

# Stakeholder Feedback and IESO Response

## Market Renewal Program: Market Settlements, Metering, Market Billing and Funds Administration market rule amendment proposal – Technical Panel June 13, 2023

ID	MP	Section	Feedback	IESO Response
1	Atura	MR Ch.9 App. 9.3 s.1.1.1.2	<p>The IESO Document MR-00456-R01 on page #35 section 1.1.1.2 states the following:</p> <p><math>M_k^p</math> = the maximum number of <i>price-quantity pairs</i> in an <i>energy offer</i> that may submitted by <i>market participant 'k'</i> in the <i>day-ahead market, pre-dispatch process, and real-time market at pseudo-unit delivery point 'p'</i>, set equal to five <i>price-quantity pairs</i>; and</p> <p>This appears to indicate that the maximum number of Energy PQ pairs for a PSU is 5. My understanding is the calculation for the maximum number of PQ pairs for PSUs for Market Renewal will remain the same as it is today (20 divided by # of CTs registered to the PSU – rounded down).</p>	The maximum number of price-quantity pairs for pseudo-units will not change as part of MRP. This provision has been amended to incorporate this feedback.
2	Vlad Urukov	MR Ch.6 s.1.2.1	Is the reference to a single day-ahead market as compared to the plural real-time markets intentional. day-ahead also has multiple markets in the context of energy and OR. The inconsistency with market vs markets is observed throughout.	For consistency with prior batches, the IESO will use "real-time market" and "day-ahead market" in their singular forms; "procurement markets" in their plural form. The IESO has amended the market rules to take into account this feedback.
3	Vlad Urukov	MR Ch.6 s.2.1.1.2a	Why is the word "registered" deleted. The Chapter 11 definition does not contain reference to registration. Do MSP not need to register to serve as such?	The word 'registered' is not defined in the current market rules; its inclusion as a tracked change appears to be a result of changing baselines with the implementation of RSS. Section 5.1.1 of Chapter 6 clearly states that no person may perform the activities of a metering service provider unless that person has been properly registered by the IESO.
4	Vlad Urukov	MR Ch.6 s.6.1.1	The settlement of the day ahead market, by virtue of it being forward looking", by definition can not relate to measured "energy". It is not clear why "day ahead" is included. RT balancing, has a DA component, but it is not measured.	The settlement of the day-ahead market refers to the calculation of various day ahead settlement amounts some of which include measured quantities in their calculations. For example, the DAM balancing credit includes AQEI in its formulation. The proposed language seems correct.

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5	Vlad Urukov	MR Ch.9 s.2.1.2.3	There appears to be new practice of using "MR Ch..." as opposed to the current reference to sections, chapters etc.... Is this worthwhile as it introduces two different way to reference other sections, which may be source of confusion.	With the enhanced integration of market rules and market manuals with MRP, the IESO wanted to create a standardized cross-referencing system throughout all IESO documents. This new convention will clearly specify references that are MR references, versus MM references in a succinct manner.
6	Vlad Urukov	MR Ch.9 s.2.1.4	There is no "primary registered ..."; rather the current definitions have "Primary RWM" as RMW is part of the registered wholesale meter definition. Consider updating the definitions accordingly.	The IESO has amended the definition of <i>primary RWM</i> to take into account this feedback.
7	Vlad Urukov	MR Ch.9 s.2.2.14.3b	Could you clarify what this means	This is an existing market rule and has not been amended through the MRP Settlements batch. To request a market rule interpretation, please refer to MACD's <a href="#">Compliance and Enforcement Guidance</a> process.
8	Vlad Urukov	MR Ch.9 s.2.3.2	The reference to "demand" doesn't seem very well aligned with the definition of "demand". Also to me metering data doesn't "serve"	This provision has been amended to incorporate this feedback.
9	Vlad Urukov	MR Ch.9 s.2.4.1	Delete the first instance of the word "other"	This is existing language and seems correct as written.
10	Vlad Urukov	MR Ch.9 s.2.4.6  MR Appendix Ch.9.2 s.1.2.1 and 1.2.5	Please explain what is this in reference to? App 9.2 has other uses of 's' and 'm' are these the same?	The references to m, c, and s in section 2.4.6 refer to locations. These scripts are used throughout Appendix 9.2 to also refer to locations. Also, 'S' is used to refer to a class of market participant type. In such instances it is clear that it is referring to a class of market participant and not a location.
11	Vlad Urukov	MR Ch.9 s.2.4.6	What is this section intending to do. Please explain.  Further down 2.5.2 the same designation is used for a "resource" not "facility" as it is here.  Why is 2.4.6.1 referring to "relevant meter" and 2.4.6.2 the "registered wholesale meter"?	This is an existing market rule and has not been materially amended through the MRP Settlements batch. To request a market rule interpretation, please refer to MACD's <a href="#">Compliance and Enforcement Guidance</a> process.  This provision refers to facility because it refers to the physical requirements as set out in MR Ch. 4.
12	Vlad Urukov	MR Ch.9 s.2.5.2	See above re: resource vs facility  Consider removing the first part of 2.5.2.2 which duplicates "the registered wholesale meter" – that is already captured in 2.5.2.1	This provision refers to both resource and facility as it connects delivery point references related to resources with registered wholesale meter references that relate to the relevant facility. The IESO proposes the leave the section as is to avoid any unintended consequences of deleting the potential duplication of language.

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13	Vlad Urukov	MR Ch.9 s.2.7.1	Please confirm the intended applicability of "day ahead market" as other parts of the PBC section only speak to "energy" i.e., real time. Should there be some reference to "DA schedule"?	Physical bilateral contracts can be submitted for the DAM or for the RTM, depending on what contractual relationship market participants would like to establish. For clarity, allocation of uplifts will only relate to the RTM.
14	Vlad Urukov	MR Ch.9 s.2.10.1	What is "other information" meant to capture.	It captures information that is not market prices, and metering data and operational results.  For example, the fuel cost compensation settlement amount uses information submitted from market participants, which would not be captured by the concepts of market prices, and metering data and operational results.
15	Vlad Urukov	MR Ch.9 s.2.8.1	Should this be "prices" as there are multiple interfaces. Or add "specified"	This provision has been amended to incorporate this feedback.
16	Vlad Urukov	MR Ch.9 s.2.12.1	Settlement process is italicized elsewhere. Is it meant to be a defined term? The settlement amounts are the final product of settlements that uses settlement data. Why "provide directly" vs. "determine". Is the data in "shall provide this settlement data", the "variables, data,".. or the "settlement amounts"	Settlement amounts are determined, the settlement data is what is provided into the settlement process, which is consistent with how it is currently described in the market rules. The IESO has amended the provision for clarity and italicized process as settlement process is an existing defined term.
17	Vlad Urukov	MR Ch.9 s.2.14.1	Isn't it more accurate to say that the "admin prices" will be data provided to the "settlement process"	The definition of locational marginal price, which is used in appendix 9.2, refers to administrative pricing. Then section 2.12.1 notes that data from appendix 9.2 will be used in the settlement process. Therefore, there is already a statement which indicates that this data is provided into the settlement process.  Rather, this provision is intended to 'override' those instances where prices are referred to, for example, in regards to establishing eligibility to a settlement amount, which would otherwise not connect directly to Appendix 9.2.
18	Vlad Urukov	MR Ch.9 s.2.14.2	"real" should be italicized.  Confirm the "real-time balancing" the only settlement amount that will need to be calculated at RT? What about PBCs? I also don't see "real-time balancing settlement"	The IESO has amended the provision for clarity.
19	Vlad Urukov	MR Ch.9 s.3.1.1.1a	"real-time" should be italicized – also is "real time balancing" defined as per comment above?	There is no need to italicize 'real-time' as it is not a defined term and neither is 'real-time balancing'. This provision has been amended to incorporate this feedback.
20	Vlad Urukov	MR Ch.9 s.3.1.6	Assuming 't' is interval, and T sum of 12 intervals in an hour, "t/T" should be defined by the time reader comes across it. Also is the /12 appropriately applied to AQEI, which is already marked as 't' – as in it's the injection within an interval, not an hour?	The variable definitions set out in Appendix 9.2 indicate that where appropriate AQEI will be multiplied by 12. This is the same practice as currently. Please see section 8 of Appendix 9.2 for further details.

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21	Vlad Urukov	Reference to "hourly settlement amount"	Is there a move towards hourly settlement data. Currently a settlement statement is presented at the interval level with the associated AQEI and MCP (5 minute price). This will be a major change from current settlement process.	Settlement statement data will continue to be presented at the interval level, where such interval data is relevant to the calculation.
22	Vlad Urukov		I have see real-time market <sup>s</sup> (plural) signifying energy and OR markets elsewhere. Is there a standard approach?	The standard approach being adopted is to use "real-time market" and "day-ahead" market in their singular forms. The IESO will endeavor to identify and correct any inconsistencies with this approach.
23	Vlad Urukov	MR Ch.7 s.21.2.1	"satisfy" vs "fulfill" – consider choosing one. Change ":" to "." MR Chapter vs Chapter inconsistency.	The IESO will use 'satisfy' for consistency. This amendment was included as a part of the Interim Alignment batch of market rules provisionally recommended by the Technical Panel on April 18, 2023. This change, and a comparable change to section 21.2.3, will be integrated in a future batch.
24	Vlad Urukov	MR Ch.7 s.21.2.3	Add "the electricity storage participant shall fulfill"	The IESO agrees that this proposed revision adds clarity. This amendment was included as a part of the Interim Alignment batch of market rules provisionally recommended by the Technical Panel on April 18, 2023. This change will be integrated in a future batch.
25	Vlad Urukov	MR Ch.7 s.21.2.2 vs. s.21.2.3	Is there a difference between "registered to participate in the energy market" and "registered to allow ... provide energy, operating reserve..." Why is OR listed in one and not the other.  Consider making consistent. If leaving the below add "to" in front of "provide"  "energy market" vs "energy markets" vs "energy market or the operating reserve market" – are these all the same?	This amendment was included as a part of the Interim Alignment batch of market rules provisionally recommended by the Technical Panel on April 18, 2023.  As part of a future batch, the IESO will amend section 21.2.4 to be consistent with the language in section 21.2.2 and 21.3.3, and to improve the grammar as suggested.  Operating reserve is not included in section 21.2.2 as self-scheduling resources can not provide operating reserve.  In regards to 'energy market/energy market/ energy market or operating reserve markets', this language forms part of the current baseline. The IESO will consider this comment further and look to bring alignment and consistency to the usage of these terms.
26	Vlad Urukov	MR Ch.7 s.21.3.2	Confirm that it makes sense to register a "facility" as a "resource".	The section will be amended to improve clarity. As this section was amended as a part of the Interim Alignment batch of market rules provisionally recommended by the Technical Panel on April 18, 2023, the amendment will be included in a future batch.
27	Vlad Urukov	MR Ch.7 s.21.4.2	What is the ramification if this MR is not followed?  In old rules there is language re CMSC eligibility. If this condition is violated, what will happen to participant?	The IESO agrees that additional language regarding make whole payments will need to be inserted to replace the existing language on CMSC. The IESO will make the appropriate amendments as part of a future batch.

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28	Vlad Urukov	MR Ch.7 s.21.6.2	Should "accompanied by an offer to inject energy" not be a condition following the if? In other words, participants can offer OR if <ul style="list-style-type: none"> <li>- There is an accompanying energy offer</li> <li>- The energy offer is for the entire hour (aside – how can an offer be for less than an hour?_</li> </ul>	It was structured this way to delineate the different requirements relating to offers of operating reserve from the injections (being accompanied by an energy market offer) vs offers of operating reserve from the withdraws (being accompanied by an energy market bid). Please note that section MR Ch.7 s. 3.6.3 of the current baseline requires all resources to accompany their offer for operating reserve with a corresponding energy offer or energy bid.  The requirement to submit an OR offer is if there is an accompanying energy offer and there is no energy bid for that same hour, which reflects the intent to only inject during the entire relevant hour.
29	Vlad Urukov	MR Ch.7 s.21.6.3.2	"nor an offer to provide operating reserve in the subsequent..."  Can be read that a participant can not participate in OR two hours in two consecutive hours – consider rewording.	This amendment was included as a part of the Interim Alignment batch of market rules provisionally recommended by the Technical Panel on April 18, 2023. Section 21.6.3.2 will be amended in a future batch to clarify the requirement. It is not intended that a storage participant cannot provide OR for two consecutive hours.
30	Vlad Urukov	MR Ch.7 s.2.2.6A.4	"the resource" or "a resource"? If time lags can not be defined without a forebay, consider combining A.4 and A.5 into one	This provision has been amended to incorporate this feedback.
31	Vlad Urukov	MR Ch.11 Definitions – class r reserve	Should "spinning" and non-spinning" be part of definition and italicized	Given the longstanding use of these terms, their meaning is clear and well-established and the IESO is not changing the meaning of these terms. The IESO does not think it is necessary to create separate definitions for spinning ten-minute operating reserve and non-spinning ten-minute operating reserve.
32	Vlad Urukov	MR Ch.11 Definitions – extended pre-dispatch operational commitment	An extended ...commitment is a defined term so consider changing "...or a previously extended..." as the "extended" is part of the definition	The IESO agrees that the word 'previously' is not technically required here. The decision to include it was to emphasize the point that extended commitments could be extended further.
33	Vlad Urukov	MR Ch.11 Definitions – day-ahead market	Why is "relevant" added?	This added specificity is because every day is a dispatch day.
34	Vlad Urukov	MR Ch.11 Definitions – locational marginal price	What is the purpose of "other relevant location" – can there be a LMP not associated with the first two?	Yes, there can be a locational marginal price associated with a location that is not a delivery point or an intertie metering point. For example, for virtual hourly demand response resources.
35	Vlad Urukov	MR Ch.9 s.3.1.1.4	How is the "that are withdrawing" defined as storage can inject or withdraw from on interval to the next. Is M1 then also temporally defined and storage can be part of M1 one interval but be excluded from M1 in the next?	Electricity storage resources are represented by two resource registration types within IESO systems; one as a load resource and the other as a generation resource. The reference to electricity storage that is withdrawing is a reference to the load resource associated with the electricity storage resource. The composition of M1 will not change from 1 interval to the next,

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				rather, it will always include the load resource associated with the electricity storage resource and exclude the associated generation resource.
36	Vlad Urukov	MR Ch.9 s.3.1.4	Will the _PRL term be misleading if this term is also used for self scheduling storage	This provision has been amended to incorporate this feedback by adding `_SSW` to the name of this variable.
37	Vlad Urukov	MR Ch.9 s.3.1.2	Where are "S" and "B" defined? Is the S in s.3.1.2 the same 's' used in s.2.5.2?	Appendix 9.2 defines 'S' as the set of all selling market participants 's'. The reference to 's' in section 2.4.6 refer to locations (e.g. resources or meters). In each instance that 's' or 'S' is used the context is clear as to the appropriate definition.
38	Vlad Urukov	MR Ch.9 s.3.2.3	Confirm the /12 applies to both AQEW and DAM_QSW in brackets, as elsewhere the treatment is different consistent with AQEW being an interval reading.	The IESO has amended section 8 of appendix 9.2 to address those circumstances when AQEW and AQEI needs to be multiplied by 12.
39	Vlad Urukov	MR Ch.9 s.3.3.2.1	Can you clarify compensation of GOG-eligible resource when activated for OR? Want to understand why this only applies to boundary entity resources	The intent of the DAM balancing credit is to cover for negative buyback/sellback when a resource is being dispatched down or de-committed by the IESO for reliability. When a GOG-eligible resource or an import is activated for OR, it is dispatched up, hence DAM balancing credit does not apply. MR 3.3.2.1 is intended to cover exports that provide OR and are dispatched down when activated for OR.
40	Vlad Urukov	MR Ch.9 s.3.3.2.2	Could you confirm that the make whole payment for any interval is sufficient to cover costs. In other words, confirm that the computation of a balancing credit will not be lower than the respective MWP.	The DAM balancing credit and RT MWP are mutually exclusive. Boundary entities are not eligible for lost opportunity costs, hence the DAM balancing credit will provide compensation when it is dispatched down by the IESO for reliability. GOG-eligible resources are eligible for MWP for energy that is scheduled above minimum loading point, therefore the DAM Balancing credit will not apply. For energy below minimum loading point, the resource will be eligible for the DAM balancing credit to cover negative buy-back.
41	Vlad Urukov	MR Ch.9 s.3.3.4	Add "is" – and is calculated or "which is calculated as follows".  Can you clarify the subtraction of DAM_QSI which is not based on interval (no subscript t) and AQEI which is.  This is an hourly value which is obtained by calculating 12 intervals and dividing 12, how does this fit with the language that excludes intervals with MWPs – i.e., does it make sense to divide by 12 if fewer than 12 intervals are included?	This provision has been amended to incorporate this feedback.  The variable definitions set out in Appendix 9.2 indicate that where appropriate, AQEI will be multiplied by 12. This is consistent with current practice. Please see section 8 of Appendix 9.2 for further details.  Dividing by 12 is appropriate as the DAM balancing credit is calculated for each eligible interval and as part of such calculation, pursuant to section 8 of Appendix 9.2, the AQEW/AQEI data is multiplied by 12. The calculations for each eligible interval are then summed for the relevant hour. This will produce the correct results and reduce the impact of rounding.

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42	Vlad Urukov	MR Ch.9 s.3.3.5	Consider capitalizing "max" for consistency. Remove the dotted box subscript placeholder of the BCOR sigma sign.	This provision has been amended to incorporate this feedback throughout Chapter 9.
43	Vlad Urukov	MR Ch.9 s.3.3.5.1	With offers being part of the Operating Profit function and the function calculating across multiple PQ pairs – can you confirm all Ps will be adjusted. Is this adjustment also explicitly part of the formula of the OP term or only stated here. Also elsewhere there is a reference to "offer price", not offer - see DA MWP section	This provision has been amended to incorporate this feedback.  In regards to the operating profit function, yes, the IESO confirms that all of the price-quantity pairs will be adjusted.
44	Vlad Urukov	MR Ch.9 s.3.4.1	Should it be storage resources that are injecting rather than withdrawing?  Why are hydroelectric resources explicitly flagged here. The dispatchable ones are by default part of dispatchable resources. Is this saying that non-dispatchable hydro is included? Adds confusion.	The day-ahead make whole payment only applies to self-scheduling electricity storage resources that are withdrawing.  The reference to hydroelectric generation resources was intended to add clarity that such resources were eligible; however, since it is only adding confusion, the IESO has amended this provision to remove such reference as these resources are already captured as dispatchable generation resources.
45	Vlad Urukov	MR Ch.9 s.3.4.1 and s.3.4.1.2	<b>Is it appropriate that MWP excludes all hydro with linked forebays? Why?</b>  That "have" attained and "their" as resources is plural  Why is "Attained Max Starts" capitalized?  Is economic operating point defined (not italicized)	Hydroelectric generation resources are eligible for the day-ahead make whole payment. In order to qualify for the day-ahead make whole payment, eligible resources have to meet the requirements specified in sections 3.4.1.1 and 3.4.1.2. The language being referred to is intended to clarify that the specific requirement set out in section 3.4.1.2 is not applicable to hydroelectric generation resources with linked forebays. Further information of the eligibility of hydroelectric generation resources with linked forebays can be found in section 3.4.13 of Chapter 9.  This provision has been amended to incorporate the grammatical feedback.  Attained Max Starts is capitalized as it is an embedded definition and reminds the reader that it is a term defined in section 3.4.13, rather than Chapter 11.  Economic operating point (EOP) will be introduced with the Market and System Operations batch of market rule amendments, including a new Chapter 7 Appendix detailing its calculation.
46	Vlad Urukov	MR Ch.9 s.3.4.3.1	Confirm that the adjustment will replace any negative offer price with the lesser of zero and a	Yes, the IESO confirms that a negative offer price would be replaced by the lesser of 0 and the DAM locational marginal price.
47	Vlad Urukov	MR Ch.9 s.3.4.4.2	Can the connection between "called capacity export" called and the generator resource referenced in a and b be made more clear.	This provision has been amended to incorporate this feedback.
48	Vlad Urukov	MR Ch.9 s.3.4.4.4	Confirm applicability is hourly.	The IESO confirms that it is hourly.
49	Vlad Urukov	MR Ch.9 s.3.4.6	Is the term "binding combined cycle physical unit constraint" well understood as it is not defined	More details regarding this constraint will be provided as part of the Market and System Operations batch of market rule amendments.

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50	Vlad Urukov	MR Ch.9 s.3.4.4 vs. s.3.4.5	Is there a difference between "shall not be paid for" and "shall not be eligible to receive" – if not, consider making consistent. Confirm 3.4.4. applies to both energy and OR whereas 3.4.5 is only for energy	This provision has been amended to incorporate this feedback. The IESO confirms that section 3.4.4 applies both to energy and operating reserve components of the DAM make whole payment while section 3.4.5 applies only to the energy component.
51	OPG	MR Ch. 9 s.2.2.13	From MR-00456-R00 of Chapter 9: Market Settlements, Market Billing and Funds Administration (Updated April 24, 2023), Section 2.2.13 is interpreted that an electricity storage would need to result in a net injection (injection exceeds withdrawal) in a given metering interval to be eligible for hourly and/or non-hourly uplift reimbursements of any AQEW. Can we please request clarification of our interpretation of the whole section and the incentive drivers for the electricity storage community?	This is an existing market rule and has not been materially amended through the MRP Settlements batch. To request a market rule interpretation, please refer to MACD's <a href="#">Compliance and Enforcement Guidance</a> process.