

Rebecca Lawrence
Australian Energy Market Commission
GPO Box 2603
SYDNEY NSW 2001

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Submitted online to: www.aemc.gov.au

Dear Ms Lawrence

Generator Registrations and Thresholds ERC0256

The Australian Energy Council (the “AEC”) welcomes the opportunity to make a submission in response to the Draft Determination on the rule changes submitted by the AEC and Mr Vermeer in relation to Generator Registrations and Thresholds.

The AEC is the industry body representing 21 electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. These businesses collectively generate the overwhelming majority of electricity in Australia, sell gas and electricity to over ten million homes and businesses, and are major investors in renewable energy generation.

Summary

The AEC supports:

- Narrowing the grounds upon which new generators can be exempted from scheduling, by removing National Electricity Rule (“NER”) 2.2.3(b)(1);
- Clarifying the arrangements for interpreting the threshold for generating systems with multiple units within 2.2.3(a); and
- Increasing the transparency and predictability of the registration process through the creation of guidelines.

The AEC disagrees with:

- The draft decision to not reduce the 30MW threshold; and
- The draft decision to not oblige AEMO to publish reasons when it has exercised its registration discretion.

The draft determination failed to analyse and discuss the following issues which are all relevant to the rejected changes:

- The existing practice by network businesses in Queensland and Tasmania to require that connecting generators above 5MW are scheduled or semi-scheduled;
- AEMO’s existing practice for applying a 5MW scheduling threshold to battery storage;
- The future performance of scheduling and dispatch following growth in the 5-30MW generator size category, as opposed to current performance;
- The inefficiency of network congestion when the dispatch engine is unable to control unscheduled parties who have greater than a 1:1 detrimental impact on the access of scheduled and semi-scheduled generators;
- The circumstances surrounding the 2018 re-registrations of 277MW of South Australian generation as non-scheduled, and whether the guidelines would have resolved the resulting industry confusion;
- The unlikelihood that parties will voluntarily elect to use the proposed “scheduled-lite” proposal.

Lower Scheduling Thresholds are already in use

In their submissions supportive of the lower threshold, Network Service Providers (“NSP”s) Ergon, Energex and TasNetworks each noted that they already apply a 5 MW scheduling threshold across their network areas.

The Draft Determination has made no mention of what appears to be a critically relevant matter. The AEMC should investigate how widespread is this practice (no submissions were provided by other NSPs) and why some NSPs consider such a limit necessary to securely manage their networks. It would seem likely that that such rationale is applicable across the entire NEM. In its discussion of benefits, the AEMC has focussed purely on wholesale market benefits (such as more accurate predispatch) without considering the local network security concerns that have led to such practices.

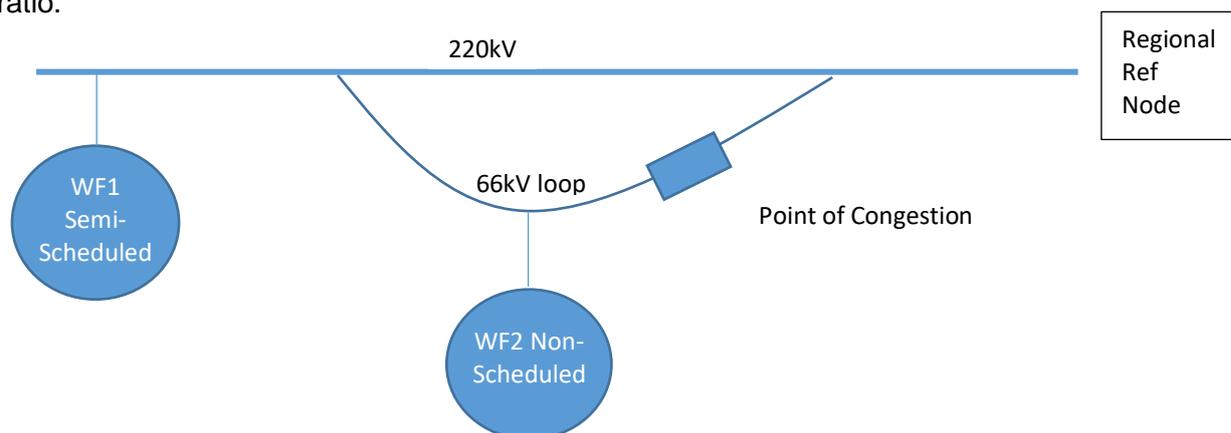
The NSP practice is also relevant to the cost side of the analysis, because it implies the rule change would have zero cost in relation to at least Queensland and Tasmania. It is also relevant to the socialisation of the proposal: the minority of submitters who opposed the rule change included Queensland Sugar representatives and the Queensland based SunMetals. It would seem these stakeholders were unaware that the rule change would have no effect on themselves.

It is AEC’s understanding that AEMO also applies a 5 MW scheduling threshold to battery storage. This issue was also not explored in the draft determination. The AEMC needs to explain why 5 MW scheduling is required for storage but not generation.

Finally, the Western Australian Wholesale Electricity Market (“WEM”) applies a 10MW threshold. The WEM is larger than the NEM’s South Australian and Tasmanian regions, where the relative impact of such generators would be larger. The draft determination should have explored the rationale for the WEM’s threshold and why it should not apply in the NEM.

Network congestion management

Whilst the Draft Determination explored questions of forecasting accuracy, it did not consider a key issue of dispatch inefficiency where non-scheduled generation exists in the proximity of scheduled and semi-scheduled generation. The issue is that smaller generators, in the 5-30MW range, will typically connect at lower voltage loops that congest higher voltage parallel lines to a greater than 1:1 ratio.



Examples of this scenario can be found in all NEM regions. If both generators were semi-scheduled, then a constraint of this form would apply:

$A*WF1 + B*WF2 \leq \text{Limit}$, where the ratio of A:B will typically be around 1:3¹

When faced with congestion, the dispatch engine would then correctly offload a scheduled WF2 first, as its output feeds directly into the congestion.

If however WF2 is non-scheduled, its output will appear on the Right-Hand-Side of the equation. Thus the dispatch engine can only resolve the congestion by reducing WF1, which must reduce by B MW for every A MW of WF2. I.e. the dispatch engine has had to inefficiently constrain off three times the total amount of generation.

As the congestion remains resolvable without the system becoming insecure, AEMO would not require WF2 to become semi-scheduled if it is below 30MW. The draft determination has not assessed the significance of these issues of inefficient resolution of looped network congestion.

Generator guidelines

The AEC supports the introduction of registration guidelines to assist intending generators better predict the likely outcomes of their applications. The AEC considers however that when AEMO has used its discretion to exempt a generator from the expectations of the rules, that it should provide an explanation.

As explained in our application, the primary motivation for our submission of this rule change related to the unexplained re-registration of some 277MW of generation plant to a non-scheduled status in South Australia in 2018. This was a very surprising event as it was entirely inconsistent with the expectations of the Rules, and of AEMO's previous and subsequent registration practices. Requests for an explanation were rebuffed on confidentiality grounds.

In the context of the South Australian system, this was a very large quantity of capacity, with material impacts on the accuracy of reliability forecasting. At that time AEMO was intervening for reliability purposes, incurring costs in excess of \$34m² in that year.

The AEC explained in the introduction to its rule change application that this historical reclassification was its primary motivation. It is therefore most disappointing that the draft determination has not found cause to mention it.

Were the situation to be replayed, it is not evident how a set of guidelines could have assisted. Almost certainly such guidelines would lead one to predict that the reclassification would have been rejected. Yet, for whatever reason, it would presumably still have occurred, and AEMO would not be bound to provide an explanation.

The AEMC needs to inform itself of the context of this event, and to explain how the provision of guidelines, without an obligation to explain, would have improved the result.

Scheduled-lite

The AEMC has placed great reliance on the "Scheduled-lite" options being developed within the Post 2025 review process will see 5-30MW generators eventually participate in the scheduling process. However these proposals are:

- Designed with demand-side and aggregator providers in mind and is unlikely to be useful for many generators. For example, the variable renewable energy generators are likely to only realistically find semi-scheduled bidding arrangement practical; and

¹ The impedances on the parallel lines on such loops tend to be broadly inversely proportional to the voltage

² https://aemo.com.au/-/media/Files/Electricity/NEM/Emergency_Management/RERT/RERT-report-for-2018-19.pdf

- Are entirely voluntary in the hope that several small private benefits (such as causer pays reductions) will overcome the private costs (such as losing the congestion advantage over semi-scheduled plants as described above).

The AEC considers that whilst scheduled-lite remains voluntary, it will not be used by small generators, or indeed by any participants. This is discussed in the AEC submission to the Post 2025 Review³.

Conclusion

The AEC supports the parts of the rule change that the AEMC has retained being made into rules and the proposed guidelines. The AEC disagrees with the rejection of the most significant matters, being:

- A lowering of the scheduling threshold; and
- An obligation upon AEMO to explain its use of discretion.

In coming to its conclusion, the AEC feels the AEMC has failed to consider some critical matters, in particular:

- Existing practices by network businesses, AEMO and WEM rules in already applying lower thresholds to generators and/or storage;
- Efficient management of congestion in network loops;
- Circumstances surrounding the registration event that triggered the rule change proposal; and
- The low likelihood that 5-30MW will voluntarily subject themselves to “scheduled-lite”.

Any questions about this submission should be addressed to the writer, by e-mail to Ben.Skinner@energycouncil.com.au or by telephone on (03) 9205 3116.

Yours sincerely,



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Australian Energy Council

³ See page 10 and B27-B43 of <https://www.energycouncil.com.au/media/ynoqhw5/aec-response-to-p2025-market-design-consultation-paper.pdf>