



Australian Energy Market Commission

RULE DETERMINATION

National Electricity Amendment (Registration of proponents of new types of generation) Rule 2016

Rule Proponent(s)

AEMO

26 May 2016

**RULE
CHANGE**

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Reference: ERC0204

Citation

AEMC 2016, Registration of proponents of new types of generation, Rule Determination, 26 May 2016, Sydney

About the AEMC

The AEMC reports to the Council of Australian Governments (COAG) through the COAG Energy Council. We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the COAG Energy Council.

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Summary

The Australian Energy Market Commission (AEMC or Commission) has determined to make a rule in response to a rule change request submitted by the Australian Energy Market Operator (AEMO). The rule amends the definition of ‘generating unit’ in Chapter 10 of the National Electricity Rules (NER) to make it clear that the rules for eligibility for registration as a Generator are technology-neutral, so that non-traditional generation like battery storage and solar PV is being appropriately included.

In order to participate in the NEM, a person must become registered in relation to the activity they wish to undertake in the market, eg, generation. AEMO has received a number of inquiries from parties interested in participating in the National Electricity Market (NEM) as ‘Generators’ who AEMO believes are ineligible for registration because the type of generation they are proposing does not fall within the current definition of ‘generating unit’.

A number of submissions to the AEMC’s work on the Integration of Energy Storage¹ also commented on this lack of clarity regarding the definition of ‘Generator’. As a result, AEMO proposed a rule change to address this issue in a timely manner.

The Commission has determined that it should make the rule as proposed as it considers it will, or is likely to, contribute to the achievement of the National Electricity Objective (NEO). This is because it considers the rule will promote efficient investment through promoting technological and process neutrality, as well as regulatory certainty as to those parties that can register as a Generator.

This rule change was considered under the expedited rule making process because the Commission considered the rule change request was a request for a non-controversial rule (being a rule which is unlikely to have a significant impact on the NEM).² No objections to the use of this process were received.

¹ AEMC, *Integration of Storage*, Final Report.

² Section 87 of the National Electricity Law.

1 AEMO's rule change request

1.1 The rule change request

On 11 February 2016, AEMO made a request to the Australian Energy Market Commission (Commission) seeking to amend the definition of the term 'generating unit' in Chapter 10 of the National Electricity Rules (NER) and omit clause 2.2.1(b) of the NER.

1.4 Background

In order to participate in the NEM, a person must become registered in relation to the activity they wish to undertake in the market. Chapter 2 of the NER governs the eligibility for participation and the process by which parties can apply to AEMO to participate in the NEM, eg, generation.

Clause 2.2.1(e) of the NER sets out what a person must do to be eligible for registration as a Generator, specifically:

'obtain the approval of AEMO to classify each of the generating units that form part of the generating system that the person owns, operates or controls, or from which it otherwise sources electricity...'

Currently the phrase 'generating unit' is defined in Chapter 10 of the NER as:

'The actual generator of electricity and all the related equipment essential to its functioning as a single entity'.

A number of submissions to the AEMC's Discussion Paper on the Integration of Energy Storage commented on a lack of clarity regarding who could register as a Generator. At that time, the Commission noted that to the extent that there is any perceived ambiguity regarding the definition of 'Generator', any interested party could submit a rule change request to the AEMC for consideration.³

1.2 Rationale for the rule change request

AEMO has received a number of inquiries from parties interested in participating in the NEM as 'Generators' who AEMO believes are ineligible for registration because the type of generation they are proposing does not fall within the current NER definition of a generating unit. This is discussed further in section 3.1.

Therefore, AEMO sought to clarify that the rules for eligibility for registration as a Generator are technology-neutral.⁴

³ AEMC, *Integration of Storage*, Final Report, p. 22.

⁴ Registration as a generator is currently only required for plant over 5MW, although AEMO has discretion about registration thresholds.

1.3 Solution proposed in the rule change request

The rule proponent proposed to resolve the issues referred to above by making a rule that would clarify that the rules for eligibility for registration as a Generator are technology-neutral. Under the proposed rule the definition of 'generating unit' in Chapter 10 of the NER would be amended as follows:

'The ~~actual generator of~~ plant used in the production of electricity and all ~~the~~ related equipment essential to its functioning as a single entity'.

In addition, under the proposed rule clause 2.2.1(b) would be deleted. Clause 2.2.1(B) states the following:

'A person who otherwise supplies electricity to a transmission or distribution system may, on application for registration by that person in accordance with rule 2.9, be registered by AEMO as a Generator'.

AEMO considered that clause 2.2.1(b) was not useful and had the potential to create confusion. It would not have assisted an applicant with non-conventional forms of generation to register as a Generator, as in order to register as a Generator, the applicant would still have had to classify its generating units under clause 2.2.1(e). This meant that the supply of electricity under clause 2.2.1(b) could only be carried out using a generating unit, which needed to conform to the definition in Chapter 10 of the rules.

AEMO considered that these proposed amendments to the rules would remove the unintended barrier to entry for non-conventional producers of electricity, supporting technological and process neutrality. The merits of each application for registration as a Generator would then be assessed on the basis of operational and market considerations, as required by the NER.

1.5 Commencement of rule making process

On 14 April 2016, the Commission published a notice under section 95 of the National Electricity Law (NEL) advising of its intention to commence the rule making process and the first round of consultation in respect of the rule change request. A consultation paper identifying specific issues and questions for consultation was also published with the rule change request. Submissions closed on 12 May 2016.

The Commission received seven submissions on the rule change request. They are available on the AEMC website⁵. A summary of the issues raised in submissions and the Commission's response to each issue is contained in Appendix A.

The Commission was of the view that the rule change request was a request for a non-controversial rule. Accordingly, the Commission intended to expedite the rule change request under section 96 of the NEL, subject to any written requests not to do so. The closing date for receipt of written requests was 28 April 2016. None were received. Accordingly, the rule change request was considered under an expedited process under section 96 of the NEL.

5 www.aemc.gov.au

2 Final rule determination

2.1 Commission's determination

In accordance with section 102 of the NEL the Commission has made this final rule determination in relation to the rule proposed by AEMO. In accordance with section 103 of the NEL the Commission has determined to make the rule proposed by AEMO. The Commission's reasons for making this final rule determination are set out in section 3.1.

The *National Electricity Amendment (Registration of proponents of new types of generation) Rule 2016 No. 4*. (rule as made) is published with this final rule determination. The rule as made commences on 26 May 2016. The rule as made is the same as the rule proposed by the Rule Proponent. Its key features are described in section 3.2.

2.2 Commission's considerations

In assessing the rule change request the Commission considered:

- the Commission's powers under the NEL to make the rule;
- the rule change request;
- submissions received during consultation; and
- the Commission's analysis as to the ways in which the proposed rule will or is likely to, contribute to the achievement of the National Electricity Objective (NEO).

2.3 Commission's power to make the rule

The Commission is satisfied that the rule as made falls within the subject matter about which the Commission may make rules. The proposed rule is within the matters set out in s. 34 of the NEL, as it is related to regulating the operation of the national electricity market; and the operation of the national electricity system for the purposes of the safety, security and reliability of that system.

2.4 Rule making test

Under section 88(1) of the NEL the Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the NEO. This is the decision making framework that the Commission must apply.

The NEO is set out in section 7 of the NEL as follows:

"The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:

- (a) price, quality, safety, reliability and security of supply of electricity;
and
- (b) the reliability, safety and security of the national electricity system."

Under section 91(8) of the NEL, the Commission may only make a rule that has effect with respect to an adoptive jurisdiction if it is satisfied that the rule is compatible with the proper performance of the AEMO's declared network functions. The rule is compatible with AEMO's declared network functions because it does not affect AEMO's performance of those functions.

2.5 Assessment framework

For the rule change request, the Commission considers that the relevant aspect of the NEO is promoting efficient investment in electricity services with respect to the price, reliability and security of supply of electricity and the national electricity system.⁶

To give effect to the NEO, the following principles have been used to guide the assessment of this rule change request:

- **Regulatory certainty and clarity:** regulatory certainty supports confidence in markets and supporting regulatory arrangements. For market participants, confidence in regulatory arrangements may encourage them to actively participate and invest in the market, which promotes efficiency.
- **Technological neutrality:** regulation should be technologically neutral. There should be no bias or barrier towards any particular technology in the registration process.
- **Unintended consequences:** the assessment of this rule change request has considered whether changes to the rules may generate unintended consequences.

2.6 Summary of reasons

Having regard to the issues raised in the rule change request, the Commission is satisfied that the rule as made will, or is likely to, contribute to the achievement of the NEO because:

- The rule will support **regulatory certainty**, by clarifying that non-conventional producers of electricity (that is, owners of plant that does not convert mechanical to electrical energy) can apply to register as Generators.
- The rule will support **technological neutrality**, by removing an unintended barrier to entry for non-conventional producers of electricity.
- There are unlikely to be **unintended consequences** from the rule being made.

⁶ Under section 88(2), for the purposes of section 88(1) the AEMC may give such weight to any aspect of the NEO as it considers appropriate in all the circumstances, having regard to any relevant MCE statement of policy principles.

3 Commission's assessment and decision

3.1 AEMO's view

AEMO considers that making the proposed rule will, or is likely to, contribute to the achievement of the NEO by promoting efficient investment in electricity services with respect to the price, reliability and security of supply of electricity and the national electricity system. The purpose of the proposed rule is to clarify that the rules for eligibility for registration as a Generator are technology-neutral.

Specifically, AEMO is concerned the current definition of a 'generating unit' as set out in the rules excludes forms of generation which do not convert mechanical energy into electrical energy, such as solar PV and battery storage.

The word 'generator' as used in the context of the definition of generating unit is not defined in the NER (although the term Generator is defined).

The word 'generator' is commonly used by industry participants when referring either to the plant used to generate electricity or the owner/operator of that plant. For this reason, AEMO considers that a Court may find it difficult to arrive at a 'common' meaning of the term 'generator' and therefore may resort to a dictionary to determine the meaning of the term.

The Macquarie Dictionary, commonly used for statutory interpretation in Australia, defines a generator as:

'a machine which converts mechanical energy into electrical energy'.

Given this, AEMO is of the view that currently, plant that does not convert mechanical energy to electrical energy are not "generating units" within the meaning of the NER and therefore the owners and operators of this plant are ineligible for registration as Generators. This creates an unintended barrier to entry for operators of non-conventional electricity generation eg, a solar PV or battery storage system that converts chemical energy to electrical energy.

3.2 Stakeholder views

All stakeholders supported the proposed amendments to the definition of 'generating unit' in Chapter 10 and the deletion of clause 2.2.1(b) of the NER, in order to achieve technological neutrality.⁷

However, Ergon and Energex expressed concern that the amended definition would automatically capture non-conventional generation technologies such as batteries, with the unintended consequence that such technologies would only be able to be used as generators.⁸ Similarly, the ENA noted that while storage may be employed as a

⁷ See submissions on the Consultation Paper: Ergon Energy, pp. 1-2; Energex, p. 1; ENGIE, pp. 1-2; ENA, p. 1, Stanwell, p. 1; AER, p. 1; AGL, p. 1.

⁸ See AGL submissions on the Consultation Paper, p. 1.

generating unit to produce electricity and participate in the NEM, this is not its only potential function.⁹

3.3 Analysis and conclusion

3.3.1 Regulatory certainty

The Commission agrees with AEMO that the rule will promote regulatory certainty by clarifying that owners and operators of non-conventional plant are eligible for registration as Generators.

3.3.2 Technological neutrality

The current definition of 'generating unit' may act to prevent some emerging technologies from being registered as Generators. This in turn will prevent them from competing in the wholesale market.

Making it clear that proponents of non-conventional generation are eligible to participate in the NEM as Generators, will increase the amount of generation, and so will support competition in the wholesale market, resulting in more efficient investment outcomes. An increase in sources of Generator bids may also result in more efficient dispatch solutions.

An increase in the variety of sources of generation in the NEM may also drive more efficient investment in networks. The need for investment in network augmentation is likely to reduce if more non-conventional, distributed generation is installed and so non-network alternatives can be pursued.

3.3.3 Unintended consequences

The Commission does not foresee any unintended consequences arising from this rule. No stakeholder groups will be negatively impacted. The cost of implementing the rule will be negligible (changes to registration guide and forms). On the other hand, the cost of not implementing the proposed rule may be substantial, as AEMO may not be able to address applications for registration from non-conventional generation.

In response to stakeholder concerns that battery storage would only be able to be registered as generation, the Commission is of the view that a person seeking to participate in the NEM using a storage device should be registered according to the activities that the person intends to perform in the NEM using that device. Any system that exports electricity to the grid (ie, where there is an inverter that has been used to connect the relevant unit to the grid) is a generating system, and the owner/operator of that system should be registered as a Generator, subject to any applicable exemptions in the registration framework. This rule change makes it clear that AEMO can register the owners and operators of battery storage as Generators.

⁹ See ENA submission on the Consultation Paper, pp. 1-2. For example, storage may provide energy arbitrage, spin/non-spin reserve, frequency regulation, voltage support and black start capability for the system operator.

The Commission acknowledges that there is a separate issue about whether one device can be registered to perform more than one activity in the NEM (for example, whether a participant can register a facility as both a market generating unit and a market load). The question of whether a facility or device can be registered to perform more than one activity in the NEM is a separate issue and out of the scope of this rule change. In the Integration of Storage report, the Commission set out that registering the operator of a storage device as both a generator and a market customer is feasible and can occur under the current rules. Therefore, the Commission concluded that no amendment to the rules in this respect was necessary. The Commission did, however, note that a number of practical issues would need to be clarified, and understands that AEMO is currently working through these issues.¹⁰

3.3.4 Conclusion

The rule proposed would clarify that the rules for eligibility for registration as a Generator in the NEM are technology and process neutral. It is unlikely to have any negative impacts or unintended consequences – the most likely outcome is ‘business as usual’, with AEMO continuing to register both conventional and non-conventional sources of generation subject to operational and market considerations, as required by the NER. Therefore, the Commission considers that amending the definition of a generating unit in the NER would contribute to the achievement of the NEO, and has determined that the rule be made as proposed.

¹⁰ Indeed, Engie notes that “there is still an open question of whether battery storage should be registered as a generator or a load or both, but before this question can be progressed, it is still important that the current requirement that generators convert mechanical power into electrical power be amended”. See Engie submission on the Consultation Paper, p. 2.

Abbreviations

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
MCE	Ministerial Council on Energy
NEL	National Electricity Law
NEO	National Electricity Objective

A Summary of issues raised in submissions

Stakeholder	Issue	AEMC response
AGL	AGL, while supporting the concept of technology neutral regulation, argued that the definition of 'Generator' in the NER is already sufficiently broad, pointing out that AEMO has already registered the Nyngan/Broken Hill solar farm as a Generator in the NEM.	While some facilities like the Nyngan/Broken Hill solar farm have been registered as Generators, AEMO noted in their rule change request ¹¹ that it considers that these types of parties are ineligible for registration because the type of generation they are proposing does not meet the rules definitions of eligibility.
AGL	AGL queried whether the proposed definition of a generating unit with reference to plant that 'produces electricity' might exclude battery storage systems, since in AGL's view these do not 'produce' electricity, but rather store and discharge it.	The Commission considers that the definition of generating unit in the Rule as Made will not exclude battery storage on the basis suggested by AGL. This is because the AEMC considers that battery storage produces electricity when it converts energy stored in a chemical form into electrical energy.
Stanwell	Stanwell, while also supporting the concept of technological neutrality, asked the AEMC to consider the increasing use of aggregation in the NEM, particularly small generating units and controllable storage devices which are eligible for individual exemption and but which may be aggregated and centrally controlled.	The Commission refers stakeholders to the Integration of Energy Storage report. The Commission and a number of stakeholders support the ability for parties to aggregate the combined capability of a number of storage devices behind the meter, including selling electricity into the wholesale market. However, it is unclear whether the rights and obligations of the existing registration category of small generation aggregator are suited to the

¹¹ See AEMO, 'Rule change request – Registration of proponents of new types of generation', 2016

Stakeholder	Issue	AEMC response
		aggregation of storage behind the meter. In order to address this issue, the Commission recommended that AEMO conduct an assessment of the existing registration category of small generation aggregator. The purpose of the review would be to assess whether the existing registration category is suited to parties seeking to utilise the combined capability of disaggregated storage for participation in the NEM.
Stanwell	Stanwell also requested that the AEMC consult with the Clean Energy Regulator to ensure the expanded definition of generators does not inadvertently increase the Renewable Energy Target (RET) liability for Stanwell customers.	The AEMC has consulted with the Clean Energy Regulator (CER) and understands that liabilities under the RET fall on the 'individual or company who is the first person to acquire electricity in a grid which has an installed capacity of 100MW or more'. Enabling more parties to be registered as Generators would therefore not change liabilities (since the liabilities are based on purchases in that market). However, there may be an increase in the complexity of determining these liabilities. The AEMC is continuing to work with the CER on this issue.