17th December 2020

Australian Energy Market Commission
PO BOX A2449
Sydney South NSW 1235

Lodged online at: www.aemc.gov.au

AEMC: Generator registration threshold (ERC0256)

Dear Sir/Madam,

Wind Projects Australia Pty Ltd welcomes the opportunity to provide comments to the Generator registration threshold into the NEM consultation paper (ERC0256).

Wind Projects Australia Pty Ltd is a junior renewables developer currently active Australia wide, portfolio of projects includes wind projects with potential capacity ranging from 30 to 300 MW.

Our key points are:

We do not support the proposed change to the Non-Scheduled Generator Threshold from 30 MW to 5 MW for the following reasons:

- Penetration of Non-Scheduled Generation remains low. New proposed generation capacity currently under development is largely above 30 MW and thus would not be affected by the proposed change.
- Under the current rules, when deem necessarily, AEMO has already power under NER 2.2.3 to require Non-Scheduled generator to adhere to requirement relevant to Semi-Scheduled or Scheduled Generators.
- It will increase compliance risk and cost for small projects which do not have the scale or business model (e.g. Community led projects, dedicated projects to specific mining or industrial loads, single small embedded renewable ownership) to support without providing appreciable market benefits.
- Small generation projects (<30 MW) provide overall market benefits by adding generation capacity closer to where the demand is located. They remain nimble so to integrate more easily into capacity constrained networks. This reduce the need for additional network investment and lower electrical losses. Both promote the NEO. The proposed change will increase the financial hurdle rate for small projects to proceed and either discourage investment in this small market niche.

However, we do support proposed changed to the exemption process as they would

- Increase transparency of the exemption process
- Provide certainty and a clear path for eligible generators to progress their connection process as early as practical.

Specific feedback on the commission consultation is attached.

Should you have any questions relating to this matter, please contact Jerome Project Manager at via email jerome@windprojectsaustralia.com.au or by phone on (04) 1913 3538.

Yours sincerely,

Jerome Rowcroft Ph.D. B.E. (Mech)(Hons)
Director

Wind Project Australia Pty Ltd

Generator registrations and connections – consultation paper: stakeholder feedback template

The template below has been developed to assist stakeholders in providing their feedback on the questions posed in this paper and any other issues that they would like to provide feedback on. The AEMC encourages stakeholders to use this template to assist it to consider the views expressed by stakeholders on each issue. Stakeholders should not feel obliged to answer each question, but rather address those issues of particular interest or concern. Further context for the questions can be found in the consultation paper.

Organisation: Wind Projects Australia Project 1 Pty Ltd
Contact name: Jerome Rowcroft
Contact details (email / phone): email jerome@windprojectsaustralia.com.au/ 0419133538

Questions		Feedback
Chapter 1 – Introduction		
Question 1: Proposed assessment framework (p. 5)		
1	Do you agree with the proposed assessment framework or are there any additional assessment criteria the Commission should use when assessing identified issues and possible solutions?	We agree with the commission framework

Questions		Feedback
Chapter 2 – Participation of smaller-scale generation in central dispatch		
Question 2: Issue identified by AEC – increase in non-scheduled generation in the NEM (p. 15)		
1	Do you agree with the AEC that transition in the NEM's generation mix is trending towards having a greater proportion of non-scheduled generation?	We do not agree. Although we agree large conventional generators are currently been replaced by smaller generators. There are mostly larger than 30MW and thus would not be affected by the proposed rule change as they would typically register as Scheduled or Semi Scheduled. AEMO generation November data show that of the 61 GW of proposed and committed capacity, only 531 MW is proposed to be between 5 and 30 MW or less than 1%. The Median project size is 100 MW. AEMC review the Threshold in 2018 and rules that change were not necessary. For consistency, we believe the benchmark year that should be is 2018, which coincide with the latest AEMC ruling. Graph shown in Figure 2.2 shows a stagnant or declining trend of Non-Scheduled Generators share as a percentage of total generation capacity for all states expect SA. A large portion of SA Non-Scheduled Generator Capacity is explained by AEMO decision to register SA Temporary Diesel Back Up 9 x 30MW Diesel Generators totalling 276 MW as Semi-Scheduled.
2	Do you expect the capacity of non-scheduled generation as a proportion of total generation capacity to maintain the same growth trend into the future? If not, how do you expect this trend to change over time?	Yes. Most of the proposed generation capacity is intermittent generation or batteries. Generally, wind farm projects tend to be much larger than 30 MW and thus would register as Semi Scheduled. As previously mentioned, the current median project size is 100 MW which point to a declining share of Non-Scheduled Generation in the future under the current rules. Unless a large number of exemptions are made by AEMO for generators above 30 MW. There are currently in the NEM 58 MW and 732 MW of Non-Scheduled Wind and Solar Generation Proposed respectively or just under 2% to be added over the next 3 years. This capacity is marginal.

Questions		Feedback
Question 3: Issue identified by AEC – the forecasting and dispatch process (p. 16)		
1	Do you consider that the current penetration of non-scheduled generation in the NEM is causing difficulties or inefficiencies in the forecasting and market scheduling process?	Non-Scheduled Generators are connected to the sub-transmission or distribution systems. Their output is aggregated with local load. In cases where the local load is greater than the aggregated embedded generation capacity (incl. Non-Scheduled) connected to the network, no impact beyond load variation profile should be expected, which the NEM forecasting system is well equipped to handle. Some of the Non-Scheduled generators serve a specific load (Mine or Industrial Process) and their capacity will not be generating unless the associated load is present thus should no impact forecasting in a material way. We note that in large part the Non-scheduled Generators in the pipeline are solar projects whose output is largely predictable. There may be instance where a terminal station becomes a net exporter during load demand period causing some inaccuracy in forecasting. However, this may be handled by building better model of the aggregate load and embedded generator at each specific terminal station.
Question 4: Assessment of the proposed solution (p. 18)		
1	Do you consider that lowering the threshold for classifying new generators as non-scheduled would help to address the issues the AEC has identified for the efficient management of the power system? Why or why not?	No. We do not believe it would have an appreciable impact. We believe this issue is better addressed on a case by case basis. Initially, looking at the individual terminal station aggregated Load/Embedded Generation profile. Under the current NER, AEMO where deemed necessary, has power under 2.2.3 to require Non-Scheduled generator to adhere to requirement relevant to Semi-Schedule or Scheduled Generators. Should AEMO identify an issue with efficient management of the power system due to Non Scheduled Generator, it will be capable of acting post registration of such generators.
2	How much of an improvement to the accuracy of AEMO's forecasts would scheduling new	No comment

Questions		Feedback
	generators above 5 MW nameplate capacity have, compared with requiring this of all new and existing generators above this size?	
3	Do you think the costs associated with the AEC's proposal to reduce the thresholds have been adequately captured? How would these costs vary depending on whether the generator was scheduled or semi-scheduled?	Non-Scheduled Intermittent Generators are usually located in remote areas where network communication facilities are limited or non-existent. Terrain might require establishment on new communication infrastructure adding to the cost. Establishing redundant communication path could be costly and should be captured.
4	Do you agree with the AEC that the costs of participating in central dispatch have fallen to the extent where the market benefits of increasing the proportion of scheduled generation outweighs the costs to participants? Why or why not?	No. We have not seen any evidence of this presented. Also the market benefits arising from the proposed change have not been costed When assessing costs of operating as a semi schedule/schedule generator should include: - Generator costs - External Communication Infrastructure costs - Incremental Connection Cost - Compliance Cost during operation - Risk premium added to cost of capital Cost listed on page 18, do not consider cost of external communication infrastructure or incremental connection cost to upgrade local communication capability (e.g. installation of new OPGW) The anecdotal ongoing cost of $260,000 would represent a significant portion of the O&M budged of a 5-30 MW project. Depending on the O&M model of the generators, ongoing costs of $260,000 may be a low estimate for single project or entity with small portfolio of non-schedule generators. This entity would not have a regulatory manager and power system engineering resources at their

Questions		Feedback
		disposal and would need to consultant support. In this case, an estimate of $20,000 per year for monitoring of obligation, let alone a non-compliance event, could lead to much higher ongoing costs. Proposed rule change would create a competitive advantage for entity with large generation portfolio able to spread ongoing regulatory cost over many projects.
5	Do you agree with the AEC that its proposed scheduling threshold does not need to be made consistent with the thresholds that apply to system security management and technical connection requirements? Why or why not?	No Comment
6	If made, should the AEC's rule change only apply to new generating units at the time of their registration and AEMO's existing practise of grandfathering the changes apply to existing generators registered inconsistently with the new provision?	No. To maintain a level playing field, new provision should be applied across the board.
Question 5: Timing of the proposed solution (p. 19)		
1	Do you consider that the penetration of unscheduled generation has reached a level where a decision needs to be taken to lower the thresholds to require this generation to participate in central dispatch? Why or why not?	No. Please See question 2.
2	If not, what level of penetration would need to be reached before it is warranted to place	No comments

Questions		Feedback
	more scheduling obligations on this category of generator?	
Question 6: Is the proposed threshold of 5 MW nameplate capacity appropriate? (p. 21)		
1	Do you believe AEMO's 5 MW generator registration exemption threshold would serve as a reasonable threshold for participation in central dispatch? If not, what do you think this threshold should be?	No. Threshold should be left unchanged to 30 MW.
2	Do you think that factors other than the size of a generator should factor into whether a generator is required to participate in central dispatch? If so, what should these other factors be?	Yes. The following factors should be considered: - Ownership structure (IPP or community wind farm) - Portfolio size - Purpose and/or frequency of operation - Aggregate Embedded MW value of Terminal Station - Local Network communication capability
Question 7: Alternative solutions (p. 23)		
1	Do you have any suggestions for information which would satisfy these criteria to make the existing scheduling framework more accessible for small generators?	No Comments
2	Would AEMO's forecasting and market scheduling process benefit from partial visibility of non-scheduled generators?	No Comments
3	Can you suggest ways that participants could provide this information without becoming bound to the obligations of the existing	No Comments

Questions		Feedback
	dispatch process? Would the New Zealand approach, or the approach taken in relation to wholesale demand response in the NEM, be appropriate?	
4	Do you consider the benefits of implementing these alternative arrangements would outweigh the prospective additional system costs they might impose on the market by increasing the complexity of AEMO's operations?	No Comments
Chapter 3 – Exemptions in the registration process		
Question 8: Exemption issues – AEC (p. 31)		
1	Do you share the AEC's concern about the impacts of generator exemptions and non-scheduled classifications on the number of generators (and proportion of total generation) subject to scheduling obligations? Why or why not?	Yes. Reason for an exemption should be clary communicated to the market especially for generators above 30 MW. Generators eligible for an exemption should be made aware as early as possible in the process so they can confidently progress their connection process. It would also provide additional regulatory certainty and assisting with the financing process of these projects. Both measures would promote the NEOs.
2	Do you agree there is an issue with AEMO classifying generators as non-scheduled where it is satisfied that: a) the primary purpose of the generator is local use and it would rarely, if ever, send out generation above 30 MW?	No.

Questions		Feedback
	b) the individual generating units do not have the physical attributes to participate in central dispatch (regardless of whether they are part of a bigger system)?	
3	Do you share the AEC's concern about a lack of transparency surrounding AEMO's decisions to provide generators with registration exemptions or classify their generating units as non-scheduled? Why or why not?	We do share the AEC concerns for the same reasons outlined by the AEC. A generator eligible for an exemption should be able establish early on which connection path is relevant to its registration. It would make a lot sense that the path is clear and consistent across NSPs.
Question 9: Exemptions issues – Mr Vermeer (p. 31)		
1	What are your views on Mr Vermeer's concerns with the connection process for embedded generation owned, operated or controlled by entities that intend to be exempt from the requirement to register as a generator?	No Comment

Questions		Feedback
Question 10: Exemption solutions – AEC (p. 32)		
1	What are your views about the relative costs and benefits of the AEC's proposal to narrow the circumstances set out in the NER for exempting generators from the requirement to register or classifying generating units as non-scheduled?	We believe costs of the proposed lowering of the threshold from 30 MW to 5 MW will not deliver material market benefits: - the number of unregistered or non-scheduled generators remain low as a percentage of total generation; - In large part communicated future projects sizes are well above 30 MW and will not be affected by the proposed changes; - Generator with a rating below 30 MW offset local substation load and their impact is mostly washout at the local level; and - Infrastructures and ongoing costs to register as scheduled or semi-scheduled remain relatively high.
2	Besides the nameplate capacity, what would you consider to be appropriate reasons to provide an exemption or classify a generating unit as non-scheduled, such that they are not required to participate in central dispatch?	Besides the nameplate capacity, we would consider to be appropriate to provide an exemption or classify a generating unit as non-scheduled: - Purpose of the generation facility (e.g. supplying dedicated local load) - Amount of energy sent out annually (low frequency of operation) - Lack of existing network ability to transmit data/comm from the connection point, requiring an invest - Existing or lack thereof of communication link from the connection point - Terminal Station load net of existing embedded generation is still positive (i.e. absorbing from the transmission network)

Questions		Feedback
3	Are you in favour of the NER requiring AEMO to publish its reasons for making these exemption and classification decisions? Why or why not?	Yes. when the reasons are not obvious. For instance, Aggregated Generating capacity at the connection point exceed 30 MW. This would provide more transparency to other market participants.
Question 11: Exemption solutions – Mr Vermeer (p. 33)		
1	Do you consider that Mr Vermeer's proposed solution appropriately addresses the connection issues for embedded generators between 5 and 30 MW? Why or why not?	We consider that Mr Vermeer proposed solution in relation to added transparency of the exemption process will be a positive outcome.
2	Do you agree that there are potential inconsistencies with the solutions proposed by the AEC and Mr Vermeer? If so, do you have any recommendations for how they could both be accommodated?	No comments
3	Do you consider that the issue would be more appropriately addressed outside of the NER through changes to AEMO's procedures and processes?	One avenue that could be investigated is the accuracy combined modelling of the terminal substation load and embedded generation.