DER Session 1 Stakeholder Feedback



Posted: Nov. 25, 2020

- Capital Power
- Direct Energy
- ENEL
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DER Market Participation Options



Period of Comment: October 15th, 2020 through October 30th, 2020 Contact:

Comments From: Capital Power Corporation Phone:

Date: 2020/10/30 **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 October 30th, 2020.

	Questions	Stakeholder Comments
1.	In your view, are there barriers or issues with DER participation in the energy and/or OR market that should be addressed now? What are those barriers or issues and how should they be best addressed?	Capital Power appreciates the opportunity to provide comments on the AESO's <i>DER Market Participation Options</i> . Capital Power provides the following comments for consideration. Capital Power understands that there is growing interest in DERs in Alberta and that the AESO is being proactive with this initiative by identifying and potentially removing barriers to entry for DERs to participate in the energy and operating reserves market. However, and as our subsequent comments show, DER participation raises important issues for the market, and it is important that any potential rules that may be developed to enable DER participation are consistent with the level playing field principles established in the <i>EUA</i> .
2.	Is it important for market participation for DER/small DCG to be addressed with market design changes now, or can this be deferred into the future? Can you identifty priority items that should be addressed first?	Capital Power is supportive of a FEOC market that promotes market efficiency and is inclusive of all market participants. However, based on what the AESO presented at the October 14 th session, it does not appear that the benefits to small DCG (<5 MW) or the existing market will be enough to outweigh the costs associated with participant rule compliance and AESO implementation. The AESO stated it is considering changes to the energy market participation threshold to promote, in part, market efficiency and price fidelity by enabling small



		DCG to offer in the energy-market. Yet at the October 14 th presentation the AESO demonstrated that there will be limited, if any impact on pool price, if small DCG participates in the energy market. Capital Power submits that changes to the market design may not be necessary at this time, as the benefits do not seem to outweigh the associated implementation costs.
3.	If voluntary energy market participation were to be permitted for small DER (<5MWS), would you anticipate parties to use the opportunity to directly participate in the energy market? i.e. submit bids and offers, accept and respond to dispatches, comply with all applicable ISO rules? Why or why not? Please explain.	Based on the Oct 14 th presentation, Capital Power believes it is unlikely small DER owners would participate in the energy market. Capital Power supports the AESO's conclusion in the Oct 14 th presentation that there appears to be little benefit for small DER and the costs to implement changes may not be commensurate with benefits to Albertans. If Small DERs did participate in the energy-market, it is expected they would be held to the same standards of all other market participants.
4.	 a) Do you support lowering the minimum market participation thresholds in the energy and/or operating reserves markets? Please provide rationale as to why or why not. If yes, to what level? b) Do you support lowering the minimum market participation thresholds now, or at a future date? Please explain. 	Capital Power supports a FEOC market and submits that regardless of what the threshold is, all market participants should be subject to the same rules and requirements when participating in the energy and operating reserves markets. Any changes proposed by the AESO must also be within the bounds of the existing legislative and regulatory scheme. For example, generators that are qualified under the <i>Small Scale Generation and Micro-Generation Regulations</i> are obligated to offer at 0\$ and be excluded from the power pool, respectively. While there may be exceptions to these constraints, regardless of what the market participation threshold is, these assets may be restricted from participating. Capital Power also submits that if the minimum market participation threshold is lowered, participation for small DCG should not be voluntary. To maintain a level playing field, all generation, regardless of size must be obligated to comply with market rules, including Must-Offer-Must-Comply.
5.	If market participation thresholds are lowered for energy and/or operating reserve market participation, is there a need to review aggregation rules surrounding market participation (outside of aggregation for the purpose of meeting the market participation threshold)? Please explain.	Capital Power reiterates its comments in the previous question that all market participants should be subject to the same standards when participating in the energy and/or OR market.
6.	When considering aggregation, has the AESO missed any essential components?	Capital Power has no comments at this time.



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

DER Market Participation Options



Period of Comment:October 15th, 2020through October 30th, 2020Comments From:Direct EnergyPhone:Date:2020/10/30Email:

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	Questions	Stakeholder Comments
1.	In your view, are there barriers or issues with DER participation in the energy and/or OR market that should be addressed now? What are those barriers or issues and how should they be best addressed?	Direct Energy ("DE") is a strong advocate for the creation of market rules that can withstand the test of time and allow for long-term investments in capital based on a stable operating environment. The consideration of DER in advance of the anticipated exponential growth in DER is to the benefit of all.
2.	Is it important for market participation for DER/small DCG to be addressed with market design changes now, or can this be deferred into the future? Can you identify priority items that should be addressed first?	This can be deferred into the future to a certain extent, but should be fully contemplated by 2025.
3.	If voluntary energy market participation were to be permitted for small DER (<5MWS), would you anticipate parties to use the opportunity to directly participate in the energy market? i.e. submit bids and offers, accept and respond to dispatches, comply with all applicable ISO rules? Why or why not? Please explain.	This may be an opportunity for central aggregators to manage aggregated assets on behalf of small generators. DE does not expect that the average homeowner would be interested in submitting bids and offers, following dispatch instructions or complying with ISO rules.



4.	 a) Do you support lowering the minimum market participation thresholds in the energy and/or operating reserves markets? Please provide rationale as to why or why not. If yes, to what level? b) Do you support lowering the minimum market participation thresholds now, or at a future date? Please explain. 	Yes, DE is supportive of reducing the minimum to 1MW in the near term, as 5MW is not considered a small nameplate capacity.
5.	If market participation thresholds are lowered for energy and/or operating reserve market participation, is there a need to review aggregation rules surrounding market participation (outside of aggregation for the purpose of meeting the market participation threshold)? Please explain.	Yes, aggregation rules should be adjusted accordingly.
6.	When considering aggregation, has the AESO missed any essential components?	No.
7.	Do you have any concerns or suggestions on the DER market participation process and timeline?	No.
8.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities?	DE would like the FEOC operation of the market to continue so that there is a level playing field for all participants.

DER Market Participation Options



Period of Comment:	October 15 th , 2020	through October 30th, 2020	Contact:
Comments From:	Enel		Phone:
Date:	[2020/10/30]		Email:

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	Questions	Stakeholder Comments
1.	In your view, are there barriers or issues with DER participation in the energy and/or OR market that should be addressed now? What are those barriers or issues and how should they be best addressed?	As the AESO facilitates the entry of DERs, recognition has to be made that DER resources are much smaller but also potentially more dynamic and capable of providing value in different ways than traditional large-scale generation. This will require participation models and enablement that extract the value from the DER which will be different than that of a >5 MW traditional generator (whether behind the meter or as a stand-alone market participant).
		How value to the grid by a DER is measured needs to be examined. When dealing with large loads and their traditional BTF generation, measurement at the utility meter has been the only option. As DERs proliferate, situations will and have arisen where smaller assets are down stream of the utility meter and providing value to the system (by generating energy/reducing load that would have otherwise been consumed) but such value will not be measured due to the DERs' location and DERs' size relative to the size and load profile of the rest of the site. Meter configuration and measurement & verification needs to reflect the value of smaller DERs and not be "lost in the noise" due to the size of the overall facility and the traditional methods of measurement. For example, the AESO should consider how a 3 MW battery storage system connected behind the fence at a 20 MW steel mill might appear if measured at the utility meter — due to the volatile load of the steel mill (shifting 5 – 10 MW as furnaces cycle on and off intermittently), a 3 MW battery storage system following dispatch instructions



		(discharging 3 MW) perfectly might appear to be preforming erratically (or not at all) if measured at the grid connection point despite providing 3 MW of value to the grid by reducing the power that the steel mill would have otherwise consumed by 3 MW.
2.	Is it important for market participation for DER/small DCG to be addressed with market design changes now, or can this be deferred into the future? Can you identify priority items that should be addressed first?	Market participation for DER/small DCG should be addressed now. The system operator and the rate-payer are losing out on value that cannot be extracted due to the current market design. As noted in the answer 1, review of how resources are measured should be a priority as well as minimum size for participation as per question 4.
3.	If voluntary energy market participation were to be permitted for small DER (<5MWS), would you anticipate parties to use the opportunity to directly participate in the energy market? i.e. submit bids and offers, accept and respond to dispatches, comply with all applicable ISO rules? Why or why not? Please explain.	Participation in the energy market (bids/offers and response to dispatches) should be an option for small DERs.
4.	 a) Do you support lowering the minimum market participation thresholds in the energy and/or operating reserves markets? Please provide rationale as to why or why not. If yes, to what level? b) Do you support lowering the minimum market participation thresholds now, or at a future date? Please explain. 	 a) Yes. The minimum market participation thresholds in the energy and operating reserves market should be lowered. The arbitrary size of 5 MW prohibits the participation by smaller assets and aggregations. Almost all jurisdictions in North America have decreased their minimum participation size to 100 kw to enable the participation of non-traditional resources; resources that will provide value to the system operator and the rate-payer. As resource types evolve, so should market design to ensure new resource types who are able to provide value, can provide value. b) The minimum market participation thresholds should be lowered now. Currently AESO system is split into 5 different zones to enable participation in Operating Reserves. Since there is little to no congestion on the AESO system and directives are usually called for all zones, this would reduce the minimum size barrier to competition.
5.	If market participation thresholds are lowered for energy and/or operating reserve market participation, is there a need to review aggregation rules surrounding market participation (outside of aggregation for the purpose of meeting the market participation threshold)? Please explain.	For demand side resources participation as demand response, AESO has a fair and productive participation model which follows best practices.



6.	When considering aggregation, has the AESO missed any essential components?	
7.	Do you have any concerns or suggestions on the DER market participation process and timeline?	
8.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities?	Recognition has been made in the DER Update on the interdependencies and assumptions resulting from other initiatives/decisions. In the Energy Storage Market Participation Long Term Energy Storage implementation these are expanded. This includes an assumption that for Self Supply and Export - 'hybrid sites' (generation and storage) are not offside with the regulatory framework regarding self-supply. As innovation evolves, recognition needs to be made that there may be other forms of technology/resources that should be partnered together to provide value to the system operator, the rate payer and the customers. An example is the emergence of green hydrogen through partnerships of an electrolyzer and a renewable generator. The electrolyzer can act as a DER and participate in the AESO administered markets while partnered with a renewable energy asset. Under the current market participation rules, this set up would be considered self-supply which would limit export from the renewable energy resource. The rule which focused on minimizing defection from the grid, has now created a barrier for innovative energy ideas that would provide value.

DER Market Participation Options



Period of Comment:October 15th, 2020through October 30th, 2020Contact:Comments From:ENMAX CorporationPhone:Date:2020/10/30Email:

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	Questions	Stakeholder Comments
1.	In your view, are there barriers or issues with DER participation in the energy and/or OR market that should be addressed now? What are those barriers or issues and how should they be best addressed?	See ENMAX responses below.
2.	Is it important for market participation for DER/small DCG to be addressed with market design changes now, or can this be deferred into the future? Can you identify priority items that should be addressed first?	See ENMAX response to questions 3 and 4.
3.	If voluntary energy market participation were to be permitted for small DER (<5MWS), would you anticipate parties to use the opportunity to directly participate in the energy market? i.e. submit bids and offers, accept and respond to dispatches, comply with all applicable ISO rules? Why or why not? Please explain.	Unless the benefits of participating in the market outweigh the additional costs that would arise from having to bid the asset into the market and comply with market-related ISO rules, parties are unlikely to participate voluntarily. Costs include staffing 24x7, metering requirements and developing ISO rule compliance related systems.
4.	a) Do you support lowering the minimum market participation thresholds in the energy and/or operating reserves markets? Please provide rationale as to why or	ENMAX does not see enough benefit for lowering the minimum market participation thresholds in the energy and/or operating reserves markets at this time.

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	why not. If yes, to what level? b) Do you support lowering the minimum market participation thresholds now, or at a future date? Please explain.	The current penetration levels of DERs less than 5 MW remain negligible and lowering the minimum market participation thresholds would impose additional costs and processes onto small DERs – many of which are intermittent generation.
	олраш.	Small DERs are already able to indirectly participate in the market under the <i>Micro-Generation Regulation</i> , and select market price signals where they see an opportunity to profit and self-dispatch accordingly. The <i>Small Scale Generation Regulation</i> also provides smaller DERs with an avenue to access the electricity market with lesser requirements that would otherwise make it too burdensome for small scale units to connect.
		Unless the operating reserve 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.
		b) See response above. Before any future change is contemplated, a clear definition of the problem or issue the AESO is intending to solve should be identified. Additional work would also be required to better understand if a change to the minimum threshold should be extended down to small DERs.
5.	If market participation thresholds are lowered for energy and/or operating reserve market participation, is there a need to review aggregation rules surrounding market participation (outside of aggregation for the purpose of meeting the market participation threshold)? Please explain.	Yes, if market participation thresholds are lowered for energy and/or operating reserve market participation then aggregation rules surrounding market participation should also be reviewed to avoid any unintended consequences. Any changes should avoid exacerbating issues relating to self-supply and export and should not introduce new congestion challenges on the distribution or transmission systems.
6.	When considering aggregation, has the AESO missed any essential components?	If connected at the distribution level, there are always going to be potential issues of reliability within the DFO's control and DERs will need to understand the dynamic nature of the distribution system where they may not always be able to export to the grid. The AESO will not necessarily be in the position to control the generation assets and DERMS type investments may need to be made in some circumstances.
7.	Do you have any concerns or suggestions on the DER market participation process and timeline?	Changes to market constructs should not be made hastily as they will have immediate and long-lasting implications for Alberta's market. That said, the market design should not be touched, and stability is required.



8. Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities?

It is important to highlight that the *Micro-Generation Regulation* is a key enabling regulation in Alberta and as noted in the October 14 presentation, DER connection and operation should continue to be permitted under this regulation without additional burdens on DERs.

Any AESO developed DER and storage rules should not infringe on the DFO's ability and obligation to continue managing their respective systems. ENMAX supports the development of an AUC-vetted DFO-specific roadmaps that enables the paced and efficient integration of DERs within respective distribution systems.

DER Market Participation Options



Period of Comment:	October 15 th , 2020	through October 30th, 2020	Contact:
Comments From:	Heartland Generation Ltd. ((Heartland Generation)	Phone:
Date:	[2020/10/30]		Email:

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	Questions	Stakeholder Comments
1.	In your view, are there barriers or issues with DER participation in the energy and/or OR market that should be addressed now? What are those barriers or issues and how should they be best addressed?	Heartland Generation does not see overt barriers to DER participation in the energy and OR markets.
2.	Is it important for market participation for DER/small DCG to be addressed with market design changes now, or can this be deferred into the future? Can you identify priority items that should be addressed first?	Heartland Generation believes that there will be key information presented in the Alberta Utilities Commission's forthcoming findings paper regarding the Distribution System Inquiry (Proceeding #24116). As such, it may be prudent for the AESO to prioritize items based on the findings of the Distribution System Inquiry.
3.	If voluntary energy market participation were to be permitted for small DER (<5MWS), would you anticipate parties to use the opportunity to directly participate in the energy market? i.e. submit bids and offers, accept and respond to dispatches, comply with all applicable ISO rules? Why or why not? Please explain.	Heartland Generation does not think a "grey area" of voluntary participation is warranted, and that the 5 MW threshold for mandatory participation should be reviewed. For further discussion on lowering the minimum market participation threshold, see the response to #4.
4.	a) Do you support lowering the minimum market participation thresholds in the energy and/or operating reserves markets? Please provide rationale as to why or	a) The energy market, and related markets (i.e. ancillary services markets), are premised on level-playing field and fair treatment of market participants. With the principles of fairness, efficiency, and open competition in mind, Heartland Generation suggests that it may be appropriate to lower the mandatory

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	why not. If yes, to what level?	participation threshold for generation technologies. Microgeneration is exempt
	b) Do you support lowering the minimum market participation thresholds now, or at a future date? Please explain.	from energy market participation, and Heartland Generation is not advocating for this aspect to change; however, the 5 MW threshold which allows "voluntary" participation in the energy market seems arbitrary and may attract inefficient investment decisions. For example, a single asset with a capacity of 4.9 MW does not have to comply with ISO Rules (including must-offer and must comply), while a generator of 5 MW or greater must comply with all ISO Rules and directly participate in the energy market. Therefore an investor may choose to build one or several assets under 5 MW in order to avoid compliance costs and mandatory market participation, even though a single asset greater than 5 MW may be more efficient.
		As such Heartland Generation suggests that a minimum market participation threshold of 1 MW may be an appropriate starting place for discussion. 1 MW would align with the energy market minimum block size for offers and declaration of available capacity. It may be appropriate for DER greater than 1 MW, which does not qualify as microgeneration, to be fully part of the energy markets.
		b) Lowering the minimum market participation threshold will likely force certain upgrades to AESO systems and controls. The AESO should include in the next update what steps and processes would need to change in order to integrate this change. If the work level suggested by the AESO is significant, it may not be possible to lower the minimum market participation level in the near-term. Since the adoption of DER is likely to increase in Alberta, grandfathering and lowering the minimum market participation threshold now will limit regulatory holdup.
5.	If market participation thresholds are lowered for energy and/or operating reserve market participation, is there a need to review aggregation rules surrounding market participation (outside of aggregation for the purpose of meeting the market participation threshold)? Please explain.	Heartland Generation does not have direct comments regarding the aggregation rules.
6.	When considering aggregation, has the AESO missed any essential components?	Heartland Generation does not have direct comments regarding the aggregation rules.



7.	Do you have any concerns or suggestions on the DER market participation process and timeline?	Heartland Generation looks forward to the publication of the AESO's DER integration plan with prioritized activities. If the AUC publishes the Distribution System Inquiry report soon, Heartland Generation suggests that the AESO take guidance on the priorities and timeline from this document regarding the implementation of DER in energy markets.
8.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities?	Heartland Generation does not have any further comments at this time.

DER Market Participation Options



Period of Comment: October 15th, 2020 through October 30th, 2020 Contact:

Comments From: Lionstooth Energy Phone: Email:

2020/10/30 Date:

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	Questions	Stakeholder Comments
1.	In your view, are there barriers or issues with DER participation	Yes.
	in the energy and/or OR market that should be addressed now? What are those barriers or issues and how should they be best	The most significant barrier is regulatory and market design instability and uncertainty.
	addressed?	This should be immediately addressed by correcting / preventing market design changes where unintended consequences have resulted in further barriers to market participation.
		Over the longer-term, the status quo must be maintained until such time that any future regulatory / market design changes are clearly understood, and their impacts studied.
2.	Is it important for market participation for DER / small DCG to be addressed with market design changes now, or can this be	Both market design and tariff changes that impact market participation for small DER / DCG can and should be deferred into the future.
	deferred into the future? Can you identify priority items that should be addressed first?	It is good to have identified how our market differs from others, especially in light of other jurisdictions having much lower minimum asset size requirements. However, the costs of pursuing any such changes at this time, including AESO costs, almost definitely outweigh any benefits.
		Lionstooth believes that the AESO should prioritize modelling, planning, and integrating all forms of DERs / DCGs, including dispatchable / controllable, into system



		models, the LTO and LTP.
		DERs / DCGs want to have a meaningful impact and provide benefit to the integrated electric system. If the 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.
3.	If voluntary energy market participation were to be permitted for small DER (<5 MWs), would you anticipate parties to use the opportunity to directly participate in the energy market? i.e. submit bids and offers, accept and respond to dispatches, comply with all applicable ISO rules? Why or why not? Please explain.	Voluntary participation would entirely depend on the nature of the project and the participant. Having said this, market compliance requires dedicated effort and has real costs. We do not envision many small DERs / DCGs signing up for voluntary participation at this time.
		Lionstooth does appreciate concepts, like voluntary participation, being considered as our market transitions and looks to integrate a greater amount of DERs / DCGs.
4.	a) Do you support lowering the minimum market participation thresholds in the energy and/or operating reserves markets? Please provide rationale as to why or why not. If yes, to what level?	A. Yes. It is the customers of our market that are driving change and increases in DERs / DCGs. This will continue and include more, and smaller generation, serving first individual customers, then the local system, and eventually the Tx grid. Our market must transform to support this changing behavior, or risk alienating customers.
	 b) Do you support lowering the minimum market participation thresholds now, or at a future date? Please explain. 	B. Lowering the minimum market participation thresholds can be pursed at a future data. Again, it is good to have analyzed how Alberta compares to other jurisdictions. However, the costs to pursue and implement any such changes at this time, including the impacts on other market elements, like the ADV, most likely outweigh any short-term benefits.
5.	If market participation thresholds are lowered for energy and/or operating reserve market participation, is there a need to review aggregation rules surrounding market participation (outside of aggregation for the purpose of meeting the market participation threshold)? Please explain.	No comment.
6.	When considering aggregation, has the AESO missed any essential components?	Lionstooth would support more consultation on cross-site dispatch. While this concept is intriguing and could provide benefits to small DERs and the wires system, the considerations and discussion during the Session suggest further thought, analysis, and understanding of impacts is required.
7.	Do you have any concerns or suggestions on the DER market participation process and timeline?	Lionstooth supports the AESO's efforts to prioritize aspects of the DER Roadmap. As outlined above, near term focus should be on better incorporating DERs / DCGs into AESO models and planning, so that DERs / DCGs are better represented in next



		year's LTO and LTP.
8.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities?	 A few additional comments: Aligned Definitions: All would benefit from the use of clear and consistent terminology and definitions for DERs / DCGs, especially in light of the introduction of "small DCGs." DER / DCG Inventory: The session provided a handful of slides with additional analysis on existing DER / DCG inventories. While some information is available through the AESO's Microgeneration Report, other information is not. Perhaps the Microgeneration Report can be expanded to include some of this additional detail. Joint Sessions: We appreciate the AESO's efforts to schedule joint sessions when topics are related. Having seen this now applied twice (here and in the B&R Tariff Design Session #2), perhaps a better approach would be to schedule the sessions on the same day, allowing for a complete break (i.e. lunch) in between. This will allow stakeholders to attend whichever session they would like, without flipping back and forth between major concepts. This could also allow for more time for Q&A, as in some instances this had to be cut short due to time overruns on other topics.

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

DER Market Participation Options



Period of Comment:October 15th, 2020through October 30th, 2020Contact:Comments From:TransAlta CorporationPhone:Date:2020/10/30Email:

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	Questions	Stakeholder Comments
1.	In your view, are there barriers or issues with DER participation in the energy and/or OR market that should be addressed now? What are those barriers or issues and how should they be best addressed?	The existence of distribution-connected generation credits needs to be rationalized in the framework for generation development or otherwise eliminated. We view a key incentive for DER is the availability of distribution-connected generation credits. Regulatory uncertainty about the continuation of distribution-connected generation credits is a challenge to DER development. We continue to view the existence of this program as poor justified by energy policy (originally these were an incentive related to flare gas usage) and should be rationalized in the comprehensive framework for generation development on the distribution and transmission systems.
2.	Is it important for market participation for DER/small DCG to be addressed with market design changes now, or can this be deferred into the future? Can you identify priority items that should be addressed first?	The policy issue(s) with Distribution-connected generation credits should be resolved first; there are few significant barriers to DCG. TransAlta has owned distribution connected generation for a decades. We do not see any special need to address market design issues with respect to DCG participation. The emergence of microgeneration is newer but we also believe that these resources are not likely to be active market participants and there is little benefit to considering market design changes for these resources (due to cost-benefit considerations).



3.	If voluntary energy market participation were to be permitted for small DER (<5MWS), would you anticipate parties to use the opportunity to directly participate in the energy market? i.e. submit bids and offers, accept and respond to dispatches, comply with all applicable ISO rules? Why or why not? Please explain.	The burden and cost of submissions, dispatches and compliance would likely outweigh any benefit. There may be niche opportunities for aggregators to participate but we are not convinced that this will be significant. We note that for a small provider it is easier and provides all of the revenue-earning benefit to generate in the energy market without prescheduling, making offer submissions, or responding to dispatches — and without any of the incremental cost associated with these planning activities.
4.	 a) Do you support lowering the minimum market participation thresholds in the energy and/or operating reserves markets? Please provide rationale as to why or why not. If yes, to what level? b) Do you support lowering the minimum market participation thresholds now, or at a future date? Please explain. 	The requirements for the providers and the products should be applied the same regardless of any change to the threshold. TransAlta supports competition in the energy and/or operating reserves markets and expects that small and large resources will have the same/similar obligations and compliance requirements. We do not support any leniency in the standard that is applied to small provider versus a larger provider as the capacity or electricity sold is expected to be equally reliable and substitutable between suppliers. We neither support or reject lowering the minimum market participation threshold now or in the future. However, we ask that any incremental costs that is incurred in the near future be fully justified against its expected benefit as we are concerned about costs to consumers during the pandemic and as we progress through the ensuing economic recovery.
5.	If market participation thresholds are lowered for energy and/or operating reserve market participation, is there a need to review aggregation rules surrounding market participation (outside of aggregation for the purpose of meeting the market participation threshold)? Please explain.	Aggregation could be a lower cost way to accommodate small resource participation. We question whether the market participation thresholds should be lowered as aggregation may be a better way to enable smaller resource participation. As mentioned above, we are concerned about the potential cost. We view aggregation as a way to allow small resource participation at a lower cost than might be incurred if systems have to be adapted to accommodate lower thresholds – the aggregator takes on the obligation to create system to manage these assets. At a minimum, we believe the analysis should compare the cost of aggregation and cost of a lower minimum threshold.
6.	When considering aggregation, has the AESO missed any essential components?	No comments at this time.



7.	Do you have any concerns or suggestions on the DER market participation process and timeline?	No concerns or suggestions at this time.
8.	Do you have any other suggestions or comments you would like to share on DER market participation or the engagement activities?	No comments at this time.