



Australian Energy Market Commission

RULE DETERMINATION

National Electricity Amendment (Classification of loads as ancillary service loads) Rule 2017

Rule Proponent(s)

AEMO

8 August 2017

**RULE
CHANGE**

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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 made a rule that allows Market Ancillary Service Providers (MASPs) to classify *any* load approved by AEMO as an ancillary service load. This is achieved by removing the requirement that ancillary service load must be a market load.

The rule change request was submitted by AEMO on 26 April 2017. The expedited rule change process was used for this rule change. The Commission determined that it should make the rule as proposed, with some amendments, since it considers it will, or is likely to, contribute to the achievement of the National Electricity Objective, because:

- The rule will enhance competition, as well as promoting consumer choice. Retail customers who are currently served by their local retailer will gain access to a competitive market for MASP services, leading to an increase in the number of customers eligible to provide their loads for providing market ancillary services.
- The rule will increase the amount of load that will be eligible to provide ancillary services thereby potentially increasing the resources available to AEMO with which to maintain power system security

The final rule will come into effect on 29 August 2017. This allows AEMO sufficient time to amend their registration procedures and documents to take account of this change.

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1 AEMO's rule change request

1.1 The rule change request

On 26 April 2017, Australian Energy Market Operator (AEMO) made a request to the Australian Energy Market Commission (AEMC or Commission) seeking to amend the National Electricity Rules (NER) (rule change request) to:

- allow Market Ancillary Service Providers (MASPs) to classify any load as ancillary service load by removing the requirement that ancillary service load must be market load
- make minor drafting changes to ensure the consistent use of language with respect to the description of ancillary service loads throughout the NER.

1.2 Background

In 2015 the COAG Energy Council submitted the *Demand response mechanism and ancillary service unbundling* (DRM-ASU) rule change request to the Commission.¹ In response to this request, the Commission made a final rule, the *Demand response mechanism and ancillary services unbundling rule* (DRM-ASU amending rule), which unbundled the provision of ancillary services from the sale of energy. This rule came into effect on 1 July 2017.²

The DRM-ASU amending rule implemented ancillary service unbundling by creating a new type of market participant - a MASP - to offer customers' market loads or an aggregation of market loads into the frequency control ancillary services (FCAS) markets. As a MASP does not need to be a customer's retailer in order to offer demand response services, the DRM-ASU amending rule effectively separated the provision of ancillary services from the purchase and sale of energy from the wholesale market. The MASP is required to satisfy certain registration and technical requirements and deliver FCAS services in accordance with AEMO's specifications just as any other market participant is currently required to do.

At the time the DRM-ASU amending rule came into effect on 1 July 2017, the NER contained a restriction that only loads that are market loads were eligible for classification as ancillary service load. This restriction renders loads that are not market loads (i.e. loads supplied by the local retailer³) ineligible from participating in ancillary service unbundling, and are therefore not capable of being offered by MASPs as FCAS resources.⁴

1 COAG Energy Council, Demand Response Mechanism Rule Change Request, 25 March 2015.

2 National Electricity Amendment (Demand Response Mechanism and Ancillary Services Unbundling) Rule 2016 No. 10.

3 Clause 2.3.2 (a) of the NER

4 Clause 2.3.5(b) of the NER and the DRM-ASU amending rule

Further background on the concepts of ancillary services and market loads can be found in appendix A.

1.3 Rationale for the rule change request

In developing systems and procedures to implement the DRM-ASU amending rule, AEMO identified the market load restriction as an issue likely to reduce the benefits arising from ancillary service unbundling. AEMO considered the exclusion of non-market loads to be an outcome that did not appear to have been intended by the AEMC in making the DRM-ASU amending rule.⁵ Therefore, AEMO proposed this rule change, which sought to fully implement the AEMC's policy intent in making the DRM-ASU amending rule.⁶

While market and non-market load is treated differently for metering and settlement purposes, AEMO viewed non-market load to be no less capable of meeting the technical requirements for providing FCAS.⁷ Therefore, the Commission understood that AEMO no longer considered it necessary to restrict the unbundling arrangements to only market loads. AEMO also noted in its rule change request that without the requested amendment, market participants would be required to manage more complex processes to validate that only market loads are registered as ancillary service loads.⁸

In addition, AEMO identified a drafting inconsistency between the current NER and the DRM-ASU amending rule. To address this issue, AEMO proposed a change to make the DRM-ASU amending rule consistent with other provisions in the NER, which would have the effect of making sure loads are used to *provide* market ancillary services, rather than loads *being* the service.⁹

1.4 Solution proposed in the rule change request

The rule change request aimed to extend eligibility for MASP classification as ancillary service load to all loads that are technically capable of providing FCAS. The suggested solution in the rule change request was to:¹⁰

- remove the market load restriction by amending rule 2.3AA.1 of the NER (as implemented by the DRM-ASU amending rule) to enable MASPs to provide market ancillary services through use of any loads, as well as other minor consequential amendments to the definitions of ancillary service load, ancillary service provider and MASP in Chapter 10 of the NER to reflect this change

⁵ AEMO, Classification of Loads as Ancillary Service Loads - Rule Change Request, 26 April 2017, p. 5.

⁶ Ibid, p. 3.

⁷ Ibid, p. 5.

⁸ Ibid, p. 7.

⁹ Ibid, p. 4.

¹⁰ Ibid, p. 8.

- amend clause 2.3.5 to specify that a MASP in respect of a load and a market customer in respect of a market load can apply to AEMO for classification of those loads as an ancillary service load, as well as other consequential minor amendments to the remainder of clause 2.3.5 to reflect this change
- remove the restriction that market customers and MASPs can only apply to AEMO to *aggregate* market loads, by amending clause 3.8.3(a) to refer to loads rather than market loads
- amend clause 2.3AA.1(b)(1) of the NER to use consistent drafting with clause 2.3.5(a) of the NER such that loads are used to provide market ancillary services, rather than loads being described as an offered service.

By referring to loads in respect of MASPs and to market loads in respect of market customers, the suggested solution would have the effect of:

- giving MASPs access to all loads that are technically capable of providing FCAS irrespective of whether the loads are classified as a market load or not for the provision of market ancillary services, subject to AEMO's eligibility requirements for a MASP being met, and receiving AEMO's approval
- allowing local retailers to register as a MASP, and so offer their local area customers the opportunity to use their loads to provide FCAS.

No other changes to the DRM-ASU amending rule were proposed in the rule change request. Electricity retailers who are not the local retailer would retain the ability to classify their own customer load as ancillary service load without needing to register as a MASP. All loads used for ancillary services would still be required to deliver FCAS in accordance with AEMO's market ancillary service specification and submit offers to the relevant FCAS markets in accordance with existing provisions in the rules. The eligibility requirements for a MASP would remain unchanged.¹¹

1.5 The rule making process

On 27 June 2017, 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 consult in respect of the rule change request.¹² A consultation paper identifying specific issues for consultation was also published with the rule change request. Submissions closed on 25 July 2017.

¹¹ In order to be eligible for registration by AEMO as a MASP, applicants are still required to: identify units of load under their ownership, operation or control; show those loads are under their ownership, operation or control; demonstrate that the load has the requisite assets and equipment, such that the load can satisfy AEMO's requirements. See: NER, clause 2.3AA.1(b)(1).

¹² This notice was published under s. 95 and s. 96 of the National Electricity Law (NEL)

The Commission received three submissions which were considered in the rule making process. They are available on the AEMC website.¹³

The Commission was of the view that the rule change request was a request for a non-controversial rule. Accordingly, the Commission proposed 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 11 July 2017. No such requests were received. Accordingly, the rule change request was considered under an expedited process.¹⁴

13 www.aemc.gov.au

14 Section 96 of the NEL.

2 Final rule determination

2.1 The Commission's determination

In accordance with section 102 of the NEL, the Commission has made this final rule determination in relation to AEMO's *Classification of loads as ancillary service loads* rule change request.

In accordance with section 103 of the NEL, the Commission has determined to make, with amendments, the rule proposed by the rule proponent.

The Commission's reasons for making the rule, the key features of the final rule, and additional amendments made, are described further in this chapter.

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
- the fact that there is no relevant Ministerial Council on Energy (MCE) Statement of Policy Principles¹⁵
- submissions received during consultation
- 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 rule as made falls within the matters set out in section 34 of the NEL, as it relates to the activities of persons (including registered participants) participating in the National Electricity Market (NEM) or involved in the operation of the national electricity system (s. 34(1)(a)(iii)).

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.¹⁶ This is the decision making framework that the Commission must apply.

¹⁵ Under section 33 of the NEL the AEMC must have regard to any relevant MCE Statement of Policy Principles in making a Rule.

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

“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.”

2.4.1 Northern Territory legislative considerations not required

From 1 July 2016, the Commission assumed rule making responsibility for parts of the NER adopted by the Northern Territory. As the proposed rule relates to parts of the NER that currently do not apply in the Northern Territory, the Commission is not required to assess the proposed rule against additional elements required by Northern Territory Legislation.¹⁷

2.5 Assessment framework

In assessing this rule change request, the Commission considers that the relevant aspects of the NEO are the promotion of efficient investment in, operation and use of electricity services with respect to price and security of supply.¹⁸

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

- **Promoting competition and consumer choice** - Competition is a key driver of productivity and efficiency in markets which should result in lower prices for consumers in the long run. Effective competition also encourages innovation and improves consumer choice in the delivery of energy services. Therefore, a key consideration for the Commission has been the degree to which the proposed rule is likely to impact the competitive environment in the ancillary services market across the NEM.
- **Promoting system security** - System security refers to maintaining the power system in a secure and safe operating state to manage the risk of major supply disruptions. Market ancillary control services, such as FCAS, play a significant role in maintaining system security. Therefore, the Commission has considered whether the proposed rule change is likely to potentially provide additional

¹⁶ Section 88 of the NEL.

¹⁷ National Electricity (Northern Territory)(National Uniform Legislations) Act 2015.

¹⁸ 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.

resources to AEMO to be used for ancillary control services to manage power system security.

2.6 Commission's reasons

Having regard to the issues raised in the rule change request and submissions, the Commission is satisfied that the final rule will, or is likely to contribute to the achievement of the NEO. This was supported by all submissions received to the consultation paper.¹⁹

2.6.1 Promoting competition and consumer choice

In making the DRM-ASU amending rule, the Commission noted that unbundling the provision of ancillary services from the provision of energy would open up competitive opportunities to offer services to help AEMO control frequency in the NEM.²⁰ Deeper and more diverse FCAS markets have the potential to lead to more efficient prices, minimising the cost of these services.²¹ Therefore, removing the market load restriction will increase the number of customers eligible to participate in these markets, and is likely to further improve competition leading to lower FCAS prices than would have otherwise been the case.

The Commission considered whether there were risks to competition from local retailers being eligible to classify their local area load as ancillary service load. AEMO's proposal will enable local retailers to register as MASPs, and then classify their local area customers as ancillary service load for offer into FCAS markets. In areas without effective retail competition, local retailers may be provided with the opportunity to classify large quantities of customer load as ancillary service load.²² However, the Commission considers competition from other MASPs, as well as generators competing in FCAS markets, as likely to mitigate any risk of local retailers acquiring FCAS market power in regions without effective retail competition.

The Commission considered that removing the market load restriction will enhance consumer choice. Removing the market load restriction will extend ancillary service

¹⁹ Submissions to consultation paper: Hydro Tasmania, p. 1; PIAC, p. 1; AEMO, p. 1.

²⁰ PIAC considered restricting eligibility to market load as unnecessarily dampening the competitive market for ancillary services, and likely to reduce benefits from lower ancillary service costs. See: PIAC, submission to consultation paper, 20 July 2017, p. 1. Hydro Tasmania viewed the proposal as enabling new and innovative solutions, which will result in increased competition in the provision of ancillary services that will ultimately benefit consumers. See: Hydro Tasmania, submission to consultation paper, 24 July 2017, p. 1.

²¹ AEMC, Demand Response Mechanism and Ancillary Services Unbundling, Final Rule Determination, 24 November 2016, p. 90.

²² The local retailer market share is not evenly distributed across the NEM. In areas without effective retail competition, some local retailers enjoy a dominant position in the retail electricity market. Therefore, some local retailers may be in the position to opportunistically utilise their market position so as to classify large quantities of captive customer load. Retail market concentration in this regard is an issue in Tasmania, the ACT, and regional Queensland. See: AEMC, 2017 AEMC Retail Energy Competition Review, 25 July 2017, pp. 223, 254, 297.

eligibility to 38 per cent of all customers in the NEM who are served by their local retailer.²³ AEMO noted that there are no technical reasons why customers with a local retailer are less able to provide ancillary services than customers with any other retailer. Therefore, removing the restriction to market load will provide all customers with access to the same opportunity to participate in FCAS, through their chosen energy service provider, irrespective of who their retail electricity supplier is. Prior to this, only customers who were not with their local retailer would be able to exercise this choice.

2.6.2 Promoting security of supply

The Commission considers removing the market load restriction is likely to promote security of supply in the NEM by increasing the amount of load eligible to be aggregated and offered into FCAS markets. This will enhance the potential resource available to AEMO for maintaining power system frequency in accordance with the frequency operating standards.²⁴ For example, almost all load in Tasmania is non-market load, and so, if the market load restriction continued to be in place, this load would be ineligible to provide ancillary services. Expanding eligibility to non-market load could therefore provide additional resources to AEMO for managing frequency in Tasmania.

While Tasmania is an example of a NEM jurisdiction with a high level of non-market load, the Commission expects that this rule change is also likely to increase FCAS resources in other NEM jurisdictions both in the near and longer terms.²⁵ As a result, the Commission considers that making all load eligible for MASP classification as ancillary service load is likely to result in a more secure power system than would otherwise have been the case.

2.7 Final rule

For these reasons, the Commission considered that AEMO's proposal will promote the NEO, and has determined to remove the market load restriction, and make any load eligible for MASP classification as ancillary service load. Therefore, the final rule:

- amends clause 2.3.5 to replace references to market load with load so as to enable a registered MASP to obtain approval from AEMO to classify any load as ancillary service load, while retaining the restriction that market customers can only provide market loads for classification as ancillary service loads

²³ AEMC analysis utilising AEMO data

²⁴ This was supported by AEMO's submission, who noted that removing the restriction is likely to increase the pool of resources on which AEMO may call for services to support system security. See: AEMO, submission to consultation paper, 26 July 2017, p. 1

²⁵ In addition to increasing the FCAS resources potentially available to AEMO under current market arrangements, the Commission also considers that non-market load could provide an additional source of fast frequency response resource in a future power system with low levels of synchronous inertia. Such future markets and their specification are being considered through the Commission's Frequency control frameworks review.

- amends clause 2.3AA.1 by replacing references to market load with load so as to make a MASP eligible for registration by way of obtaining AEMO's approval to offer any load under its ownership, operation, or control as a market ancillary service, subject to each load being capable of meeting or exceeding relevant technical performance standards
- amends clause 3.8.3(a) to remove the restriction that market customers and MASPs can only aggregate market loads by instead referring to loads rather than market loads
- amends clause 2.3AA.1(b)(1) to use consistent drafting with clause 2.3.5(a) of the NER so that loads are used to provide market ancillary services, rather than loads being described as an offered service
- amends the definitions of *ancillary service load*, *Ancillary Service Provider*, and *Market Ancillary Service Provider* to reflect the fact that non-market load is now eligible to be used in the provision of market ancillary services.

As noted, the Commission has made a number of minor additional amendments, beyond those proposed by AEMO, so that all load is subject to consistent obligations across the NER in respect of ancillary services. In particular, two additional clauses were identified as requiring amendment. Therefore, the final rule also:

- amends clause 3.11.2(f) to extend the requirement to install and maintain equipment to monitor and record the response of an ancillary service load to cover all load acting as ancillary service load rather than solely applying to market load
- amends clause 4.9.3A(a) to extend AEMO's powers to issue ancillary services instructions to cover all load acting as ancillary service load rather than solely applying to market load
- amends clause 4.9.3A(c)(1) to extend the requirement for personnel or electronic facilities for the receipt of dispatch instructions to apply to all load used as ancillary service load rather than solely applying to market load.

2.8 Implementation approach

AEMO included indicative rule drafting with its rule change request.²⁶ AEMO's drafting revised the DRM-ASU amending rule to remove the term 'market' and solely referenced 'load' in respect of MASP classification of ancillary service load.

However, an alternative approach was canvassed in the consultation paper. This alternative approach would have involved amending the definition of market load, as

²⁶ See: <http://www.aemc.gov.au/Rule-Changes/Classification-of-loads-as-ancillary-service-loads>

set out in Chapter 10 of the NER, to deem non-market loads as market loads for the purpose of MASP activity.²⁷

While AEMO considered either option as enabling non-market loads to be classified by MASPs as ancillary service loads, the alternative approach would have required drafting outside the MASP provisions. As the rule change request was being assessed as an expedited change, AEMO's view was that it was more appropriate to limit changes to the new (DRM-ASU) amendments only as this would make the scope of the change more transparent.²⁸

The Commission agreed with AEMO's view and concluded that AEMO's proposed drafting was a simpler and more direct implementation approach than the alternative, which could have had the potential for unintended consequences.

AEMO has advised that it requires approximately three weeks to alter its documentation and administrative processes to implement the rule change. Therefore, the Commission has determined that the rule change will come into effect on 29 August 2017.

2.9 Civil penalty and conduct provisions

The final rule does not amend any clauses that are currently classified as civil penalty or conduct provisions under the NEL or National Electricity (South Australia) Regulations. The Commission does not propose to recommend to the COAG Energy Council that any of the proposed amendments made by the final rule be classified as civil penalties or conduct provisions.

²⁷ Such an approach was suggested by AEMO in its detailed design for the demand response mechanism initially envisioned by the COAG Energy Council. See: AEMO, Appendix B: Demand Response Mechanism and Ancillary Services Unbundling - Detailed Design, 15 November 2013, p. 105.

²⁸ AEMO, Rule Change Submission, 26 July 2017, p. 1

Abbreviations

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
FCAS	Frequency Control Ancillary Services
FFR	fast frequency response
NEL	National Electricity Law
NEM	National Electricity Market
NEO	national electricity objective
NER	National Electricity Rules

A Relevant background

A.1 Ancillary services

Ancillary services are essential to AEMO's management of power system security. These services maintain key technical characteristics of the system, including frequency, voltage, network loading and system restart processes. One such service is the FCAS that AEMO uses to maintain system frequency within the bounds specified by the frequency operating standards, both under normal operating conditions and/or to restore frequency following a contingency event such as loss of a major generating unit or transmission line.²⁹

Driven by technological development and climate change policies, the NEM is currently experiencing a significant shift away from conventional synchronous generators and towards new, non-synchronous technologies, such as wind farms and solar panels. The Commission has identified that as the generation fleet evolves, new approaches are required to resist sudden frequency changes and therefore maintain power system security.

A final report for the System security market frameworks review and two draft determinations were published on 27 June 2017.³⁰ The final report contained a number of recommendations relevant to ancillary services, including an announcement that the AEMC will initiate a review into market frameworks necessary to support better frequency control: the Frequency control frameworks review. The review will consider current concerns with frequency performance in the NEM and how best to integrate faster frequency control services offered by load and other technologies into the current regulatory and market arrangements.

A.2 Market load

Each region of the NEM is divided into local areas. Local areas are designated by jurisdictional governments and correspond to a geographical area which is allotted to a distribution network service provider (DNSP). Each local area has an associated local retailer.³¹

²⁹ There are markets for raise and lower regulation FCAS and six contingency FCAS markets divided into six-second, 60-second, and five-minute intervals for both raise and lower services. The six-second services are used to arrest major changes in frequency following a contingency event. The 60-second services are used to stabilise frequency. The five-minute services are delayed responses used to recover frequency to normal operating levels following a major change in frequency.

³⁰ See: <http://www.aemc.gov.au/Major-Pages/System-Security-Review>

³¹ Chapter 10 of the NER defines a local retailer as "in relation to a local area, the customer who is: 1. a business unit or related body corporate of the relevant Local Network Service Provider; or 2. responsible under the laws of the relevant participating jurisdiction for the supply of electricity to franchise customers in that local area; or 3. if neither 1 or 2 is applicable, such other customer as AEMO may determine.

The NER requires customers who purchase electricity other than from the local retailer in their local areas to be classified as market load (in the form of a second-tier load or a market load classified by a market customer).³² In contrast, customers who purchase electricity from the local retailer in their local area are classified as not being market load (i.e. classified as first-tier load).³³ The current eligibility restriction to market load in the DRM-ASU amending rule therefore, makes customers who purchase electricity from their local retailer ineligible to participate in FCAS markets.

While local retailers were traditionally vertically integrated, government owned entities, the role of the local retailer in much of the NEM is now typically performed by the 'big 3' electricity retailers such as AGL, Origin Energy, and Energy Australia.³⁴ Although most local retailers are now commercial participants in competitive retail electricity markets, local retailers in those parts of the NEM which lack effective competition retain a dominant market position. Local retailers in Tasmania, ACT, and regional Queensland are examples in this regard.

The concept of market load is primarily relevant to the wholesale market settlement process. The status of a load determines how AEMO settles the relevant retailer's purchases through the wholesale market. Customers whose load is market load are settled individually in the market, while customers who purchase their electricity through the local retailer are settled in aggregate across the local area via the settlement by difference method.³⁵ It should be noted that the concept of market load here reflects the classification of load for wholesale market settlement purposes rather than whether a commercial agreement between an electricity retailer and its customer is a market agreement or a standing offer under the National Electricity Retail Law.

32 Clauses 2.3.3 and 2.3.4 of the NER.

33 Clause 2.3.2 of the NER.

34 See, for example:
<http://www.resourcesandenergy.nsw.gov.au/energy-consumers/energy-providers/choosing-providers/licence-endorsements-standard>

35 Energy consumption by customers of the local retailer is settled by calculating the metered flow at the wholesale connection point (the boundary of the local distribution area) minus the energy consumed by connection points that are not with the local retailer. Clauses 3.15.5 and 3.15.5A of the NER.