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Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Postal Address:

Level 22
530 Collins Street
Melbourne VIC 3000

Postal Address:
GPO Box 2008
Melbourne VIC 3001

T 1300 858724
F 03 9609 8080

By online submission

Dear Mr Pierce

Connecting Embedded Generators Draft Rule Determination (ERC0147)

AEMO appreciates the opportunity to comment on the Draft National Electricity Amendment (Connecting Embedded Generators) Rule 2013 determination.

AEMO understands that the intent of the draft rule is to overcome barriers to efficient investment in embedded generation and is likely to be applicable to smaller-scale generators embedded within industrial or commercial premises. AEMO considers that there are information barriers for both embedded generation proponents and distribution network service providers (DNSPs) and there is a need to reduce these to allow for the efficient connection of embedded generating units to distribution networks. AEMO considers the draft rule should assist in overcoming a number of the barriers identified by the rule change proponents. However, AEMO is concerned that the draft rule might have further consequences that the AEMC needs to address prior to publishing its final rule. AEMO's detailed comments are addressed below.

1. Application of the new process

The National Electricity Rules (NER) defines 'embedded generating unit' as:

"A generating unit connected within a distribution network and not having direct access to the transmission network."

AEMO considers that this definition is ambiguous because the meaning of "not having direct access to the transmission network" is unclear. Therefore, an embedded generating unit could be taken to mean any generator connected to a distribution network including large generators being connected for the sole purpose of participating in the national electricity market (NEM).

Under Chapter 5 of the NER, AEMO assesses connection applications and has assessed generating units and generating systems of up to 150 MW connecting to the distribution network. The draft rule does not distinguish the potential size or impact of embedded generating units and would, therefore, apply to more significant generating units or generating systems. AEMO considers that the connection of large generating units or generating systems should be consistent regardless of whether the connection point is to a distribution network or a transmission network, the current Chapter 5 of the NER process allows for this. AEMO identifies benefits in clarifying and simplifying the rules applicable to smaller generators such as those co-generation plants in commercial buildings or within

industrial sites for whom generation is convenient and efficient but not necessarily core business for the owner.

AEMO is concerned that a one-size-fits-all approach is inappropriate for larger generating units or multiple smaller generating units comprising a larger generating system seeking to connect to the distribution network. Further, if the new process is applicable to a broader range of distribution connected generators, it is unlikely that the objective of providing simpler, more consistent and less onerous automatic technical standards for connection of embedded generating units would be achieved. This would occur because DNSPs are likely to determine their requirements based on the possibility of large generators using this process to register. To address this issue, AEMO suggests that the final rule should clearly define which embedded generating units or generating systems could use the new process.

AEMO considers that this could be achieved if the proposed process should only apply to generators exempted from the requirement to register with AEMO under clause 2.2.1(c) of the NER.¹ Alternatively, the definition could state the upper limit size for a generating unit or generating system. The draft rule includes a provision to advise a transmission network service provider of a connection application of more than 10 MW. This requirement recognises the more significant impact such generating units or generating systems may have on power system security and the greater need to consider the details of the connection. On this basis it may be appropriate that the proposed process only be applicable for generating unit or generating system below 10 MW.

2. Technical standards

AEMO notes that the proponent's rule change request suggested there was a lack of certainty and consistency regarding the application of Schedule 5.2 to small embedded generators. This schedule normally applies to registered generators. It contains provision that when a generator is exempt or is eligible for exemption from registration the network service provider (NSP) may waive the application of Schedule 5.2 if it considers the generator is unlikely to cause a material degradation in the quality of supply to other network users.

The draft rule does not provide additional certainty to proponents of smaller embedded generating units or generating systems regarding whether Schedule 5.2 would apply to them.

Further, draft Schedule 5.4B(b) places the responsibility for proposing negotiated standards on the DNSP rather than on the connection applicant. This approach is likely to be beneficial to the efficient development of embedded generation as the DNSP should have greater experience in developing acceptable standards. However, this might still be a difficult task for a DNSP not possessing sufficient information regarding the technical characteristics of the generating units or generating systems to be installed. Ultimately, connection applicants are responsible for achieving and maintaining compliance with the performance standards and it is essential that they also gain understanding of these the requirements.

AEMO considers that clarifying the definition of embedded generating units and restricting the application of the draft rule to generators exempted from the requirement to register with AEMO or generators below a certain size would resolve AEMO's concerns regarding clarifying the application of technical standards.

¹ Refer to Appendix 6 of the Generator Registration Guide at: http://www.aemo.com.au/Electricity/Registration/Participant-Categories/~/_media/Files/Other/registration/NEM_Generator_Registration_Guide.ashx.

3. Information Exchange

The new process outlined in the draft rule makes provision for various types of information to be exchanged through the connection enquiry and application stages.

Schedule 5.2 also includes a section regarding provision of information. AEMO is concerned that there needs to be clarity regarding the extent and type of information to be exchanged.

It is important that a mechanism remains for DNSPs and AEMO to obtain data and information that is relevant to their planning and operational obligations, particularly for large generating systems or if there are multiple generators connected in a locality. To achieve this AEMO consider it is important to clarify the generators to which Schedule 5.2 applies.

4. Technical disputes

Draft rule 5.9A provides a mechanism to resolve any technical disputes between a DNSP and a connection applicant using an independent expert.

The types of technical dispute that are included under this rule include minimum and negotiated access standards, fault levels and clearance times, communication facilities and control characteristics. AEMO suggests that some (not all) of these issues included in the draft rule 5.9A might be more efficiently resolved by consulting with AEMO. AEMO has experience in reaching agreement on access standards between NSPs and generators across NEM regions and for a range of generator sizes and locations and should be able to contribute positively to resolving any disputes regarding technical standards.

AEMO suggests that a requirement be included to discuss any disputes relating to access standards with AEMO as an independent expert, similar to the manner in which AEMO presently provides dispute resolution under rule 5.8.3. Only if the issue cannot be resolved with AEMO should it be referred to another independent expert under the proposed procedure defined in draft rule 5.9A. This approach is consistent with rule 5.3.4A where AEMO has a role in assessing negotiated access standards in relation to AEMO advisory matters. Further, it would enhance the consistency across the NEM regarding the requirements placed on embedded generators.

If you have any questions regarding this submission please do not hesitate to contact Rob Jackson on (03) 9609 8362.

Yours sincerely



Terry Grimwade
Group Manager, Market Development