Stakeholder Comment Matrix – February 23rd, 2021

DER Market Participation Draft Recommendations

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

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

	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.	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. 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.
	Do you agree with the AESO recommendation to maintain ISO Rules Section 203.1 *Offers and Bids for Energy* (must offer) requirement for energy submissions for source assets 5 MW and greater? Why or Why not.	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 credis/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.

	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. 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.
	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?	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.
	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 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).
	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the energy market? Why or Why not?	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.

	Do you agree with the AESO recommendation of discontinuing exploration of aggregation options for small DERs in the OR market? Why or Why not?	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.
	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 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.
	Do you have any concerns or suggestions on the DER market participation process and timeline? Please comment.	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.
	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities? Please comment.	*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-*

		traditional stakeholders, rooted in developing meaningful smarter grid solutions in Alberta's unique context.

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