

Posted March 31, 2021

- Ascent Energy Partners Ltd.
- CanREA
- Capital Power
- Direct Energy
- Enel
- Enmax
- Gagnon Professional Services Ltd.
- Heartland Generation
- Lionstooth Energy
- Signalta Resources Ltd.
- TransAlta
- Urica Asset Optimization
- Utilities Consumer Advocate
- Voltus Energy Canada

Stakeholder Comment Matrix – February 23rd, 2021

DER Market Participation Draft Recommendations



<p>Period of Comment: February 17th, 2021 through March 17th, 2021</p> <p>Comments From: ASCENT Energy Partners Ltd.</p> <p>Date: 2021-03-17</p>	<p>Contact: Phone:</p> <p>Email:</p>
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Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. Email your completed comment matrix to stakeholderrelations@aeso.ca **by March 17th, 2021.**

The AESO is seeking comments from Stakeholders with regard to the following matters:

	Questions	Stakeholder Comments
1.	<p>a) In your view, has the AESO’s approach reasonably addressed potential barriers to participation for Small DER in the energy and OR markets? Please comment.</p> <p>b) If significant barriers to participation in the energy and/or OR markets remain, what are they? Please comment.</p>	<p>Yes, we believe that the recommended 1 MW limit is a very reasonable threshold for participation.</p>
2.	<p>Do you agree with the AESO recommendation to maintain ISO Rules Section 203.1 <i>Offers and Bids for Energy</i> (must offer) requirement for energy submissions for source assets 5 MW and greater? Why or Why not.</p>	<p>Yes, 5MW is very a reasonable limit for must offer. We agree with this cutoff because:</p> <ol style="list-style-type: none"> 1) it is consistent with the 5MW limit for micro-generation and 2) it is a “nice size” limit for communities and other small generator that allows a meaningful investment and participation in the wholesale market without taking on the complexity and burden of offering and dispatchability.
3.	<p>Do you agree with the AESO recommendation of allowing voluntary participation in the energy market for small DERs 1 MW and greater? Why or Why not.</p>	<p>Yes, allowing voluntary participation permits generators who have the interest and sophistication to do so without compelling less sophisticated generators to take it on. This should provide at least the following benefits:</p> <ol style="list-style-type: none"> 1) To the extent that some Small DERs choose to participate the AESO will have greater visibility of the likely supply, reducing the volume of “discretionary

		<p>supply” that must be anticipated and ultimately accommodated. In theory this may eventually reduce the amount of reserves required.</p> <ol style="list-style-type: none"> 2) the Small DGs that choose to participate will have clear dispatch criteria and the opportunity to tailor operational strategy through bidding choices rather than following the pool price – more proactive rather than reactive participation. 3) Adding this optional ability to participate creates option value for generation projects in this size range and, on the margin, improves the financial viability of these projects.
4.	Do you agree with the AESO recommendation of lowering the OR asset qualification thresholds to provide operating reserves for regulating reserve, spinning reserve, and supplemental reserve from the current requirement of 15 MW, 10 MW and 5 MW, respectively, to 1 MW? Why or Why not?	<p>Yes, there is potential value in reducing the limits for participation. The higher limits for OR market participation may have been a sufficient hurdle to constrain supply and raise prices. It will be very interesting to see:</p> <ol style="list-style-type: none"> 1) how smaller generators adjust their investment and operating strategies to participate in the more open OR market and 2) how the cost for reserves trends immediately after the change in limits and over time as a new equilibrium is reached.
5.	Do you agree with the AESO recommendation of allowing small DER (1 to 5 MW) participation in the OR market without a requirement to submit offers in the energy market? Why or why not.	Yes, the smaller size of the OR market (relative to the energy market) warrants distinct participation limits.
6.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the energy market? Why or Why not?	Yes, it is reasonable to accommodate Small DERs but unreasonable to cobble together complex aggregation for a very small segment of supply. The interest level amongst <1MW DERs is likely low enough (and the sophistication to effectively participate likely scarce enough) that there are negligible efficiency gains to be realized in this segment.
7.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the OR market? Why or Why not?	Yes, it is reasonable to accommodate Small DERs but unreasonable to cobble together complex aggregation for a very small segment of supply. The interest level amongst <1MW DERs is likely low enough (and the sophistication to effectively participate likely scarce enough) that there are negligible efficiency gains to be realized in this segment.

8.	<p>In your view, what is the priority and pace required to progress the recommendations? Do they need to be progressed now or can they be implemented in the future? Please comment.</p>	<p>If the economic efficiency gains warrant changes in the market participation thresholds, those changes should be implemented in a direct and efficient way. Delays in implementation (that then delay improved economic efficiency) come at the expense of the consumer and to the benefit of current OR market participants. If there is economic harm that will befall incumbent participants due to this change, a transition period may be appropriate, but this consultation process likely serves as sufficient notice – by the time the implementation is realized there will have effectively been a lengthy transition.</p> <p>Anticipating objections to prompt implementation based on potentially low levels of participation, we counter that while these particular market changes may not see heavily subscription immediately, the development of participation mechanisms for small DERs is a clear signal of the value they can provide to the markets and AIES. This potential market participation by small DERs can be an important first step to the broader consideration of the framework for value and compensation for services to the system for generators of all sizes. We therefore reiterate and encourage prompt advancement of these recommendations and of the broader grid modernization initiatives that are already underway by DFOs and the AESO.</p>
9.	<p>Do you have any concerns or suggestions on the DER market participation process and timeline? Please comment.</p>	<p>No, in fact we are encouraged by the forward movement of the AESO in the DER Roadmap initiatives particularly in this consultation as it relates to greater recognition of the value of all DERs as system resources.</p>
10.	<p>Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities? Please comment.</p>	

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Stakeholder Comment Matrix – February 23rd, 2021

DER Market Participation Draft Recommendations



<p>Period of Comment: February 17th, 2021 through March 17th, 2021</p> <p>Comments From: Canadian Renewable Energy Association (CanREA)</p> <p>Date: 2021/03/17</p>	<p>Contact:</p> <p>Phone:</p> <p>Email:</p>
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The AESO is seeking comments from Stakeholders with regard to the following matters:

	Questions	Stakeholder Comments
1.	<p>a) In your view, has the AESO’s approach reasonably addressed potential barriers to participation for Small DER in the energy and OR markets? Please comment.</p> <p>b) If significant barriers to participation in the energy and/or OR markets remain, what are they? Please comment.</p>	<p>a) The use of a single category (“Small DERs”) to refer to both distribution-connected generation (DCG) and distribution-connected energy storage between 1 – 5 MW is not reasonable. As CanREA has previously made clear, energy storage is a unique technology, and it is neither fair nor efficient to compare it to other technologies. In the ISO tariff, load, generation and provincial interties are all considered different technologies and receive different tariff treatment. Storage is unique and it is both fair and efficient to treat it uniquely in the ISO tariff. If this unique treatment is not achieved, it is likely that only regulated transmission and distribution facility owners will make storage investments, meaning their full range of services will not be deployed to benefit the grid.</p> <p>b) The fundamental obstacle to energy storage participation in either the energy or OR market is that the current tariff framework, with application of both DTS and STS to energy storage, renders storage uneconomic.</p>

2.	Do you agree with the AESO recommendation to maintain ISO Rules Section 203.1 <i>Offers and Bids for Energy</i> (must offer) requirement for energy submissions for source assets 5 MW and greater? Why or Why not.	Yes – CanREA concurs with the AESO’s rationale for maintaining the present 5 MW threshold for the must-offer requirement.
3.	Do you agree with the AESO recommendation of allowing voluntary participation in the energy market for small DERs 1 MW and greater? Why or Why not.	Yes – CanREA supports expanding voluntary participation opportunities to a wider size of assets which will allow market participants to make the best decisions for their facility, thereby increases competition and market efficiency.
4.	Do you agree with the AESO recommendation of lowering the OR asset qualification thresholds to provide operating reserves for regulating reserve, spinning reserve, and supplemental reserve from the current requirement of 15 MW, 10 MW and 5 MW, respectively, to 1 MW? Why or Why not?	Yes – The current requirements exclude facilities (notably energy storage) that could reliably supply OR at potentially lower costs than current suppliers and therefore the thresholds should be reduced.
5.	Do you agree with the AESO recommendation of allowing small DER (1 to 5 MW) participation in the OR market without a requirement to submit offers in the energy market? Why or why not.	Yes – This is a reasonable compromise. We concur with the AESO’s view that introducing a requirement for Small DERs to participate in the energy market while concurrently participating in the OR market would increase regulatory burden and may be viewed as a barrier to participation. We do not perceive a benefit from a system operations standpoint in restricting small DERs’ ability to choose which market in which to participate.
6.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the energy market? Why or Why not?	No – Aggregated participation in the energy market is technologically viable and could potentially form part of the revenue stack for energy storage below the proposed minimum 1 MW threshold for voluntary participation. CanREA recommends that exploring aggregation options be allowed to continue, including through AESO-funded demonstration projects, collaboration with academic institutions and industry researchers, and continuous reviewing of industry best practices from other jurisdictions where small-scale DER aggregation is well established – For example, the Australia Energy Market Operator’s VPP demonstrations.
7.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the OR market? Why or Why not?	Yes – Moving this exploration of aggregation options to the OR Market Design consultation would be a reasonable step forward.
8.	In your view, what is the priority and pace required to progress the recommendations? Do they need to be progressed now or can they be implemented in the future? Please comment.	

9.	Do you have any concerns or suggestions on the DER market participation process and timeline? Please comment.	
10.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities? Please comment.	

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<p>Period of Comment: February 17th, 2021 through March 17th, 2021</p> <p>Comments From: Capital Power Corporation</p> <p>Date: 2021/03/17</p>	<p>Contact: Phone:</p> <p>Email:</p>
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1.	<p>a) In your view, has the AESO’s approach reasonably addressed potential barriers to participation for Small DER in the energy and OR markets? Please comment.</p> <p>b) If significant barriers to participation in the energy and/or OR markets remain, what are they? Please comment.</p>	<p>Capital Power appreciates the opportunity to provide comments on the AESO’s <i>DER Market Participation Draft Recommendations</i>. Capital Power provides the following comments for consideration.</p> <p>Capital Power continues to support a FEOC market that promotes market efficiency, price fidelity and reduces barriers to entry. However, at this time the AESO has not provided sufficient evidence to demonstrate to stakeholders that enabling Small DER participation in the energy and OR market will promote a more efficient market.</p> <p>Following the AESO’s October 14th session on <i>DER Market Participation Options</i>, Capital Power understood that the AESO had concluded there would be little benefit to, or interest from small DERs to participate in the energy or OR markets due in part to implementation costs and minimum market participant requirements. The AESO’s recommendation to now enable Small DER participation is at odds with the conclusion reached in the October 14th session. Further, there has not been any additional information provided to stakeholders significant enough to support this change in direction.</p> <p>Capital Power reiterates its concerns in the comments submitted on October 15th, that enabling DER participation in both the energy and OR markets raises important issues</p>

		<p>for the market, and it is important that any rules developed are consistent with the level playing field principles established in the <i>EUA</i>. Capital Power also submits that any changes to the market design to enable Small DER need to be weighed against the potential benefits and costs of implementation.</p>
2.	<p>Do you agree with the AESO recommendation to maintain ISO Rules Section 203.1 <i>Offers and Bids for Energy</i> (must offer) requirement for energy submissions for source assets 5 MW and greater? Why or Why not.</p>	<p>Capital Power supports the AESO’s recommendation to maintain ISO Rules Section 203.1, requirement for energy submissions for source assets 5 MW and greater at this time. However, the AESO’s forecasted growth in Small DERs over the next 20 years, as presented in the <i>DER Market Participation Draft Recommendations</i> paper could present significant market issues in the future. For example, the AESO forecasts there is expected to be approximately 712 MW of <5MW solar capacity online in 2040, compared to approximately 95 MW today. The significant increase in capacity presents a market and operational visibility issue that could negatively impact the FEOC operation of the energy market.</p> <p>Capital Power recommends that the AESO define milestones associated with Small DER penetration levels and that once these milestones are met, a review of the associated market rules is triggered. The AESO utilizes a similar approach in transmission planning (i.e., CETO construction milestones) and a key takeaway from the AUC’s Distribution System Inquiry was to incorporate “triggers” or specific circumstances that would signal to the Commission that further steps must be taken to enable DER integration. Capital Power recommends the milestones should be implemented through the AESO’s <i>DER Roadmap</i> initiatives.</p>
3.	<p>Do you agree with the AESO recommendation of allowing voluntary participation in the energy market for small DERs 1 MW and greater? Why or Why not.</p>	<p>Capital Power does not agree with the AESO’s recommendation to allow voluntary participation in the energy market for small DERs 1 MW and greater. While Capital Power appreciates the AESO’s intent to reduce barriers to entry for market participants, voluntary participation for Small DERs does not support a level playing field, or a FEOC market structure.</p> <p>Capital Power submits that all market participants participating in the energy market should be held to the same standards, regardless of size and be obligated to comply with the same market rules. If the AESO continues to recommend voluntary energy market participation, Capital Power makes the following recommendations:</p> <ul style="list-style-type: none"> • Similar to its comments in the previous question, a milestone should be defined for Small DER penetration levels that would trigger a review of the associated market rules. While the level of Small DER penetration may not be material at this time, the AESO’s forecasts indicate a significant amount of Small DER growth over the next 20 years that will have material impacts to the

		<p>energy market.</p> <ul style="list-style-type: none"> • Small DERs must not be able to participate in the energy market on an inconsistent basis (i.e., participate one day and not the following). If a Small DER chooses to participate in the energy market, they must submit offers for each settlement interval. • Small DERs must be held to the same standard as other market participants and comply with all ISO rules and requirements that generators >5MW are obligated to comply with.
4.	Do you agree with the AESO recommendation of lowering the OR asset qualification thresholds to provide operating reserves for regulating reserve, spinning reserve, and supplemental reserve from the current requirement of 15 MW, 10 MW and 5 MW, respectively, to 1 MW? Why or Why not?	<p>Capital Power does not support reducing the OR asset qualification thresholds at this time. The AESO has provided limited information in the <i>DER Market Participation Draft Recommendations</i> paper that would support a change to the existing OR market.</p> <p>Further, the AESO intends to conduct an OR market review later this year, including consultation on changes to minimum size thresholds. Any changes to the existing market structure to enable participation of Small DER in the OR market should be contemplated in that review, and not before then.</p>
5.	Do you agree with the AESO recommendation of allowing small DER (1 to 5 MW) participation in the OR market without a requirement to submit offers in the energy market? Why or why not.	Capital Power reiterates its comments in the previous question that no changes to the existing OR market should be considered prior to the AESO's OR market review scheduled for later this year.
6.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the energy market? Why or Why not?	Capital Power supports the AESO's decision to discontinue exploration of aggregation options for Small DERs in the energy market. As outlined by the AESO, there is limited interest from stakeholders in pursuing this initiative at this time.
7.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the OR market? Why or Why not?	Capital Power supports the AESO's decision to discontinue exploration of aggregation options for Small DERs in the OR market. As outlined by the AESO, there is limited interest from stakeholders in pursuing this initiative at this time.
8.	In your view, what is the priority and pace required to progress the recommendations? Do they need to be progressed now or can they be implemented in the future? Please comment.	Capital Power reiterates its previous comments that any changes contemplated to the OR market, including a reduction to participation thresholds should be included in the AESO's OR market review scheduled for later this year.

9.	Do you have any concerns or suggestions on the DER market participation process and timeline? Please comment.	Capital Power has no additional comments at this time.
10.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities? Please comment.	Capital Power has no additional comments at this time.

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DER Market Participation Draft Recommendations



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2.	Do you agree with the AESO recommendation to maintain ISO Rules Section 203.1 <i>Offers and Bids for Energy</i> (must offer) requirement for energy submissions for source assets 5 MW and greater? Why or Why not.	Yes – this should be maintained.
3.	Do you agree with the AESO recommendation of allowing voluntary participation in the energy market for small DERs 1 MW and greater? Why or Why not.	Yes – a small company could participate and seek to reduce demand charges (avoid peak) and actively manage the distribution components of the bill, which is a benefit and creates a more level market.

4.	Do you agree with the AESO recommendation of lowering the OR asset qualification thresholds to provide operating reserves for regulating reserve, spinning reserve, and supplemental reserve from the current requirement of 15 MW, 10 MW and 5 MW, respectively, to 1 MW? Why or Why not?	Yes – the reduction in the asset qualification thresholds allow more participants to provide operating reserves which enhances the flexibility of the market and should allow for more efficient outcomes.
5.	Do you agree with the AESO recommendation of allowing small DER (1 to 5 MW) participation in the OR market without a requirement to submit offers in the energy market? Why or why not.	Yes – this allow more participants to provide operating reserves which enhances the flexibility of the market and should allow for more efficient outcomes.
6.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the energy market? Why or Why not?	No – the ability to aggregate options for small DERS is beneficial as it allows for more participation in the market.
7.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the OR market? Why or Why not?	No – the ability to aggregate options for small DERS is beneficial as it allows for more efficient market outcomes. More participation allows for better price discovery.
8.	In your view, what is the priority and pace required to progress the recommendations? Do they need to be progressed now or can they be implemented in the future? Please comment.	These recommendations should be progressed as quickly as possible in order to advance the market.
9.	Do you have any concerns or suggestions on the DER market participation process and timeline? Please comment.	No comments.
10.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities? Please comment.	If the process created is expensive to implement, time consuming and administratively burdensome, Small DERS will not be likely to participate..

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DER Market Participation Draft Recommendations



<p>Period of Comment: February 17th, 2021 through March 17th, 2021</p> <p>Comments From: Enel North America</p> <p>Date: [2021/03/17]</p>	<p>Contact:</p> <p>Phone:</p> <p>Email:</p>
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2.	Do you agree with the AESO recommendation to maintain ISO Rules Section 203.1 <i>Offers and Bids for Energy</i> (must offer) requirement for energy submissions for source assets 5 MW and greater? Why or Why not.	Enel supports this recommendation.
3.	Do you agree with the AESO recommendation of allowing voluntary participation in the energy market for small DERs 1 MW and greater? Why or Why not.	Enel supports this recommendation.
4.	Do you agree with the AESO recommendation of lowering the OR asset qualification thresholds to provide operating reserves for regulating reserve, spinning reserve, and supplemental reserve from the current requirement of 15 MW, 10 MW and 5 MW,	Enel supports this recommendation. As noted in previous comments filed by Enel, recognition has now been made that DER resources are smaller and can provide value in different ways than larg-scale traditional supply resources. As resources types evolve, so should the market design. The recommended requirement of 1 MW

	respectively, to 1 MW? Why or Why not?	threshold for qualification in OR will allow new resource types to provide value to the Alberta electricity system and the ratepayer and enable further competition in the OR market.
5.	Do you agree with the AESO recommendation of allowing small DER (1 to 5 MW) participation in the OR market without a requirement to submit offers in the energy market? Why or why not.	Enel supports this recommendation.
6.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the energy market? Why or Why not?	AESO has a fair and productive aggregation participation model which follows best practices. However, as DERs proliferate in AB, barriers may be identified and improvements may be recommended to enable greater participation. AESO should continue to consider improvements and recommendations as they are brought forward through public consultations.
7.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the OR market? Why or Why not?	AESO has a fair and productive aggregation participation model which follows best practices. However, as DERs proliferate in AB, barriers may be identified and improvements may be recommended to enable greater participation. AESO should continue to consider improvements and recommendations as they are brought forward through public consultations.
8.	In your view, what is the priority and pace required to progress the recommendations? Do they need to be progressed now or can they be implemented in the future? Please comment.	To enable the participation of DERs and therefore competition to provide resources to the AB market, Enel recommends moving forward with the recommendations immediately. This is especially true of recommendations where market rule amendments will be necessary such as lowering the minimum threshold for OR participation to 1 MW. By not enabling the 1 MW threshold, AB will continue to lose out on valueable, competitive, cost efficient resources.
9.	Do you have any concerns or suggestions on the DER market participation process and timeline? Please comment.	
10.		

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DER Market Participation Draft Recommendations



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2.	<p>Do you agree with the AESO recommendation to maintain ISO Rules Section 203.1 <i>Offers and Bids for Energy</i> (must offer) requirement for energy submissions for source assets 5 MW and greater? Why or Why not.</p>	<p>Yes, ENMAX agrees with the AESO’s recommendation given that the current penetration level of small dispatchable DERs (<5 MW) remains negligible.</p>
3.	<p>Do you agree with the AESO recommendation of allowing voluntary participation in the energy market for small DERs 1 MW and greater? Why or Why not.</p>	<p>While ENMAX appreciates the AESO’s efforts to reduce barriers to participation for small DERs, the existing <i>Micro-Generation Regulation</i> and <i>Small-Scale Generation Regulation</i> currently provides such units with an avenue to be exposed to pool price and not have the added responsibility of following ISO Rule 203.1. That said, the approach to allow broader voluntary participation for small DERs 1 MW and greater (outside of the existing regulations mentioned above) is reasonable as long as a level playing field approach is followed, meaning voluntary participation in the energy</p>

		<p>market should come with the same obligations as other market participants.</p> <p>ENMAX suggests that these voluntary units should be visible to the market in a similar way as the Current Supply and Demand report provides visibility to those units providing energy and AS to the grid. It may also be beneficial if the AESO were to reorganize the CSD report to better illustrate the resource types. For example, with the expected growth in solar, it should be taken out of the “Biomass and Other” section.</p> <p>ENMAX would also caution the AESO when referring to NERC as the standard to follow as there are instances where the unique nature of the Alberta Grid does not lend itself to use NERC experiences as a model to follow. This was the primary reason that Alberta and the AESO elected to adopt the Alberta Reliability Standards rather than accept NERC standards.</p>
4.	<p>Do you agree with the AESO recommendation of lowering the OR asset qualification thresholds to provide operating reserves for regulating reserve, spinning reserve, and supplemental reserve from the current requirement of 15 MW, 10 MW and 5 MW, respectively, to 1 MW? Why or Why not?</p>	<p>To reiterate ENMAX’s comments submitted to the AESO in October 2020, unless the OR market changes substantially and is no longer oversupplied, the added ability for dispatchable DER participation will not be attractive enough for similar reasons as why the energy market will not be attractive for small DERs under 5MW. Changes to the thresholds should not be considered in isolation. Furthermore, the AESO’s own expectation is that renewables will make up the bulk of DERs coming online. Given renewable intermittent resources cannot participate in the OR market, there does not appear to be a clear need for changing the asset qualification thresholds at this time.</p> <p>All assets participating in the OR market should be subject to the same technical requirements and obligations. That said the AESO must consider the impacts of smaller asset participation. For regulating reserve, the dispatch tolerance is ± 1 MW for regulating reserve ranges less than 20 MW. In theory, a small resource could be paid for providing RR yet not move at all in response to a directive.</p> <p>ENMAX will fully participate in the AESO’s OR market review consultation which is expected to kick off later in 2021. ENMAX submits that no changes should be made for DERs < 5 MW in advance of that consultation.</p>
5.	<p>Do you agree with the AESO recommendation of allowing small DER (1 to 5 MW) participation in the OR market without a requirement to submit offers in the energy market? Why or why not.</p>	<p>These units must meet the technical requirements and be subject to similar ISO rules to enhance reliability of the grid. Allowing these units to only participate in the OR market and not be required to offer and comply in the energy market is not in keeping with a level playing field approach and would be considered preferential treatment.</p> <p>ENMAX is concerned these smaller DERs may be less reliable to respond to directives, provide timely restatements and respond to the instructions of the AESO System Controller if given preferential treatment. This should be considered in the OR</p>

		review. See response to Question 4.
6.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the energy market? Why or Why not?	While aggregation for energy market and OR market participation may not be a priority for the AESO at this time, it is permitted outside AESO systems much the same way as some demand response companies have operated. The AESO should remain open to further exploring future opportunities as new technology continues to be adopted and stakeholder interest increases in this area. Third party aggregators may be able to operate and develop systems more efficiently and cost effectively that would reduce the burden on the AESO.
7.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the OR market? Why or Why not?	See response to Question 6.
8.	In your view, what is the priority and pace required to progress the recommendations? Do they need to be progressed now or can they be implemented in the future? Please comment.	Market design stability should remain a priority. Recommendations that result in minimal disruption to the current framework may be progressed but there needs to be a clear cost/benefit disclosure prior to pursuing. ENMAX would like to see clear cost estimates for the AESO to implement the approach to understand the expected timelines and any potential disruption to existing systems. The AESO should also have a good understanding of the willingness of the owners of small DERs to participate and should provide an assessment of the likely price impacts. As noted above, ENMAX recommends that no changes be made in respect of small DERs before the OR market consultations have been concluded.
9.	Do you have any concerns or suggestions on the DER market participation process and timeline? Please comment.	ENMAX does not see an urgency to push for this initiative and would like it implemented with careful thought vs. a rushed timeline. Changes to market constructs should not be made hastily as they can have longer term implications for Alberta's market and its transmission and distribution systems. We reiterate that there is no need to make any changes to the OR market in advance of the upcoming consultation.
10.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities? Please comment.	<p><u>AESO DER Roadmap – Prioritization of Initiatives</u></p> <p>ENMAX appreciates the AESO's ongoing efforts to increase coordination between DFOs, TFOs and the AESO, to ensure the safe and reliable operation of the AIES as the adoption of DERs continues to grow.</p> <p>To ensure that analysis remains focused and industry is able to allocate their time and resources towards priority initiatives, the driver behind each initiative should be based</p>

		<p>on current need and pace at which DER technologies are most impactful on the grid. Otherwise, certain initiatives should be deferred until the need arises, given that technology and consumer preferences may shift and create different needs and priorities.</p> <p>New rules or reporting requirements will result in additional processes and costs for participants to implement. Any AESO developed DER and storage rules should not infringe on the DFO's ability and obligation to continue managing their respective systems.</p> <p>Regarding the sharing of DER data and the modeling of DERs, ENMAX is not convinced that there will be benefits to the level of granularity that the AESO seems to be suggesting. The output of small DERs will be dependent on small-scale phenomena, and coupled with the number of such resources, modeling at the individual-asset level will be effectively impossible. The probabilistic analysis of aggregated small-DER data at the substation level should be adequate for operations and reliability modeling purposes.</p>
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Thank you for your input. Please email your comments to: stakeholderrelations@aeso.ca.

Stakeholder Comment Matrix – February 23rd, 2021

DER Market Participation Draft Recommendations



<p>Period of Comment: February 17th, 2021 through March 17th, 2021</p> <p>Comments From: Gagnon Professional Services Ltd.</p> <p>Date: [2021/03/17]</p>	<p>Contact:</p> <p>Phone:</p> <p>Email:</p>

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. Email your completed comment matrix to stakeholderrelations@aeso.ca **by March 17th, 2021.**

The AESO is seeking comments from Stakeholders with regard to the following matters:

Questions	Stakeholder Comments
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<p>a) In your view, has the AESO's approach reasonably addressed potential barriers to participation for Small DER in the energy and OR markets? Please comment.</p> <p>b) If significant barriers to participation in the energy and/or OR markets remain, what are they? Please comment.</p>	<p>AESO's efforts to address barriers are commendable, and do make it possible for smaller DG systems to participate in AS markets in the near term, without much disruption. However, I would recommend that in the long run, solutions be linked to specific system challenges, such as frequency excursions related to tie line trips. In such case, more significant innovation and economic activity could be enabled by API-based controls (rather than SCADA and current market mechanisms such as Load Shed), which could enable short-term participation by building management systems and behind-the-meter DERs.</p> <p>The size limit changes will create the possibility of smaller players participating in Spinning Reserve, but the abandonment of aggregation (predicated on loss factor complications) means that the resulting opportunity is limited, and SCADA and compliance costs may be difficult to overcome at such small scales.</p>
<p>Do you agree with the AESO recommendation to maintain ISO Rules Section 203.1 <i>Offers and Bids for Energy</i> (must offer) requirement for energy submissions for source assets 5 MW and greater? Why or Why not.</p>	<p>The answer to this question begs more questions about materiality thresholds for DERs in AIES (or in DFO territories), and the extent to which their bidding behaviour is likely to affect pricing in terms of fidelity or average pricing for each market. Currently, Micro-Gen provides the ability to control resources under 5 MW, but only up to 'net zero' energy annually, and forgoing DTS credits/OptionM. The market has options for developers, but the question of design should be related to the desired outcomes for the system, guided by principles. For example, behind-the-meter (micro-pen) resources should arguably be seen as load management and shielded from any visibility/control requirements by AESO or DFOs unless there is a clear and demonstrable purpose. By contrast, export-oriented sites connected under Rule 007 should arguably need to comply with MOMC unless AESO can cope with these smaller resources acting independently, and be spared the overhead, and this exclusion from AESO rules should be made explicit.</p>

<p>Do you agree with the AESO recommendation of allowing voluntary participation in the energy market for small DERs 1 MW and greater? Why or Why not.</p>	<p>Yes. There is no reason to exclude participation from smaller DERs (apart from the relatively more costly SCADA/compliance costs). I offer that much smaller DERs could reasonably participate in different market constructs using existing internet-based controls protocols, but I recognize that these should be piloted and observed prior, and could be the subject of future work by AESO and other stakeholders.</p>
<p>Do you agree with the AESO recommendation of lowering the OR asset qualification thresholds to provide operating reserves for regulating reserve, spinning reserve, and supplemental reserve from the current requirement of 15 MW, 10 MW and 5 MW, respectively, to 1 MW? Why or Why not?</p>	<p>As above, yes, I agree. Among other reasons, this will make some faster-responding resources more available within the Spinning Reserve market, which will help to support the frequency excursions noted above. Price finding will be interesting to watch, however.</p>
<p>Do you agree with the AESO recommendation of allowing small DER (1 to 5 MW) participation in the OR market without a requirement to submit offers in the energy market? Why or why not.</p>	<p>Yes. This is a nuanced point; while some will argue that this would amount to special treatment (FEOC challenge), it is a reflection of the resources being capable of providing different/better services to AESO than existing generation types, including gas and hydro, and especially as the nature of storage is less aligned with energy markets than providing higher-value services such as Spin and FFR (which in turn need different market mechanisms to be appropriately valued). Underlying all of this is the fact that DERs are the only category of resource that can react faster than the ramp rate allowed in AS markets designed for thermal and hydro resources (with BTM resources, even with internet-based protocols, being only slightly behind).</p>
<p>Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the energy market? Why or Why not?</p>	<p>This is unfortunate, and appears to reflect the desire for simplicity in accounting rather than system function. A distributed response is arguably exactly what AESO should be striving for when solving for system balancing (or we should be pursuing a sub-regional balancing approach with variable pricing). Aggregation of Spinning Reserve could arguably have minimal impact on overall line losses. Aggregated DERs for energy purposes (i.e. VPP) may have more impact but should be flagged as an issue to manage rather than excluding aggregation altogether.</p>

<p>Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the OR market? Why or Why not?</p>	<p>As above, this is a space that deserves special attention. The small nature of these resources belies their potential value in both bulk system management (i.e. frequency, or fast load shed as DSM) and/or distribution system services (i.e. Non-Wires Alternatives for power quality, Volt/VAR support, etc). This relates to proper forecasting and modelling, which will be affected by assumptions such as whether AESO creates market mechanisms for them to participate and thrive. If the future of AIES involves more EVs, more DERs and more utility-scale renewables, all of these solutions may be required in future, and will require engagement and planning by AESO and AUC to get there, even if on a longer-term horizon than the DER allowances recommended in the DER Roadmap.</p>
<p>In your view, what is the priority and pace required to progress the recommendations? Do they need to be progressed now or can they be implemented in the future? Please comment.</p>	<p>The risk here is that small improvements made now may suggest that the evolution is complete, and work on further innovation/evolution can be discontinued or deferred, which I do not support. However, let us not make the perfect the enemy of the good. As long as AESO's recommendations are considered first steps, conforms to good guiding principles, and engagement remains open, they could be implemented immediately.</p>
<p>Do you have any concerns or suggestions on the DER market participation process and timeline? Please comment.</p>	<p>This whole engagement has focused on traditional players (generators, TFOs and DFOs) with inclusion of DG stakeholders. It may not have completely engaged BTM stakeholders because that scope was effectively not on the table. While AESO may be working with existing market mechanisms and tools for expediency, the overall Roadmap should be transparently based on system goals/challenges, and working through the broader range of solutions and stakeholders that could help get us there. The long-term Roadmap should acknowledge the areas of overlap/coordination between AESO and DFOs, DFOs and DERs, and DERs to AESO and actively solicit input from non-conventional stakeholders such as building controls, energy efficiency services providers and sources of load that could be more nuanced in their response and grid services than load-shed schemes can accommodate.</p>
<p>Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities? Please comment.</p>	<p><i>AESO's recommendations to create flexibility in relation to DERs is truly a powerful first step for Alberta, and I commend AESO's leadership and staff in this work. As the landscape continues to evolve, I look forward to future engagement and knowledge sharing from other jurisdictions and non-</i></p>

		<i>traditional stakeholders, rooted in developing meaningful smarter grid solutions in Alberta's unique context.</i>
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Thank you for your input. Please email your comments to: stakeholderrelations@aeso.ca.

Stakeholder Comment Matrix – February 23rd, 2021

DER Market Participation Draft Recommendations



<p>Period of Comment: February 17th, 2021 through March 17th, 2021</p> <p>Comments From: Heartland Generation Ltd. (“Heartland Generation”)</p> <p>Date: 2021/03/17</p>	<p>Contact:</p> <p>Phone:</p> <p>Email:</p>
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Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. Email your completed comment matrix to stakeholderrelations@aeso.ca **by March 17th, 2021.**

The AESO is seeking comments from Stakeholders with regard to the following matters:

	Questions	Stakeholder Comments
1.	<p>a) In your view, has the AESO’s approach reasonably addressed potential barriers to participation for Small DER in the energy and OR markets? Please comment.</p> <p>b) If significant barriers to participation in the energy and/or OR markets remain, what are they? Please comment.</p>	<p>In general, Heartland Generation supports initiatives that decrease barriers to entry while maintaining a level-playing field for all generators.</p>
2.	<p>Do you agree with the AESO recommendation to maintain ISO Rules Section 203.1 <i>Offers and Bids for Energy</i> (must offer) requirement for energy submissions for source assets 5 MW and greater? Why or Why not.</p>	<p>The AESO should provide a justification for the 5 MW threshold in first instance. The decision on whether to change the size threshold for mandatory participation in the energy market should be a separate discussion from the participation of distributed energy resources (DERs) in the energy market.</p> <p>The AESO should examine what the appropriate size of a participant should be and use that justification to set the minimum size threshold for mandatory participation. Other jurisdictions already have different participation size thresholds, and the AESO should justify why those size thresholds are inappropriate for the Alberta market.</p>
3.	<p>Do you agree with the AESO recommendation of allowing voluntary participation in the energy market for small DERs 1 MW and greater? Why or Why not.</p>	<p>From the consultation session, it is clear that the AESO needs to provide stakeholders with a concise definition for what “voluntary participation” means in this context. Once a participant elects to participate, how long is it “locked-in” to that election? Are there circumstances that would allow a selection to be changed?</p> <p>Further, Heartland Generation is always concerned when there appears to be a subset of a market that is accommodated through a separate set of rules/obligations. The AESO should consider whether a “bright-line” threshold (i.e., 5 MW) is more appropriate, whereby participants would know with certainty whether they will be participating in the market or not. A threshold of this kind would avoid project size gaming (e.g., a participant sizes just below a size threshold to retain optionality even though this may impede efficient sizing decisions).</p>

4.	Do you agree with the AESO recommendation of lowering the OR asset qualification thresholds to provide operating reserves for regulating reserve, spinning reserve, and supplemental reserve from the current requirement of 15 MW, 10 MW and 5 MW, respectively, to 1 MW? Why or Why not?	The AESO should produce what evidence or support it has for lowering the operating reserves (“OR”) minimum thresholds for all products, and what impacts this will have on those markets. This is another decision, like size threshold for mandatory participation in the energy market, which should not only be considered in the context of DERs integration.
5.	Do you agree with the AESO recommendation of allowing small DER (1 to 5 MW) participation in the OR market without a requirement to submit offers in the energy market? Why or why not.	Heartland Generation’s only concern with the proposed amendment relates to maintaining a level-playing field to ensure that the OR market operate in a manner that is fair, efficient, and openly competitive (“FEOC”). The AESO should provide justification that concludes that having a different set of requirements for small DERs to participate in the OR market without also participating in the energy market does not create an unfair advantage for small DERs.
6.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the energy market? Why or Why not?	Heartland Generation has no comment at this time.
7.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the OR market? Why or Why not?	Heartland Generation has no comment at this time.
8.	In your view, what is the priority and pace required to progress the recommendations? Do they need to be progressed now or can they be implemented in the future? Please comment.	AESO should provide the market with the threshold that would trigger progress on these recommendations. DERs are primarily a reliability concern, and the AESO is in the best situation to advise on when recommendations need to be implemented.
9.	Do you have any concerns or suggestions on the DER market participation process and timeline? Please comment.	Heartland Generation has no specific comment on the DER market participation process or timeline. However, since the publishing of the Alberta Utilities Commission (AUC) final report in the Distribution System Inquiry ¹ there is an increased importance on this initiative; it may be helpful to stakeholders how the AESO will plan to coordinate any findings from the DER market participation consultation with the AUC, and how certain initiatives will be dealt with, or handed off, if they stray outside of the AESO’s jurisdiction.

10.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities? Please comment.	AESO acknowledged in the meeting that aggregate DERs would impact frequency on the system, this should be addressed in the DERs Roadmap. Further the AESO should include how it plans to coordinate DERs market participation with the broader consultations on frequency response and operational preparedness.
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Thank you for your input. Please email your comments to: stakeholderrelations@aeso.ca.

¹ AUC Decision 24116-D01-2021

Stakeholder Comment Matrix – February 23rd, 2021

DER Market Participation Draft Recommendations



Period of Comment: February 17th, 2021 through March 17th, 2021 Comments From: Lionstooth Energy Date: 2021/03/17	Contact: Phone: Email:
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Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. Email your completed comment matrix to stakeholderrelations@aeso.ca by **March 17th, 2021**.

The AESO is seeking comments from Stakeholders with regard to the following matters:

Questions	Stakeholder Comments
1. <ul style="list-style-type: none"> a) In your view, has the AESO’s approach reasonably addressed potential barriers to participation for Small DER in the energy and OR markets? Please comment. b) If significant barriers to participation in the energy and/or OR markets remain, what are they? Please comment. 	<p>A. The AESO’s approach, so far, has reasonably addressed potential barriers for small DERs in EOM &/ OR markets. We appreciate the AESO conducting multiple rounds of consultation, incorporating stakeholder feedback, and developing and consulting on the recommendations paper. This approach has incorporated quantitative analysis, specifically with respect to the amount of existing projects that may be impacted, and has completed some cost / benefit analysis (assumed to be at a high level).</p> <p>The AESO should continue along this approach of a measured and thoughtful pace to change, supported by quantitative analysis, including an evaluation of the impact of the changes on the future state of our market to identify and avoid any potential consequences of change.</p> <p>B. We remain of the view that the most significant barrier is regulatory and market design instability and uncertainty, increasing the importance of a measured and thoughtful pace to change. The status quo must be maintained until such time that any future regulatory / market design changes are clearly understood, and their impacts studied.</p> <p>One specific area where barriers remain include AESO modeling, planning, and</p>

		integrating DERs / DCGs, including dispatchable / controllable generation, into system models, the LTO, and LTP.
2.	Do you agree with the AESO recommendation to maintain ISO Rules Section 203.1 <i>Offers and Bids for Energy</i> (must offer) requirement for energy submissions for source assets 5 MW and greater? Why or Why not.	<p>Yes. This approach, as stated by the AESO, balances increased costs &/ regulatory burdens with removing barriers and increasing competition (page 13).</p> <p>Any concerns over “lack of transparency and operational coordination from indirect participation,” while valid, as stated by the AESO, is not a concern at current installed capacities (page 11). We reiterate that if access to more data would support the AESO’s efforts to better model and plan the system, we would support identifying other, creative ways for more DERs / DCGs to share this data.</p>
3.	Do you agree with the AESO recommendation of allowing voluntary participation in the energy market for small DERs 1 MW and greater? Why or Why not.	<p>Yes. Appreciating that the motivation is to remove barriers in the EOM &/ OR markets to allow for more active small DER / DCG participation, voluntary participation is far more preferable than lowering the MOMC threshold.</p> <p>Based on discussion in the stakeholder session, there appear to be a couple areas where more detail required, such as confirmation that once a small DER / DCG chooses voluntary participation, this is a permanent choice, and cannot vary from, say, day-to-day. It is our expectation that this additional detail would be explored further as part of future consultation and any rule changes. The AESO could, as part of their forthcoming recommendations, outline some of these items that require further discussion.</p> <p>We appreciate the AESO considering the cost of implementing this change on AESO systems, which we understand is minimal. However, we remain of the view that, at this time, only a few may sign up for voluntary participation given the costs that would be borne by the generator, relative to the benefits of active EOM participation.</p>
4.	Do you agree with the AESO recommendation of lowering the OR asset qualification thresholds to provide operating reserves for regulating reserve, spinning reserve, and supplemental reserve from the current requirement of 15 MW, 10 MW and 5 MW, respectively, to 1 MW? Why or Why not?	<p>In light of the recent AESO studies that suggest the capacity thresholds can be significantly lowered and it is technically feasible (page 15), yes, we support lowering OR capacity thresholds.</p> <p>We understand the AESO will be kicking off OR market reviews later in 2021 and assume further discussion and analysis on this change will be explored during these sessions.</p> <p>As part of the forthcoming recommendations, the AESO could summarize some of the items raised during these discussions that require further thought and consultation during the more detailed OR market review.</p>

5.	Do you agree with the AESO recommendation of allowing small DER (1 to 5 MW) participation in the OR market without a requirement to submit offers in the energy market? Why or why not.	<p>Yes. Given the motivation is to remove barriers in the EOM &/ OR markets, this would allow for more active small DER / DCG participation, without placing the higher cost burden of active EOM participation on the small DER / DCG.</p> <p>As outlined above, there appear to be a couple areas where more detail may be required. It is our expectation that this additional detail would be explored further as part of future consultation and any rule changes. The AESO could, as part of their forthcoming recommendations, outline some of these items that require further discussion.</p>
6.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the energy market? Why or Why not?	<p>Assuming there is no material change to the AESO draft recommendations, and EOM & OR market voluntary participation thresholds are reduced to 1 MW, we agree with the AESO placing exploration of aggregation options on the backburner. This assumes most existing and announced small DERs / DCGs are not materially harmed by this path forward.</p> <p>The AESO should, however, identify a set of market conditions or thresholds that would signal when this issue should be explored further. This could include a certain capacity or uptick in residential DERs (i.e. rooftop solar). Publishing these conditions / thresholds would allow for the market to also track changes over time and prepare for these eventual discussions.</p> <p>We understand there are some limitations to the current AESO IT systems that prevent participation less than 1 MW. At some point in time, this costly IT upgrade (page 14) will need to occur. Given the pace at which our market, and other jurisdictions, are moving towards smaller, more distributed, end-user controlled electricity solutions (including residential / EV battery sinks / sources), this may need to be explored in greater detail sooner, rather than later, in order to keep up with customers.</p>
7.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the OR market? Why or Why not?	See response to Q#6.
8.	In your view, what is the priority and pace required to progress the recommendations? Do they need to be progressed now or can they be implemented in the future? Please comment.	<p>Lionstooth remains firmly of the view that the priority should be on modelling, planning, and integrating all forms of DERs / DCGs, including dispatchable / controllable, into system planning models, the LTO and LTP.</p> <p>We understand materials shared in this discussion reflect preliminary LTO assumptions, and that the AESO received quite a bit of feedback on the LTO scenarios. We remain of the view that the AESO is underestimating growth in DERs / DCGs and that this may result in an unrealistic view in the LTO of our market's future</p>

		<p>state, with the potential to lead to more Tx wires system growth in the LTP.</p> <p>The delivered cost of electricity is high, and the priority should be on better integrating DERs / DCGs, such that the savings this generation can bring to the market can be realized.</p> <p>With respect to these specific recommendations, as outlined above, the AESO should continue along this approach of a measured and thoughtful pace to change, supported by quantitative analysis, including an evaluation of the impact of the changes on the future state of our market to identify and avoid any potential consequences of change.</p>
9.	Do you have any concerns or suggestions on the DER market participation process and timeline? Please comment.	We understand the AESO will be making a final recommendation shortly. It is our expectation this recommendation will really kick-off the next round of discussion, which will include additional analysis and discussion, as opposed to fast-tracking rule changes.
10.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities? Please comment.	We do not believe the comment matrix responses from the October 2020 session were posted on the AESO's website (or we cannot find them). The AESO should, as with other engagements, post all stakeholder comments & a summary / response from the AESO. This allows stakeholders to have access to the same feedback as the AESO.

Thank you for your input. Please email your comments to: stakeholderrelations@aeso.ca.

Stakeholder Comment Matrix – February 23rd, 2021

DER Market Participation Draft Recommendations



<p>Period of Comment: February 17th, 2021 through March 17th, 2021</p> <p>Comments From: Signalta Resources Linlimited</p> <p>Date: 2022/03/16</p>	<p>Contact:</p> <p>Phone:</p> <p>Email:</p>
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Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. Email your completed comment matrix to stakeholderrelations@aeso.ca **by March 17th, 2021.**

The AESO is seeking comments from Stakeholders with regard to the following matters:

	Questions	Stakeholder Comments
1.	<p>a) In your view, has the AESO’s approach reasonably addressed potential barriers to participation for Small DER in the energy and OR markets? Please comment.</p> <p>b) If significant barriers to participation in the energy and/or OR markets remain, what are they? Please comment.</p>	Yes, the ability for Small DER interested to voluntarily participate in the energy and OR market is a positive step forward. Many have been waiting for this opportunity.
2.	Do you agree with the AESO recommendation to maintain ISO Rules Section 203.1 <i>Offers and Bids for Energy</i> (must offer) requirement for energy submissions for source assets 5 MW and greater? Why or Why not.	Yes. Avoids changing the existing rules and the time and effort that would entail for further consultation. Allows proponents below 5MW (min 1MW) to voluntarily opt in to gain potential benefit and aids in the FEOC market. Many proponents may be either unable or unwilling to upgrade their facilities as the cost versus benefit may not be feasible for their specific installation so voluntary participation strikes the correct balance.
3.	Do you agree with the AESO recommendation of allowing voluntary participation in the energy market for small DERs 1 MW and greater? Why or Why not.	Yes. Small DER proponents can make their own economic decision to participate or not.

4.	Do you agree with the AESO recommendation of lowering the OR asset qualification thresholds to provide operating reserves for regulating reserve, spinning reserve, and supplemental reserve from the current requirement of 15 MW, 10 MW and 5 MW, respectively, to 1 MW? Why or Why not?	Yes. Small DER proponents can make their own economic decision to participate or not.
5.	Do you agree with the AESO recommendation of allowing small DER (1 to 5 MW) participation in the OR market without a requirement to submit offers in the energy market? Why or why not.	Yes. Small DER proponents can make their own economic decision to participate or not.
6.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the energy market? Why or Why not?	Yes. With voluntary opt in lowered to 1MW, the Asset size limitation is no longer a concern. Most smaller facilities either would still be unable or unwilling to meet the aggregation requirements. If the data systems that can recognize generation levels less than 1 MW are changed in the future, the issue can be revisited.
7.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the OR market? Why or Why not?	Yes. With voluntary opt in lowered to 1MW, the Asset size limitation is no longer a concern. Most smaller facilities either would still be unable or unwilling to meet the aggregation requirements. If the data systems that can recognize generation levels less than 1 MW are changed in the future, the issue can be revisited.
8.	In your view, what is the priority and pace required to progress the recommendations? Do they need to be progressed now or can they be implemented in the future? Please comment.	The recommendations should be implemented as soon as reasonably possible. We've been advocating for the ability for Small DERs to participate in both the energy and OR market for some time. Most decisions take far too long to implement. This is a minor however significant change for the few smaller proponents who have wanted in to these areas for some time but have been prevented from participating.
9.	Do you have any concerns or suggestions on the DER market participation process and timeline? Please comment.	Not at this time.
10.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities? Please comment.	Not at this time.

Thank you for your input. Please email your comments to: stakeholderrelations@aeso.ca.

Stakeholder Comment Matrix – February 23rd, 2021

DER Market Participation Draft Recommendations



<p>Period of Comment: February 17th, 2021 through March 17th, 2021</p> <p>Comments From: TransAlta Corporation</p> <p>Date: 2021/03/17</p>	<p>Contact:</p> <p>Phone:</p> <p>Email:</p>
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Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. Email your completed comment matrix to stakeholderrelations@aeso.ca by **March 17th, 2021**.

The AESO is seeking comments from Stakeholders with regard to the following matters:

	Questions	Stakeholder Comments
1.	<p>a) In your view, has the AESO’s approach reasonably addressed potential barriers to participation for Small DER in the energy and OR markets? Please comment.</p> <p>b) If significant barriers to participation in the energy and/or OR markets remain, what are they? Please comment.</p>	<p>TransAlta understand the AESO’s intent to remove potential barriers to participation for small DER in the energy and OR markets but we are also concerned with the solutions proposed by AESO. The AESO’s approach appears to be solely focused on reducing the requirements so that DER can participate in the energy and OR markets without recognition to the practical issues with ensuring that DER are held to the same standards and requirements as apply to all other resources. Our concerns with the the AESO’s proposal/recommendations are discussed in our responses to the questions below.</p> <p>To be clear, TransAlta owns and operates DER and does not oppose removal of unnecessary/unjustified “barriers” to DER participation but we also recognize that DER do not and may not wish to participate in the markets in an equivalent manner as larger resources. In this respect, we do not agree that the differences between DER and larger resources represent barriers but may rather reflect the operational and practical differences in the way that these resources participate in the energy market.</p>
2.	<p>Do you agree with the AESO recommendation to maintain ISO Rules Section 203.1 <i>Offers and Bids for Energy</i> (must offer) requirement for energy submissions for source assets 5 MW and greater? Why or Why not.</p>	<p><i>Whether the “must offer” requirement should be continued is a broader market design question than the framework for DER market participation; the AESO should separately consult on that matter.</i></p>

		<p>TransAlta agrees that: (1) the existing “must offer” requirement in Section 203.1 applies to source assets 5 MW and greater, and (2) the scope of DER market participation is focused on assets below 5 MW. We did not expect that the scope of this consultation included a review of whether the “must offer” requirement should continue to apply in the market rules.</p> <p>We note that the “must offer” requirement was put in place by the AESO (not at the request of market participants) and if the AESO now feels that the “must offer” requirement is no longer needed we are willing to explore the removal of that obligation for all resources in the market. That said, we recommend that the AESO consult specifically on that matter with appropriate notices to stakeholders as many of the stakeholders that should be given the opportunity to provide input on that decision may not realize that scope of this DER market participation consultation includes, more broadly, whether the “must offer” requirement should continue.</p>
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<p>3.</p>	<p>Do you agree with the AESO recommendation of allowing voluntary participation in the energy market for small DERs 1 MW and greater? Why or Why not.</p>	<p><i>The AESO should not impose a new requirement on DERs that are not changing their participation in the market.</i></p> <p>TransAlta agrees that intent of this consultation was to review the barriers to DER market participation and where possible to remove unnecessary barriers. The starting point of this evaluation is the current participation requirements, which do not require generating resources below 5 MW to make offer submissions in the energy market. We also note that there would be additional costs to DER owners if a requirement to make offers was mandatory. Taking these considerations into account, we agree that imposing a new requirement on DERs to make offers in the energy market would appear to be erecting a barrier to DER market participation and inconsistent with the manner in which these resources participate in the energy market today.</p> <p>TransAlta also agrees that should DERs plan to continue to participate (passively) in the energy market as they do today there should be no new requirement to make offer submissions in the energy market. We are doubtful that a DER would choose to voluntarily make offer submission and, more importantly, we are skeptical that the AESO's system are set up to handle dispatches of 1 MW and/or track dispatch compliance.</p> <p>However, if DER wish to participate differently and offer "premium" products such as OR that they should be required to participate in the same manner as other providers of those products including being subject to the same or similar requirements.</p>
<p>4.</p>	<p>Do you agree with the AESO recommendation of lowering the OR asset qualification thresholds to provide operating reserves for regulating reserve, spinning reserve, and supplemental reserve from the current requirement of 15 MW, 10 MW and 5 MW, respectively, to 1 MW? Why or Why not?</p>	<p><i>The OR thresholds should not be lowered until the AESO can provide assurances that large and small providers will be dispatched and directed on in the same manner.</i></p> <p>No, TransAlta does not agree with the AESO's recommendation to lower the OR asset qualification thresholds for operating reserves. The AESO must ensure that small DERs will be activated and directed to provide OR in an equivalent and proportionate manner to larger OR providers. Without providing this assurance, we believe that the AESO is conflating the creation of a different, less used OR product for small DER as enhancing competition.</p> <p>Our concern with the proposal is that the AESO has not explained how its systems or practices will be adapted to dispatch a fleet of small OR providers to ensure that large and small providers are treated the same when providing OR. Furthermore, the AESO has not presented the cost of changing its system to accommodate this change – which may be explained if the AESO did not contemplate that it would make any changes. Even today from our historical experience, we believe that the AESO's</p>

		<p>system controllers activate larger providers more frequently when loss of generation events occur than it does for smaller providers. If in the future the AESO has more 1 MW suppliers, we expect that the system controllers may have even more reason to prefer activating larger providers, particularly, if it is even more work to direct on small DERs.</p> <p>As noted by the AESO, much of the growth for DERs will come from intermittent renewables that cannot even provide OR. We struggle to reconcile whether there are real benefits of enabling DER participation in OR against its potential costs. We believe that the AESO is making a suboptimal trade off between open competition for fairness and efficiency in market in its recommendation.</p>
5.	<p>Do you agree with the AESO recommendation of allowing small DER (1 to 5 MW) participation in the OR market without a requirement to submit offers in the energy market? Why or why not.</p>	<p><i>Small provider in OR should be obliged to participate in the energy market in the same manner as larger providers.</i></p> <p>TransAlta recommends that small DER that participate in the OR market be subject to a mandatory requirements to submit offers in the energy market and, more importantly, follow AESO dispatches.</p> <p>Existing OR providers make offers into the energy market and in their offers they ensure that OR volumes that they have sold are offered at the top of the merit order to ensure that they have reserve their Available Capability (AC) to fulfill their OR obligations.</p> <p>In contrast to existing OR providers, the AESO has very limited visibility over small DERs. Small DERs don't show their AC, offer into the energy market, or even have any requirements to follow dispatch – as the AESO is aware, small DERs self-dispatch currently. There is no check or balance to prevent a small DERs from selling in the OR market and no reserving that capacity to meet their obligation but rather double selling it by generating in the energy market. We consider this a high risk under the AESO proposal and for these reasons we do not support the AESO's recommendation.</p>
6.	<p>Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the energy market? Why or Why not?</p>	<p><i>Pursuing aggregation has the benefit of shifting the cost of small DERs from the AESO to aggregators.</i></p> <p>We recommend that the AESO consider the cost and benefit of aggregation against the true cost of what it being proposed. At the highest level, we believe that aggregators save the AESO of the cost and effort to enable small DERs participation in the market and would be more cost effective that the AESO's proposal.</p> <p>Aggregators are in a better position to develop the systems require to accommodate</p>

		<p>small DERs in the market. In fact, aggregators are in business precisely because they have demonstrated their capability in providing these services in other markets and have invested into system to enable small DER participation.</p> <p>The benefit of enabling aggregators to provide this service is that the aggregator takes the risk and invests the capital to develop systems to allow small DERs participate in the market. This is a cost savings to the AESO and brings to bear competition between aggregators to drive down these costs. Moreover, the costs of aggregation service are paid for by the small DERs that use their service rather than being recovered from other market participants and load customers.</p>
7.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the OR market? Why or Why not?	<i>Please refer our response to question 6 above.</i>
8.	In your view, what is the priority and pace required to progress the recommendations? Do they need to be progressed now or can they be implemented in the future? Please comment.	<p><i>The recommendations are not sound and further consultation is needed.</i></p> <p>As expressed in our comments above, we do not support many of the AESO's recommendations. We suggest that if they are to be pursued our concerns, which we believe are shared by other market participants, should be addressed.</p> <p>We do not support the recommendations being progressed to ISO rules development or implementation now or in the near future (until our concerns are addressed).</p>
9.	Do you have any concerns or suggestions on the DER market participation process and timeline? Please comment.	<i>See our response to question 8 above.</i>
10.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities? Please comment.	<i>No other suggestions or comments at this time.</i>

Thank you for your input. Please email your comments to: stakeholderrelations@aes0.ca.

Stakeholder Comment Matrix – February 23rd, 2021

DER Market Participation Draft Recommendations



<p>Period of Comment: February 17th, 2021 through March 17th, 2021</p> <p>Comments From: URICA Asset Optimization</p> <p>Date: 2021/03/17</p>	<p>Contact:</p> <p>Phone:</p> <p>Email:</p>
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Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. Email your completed comment matrix to stakeholderrelations@aeso.ca **by March 17th, 2021.**

The AESO is seeking comments from Stakeholders with regard to the following matters:

	Questions	Stakeholder Comments
1.	<p>a) In your view, has the AESO’s approach reasonably addressed potential barriers to participation for Small DER in the energy and OR markets? Please comment.</p> <p>b) If significant barriers to participation in the energy and/or OR markets remain, what are they? Please comment.</p>	<p>Yes – however, from the standpoint of small DER, barriers to participation in the energy market are currently not that high. On the OR side the changes suggested obviously are a benefit to dispatchable small DER that has the ability to meet the OR market requirements, respond to dispatches and (likely) the ability to be operated remotely. In general it is hard to really ascertain how much of a benefit this actually will be to small DER based on the amount of non-dispatchable assets that are expected be added to the grid; however, while a positive change for small DER this is likely not a game changer.</p>
2.	<p>Do you agree with the AESO recommendation to maintain ISO Rules Section 203.1 <i>Offers and Bids for Energy</i> (must offer) requirement for energy submissions for source assets 5 MW and greater? Why or Why not.</p>	<p>No –UAO feels that if assets under 5 MW are going to participate in the OR market then they should also be under the energy market must offer requirements. Reducing the volume of small DER passively participating in the energy market is a benefit to the system controllers and AESO planning. UAO is unclear as to the rationale used to determine that a small DERs intending to participate in the OR market which will be required to meet appropriate technical and SCADA standards/requirements for OR qualification, including the ability to meet OR dispatches and directives should not be under the energy must offer requirement.</p>

3.	Do you agree with the AESO recommendation of allowing voluntary participation in the energy market for small DERs 1 MW and greater? Why or Why not.	No – as per our thoughts regarding participation in the OR market UAO believes that the ability to participate in the OR market should come with the need to must offer in the energy market. Voluntary participation should only be allowed if an asset has determined they will not participate in the OR market. Further to this, if an asset decides to initially to offer into the energy market then decides to change their mind, how is this managed? UAO is unsure why the AESO is choosing to creating unnecessary vagueness when a standard must offer threshold could be implemented. If the AESO feels that the costs outweigh the benefits for small DERs on this front then I guess the question is why are they going down this path? If the cost/benefit threshold is based on size of DER then should the 1 MW value be increase as opposed to adding ambiguity to an ISO rule?
4.	Do you agree with the AESO recommendation of lowering the OR asset qualification thresholds to provide operating reserves for regulating reserve, spinning reserve, and supplemental reserve from the current requirement of 15 MW, 10 MW and 5 MW, respectively, to 1 MW? Why or Why not?	Yes – In theory this change will provide added revenue potential for Small DER and increase market participation. At the same time, UAO does have some concerns regarding the compliance obligations and performance standards and tolerance bands for 1 MW assets. UAO is looking towards the AESO’s upcoming OR market design engagement to gain further understanding of the proposed changes and how they will align with the current AESO suggestions.
5.	Do you agree with the AESO recommendation of allowing small DER (1 to 5 MW) participation in the OR market without a requirement to submit offers in the energy market? Why or why not.	No - UAO does not agree with this concept. In principle it does not make sense to allow small DER or any asset to participate in the OR market without submitting offers in the energy market – UAO is unsure why the AESO would bifurcate these two commitments. In reality if an asset is offering into the OR market, they should be required to offer into the energy market both to allow for visibility of the assets AC but to also ensure that all participants in both markets are operating under the same principles and rules. If an asset can accept a dispatch for OR then they should have a corresponding energy offer in the market/system, there is really no rationale for this separation of requirements. Furthermore, if an entity considers the potential cost and effort required to provide OR is logical from cost/benefit perspective, they should be also submit energy offers without it being a cost barrier.
6.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the energy market? Why or Why not?	Yes – UAO does not see a significant benefit for small DER at this level to participate in the energy market and at this time does not see this as a market need or a high priority concern for small DER.
7.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the OR market? Why or Why not?	Yes - UAO agrees that at this time that aggregation below 1 MW is not a high priority considering the amount and breadth of other positive changes being recommended by the AESO as part of the small DER recommendations.

8.	In your view, what is the priority and pace required to progress the recommendations? Do they need to be progressed now or can they be implemented in the future? Please comment.	UAO believes the AESO recommendations should be moved forward at a measured pace, while the changes proposed are important and will allow for a more robust market, UAO believes the AESO should exercise caution with their implementation schedule to ensure that consideration has been given to other ongoing engagements and regulatory/compliance requirements ensuring alignment across all areas. Also, the AESO will be conducting an OR Market Review in late 2021 which will likely impact the proposed changes in this engagement.
9.	Do you have any concerns or suggestions on the DER market participation process and timeline? Please comment.	As currently stated the AESO is scheduled to respond to stakeholder feedback and provide a final recommendation in April 2021 – this feels like an extremely brisk timeline especially considering the alignment this process has with other ongoing engagements that have faced considerable delays.
10.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities? Please comment.	

Thank you for your input. Please email your comments to: stakeholderrelations@aeso.ca.

Stakeholder Comment Matrix – February 23rd, 2021

DER Market Participation Draft Recommendations



<p>Period of Comment: February 17th, 2021 through March 17th, 2021</p> <p>Comments From: The Office of the Utilities Consumer Advocate</p> <p>Date: 2021/03/17</p>	<p>Contact:</p> <p>Phone:</p> <p>Email:</p>
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Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. Email your completed comment matrix to stakeholderrelations@aeso.ca by **March 17th, 2021**.

The AESO is seeking comments from Stakeholders with regard to the following matters:

	Questions	Stakeholder Comments
1.	<p>a) In your view, has the AESO’s approach reasonably addressed potential barriers to participation for Small DER in the energy and OR markets? Please comment.</p> <p>b) If significant barriers to participation in the energy and/or OR markets remain, what are they? Please comment.</p>	<p>The UCA appreciates the opportunity to provide comments on the AESO’s DER market participation options. Yes, it is UCA’s view that the AESO has reasonably addressed potential barriers of significance.</p> <p>The UCA suggests a more integrated approach by the AESO to system planning and operation will be required with the growth of DER to continue to be proactive and identify/remove barriers for small DER participation in the energy and/or OR markets. This integrated approach must work towards improved coordination between the AESO, AUC, utilities, and load customers. The outcomes of this engagement for the DER market participation should also be linked to other ongoing policy initiatives such as transmission and distribution coordinated planning, the AESO tariff design, and possible AUC’s distribution roadmap.</p> <p>The UCA recognizes the importance for a customer interested in making an investment decision for installing a DER to easily access relevant information and data (such as real-time or near-real-time load information and prices). The data will help the customer estimate the potential costs of grid-supplied electricity that can be avoided by installing a DER and possibly facilitating their entry into the market. This information will also help</p>

		<p>the DER's owners understand how their source assets can meet their own energy needs at different hours a day, and the system needs to export their energy to the grid. It is the UCA's view that the AESO must weigh the costs of implementing any changes to remove such barriers with the benefits that it will provide. The UCA recognizes that administrative costs will be relatively high for smaller DER to participate in the energy and/or OR markets; however, this is a consequence of scale economies and should not be considered a barrier. It is UCA's view that all costs incurred to allow Small DER participation in the energy and/or OR markets should be paid for by the DERs and not consumers.</p>
2.	<p>Do you agree with the AESO recommendation to maintain ISO Rules Section 203.1 <i>Offers and Bids for Energy</i> (must offer) requirement for energy submissions for source assets 5 MW and greater? Why or Why not.</p>	<p>The UCA understands that reducing the minimize-size threshold for offer submission from 5 MW will increase the transparency and competition in the energy market, leading to enhanced market efficiency and possibly lower price for the energy market, especially with the high rate of DER adoption. On the other hand, lowering the threshold will increase the small DER market participant costs and regulatory burden as the market participant follow the "must offer-must comply" rule, which may create a barrier for small DER to enter the market. The UCA supports maintaining the 5 MW threshold for offer submission in the energy market, considering the current level of DER adoption at this point.</p>
3.	<p>Do you agree with the AESO recommendation of allowing voluntary participation in the energy market for small DERs 1 MW and greater? Why or Why not.</p>	<p>Yes, the UCA supports allowing small DER assets with 1 to 5 MW capability to participate in the energy market and submit their offers voluntarily, provided visibility is improved via technical interconnection standards. This will allow those small DER's who find more benefits to participate in the energy market directly and willing to meet the potential costs and effort needed to follow the "must offer-must comply" rule. Their ability to voluntarily opt-in and submit their offers will increase competition in the energy market.</p> <p>Moreover, this mechanism will allow the AESO to evaluate what portion of DER with lower than 5 MW capability are willing to submit their offer into the energy market directly. The result of this assessment will direct the AESO to whether reducing the 5MW offer submission threshold in the future if more and more small DERs are eager to participate in the market directly.</p> <p>However, once the DER voluntarily opts-in to participate in the energy market, the</p>

		<p>AESO must carefully consider how and if DERs are allowed to opt-out. The opt-in could be a one-time mechanism that signals to the market that a new entrant will be added to the supply stack. Opting out provisions may cause an unlevelled playing field to other market participants and potentially greater price volatility in the energy market, with the fluctuation of the available supply stack.</p>
4.	<p>Do you agree with the AESO recommendation of lowering the OR asset qualification thresholds to provide operating reserves for regulating reserve, spinning reserve, and supplemental reserve from the current requirement of 15 MW, 10 MW and 5 MW, respectively, to 1 MW? Why or Why not?</p>	<p>The UCA supports this recommendation as reducing the minimum asset size requirement to 1 MW will remove the barrier to entry for small DER participation. Higher participation of DERs into the OR Market has the potential to improve the grid reliability as more resources become available for the system operator to deliver power during system failure events effectively. As the AESO jurisdictional review indicated, almost all jurisdictions in North America have decreased or are proceeding to reduce their minimum participation size to 100 kW to enable the participation of resources in the OR market. It is not clear if these approaches of lowering thresholds as far as 100KW can provide the security of larger dispatchable generating units. On the other hand, the existing limits are a barrier to entry for DERs, and a reduction to 1MW with full visibility is acceptable.</p>
5.	<p>Do you agree with the AESO recommendation of allowing small DER (1 to 5 MW) participation in the OR market without a requirement to submit offers in the energy market? Why or why not.</p>	<p>Considering the combined effect of maintaining the minimum size threshold at 5MW to submit an offer in the energy market and lowering the minimum asset capability requirement to 1 MW for qualification in the OR Market, the UCA agrees to allow participation in the OR market without requiring the submission of offers in the energy market for source assets below 5 MW. This mechanism will increase competition in the OR market, remove the barrier to entry, and reduce the small DERs regulatory burden by eliminating the unnecessary mandatory participation in the energy market. The administrative costs for DER to participate in the OR market may not justify submitting offers (as opposed to a negative load response), but this should not become a barrier to entering the OR market if the DER meets the appropriate OR conditions and the owner considers the administrative burden to be cost-effective. It is UCA's view that any and all costs incurred by the AESO to implement this change should be borne by the participating DERs.</p>
6.	<p>Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the energy</p>	<p>As allowing the small DERs with the capability of 1 MW and greater to voluntarily</p>

	market? Why or Why not?	participate in the energy market and lowering the OR minimum asset qualification thresholds to 1 MW will address the need for more participation of DERs in both the energy and OR market, the UCA agrees to discontinue exploration of aggregation options for small DERs at this point. It may require that the AESO reassess the aggregation option in the energy and OR market in the future with the emerging high rate of DERs adoption and more interest from participation pursuing aggregation of their source assets.
7.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the OR market? Why or Why not?	Yes, the UCA has concerns over the ability to manage aggregations of smaller generators in a critical OR function, as expressed above. See responses to questions 4 and 6 above.
8.	In your view, what is the priority and pace required to progress the recommendations? Do they need to be progressed now or can they be implemented in the future? Please comment.	It is the UCA's view that DER recommendations should be implemented as soon as practicable, subject to the availability of AESO resources. As the DERs adoption is growing fast, it is essential for both the market participants and the electricity system to be able to capture the benefits of these new resources of energy. However, we acknowledge there are other higher existing priorities, such as the filing of a new Tariff to address Bulk and Regional Transmission cost allocations.
9.	Do you have any concerns or suggestions on the DER market participation process and timeline? Please comment.	No, the UCA does not have any concerns at this time.
10.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities? Please comment.	No comment.

Thank you for your input. Please email your comments to: stakeholderrelations@ieso.ca.

Stakeholder Comment Matrix – February 23rd, 2021

DER Market Participation Draft Recommendations



<p>Period of Comment: February 17th, 2021 through March 17th, 2021</p> <p>Comments From: Voltus Energy Canada Ltd.</p> <p>Date: 2021/03/05</p>	<p>Contact:</p> <p>Phone:</p> <p>Email:</p>
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Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. Email your completed comment matrix to stakeholderrelations@aeso.ca **by March 17th, 2021.**

The AESO is seeking comments from Stakeholders with regard to the following matters:

	Questions	Stakeholder Comments
1.	<p>a) In your view, has the AESO's approach reasonably addressed potential barriers to participation for Small DER in the energy and OR markets? Please comment.</p> <p>b) If significant barriers to participation in the energy and/or OR markets remain, what are they? Please comment.</p>	<p>a) Yes.</p> <p>b) Prohibiting aggregation of assets by geographic zone (which is allowed for Supplemental Reserves) poses a barrier to participation in the Spinning Reserves market.</p>
2.	<p>Do you agree with the AESO recommendation to maintain ISO Rules Section 203.1 <i>Offers and Bids for Energy</i> (must offer) requirement for energy submissions for source assets 5 MW and greater? Why or Why not.</p>	<p>No comment.</p>
3.	<p>Do you agree with the AESO recommendation of allowing voluntary participation in the energy market for small DERs 1 MW and greater? Why or Why not.</p>	<p>Voltus agrees with this recommendation. Small DERs should be able to participate in the energy market if they are capable and desire to do so. The current rule poses a barrier to participation inconsistent with FEOC operation of markets.</p>
4.	<p>Do you agree with the AESO recommendation of lowering the OR asset qualification thresholds to provide operating reserves for regulating reserve, spinning reserve, and supplemental reserve from the current requirement of 15 MW, 10 MW and 5 MW, respectively, to 1 MW? Why or Why not?</p>	<p>Voltus agrees with this recommendation. However, we would like to better understand how the AESO intends to measure performance and conduct settlement for small assets, inclusive of all forms of DER and Demand Response (consistent with the definition of DER in American ISOs/RTOs, Demand Response <u>is</u> a DER). Currently, DER <5 MW SCADA requirements are defined by the DFOs and not visible to the AESO. If AESO maintains this 5 MW minimum requirement and unless more stringent DFO requirements are in place, how are small assets expected to comply with the SCADA requirements for OR participation?</p>
5.	<p>Do you agree with the AESO recommendation of allowing small DER (1 to 5 MW) participation in the OR market without a requirement to submit offers in the energy market? Why or why not.</p>	<p>Voltus agrees with this recommendation. Mandatory participation in the energy market if participating in the OR market would pose a barrier to participation in the OR market for small DERs and thereby reduce competition in the OR market.</p>
6.	<p>Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the energy market? Why or Why not?</p>	<p>No comment.</p>

7.	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the OR market? Why or Why not?	Voltus agrees with this recommendation. Lowering the OR asset qualification thresholds to 1 MW will significantly reduce the need for aggregation in the OR market for most small DERs and the potential benefit of further aggregation options is limited. However, we do see the current prohibition against aggregating assets by geographic zone (which is allowed for Supplemental Reserves) as a barrier to participation in the Spinning Reserves market which should be addressed.
8.	In your view, what is the priority and pace required to progress the recommendations? Do they need to be progressed now or can they be implemented in the future? Please comment.	The recommendation to reduce asset qualification thresholds should be progressed now. The AESO thresholds are much higher than those of other North American jurisdictions and pose a significant barrier to participation.
9.	Do you have any concerns or suggestions on the DER market participation process and timeline? Please comment.	Voltus would like to see the OR Market Design initiative accelerated. We look forward to engaging in the stakeholder sessions throughout the conception and development phases in 2021.
10.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities? Please comment.	Not at this time.

Thank you for your input. Please email your comments to: stakeholderrelations@aeso.ca.