



Australian Energy Market Commission

CONSULTATION PAPER

National Electricity Amendment (Classification of Loads as Ancillary Service Loads) Rule 2017

Rule Proponent(s)

Australian Energy Market Operator

27 June 2017

RULE
CHANGE

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Reference: ERC0221

Citation

AEMC, Classification of Loads as Ancillary Service Loads, Consultation Paper, 27 June 2017, 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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1 Introduction

On 26 April 2017, the Australian Energy Market Operator (AEMO) submitted a rule change request to the Australian Energy Market Commission (AEMC or Commission) seeking to make Market Ancillary Service Providers (MASPs) eligible to classify any load as ancillary service load by removing the requirement that ancillary service load be market load.

This consultation paper has been prepared to facilitate public consultation on the rule change request and to seek stakeholder submissions.

1.1 Background

The AEMC's 2012 *Power of choice* review set out recommendations for supporting market conditions that facilitate effective demand side participation. Two of these recommendations were to:

- implement a demand response mechanism that rewards changes in demand resources via the wholesale electricity market
- create a new category of market participant to unbundle the sale and supply of electricity from non-energy services, such as ancillary services.¹

Following from this recommendation, in 2015 the COAG Energy Council submitted the *Demand response mechanism and ancillary service unbundling* (DRM-ASU) rule change request to the Commission.² While the Commission, in considering the COAG Energy Council's request, decided not to implement the proposed demand response mechanism, the ancillary services unbundling component of the rule was retained within the final rule, the *Demand response mechanism and ancillary services unbundling* rule (DRM-ASU amending rule) coming into effect on 1 July 2017.³

The DRM-ASU amending rule implements ancillary service unbundling by creating a new type of market participant - a MASP - to offer customers' loads into the frequency control ancillary services (FCAS) markets. As a MASP will not need to be a customer's retailer to offer such demand response services, the DRM-ASU amending rule effectively separates the provision of ancillary services from the purchase and sale of energy. The MASP is however 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.

The current National Electricity Rules (NER), in effect at the time the DRM-ASU amending rule comes into effect on 1 July 2017, contain a restriction that only loads

¹ AEMC, *Power of Choice - Stage 3 DSP Review Final Report*, 30 November 2017, p. ii.

² COAG Energy Council, *Demand Response Mechanism Rule Change Request*, 25 March 2015.

³ National Electricity Amendment (Demand Response Mechanism and Ancillary Services Unbundling) Rule 2016 No. 10.

that are market loads are eligible for classification as ancillary service load. This restriction renders loads that are not market loads ineligible from participating in ancillary service unbundling, and are therefore not capable of being offered by MASPs as FCAS services.⁴

AEMO, in developing systems and procedures to implement the DRM-ASU amending rule for commencement on 1 July 2017, has identified the market load restriction as an issue likely to reduce the benefits arising from ancillary service unbundling. AEMO considers the exclusion of non-market loads supplied by the local retailer to be an outcome which does not appear to have been intended by the AEMC in making the DRM-ASU amending rule.⁵

1.1.1 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 class of such service is the Frequency Control Ancillary Services (FCAS) that AEMO uses for maintaining 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.⁶

Currently, driven by technological development and climate change policies, the NEM is experiencing a significant shift away from conventional synchronous generators and towards new, non-synchronous technologies, such as wind farms and solar panels. The impact of non-synchronous generation on how the system is maintained in a secure state is an important focus. AEMO has identified that power system security in a future system with low levels of synchronous inertia may require resources that can be activated in milliseconds, rather than seconds as is the currently the case.⁷ Switchable loads and storage could provide a fast FCAS response in this regard. Therefore, load may represent a valuable source of fast FCAS which would help maintain a secure power system in the context of increasing penetrations of intermittent and non-synchronous generation expected over the long term.

Through the *System security market frameworks* review, and associated rule change requests, the AEMC is considering, developing and implementing changes to the

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

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

⁶ 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.

⁷ AEMC - *System Security Market Frameworks Review - Consultation Paper*, 8 September 2016, p. 34

market rules to allow the continued uptake of these new forms of generation, while maintaining the security of the system. In particular, the review focussed on the management of frequency, and system strength in a power system with reduced levels of synchronous generation. A final report for the review, and two draft determinations were published on 27 June 2017.⁸The final report includes a number of recommendations relating to FCAS, most notably, that in July 2017 the AEMC will initiate a review into market frameworks necessary to support better frequency control: the *Frequency control frameworks review*.

1.1.2 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. Each local area has an associated local retailer.⁹

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*).¹⁰ In contrast, customers who purchase electricity from the local retailer in their local area are classified as not being market load (namely, classified as *first-tier load*).¹¹

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 performed by the 'big 3' electricity retailers such as AGL, Origin Energy, and Energy Australia.¹² 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.¹³ Local retailers in Tasmania, the 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

⁸ See: <http://www.aemc.gov.au/Major-Pages/System-Security-Review>

⁹ 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.

¹⁰ Clauses 2.3.3 and 2.3.4 of the NER.

¹¹ Clause 2.3.2 of the NER.

¹² See, for example:

<http://www.resourcesandenergy.nsw.gov.au/energy-consumers/energy-providers/choosing-providers/licence-endorsements-standard>

¹³ AEMC, Final Report – 2016 Retail Competition Review, 30 June 2016, p. ii.

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.¹⁴ 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.

1.2 Issue raised in the rule change request

AEMO propose this rule change as being required to fully implement the AEMC's policy intent in making the DRM-ASU amending rule. Specifically, AEMO considers the market load requirement as unintentionally limiting the applicability of the DRM-ASU amending rule, which is an outcome that AEMO considers not to have been intended by the AEMC when making the rule.¹⁵

While market and non-market load is treated differently for metering and settlement purposes, AEMO views non-market load to be no less capable of meeting the technical requirements for providing FCAS. Therefore, we understand that AEMO no longer considers it necessary to restrict the unbundling arrangements to only market loads.¹⁶

AEMO has also identified a minor issue with rule drafting regarding the relationship between the physical load and the service provided by the load. In this regard, AEMO proposes a change to make the amending rule consistent with other provisions in the NER.¹⁷

AEMO notes in their rule change request that without the amendment, market participants will be required to manage more complex processes to validate that only market loads are registered as ancillary service loads.¹⁸

1.3 Proposed rule change

AEMO's proposed rule change extends eligibility to all loads that are technically capable of providing FCAS. If made, the rule would:¹⁹

¹⁴ 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.

¹⁵ AEMO, Classification of Loads and Ancillary Service Loads, rule change request, 26 April 2017, p. 3.,

¹⁶ AEMO, Classification of Loads and Ancillary Service Loads, rule change request, 26 April 2017, p. 5.

¹⁷ AEMO, Classification of Loads and Ancillary Service Loads, rule change request, 26 April 2017, p. 4.

¹⁸ AEMO, Classification of Loads and Ancillary Service Loads, rule change request, 26 April 2017, p. 7.

- remove the market load restriction by amending clause 2.3AA of the DRM-ASU amending rule to refer to loads in respect of MASPs and to market loads in respect of market customers
- amend DRM-ASU amending rule 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 the service.

By referring to loads in respect of market ancillary service providers and to market loads in respect of market customers, AEMO's change would have the effect of:

- giving MASPs access to all loads which are technically capable of providing FCAS irrespective of their market load status
- allowing local retailers to offer their local area customers the opportunity to provide FCAS by registering as a MASP.

No other changes to the DRM-ASU amending rule are proposed in this rule change request.

Electricity retailers who are not the local retailer will retain the ability to classify their own customer load as ancillary service load without needing to register as a MASP. All ancillary service loads will 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 remain unchanged. In order to be eligible for registration by AEMO as a MASP, applicants are still required to:²⁰

1. identify units of load under their ownership, operation or control
2. show those loads are under their ownership, operation or control
3. demonstrate that the load has the requisite assets and equipment, such that the load can satisfy AEMO's requirements.

AEMO's rule change request included indicative drafting. The proposed rule change request is available on the AEMC website.²¹

1.3.1 AEMO considers the rule change request would meet the NEO

AEMO anticipates that the proposed change will advance the national electricity objective by affecting the market in the following ways:²²

¹⁹ AEMO, Classification of Loads and Ancillary Service Loads, rule change request, 26 April 2017, p. 8.

²⁰ Clause 2.3AA.1(b)(1) of the DRM-ASU amending rule.

²¹ See: <http://www.aemc.gov.au/Rule-Changes/Classification-of-loads-as-ancillary-service-loads>

²² AEMO, Classification of Loads and Ancillary Service Loads. rule change request, 26 April 2017, p. 9.

- **Removing a barrier to entry** - The proposed rule change will allow loads supplied by local retailers in their local areas to participate in ancillary service unbundling that would otherwise be ineligible to provide market ancillary services. Removing this barrier to entry advances the objective by facilitating more efficient investment outcomes in the long term.
- **Impact competition and prices for consumers** - The proposed rule change will increase sources of market ancillary services and is therefore likely to reduce the price for market ancillary services for consumers.
- **Impact efficient investment in, use and operation of, the power system** - AEMO expects that the proposed rule change will, over time, encourage more demand response by increasing participation in the market ancillary services. It will also lead to better power system security outcomes by increasing the resources available for providing market ancillary services in the long term.

1.4 Assessment framework

Our assessment of this rule change request must consider whether the proposed rule promotes the National Electricity Objective (NEO) as set out under section 7 of the National Electricity Law (NEL). The NEO is:²³

- “To promote efficient investment in, and efficient operation and use of, electricity services for the longer 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.”

Therefore, the Commission proposes to apply the following criteria to guide the assessment of the rule change request:

- Will the proposed changes promote competition and consumer choice?
- Will the proposed changes enhance security of supply of electricity?

Promoting competition and consumer choice

Competition is a key driver of productivity and efficiency in markets which results in lower prices for consumers in the long run. Effective competition also encourages innovation and improves consumer choice in the delivery of energy services. A key consideration for the Commission will be the degree to which the proposed rule is likely to impact the competitive environment in the ancillary services market across the NEM.

Promoting security of supply

²³ Section 7 of the NEL.

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 play a significant role in contributing to maintaining system security. The Commission will consider whether the proposed rule change will provide additional ancillary control services to enable AEMO to operate a more secure power system.

Question 1 Assessment framework

- 1. Is the assessment framework appropriate for considering the changes proposed in the rule change request?**
- 2. Are there other relevant considerations that should be included in the assessment framework?**

From 1 July 2016, the NER, as amended from time to time, apply in the Northern Territory, subject to derogations set out in the Regulations made under the Northern Territory legislation adopting the National Electricity Law.²⁴ Under those Regulations, only certain parts of the NER have been adopted in the NT.²⁵ As the proposed rule relates to parts of the NER that currently do not apply in the Northern Territory, the Commission will not assess the proposed rule against additional elements required by the Northern Territory legislation.²⁶

²⁴ National Electricity (National Uniform Legislation) (Modifications) Regulations.

²⁵ For the version of the NER that applies in the Northern Territory, refer to:
[http://www.aemc.gov.au/Energy-Rules/National-electricity-rules/National-Electricity-Rules-\(Northern-Territory\)](http://www.aemc.gov.au/Energy-Rules/National-electricity-rules/National-Electricity-Rules-(Northern-Territory)).

²⁶ National Electricity (Northern Territory) (National Uniform Legislation) Act 2015.

2 Issues for consultation

This chapter outlines the aspects of the rule change proposal on which the Commission is seeking stakeholder feedback. The issues for consultation include:

- potential impact on competition
- alternative implementation approach

Stakeholders are encouraged to comment on these issues and any other aspect of the rule change request.

2.1 Potential impacts on competition

The creation of a new type of market participant, the MASP, provides an avenue for new, non-traditional providers of ancillary services to procure non-traditional sources of FCAS including aggregated demand response from smaller loads, batteries, and distributed generation located behind the meter. In making the DRM-ASU amending rule, the addition of these new competitors was viewed by the Commission as creating deeper and more diverse FCAS markets, potentially leading to more efficient FCAS market prices.²⁷

The potential for new market participants and non-traditional resources to increase competition in FCAS markets is limited to the size of the pool of possible customers. The market load restriction currently makes 38 per cent of all NEM customers ineligible for classification as ancillary service load. Removal of this restriction would therefore see in excess of 3.6 million additional customers become eligible to provide FCAS from their loads through a MASP.²⁸ AEMO's proposal to extend eligibility to all loads which are technically capable, irrespective of their market load status, would therefore provide MASPs with access to the largest possible number of potential customers.

Even though only 38 per cent of NEM customers are non-market load served by the local retailer in their local area, local retailers' market share across the NEM is highly non-uniform. While retail competition in much of the NEM has seen the market share of local retailers reduce significantly, several regions exist in which the local retailer remains the dominant electricity supplier. In particular, Tasmania, the ACT, and regional Queensland are regions in which retail price regulation or jurisdictional tariff policies has limited the entry of new retailers.²⁹

²⁷ AEMC, Demand Response Mechanism and Ancillary Services Unbundling rule change - Final Determination, 24 November 2016, summary p. 2

²⁸ AEMC analysis of AEMO data.

²⁹ AEMC, Final Report - 2016 Retail Competition Review, 30 June 2016, Section 2.1.

While local retailers have a dominant market position in some parts of the NEM, our preliminary view is that there are limited competition concerns from removing the market load restriction since:

- ancillary service unbundling would also allow any other registered MASP to enter, and compete to classify first tier load which is serviced by the local retailer i.e. it is not just the local retailer that would be able to classify their retail load for ancillary services
- FCAS markets are largely driven by generator offers at the moment. Therefore, any change that would widen the potential pool of providers to compete with generators would increase competition, consistent with the Commission's conclusions in the *Demand response mechanism and ancillary services unbundling* rule change request.

We note that while AEMO's proposal would not allow the local retailer to directly classify customers in their local area, it would allow a local retailer to register as a MASP. That local retailer, acting in its capacity as a MASP, would then be able to offer its local area customers the opportunity and benefits of providing FCAS.

Question 2 Potential impact on competition

- 1. What are stakeholders' views on the potential for non-market load to increase competition, and the efficiency of pricing, in FCAS markets?**
- 2. Are there any other potential impacts on competition that the Commission should consider?**

2.2 Alternative implementation approach

AEMO has supplied indicative drafting with its rule change request.³⁰ AEMO's drafting revises the DRM-ASU amending rule to remove the term 'market' and solely reference 'load' in respect of MASPs.³¹ The objective of AEMO's rule change and proposed drafting being to allow MASPs to classify all loads as ancillary service loads.

In respect of implementation, the Commission is considering whether an alternative approach may better achieve the objective discussed in chapter 1. This alternative approach involves amending the definition of market load, as set out in Chapter 10 of the NER, to deem non-market loads as market loads for the purpose of MASP registration, and thus enabling the offer of *first-tier load* into FCAS markets. Such an approach was suggested by AEMO in its detailed design for the demand response mechanism initially envisioned by the COAG Energy Council.³²

³⁰ See: <http://www.aemc.gov.au/Rule-Changes/Classification-of-loads-as-ancillary-service-loads>

³¹ <http://www.aemc.gov.au/Rule-Changes/Classification-of-loads-as-ancillary-service-loads>

³² AEMO, Appendix B: Demand Response Mechanism and Ancillary Services Unbundling - Detailed Design, 15 November 2013, p. 105

Both the proposed rule change and the above alternative would enable non-market loads to be classified by MASPs as ancillary service loads. However, a deemed approach to expanding load eligibility has the benefit of minimising drafting changes to the NER thereby providing a simpler solution to AEMO's rule change request. We do, however, acknowledge that market load is a foundation term for a range of functions in the rules, particularly settlement and metering. As such we are interested in stakeholder views on this alternative approach, as well as views on the potential for any flow-on consequences from such an approach.

Question 3 Alternative implementation approach

1. **What are stakeholder's views on this alternative implementation approach?**
2. **Are there any unintended consequences, or flow on consequences, that the Commission should be aware of when considering this alternative approach?**

3 Process for this rule change

3.1 Treatment as a non controversial rule change

AEMO submitted that the rule change request should be treated as non-controversial under section 96 of the National Electricity Law.

The Commission considers that the rule change request should be subject to the expedited rule making process under s. 96 of the NEL on the grounds that it considers the rule change request to be non-controversial, and is unlikely to have a significant impact on the national electricity market.³³ This is because:

- the proposed rule only addresses eligibility of loads for classification by MASPs as ancillary service loads in the NEM
- the additional customers made eligible under AEMO's proposal will still have to consent before their load is classified by a MASP, have metering and telemetry installed which meets the requirements of the Market Ancillary Service Specification (MASS), and register the relevant loads with AEMO. Further, given the likely size of non-market loads, the additional FCAS resources arising from these customers is expected to not to have a significant impact on the NEM.

Rule changes that are considered to be non-controversial may be progressed under an expedited (faster) process involving only one round of consultation. Under an expedited rule change, the Commission must publish its final rule determination within six weeks of commencing the rule change process.³⁴

The Commission has decided to use an expedited process to consider this rule change request provided that it does not receive any valid requests not to use the expedited process by 11 July 2017. To be valid, an objection should set out the reasons why the rule change request will have a significant impact on the NEM.

If there are no valid objections to the expedited process, the final determination will be published on 8 August 2017.

3.2 Key dates

Given the tightly defined nature of the issue, and the background information provided in the rule change request, this consultation paper is brief. Nevertheless, submissions are invited in relation to the matters identified above, and any other relevant issue.

The **key dates** for stakeholders in this process are as follows:

³³ Section 87 of the National Electricity Law

³⁴ The AEMC has published a notice under sections 95 and 96 of the National Electricity Law to commence and assess this rule change request as a non-controversial rule.

- Commencement of this rule change process: 27 June 2017
- Objections to an expedited process to be received by: 11 July 2017
- Submissions to the proposal to be received by: 25 July 2017
- Final decision to be published under an expedited process by: 8 August 2017

4 Lodging a submission

The Commission invites requests not to make a rule under the expedited process and written submissions on this rule change proposal.

All enquiries on this project should be addressed to Graham Mills on (02) 8296 0614.

4.1 Lodging a request not to make a rule under an expedited process

Written requests not to make a rule under the expedited process in s. 96 of the NEL must include reasons for the request, and must be lodged with the Commission by 11 July 2017, either online or by mail, in accordance with the process specified below.

4.2 Lodging a submission to this rule change request

Written submissions on the rule change request must be lodged with Commission by 25 July 2017, either online or by mail, in accordance with the requirements specified below.

Where practicable, submissions should be prepared in accordance with the Commission's guidelines for making written submissions on rule change requests.³⁵ The Commission publishes all submissions on its website, subject to a claim of confidentiality.

4.3 Lodging a submission electronically

Electronic submissions, or requests not to make a rule under the expedited process, must be lodged online via the Commission's website, www.aemc.gov.au, using the "lodge a submission" function and selecting the project reference code ERC0221.

The request or submission must be on letterhead (if submitted on behalf of an organisation), signed and dated.

Upon receipt of the electronic request or submission, the Commission will issue a confirmation email. If this confirmation email is not received within three business days, it is the submitter's responsibility to ensure the request or submission has been delivered successfully.

4.4 Lodging a submission by mail

The submission must be on letterhead (if submitted on behalf of an organisation), signed and dated. The request or submission should be sent by mail to:

Australian Energy Market Commission
PO Box A2449

³⁵ This guideline is available on the Commission's website www.aemc.gov.au.

Sydney South NSW 1235

The envelope must be clearly marked with the project reference code: ERC0221.

Alternatively, the submission may be sent by fax to (02) 8296 7899.

Except in circumstances where the submission has been received electronically, upon receipt of the hardcopy submission the Commission will issue a confirmation letter.

If this confirmation letter is not received within 3 business days, it is the submitter's responsibility to ensure successful delivery of the submission has occurred.

Abbreviations

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
Commission	See AEMC
FCAS	Frequency Control Ancillary Services
MASP	Market Ancillary Service Provider
MASS	Market Ancillary Service Specification
NEL	National Electricity Law
NEO	National Electricity Objective
NER	National Electricity Rules