Australian Energy Market Commission

RULE CHANGE

CONSULTATION PAPER

National Electricity Amendment (Embedded Networks) Rule 2015

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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.

Contents

1 Introduction

On 2 October 2014, the Australian Energy Market Operator (AEMO) submitted a rule change request to the Australian Energy Market Commission (AEMC or Commission) proposing amendments to the regulation of embedded networks within the National Electricity Market (NEM).[1]

AEMO seeks to clarify the metering and other arrangements that apply to embedded networks and reduce the barriers to embedded network customers accessing retail market offers. It is anticipated that this would promote competition by allowing customers within embedded networks to choose whether to be supplied energy and related services by the provider of the embedded network or by a NEM authorised retailer.

This consultation paper has been prepared to facilitate public consultation on the rule change request, and aid stakeholders in making submissions. This paper:

- sets out the background to the rule change request;
- provides a summary of the rule change request;
- sets out the Commission's proposed assessment framework;
- identifies a number of questions and issues to facilitate the consultation on this rule change request; and
- outlines the process for making submissions.

1 Embedded networks are private networks which serve multiple premises and are located within, and connected to, a distribution system in the NEM. A detailed explanation of the operation of embedded networks is set out in section 2.2 below.

2 Background

To provide context to the issues that AEMO has identified and the solutions that it has proposed, this chapter provides an overview of the origins of the rule change request, the current operation and regulation of embedded networks, and other AEMC work that is related to the rule change request.

2.1 Origins of the rule change request

The AEMC's final advice on Energy Market Arrangements for Electric and Natural Gas Vehicles made a number of recommendations relating to arrangements that would support multiple trading relationships (MTR) at a single site, and arrangements for embedded networks in the NEM.[2] These recommendations were further noted in the AEMC's Power of Choice final report which set out a substantial reform package for the NEM.[3] The package was intended to provide households, businesses and industry with more opportunities to make informed choices about the way they use electricity and manage their expenditure on electricity.

In regard to embedded networks, the reports recommended changes to clarify the relevant metering and other arrangements, and reduce the barriers to embedded network customers accessing retail market offers.

On 31 July 2013, the Standing Council on Energy and Resources (now the COAG Energy Council) requested AEMO lead the implementation of the MTR and embedded network policy initiatives. Consequently, AEMO, with the support of a stakeholder reference group, has developed a high level market design, a detailed market design and a proposed rule for the implementation of these initiatives.[4] During the design development process, AEMO separated the MTR and embedded network initiatives and submitted them as separate rule changes to the AEMC on 2 October 2014.

2.2 The operation of embedded networks

Embedded networks are private networks which serve multiple premises and are located within, and connected to, a distribution system in the NEM. Common examples of embedded networks include shopping centres, retirement villages, caravan parks, apartment blocks and office buildings. There are approximately 500 major embedded networks within the NEM and many thousands of smaller embedded networks.[5]

Figure 2.1 shows an embedded network and contrasts the responsibilities of various parties to customers within and outside of embedded networks.

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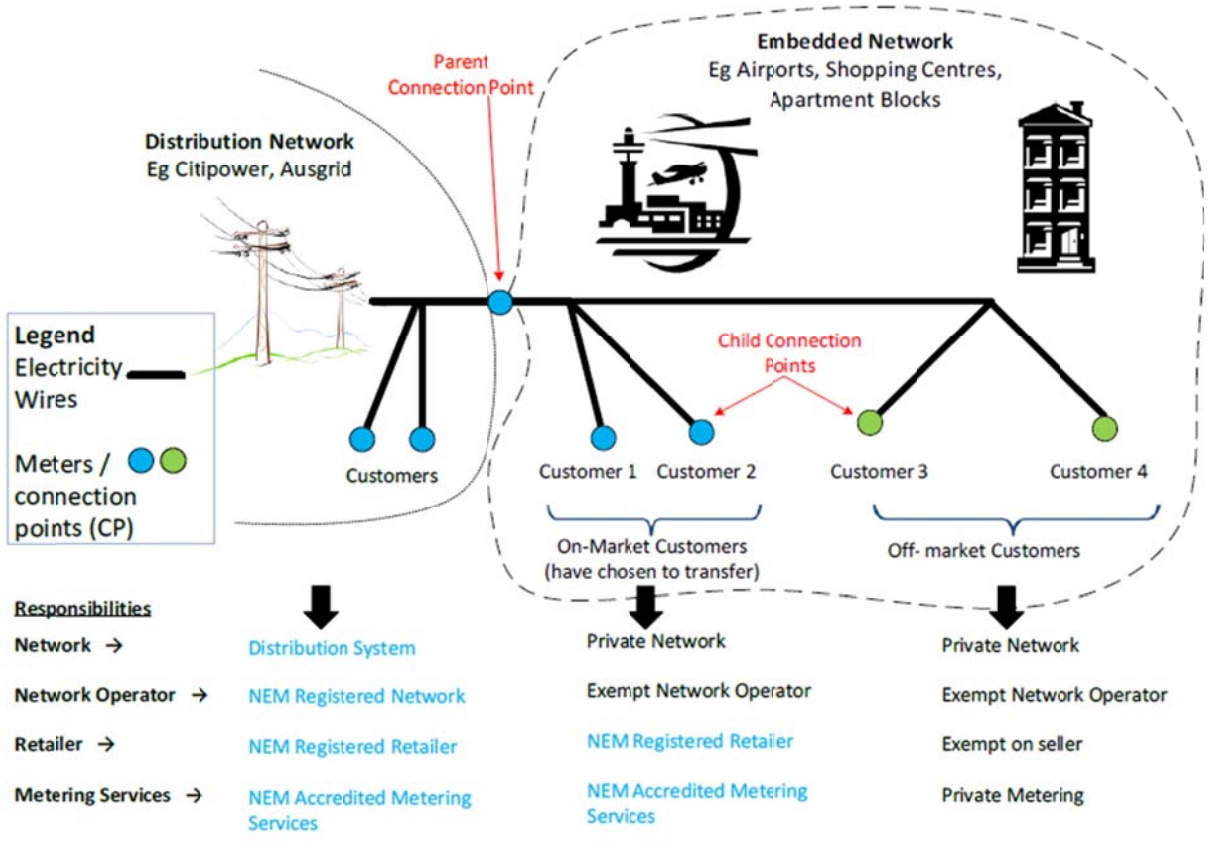
2 AEMC, *Final Advice, Energy Market Arrangements for Electric and Natural Gas Vehicles*, December 2012, p.38.

3 AEMC, *Final Report, Power of Choice Review - Giving Consumers Options in the way they use Electricity*, November 2012.

4 The rule change request for the embedded networks initiative includes a proposed rule. The rule change request for the multiple trading relationships initiative does not.

5 Jacobs SKM, *Benefits and Costs of Multiple Trading Arrangements and Embedded Networks*, May 2014, p.4.

Figure 2.1 Embedded network operations



Source: AEMO, Rule change request, September 2014, p.4.

The standard arrangement for customers in the NEM is displayed on the left of Figure 2.1. The NEM registered local network service provider (LNSP) owns and operates the distribution network, which connects directly to the customers' premises. Customers choose between retail market offers from NEM authorised retailers.[6] Metering services, including installation, maintenance and meter reading are provided by accredited providers, as arranged by the responsible person – the retailer or LNSP – relevant to the specific connection point.

The network arrangements and the responsibilities of market participants within embedded networks are different. While the LNSP is responsible for electricity supply to the parent connection point (as it is attached to the LNSP's network), it is not responsible for supply to customers within the embedded network. Instead, any assets beyond the parent connection point are owned and operated by the embedded network owner and embedded network operator (ENO) respectively. These parties are not NEM registered network service providers (NSPs).

There are two possible approaches to providing retail and metering services to customers within embedded networks. One arrangement, displayed on the far right of Figure 2.1, is that customers are supplied, and metering services provided, by the ENO, who is not a NEM registered retailer, NEM registered network service provider or

6 Under s. 88(1) of the NERL a person must be the holder of a current retailer authorisation or be classed as an exempt seller to sell energy. For simplicity, this paper uses the terms authorisation and registration interchangeably.

accredited service provider. This type of arrangement is known as an "off-market" activity because the customers are not visible in the NEM systems or to AEMO or NEM participants. From discussion with stakeholders the Commission understands that currently this is the arrangement for the vast majority of embedded network customers.

In the second arrangement, as displayed in the middle of Figure 2.1, customers have chosen a NEM registered retailer instead of the ENO for the supply of their energy services. Customers are still provided with network services by the ENO. This type of arrangement is called "on-market" activity because the customers are included in the NEM market systems and are visible to AEMO and NEM market participants.

Where an off-market customer within an embedded network elects to become on-market, the customer must still pay the ENO for the provision of network services. Typically this will occur by the customer paying the ENO directly, but in some cases the retailer and the ENO will co-ordinate to allow the customer to pay a single invoice to the retailer for network and energy services. The retailer then passes on the network component to the ENO.

Network charges to embedded network customers consist of ENOs passing on charges from LNSPs for the provision of network services to the parent connection point. ENOs do not charge for provision of the embedded network. To charge for the embedded network the ENO would require a formal determination by the Australian Energy Regulator (AER) under Chapter 6 of the NER.[7]

2.3 Regulatory arrangements for embedded networks

There is currently no specific reference in the National Electricity Law (NEL), National Electricity Rules (NER), National Electricity Retail Law (NERL) or National Electricity Retail Rules (NERR) to embedded networks. Instead, ENOs must gain (or be eligible for) exemption from registration as a NSP and/or retailer. ENOs must also comply with the conditions of exemptions from being registered NSPs and retailers under the AER's Electricity Network Service Provider Registration Exemption Guideline (the network guideline) and Retail Exempt Selling Guideline (the retail guideline). ENOs and their agents are also subject to a number of jurisdiction specific requirements.

The NEL, NER and the network guideline apply to all jurisdictions within the NEM. However, not all NEM jurisdictions have adopted the NERL. In those jurisdictions that have not (currently Queensland and Victoria), energy selling continues to be regulated under jurisdictional instruments.[8]

For customers attached to a distribution network, the NER and NERR set out specific, well defined obligations and responsibilities for registered NSPs, registered retailers and accredited service providers. Compliance with these obligations and responsibilities is required to provide customer protections and facilitates the NEM systems which allow customers to access their energy data, choose and transfer

7 AER, *Electricity Network Service Provider Registration Exemption Guideline*, August 2013, p.36.

8 Queensland has legislated to commence the NERL on 1 July 2015.

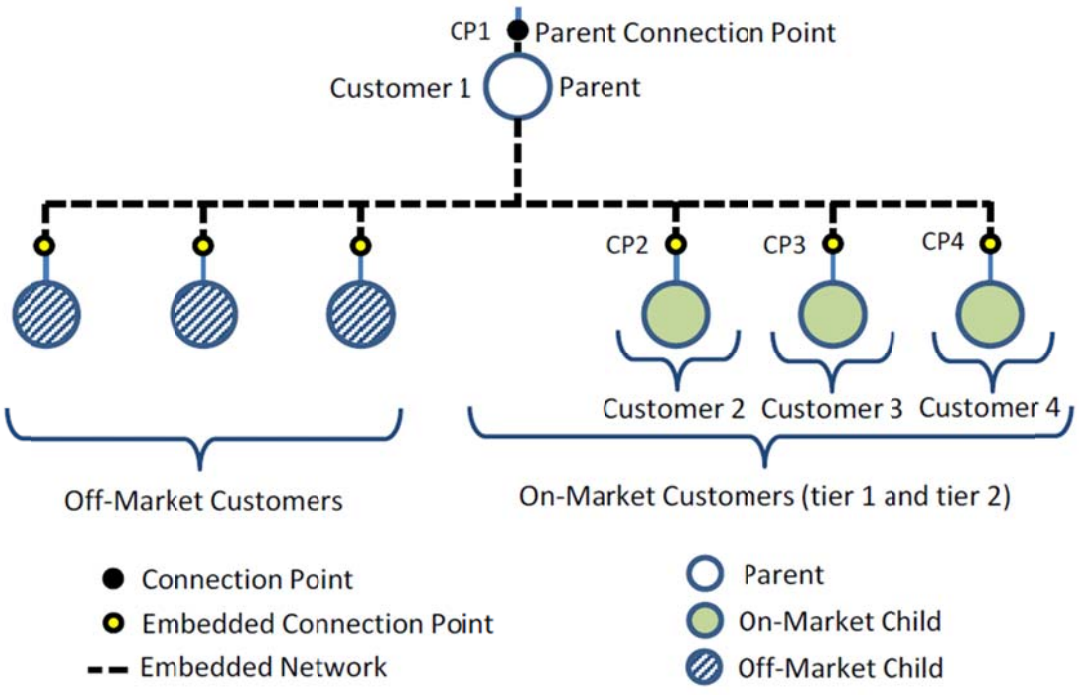
between NEM registered retailers and be provided with a number of energy related services.

For the customers within embedded networks who want to permanently remain off-market many of these requirements are unnecessary. These customers will continue to receive energy and network services from the ENO, removing the need to facilitate the ability to change retailers. In such circumstances, the AER's exemptions framework provides customer protections, information entitlements and obligations to comply with safety standards.

The major gap in the current regulatory arrangements and the focus of AEMO's rule change request is the lack of regulatory arrangements to support customers within embedded networks who are off-market and are seeking to become on-market, or are on-market and seeking to change retailer. These embedded network customers are not easily able to choose and transfer from the ENO to a registered retailer or from one registered retailer to another registered retailer. This is primarily because there is no regulatory framework to facilitate embedded network customer choice of retail provider.

In addition, the metering framework must also accommodate on-market activity within embedded networks. This requires parent to child metering relationships to be established to facilitate subtractive metering within the embedded network. For example, in Figure 2.2 below, customer 1 must have the metered load of customers 2, 3 and 4 subtracted from the metered load at the parent connection point before it is billed by its retailer. These relationships must be established within AEMO's Market Settlement and Transfer Solutions (MSATS) system or billing errors will likely occur for the child and parent connection points.

Figure 2.2 Parent child metering arrangements



Source: AEMO, Rule change request, September 2014, p.9.

2.3.1 The exemption framework

Who requires an exemption?

Under the NEL and NERL, NSPs and all sellers of electricity are required to register in the NEM[9] or be exempted from registration by the AER.[10]

The definition of NSP is very broad. No matter how small the network, anyone that supplies electricity to another person over a network of any kind is providing a network service. An exemption from the AER is required for such a party to be unregistered, be that party a legal person, corporation, government department or statutory body of any kind.

Similarly, 'energy selling' covers a wide range of activities, from energy retailing by authorised (licensed) retailers to landlords recovering energy costs from their tenants. Energy sales do not necessarily have to be for profit – simply passing on energy costs to another person is considered to be a sale. Nor are energy sales limited by the parties involved. For example, they include sales to residential homes or other places of residence (for example, a caravan park where residents permanently reside), shopping centres and commercial sites.

The broad definitions of NSP and 'energy selling' mean that almost all ENOs, even those for very small networks, will be required to either register as, or seek an exemption from both NSP and retailer. Furthermore, as the registration processes and the requirements once registered are complex and expensive, the majority of embedded network owners/operators either fall within deemed exemptions or otherwise seek the available exemptions.

Creating and enforcing exemption conditions

The NEL and the NER do not direct the AER's discretion when considering exemptions for NSPs other than that they should be in accordance with the national electricity objective (NEO). Also, because the NSP exemption framework largely sits outside of the regulatory framework, the AER's enforcement powers are limited to revocation of exemptions for breach of exemption conditions and prosecution for failure to obtain an exemption for breach of the NEL.

In contrast, the NERL sets out factors that the AER may take into account when considering the eligibility for retailer authorisation exemptions. It also sets out the conditions the AER should impose on exempt sellers, including:[11]

- regulatory arrangements for exempt sellers (put in place as conditions to an exemption) should not unnecessarily diverge from those applying to authorised retailers;
- exempt customers should, as far as practicable, be afforded the right to a choice of retailer in the same way as comparable retail customers in the same jurisdiction have that right; and

9 NEL, s. 11(2)(a) and NER, clause 2.5.1(a).

10 NEL, s. 11(2)(b) and NER, clause 2.5.1(d) and NERL, s. 88.

11 NERL s. 114.

- exempt customers should, as far as practicable, not be denied customer protections afforded to retail customers under the NERL and NERR.

In addition to the ability to revoke a retail exemption and prosecute a part for not obtaining an exemption,[12] the NERL provides the AER with the ability to impose civil penalty provisions for breaches of exemption conditions.[13]

Requirements under the network guideline

The network guideline outlines three categories of exemptions to being registered as a NSP: deemed, registrable and individual. Each category has a different set of eligibility requirements and terms and conditions which must be complied with. Notably:

- small networks (for example, a caravan park with less than ten customers) are generally eligible for a deemed exemption. These do not require application or registration with the AER, but the exempt party must still comply with the conditions of the exemption, which vary depending on the type of embedded network;
- larger networks (for example, an airport) are required to register with the AER as a specific type of registrable embedded network to provide the AER with greater awareness and oversight of these networks; and
- larger networks which do not fit within one of the specified types of registrable embedded networks must seek an individual exemption from the AER.

In general, the conditions of exemption relate to safety, access to dispute resolution, network pricing, metering and access to competition. Appendix A provides further information on these conditions.

In regard to access to retail market offers, the network guideline specifies that ENOs must not impede a customer's access to competitive retail market offers if they are available in the relevant jurisdiction. The network guideline sets out that this condition means that an ENO must actively facilitate access to competitive retail market offers (where allowed).[14] For example, an ENO, when requested by a customer must provide details of the parent metering configuration without undue delay.

Requirements under the retail guideline

Similar to the network guideline, the retail guideline identifies three classes of exemption: deemed, registrable and individual. The registrable and individual exemptions are relevant to parties carrying out activities on a larger scale.

The retail guideline details the conditions of exemption applicable to an exempt seller. The conditions largely reflect the rights and consumer protections that customers would otherwise have if they were not within an embedded network. Generally, this means that more stringent conditions are placed on embedded networks supplying small and vulnerable customers. Other conditions for exempt sellers relate to

12 NERL s. 111 and 88.

13 NERL s. 112(2).

14 AER, *Electricity Network Service Provider Registration Exemption Guideline*, August 2013, p.25.

information provision, retail pricing, dispute resolution and access to retail market offers. Appendix B provides a summary of these conditions.

In jurisdictions where access to retail market offers is available ENOs may not impede access. In this case, impeding includes an ENO: requiring a customer to waive their ability to choose a retailer, unreasonably hindering a customer's efforts to find another retailer and unreasonably hindering any metering or network changes required to enable retailer choice.[15]

2.3.2 Jurisdiction specific requirements

Jurisdictional regulatory arrangements relevant to this rule change request are those which facilitate or prohibit embedded network customers accessing retail market offers. A number of stakeholders have noted that these arrangements are unclear, complex and are different in every jurisdiction. The Commission's understanding of the legislative instruments and policy decisions that form these arrangements in each jurisdiction is provided in Appendix C. The Commission seeks submissions on these arrangements, including on the Commission's interpretation of their impact on customer access to retail market offers, and whether there are any other jurisdictional legal instruments or policy decisions that are relevant to such access.

The AER's network and retail guidelines set out that Victoria, New South Wales and South Australia currently have regulatory frameworks which support embedded network customer access to retail market offers. The guidelines note that such support is not provided in Queensland, Tasmania and the Australian Capital Territory (ACT).[16]

In Queensland, Tasmania and the ACT embedded network customers need a direct connection to the local distribution network if they want access to retail market offers. This may require significant changes to the wiring within the network, the costs of which would be borne by the customer.

2.4 Competition in metering and related services rule change

On 26 March 2015 the Commission released a draft rule determination for the Expanding Competition in Metering and Related Services rule change. The draft determination sets out significant proposed changes to the NER and NERR in relation to the provision of metering services to facilitate a market-led approach to the deployment of advanced meters.[17]

The Expanding Competition in Metering and Related Services draft rule provides for the role and responsibilities of the existing responsible person to be performed by a new type of registered participant – a metering coordinator. Under the draft rule any person can become a metering coordinator subject to satisfying certain registration requirements. Retailers are required to appoint the metering coordinator for their retail customers, except where a large customer has appointed its own metering coordinator.

15 AER, *AER (Retail) Exempt Selling Guideline - Version 3*, April 2015, p.46.

16 AER, *Electricity Network Service Provider Registration Exemption Guideline*, August 2013, p.9. and AER, *AER (Retail) Exempt Selling Guideline - Version 3*, April 2015, p.23.

17 AEMC, *Draft Rule Determination National Electricity Amendment (Expanding competition in metering and related services) Rule 2015*, March 2015, p.9.

The draft rule also changes the minimum requirements for new and replacement meters for small customers.

The timing of the Expanding Competition in Metering and Related Services rule change process also has implications for the embedded networks rule change process. Notably:

- The Expanding Competition in Metering and Related Services draft determination was made after AEMO submitted the embedded networks rule change request. AEMO was therefore not able to take into account all of the changes to the metering arrangements in its rule change request. This is discussed in the issues for consultation chapter of this consultation paper;
- The Expanding Competition in Metering and Related Services final determination is currently scheduled to be published in July 2015. The draft determination for the embedded networks rule change request is currently expected to be published by 27 August 2015. This timing will allow the Commission to take into account the Expanding Competition in Metering and Related Services final rule in making the embedded networks draft determination. It will also allow stakeholders to make submissions to the embedded networks draft determination with full knowledge of the Expanding Competition in Metering and Related Services final rule; and
- The Expanding Competition in Metering and Related Services draft determination proposes a commencement date of 1 July 2017 for the final rule. In the event a rule was to be made in this rule change process, aligning its commencement date to the implementation of the Expanding Competition in Metering and Related Services final rule may be considered. Aligned timing could allow synergies in required changes to systems and procedures, which may reduce implementation costs. This issue is discussed in the issues for consultation section below.

3 Summary of the rule change request

This section provides a brief summary of AEMO's rule change request to provide context to the issues raised in Chapter 5. The full rule change request, including the proposed rule, the detailed market design and Jacobs SKM's cost benefit report are available from the AEMC's website.

3.1 Reasons for the rule change request

The AEMC's final advice on Energy Market Arrangements for Electric and Natural Gas Vehicles identified that the regulatory arrangements for embedded networks are unclear and may pose a barrier to embedded network customers accessing retail market offers.[18] These issues were also noted in the AEMC's Power of Choice final report. On 31 July 2013, the SCER (now known as the COAG Energy Council) requested AEMO lead the implementation of these policy initiatives for embedded networks.

In developing the rule change request AEMO sought to identify the potential benefits of implementing the policy initiatives. AEMO engaged Jacobs SKM to undertake a cost benefit analysis of the changes to the regulatory arrangements proposed by AEMO. The analysis indicated that there are significant benefits available, including:

- Increased regulatory certainty by formalising the roles, responsibilities and arrangements in a national regime;
- Allowing embedded network customers to access alternative retailers will drive competition, resulting in lower prices for customers;
- Lower prices from enhanced competition will create a demand response for energy and related services, leading to resource allocation benefits; and
- Access to retail market offers will drive product innovation within embedded networks. For example, by allowing retailers to compete to supply portions of the embedded networks' loads. A more efficient allocation of resources devoted to generation of electricity and possibly leading to improvements of network productivity may arise.

3.2 Issues identified with current regulatory arrangements

AEMO has identified three key issues with the current regulation of embedded networks in relation to access to retail market offers:

1. The NER does not make it clear who has the obligation to support NEM activities for customers within embedded networks. This includes:
    - Who has the obligation to set up and maintain the MSATS standing data for an embedded network?
    - Who is responsible for ensuring that data on life support customers within embedded networks is maintained?

18 AEMC 2012, *Energy Market Arrangements for Electric and Natural Gas Vehicles*, Final report. p.38.

- Who performs the NEM processes for the transfer of embedded network customers between retailers, particularly between the ENO and a registered retailer?
- How are distribution loss factors (DLFs) set for customers within an embedded network?
- Who has access to embedded network customers' metering data?
- Who is responsible for metering for embedded network customers who have selected their own retailer?

2. Queensland, Tasmania and the Australian Capital Territory (ACT) have not designed regulatory arrangements to support access to retail market offers.
3. The regulatory arrangements which allow access to retail market offers in New South Wales (NSW), South Australia and Victoria are inconsistent.

AEMO notes that issues two and three are not within the scope of the rule change because they are covered by jurisdictional instruments that the AEMC cannot amend through changes to the NER or NERR.

3.3 Proposed solution

AEMO proposes to create a new category of service provider – an embedded network manager (ENM) – to manage embedded network customers in the NEM.

Under the proposed rule the AER would only be permitted to grant an ENO an exemption from the requirement to be registered as a network service provider if an ENM has been appointed for the embedded network.[19]

AEMO expects that the ENM would facilitate the transfer of customers between the ENO and registered retailers. This includes carrying out the functions within MSATS and the Business to Business (B2B) procedures that are performed by registered network service providers, retailers and accredited service providers for non-embedded network customers.[20]

AEMO has identified that significant changes will be required to the AER's network guideline to fully implement the proposed rule. In particular, the application of the proposed rule to existing embedded networks will need to be addressed in amendments to the network exemption conditions.[21]

A cost benefit analysis of the high level market design of AEMO's solution indicated that there are long term benefits from reducing the barriers to embedded network customers accessing retail market offers.[22] AEMO considers that the assumptions within the cost benefit analysis were conservative and so the net benefits may be understated. In developing the more detailed market design and the rule change

19 This requirement is waived for smaller networks where deemed AER exemptions currently apply.

20 AEMO, *National Electricity Rule Change Request – Embedded Networks*, September 2014, p.4.

21 AEMO, *National Electricity Rule Change Request – Embedded Networks*, September 2014, p.4.

22 Jacobs SKM, *Benefits and Costs of Multiple Trading Arrangements and Embedded Networks*, May 2014, p.3.

request AEMO has looked to minimise the extent and costs of the changes required while maintaining the integrity of the processes involved.[23]

AEMO considers that if implemented, the proposed rule will provide clarity regarding the roles and responsibilities of managing embedded networks and provide a framework for embedded network customers to access retail market offers.

AEMO expects this would then allow relaxation of the jurisdictional regulations which currently prevent customers choosing a registered retailer. AEMO also anticipates a harmonisation of the regulations in jurisdictions which already permit retailer choice. Such jurisdictional changes are expected to increase the benefits arising from making the proposed rule.[24] However, any such changes to jurisdictional regulations would need to be made by jurisdictions and are not within the scope of this rule change.

23 AEMO, *National Electricity Rule Change Request – Embedded Networks, September 2014*, p.4.

24 Ibid.

4 Assessment framework

The Commission's assessment of this rule change request must consider whether the proposed rule promotes the NEO as set out under s. 7 of the NEL.

The NEO states:

> "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."

Based on a preliminary assessment of the rule change request, the relevant aspects of the NEO are the promotion of efficient investment in, and operation of retail and distribution electricity services for the long term interests of consumers with respect to price and quality.

The Commission may make a more preferable rule if it is satisfied that it is likely to better contribute to the achievement of the NEO.[25] To determine whether the proposed rule, or a more preferable rule, if made, is likely to promote the NEO, the following factors may be considered as part of the Commission's assessment of the rule change request.

4.1 Facilitating competition

Competition can be a key driver of productivity and efficiency in markets, driving lower prices and a greater range of choices for consumers in the long run. The Commission intends to assess the degree to which the framework sought to be established by the rule change request will promote competition in the retail market for energy and demand side participation services for customers within embedded networks.

The Commission also intends to assess the potential benefits from a competitive market for the provision of embedded network management services.

4.2 Clarity, transparency and predictability

The legal framework for the management of embedded networks, including the governing roles, responsibilities and accountabilities should be clear, understandable and result in predictable outcomes for all participants. This should promote confidence in the regulatory framework and encourage registered retailers to participate in the supply of retail energy and demand side services to customers within embedded networks (where allowed). Similarly, confidence in the regulatory framework should encourage all potential providers, including DNSPs, retailers, ENOs and other parties to participate, and invest in providing embedded network management services.

All parties, especially consumers, should have access to sufficient information to make efficient decisions. For example, for consumers within embedded networks to choose

25 NEL s. 91A.

between registered retailers and ENOs as their retailer they need to be able to compare the price of energy services from each. This requires network charges to be transparent from energy charges for embedded network consumers. Transparency is integral to consumers within embedded networks being able to make efficient decisions.

4.3 Proportionality and regulatory burden

Changes to the NER should not create unnecessary compliance and administrative burdens for stakeholders. A rule that is complex to administer, difficult for stakeholders to understand or results in unnecessary compliance requirements is less likely to achieve its intended purpose or will do so at a higher cost. The Commission intends to consider whether the administrative and compliance burden created by the proposed rule is likely to be proportionate to the benefits it is seeking to achieve. This will include reductions in administrative and compliance costs as a result of the introduction of NEM wide consistent regulations arising from the rule change request.

5 Issues for consultation

Taking into consideration the proposed assessment framework, a number of issues for consultation appear to be relevant to the rule change request. Stakeholders are encouraged to comment on these issues as well as any other aspect of the rule change request or this paper including the proposed assessment framework.

5.1 Requirements to facilitate competition

AEMO has identified the functions that would be required to facilitate embedded network customers' access to retail market offers. These functions are set out below. The key regulatory arrangements for embedded networks that AEMO does not consider need to be altered are also identified.

To minimise the costs of the changes, AEMO elected to only specify those functions which are necessary to allow access to retail market offers and maintain the integrity of MSATS.

5.1.1 Functions required to facilitate access to competition

The functions AEMO considers are required to allow embedded network customers access to retail market offers and provide clarity over the management of embedded network customer include:[26]

- Allocating an identifying embedded network code, which would be a unique name for the embedded network, to the parent national metering identifier (NMI) in MSATS and maintaining that code when embedded network customers become on-market customers. This demonstrates in MSATS that the parent and child connection points are part of the same embedded network to allow the parent-child relationship to occur.
- Fulfilling the LNSP role provided for in MSATS and the B2B procedures for the on-market embedded network child connection points, including:
    - requesting AEMO to provide NMIs and allocating these NMIs to child metering installations in MSATS when an off-market embedded network customer wishes to become on-market;
    - maintaining all standing data required in connection with on-market embedded network child NMIs;
    - managing MSATS and B2B interfaces for the embedded network connection points;
- Maintaining and communicating information regarding embedded network customers to market participants and accredited service providers, including:
    - maintaining information about the subtractive metering arrangements relating to the configuration of the metering installation and making that information available on request to any retailer to whom an embedded

26 AEMO, *National Electricity Rule Change Request – Embedded Networks, September 2014*, p.9.

network customer is proposing to transfer or to that retailer's metering provider;

- where electricity supply must be maintained for life support requirements, notifying the financially responsible market participant (FRMP) of the parent connection point of the requirement;
- communicating with local retailers, market customers and distribution network service providers in relation to all on-market and prospective on-market embedded network customers.

AEMO also identified two changes to conditions of exemptions in the AER's network guideline that it considers are necessary to facilitate embedded network customer access to retail market offers:[27]

- the AER should require the same routine testing and inspection of off-market child meters as for those customers directly connected to a registered NSP's network; and
- the AER should require ENOs to unbundle retail bills of embedded network customers into network and energy charges so that customers can compare offers for energy charges from a registered retailer and the ENO.

5.1.2 Key arrangements that will not change

AEMO is not proposing changes to the regulatory arrangements for metering standards or accuracy, network charges, distribution loss factors, retailer of last resort procedures or obligations to supply.[28] AEMO proposes that these arrangements for embedded networks continue to be governed by the AER's network guideline. These arrangements are summarised in Appendix A.

Question 1 Requirements to facilitate competition

a) Are there any additional changes to the NER or the AER's network guideline that are necessary to allow embedded network customers access to retail market offers?

b) Are there any additional changes to the NER or the network guideline that are necessary to clarify the roles and responsibilities for management of embedded network customers?

c) Are any of the proposed changes to the NER or the network guideline proposed by AEMO not appropriate?

5.2 Who should perform these functions?

AEMO is proposing to create a new service provider role – the ENM. This role would be contestable, using the current approach taken for accrediting metering providers

27 AEMO, *National Electricity Rule Change Request – Embedded Networks, September 2014*, p.12.

28 AEMO, *National Electricity Rule Change Request – Embedded Networks*, September 2014, pp.12-13.

and metering data providers. AEMO considers that this approach will have a number of benefits, including:[29]

- it creates a competitive market for ENM services which will allow ENOs to choose the lowest cost provider of ENM services;
- it allows a wide range of parties to provide the services, including ENOs themselves, retailers and DNSPs;
- assurance through an AEMO accreditation process of the capability of the parties to provide the services; and
- the high costs of full NEM registration would be avoided. AEMO also considered a number of other options of entities to perform the functions set out in section 5.1.1 above.[30] The positives and negatives of each are described below.
- The LNSP or retailer of the parent connection point

  AEMO considered that these market participants have the capability and expertise to provide the embedded network management functions because they are already familiar with MSATS and the B2B procedures. However, if the functions were simply assigned to these parties the benefits of a contestable market for ENM services would be lost and other parties would be prevented from providing the services. Further, these functions do not sit neatly within either the LNSP or retailer's roles in reference to an embedded network because they have no direct relationship with embedded network customers.
- The ENO

  Alternatively, the functions could be allocated to the ENO by adding to the conditions of network exemptions under the AER's network guideline. However, while some ENOs may be capable of performing the embedded network management functions (and will be able to be accredited under AEMO's proposal) others will not have the expertise or resources to do so. This would therefore risk ENOs breaching their exemption conditions, compromising the MSATS and B2B procedures, and impacting on the services provided to customers.
- A new classification of market participant

  AEMO considered creating a new market participant category instead of a new classification of service provider. However, AEMO preferred a service provider role because it considered that the registration requirements of a participant category would increase the cost of providing the functions. Also, market regulation is not warranted because the ENM functions are providing services to others rather than trading in the market.
- Some other entity

  The Expanding Competition in Metering and Related Services draft determination proposed to introduce a new market participant – the metering

29 AEMO, *National Electricity Rule Change Request – Embedded Networks*, September 2014, p.10.

30 AEMO, *National Electricity Rule Change Request – Embedded Networks*, September 2014, p.10.

coordinator – that will take on the current roles and responsibilities of the responsible person. This proposed market participant could be assigned some of these functions. However, the proposed metering coordinator role primarily relates to coordinating accredited service providers, such as metering data providers, to undertake functions for customers, not performing functions themselves.

Question 2 Who should perform these functions?

a) Should a new accredited service provider role (the ENM) be created to perform all or some of these functions as proposed by AEMO?

b) What, if any, functions should be performed by an existing party? And if so, which existing party? What would the advantages be of an existing party performing some of the functions?

c) Alternatively, if a new ENM role is not created, who should perform the functions identified by AEMO? What would the advantages be of other parties performing the functions?

5.3 Implementation issues

Notwithstanding the issues described above, this section focuses on the implementation of AEMO's proposed ENM role as a new accredited service provider. It raises questions around the following issues:

- When is an ENM required?
- Accreditation and governance of ENMs
- Who can be an ENM?
- Transitional issues
- The ENM market

5.3.1 When is an ENM required?

AEMO proposes to make use of the AER network exemption threshold for the purpose of determining when an ENM is required for an embedded network. The network exemption thresholds are set at the AER's discretion.

AEMO proposes that all ENOs that require a registrable or individual exemption under the AER's network guideline be required to appoint an ENM.[31] ENOs eligible for deemed exemptions would not be required to appoint an ENM. As the requirement for an ENM to be appointed would be a condition of exemption under the AER's network guideline, failure to comply could be addressed by the AER as a breach of an exemption condition.[32]

31 AEMO proposes to implement this via a requirement in the NER that the AER must not grant a registrable or individual exemption unless an ENM is appointed and maintained for the embedded network.

32 AEMO, *National Electricity Rule Change Request – Embedded Networks, September 2014*, p.11.

Under the proposed rule the threshold for appointment of an ENM would be determined by the AER and set out in the network guideline, which specifies when an ENO requires a registrable or individual exemption. For example, under the current network guideline, the AER specifies that the deemed exemption class covers small industrial/commercial networks with fewer than ten customers, residential apartment complexes with fewer than ten customers and holiday caravan parks and other small incidental supplies. Embedded networks that do not fall into these categories will require a registered or individual exemption. However, the AER has discretion over these thresholds.[33] Consequently, under AEMO's proposal the AER will also have discretion over the threshold for ENOs to appoint an ENM.

For those jurisdictions which have regulatory arrangements which allow for access to retail market offers (currently Victoria, South Australia and New South Wales), the AER's network guideline provides that if an embedded network customer seeks access to a retail market offer, an existing deemed exemption becomes registrable. This in turn will trigger the appointment of an ENM under AEMO's proposed framework. This means that even customers within embedded networks subject to deemed exemptions will be able to access an ENM when they need to do so to facilitate them to become on-market.

Question 3 When is an ENM required?

a) Should all registrable and individual embedded networks be required to appoint an ENM? What are the advantages of such a requirement?

b) Should deemed embedded networks be required to appoint an ENM?

c) Is another threshold appropriate?

d) Should the threshold for appointing an ENM be a matter for the AER under the network guideline? Should the NER provide factors for the AER to consider when setting the threshold?

5.3.2 Accreditation and governance of an ENM

Under the proposed rule an ENM must be accredited by AEMO. AEMO proposes to establish and maintain ENM service level requirements, accreditation checklists and guidelines for accreditation applicants. Further, only an accredited ENM will be able to provide ENM services. AEMO proposes that this requirement be classified a civil penalty provision.

AEMO proposes that the capabilities required of an ENM to gain accreditation include:

- a detailed understanding of the NER, procedures relating to the function of an ENM and the carrying out of embedded network services;
- a detailed understanding of the participant role relationships and obligations that exist between the ENMs, FRMPs, DNSP and AEMO;

33 As described in section 2.3.1, the NEL and the NER direct the AER that NSP exemptions should be in accordance with the NEO.

- a detailed understanding of subtractive metering arrangements as they relate to market settlements; and
- maintaining interfaces (for example, web browsers) to give capabilities to support B2B procedures and support MSATS procedures for maintenance of NMI standing data.

AEMO proposes to undertake periodic reviews to assess ENMs' compliance with the above requirements. All scheduled reviews will be through a centralised review process to be established by AEMO and will be undertaken at the ENM's own cost. Reviews should be no more frequently than annually.

As noted above, the compliance requirements for ENMs would include an obligation to comply with the relevant provisions of the NER, MSATS procedures, and B2B procedure. Where AEMO identifies non-compliance, the ENM would be required to take corrective action. Options available to AEMO in the event of breach or lack of adequate corrective action would be:

- suspension of the ENM, or a reduction in the scope of its accreditation, until the required corrective action is taken; or
- loss of accreditation of the ENM.

Question 4 Accreditation and governance of an ENM

a) Are the proposed requirements appropriate?

b) Are any other requirements needed for the accreditation and governance of ENMs?

c) Are any of the requirements proposed by AEMO not necessary for the accreditation and governance of ENMs?

d) Should the requirement to have ENM services provided by an accredited ENM be classified as a civil penalty provision?

5.3.3 Who can be an ENM?

AEMO proposes that any party that meets the accreditation requirements can become an ENM.[34] This will provide for a wide range of potential ENMs, both existing participants and new entrant businesses.

It would be possible for ENOs to undertake these functions themselves if they apply to AEMO to be accredited as an ENM and can establish that they meet the requirements.

AEMO proposes that to ensure a level playing field, any ENM activities undertaken by a registered DNSP should be ring-fenced from its regulated business activities.[35] However, AEMO does not propose changes to the current ring-fencing arrangements

34 AEMO, *National Electricity Rule Change Request – Embedded Networks, September 2014*, p.9.

35 AEMO, *National Electricity Rule Change Request – Embedded Networks, September 2014*, p.10.

in the NER, which allow the AER to decide (subject to the NEO) which DNSP activities must be ring-fenced.[36]

The Commission recently considered the ring-fencing arrangements in the Expanding Competition in Metering and Related Services draft determination. The Commission proposed that the AER should continue to select which DNSP activities are to be ring-fenced because this will provide the AER with the flexibility to determine what ring-fencing measures are most appropriate, having regard to the services being provided.[37] This could include ring-fencing of ENM services.

Question 5 Who can be an ENM

a) Should any party be prevented from becoming an ENM?

b) Should the AER be able to determine the ring-fencing arrangements for ENM services?

5.3.4 Transitional issues

Grandfathering

AEMO proposes that existing embedded networks with registrable or individual exemptions be allowed two years from the commencement of the rule to appoint an ENM. This will allow existing ENOs sufficient time to budget any additional costs and undertake a tender process to appoint an ENM or develop the systems and expertise to be accredited as an ENM themselves. AEMO proposes that this arrangement be implemented through the AER's network guideline and expects that the AER will consider the appropriate transitional period for these sites to have completed the appointment of an ENM, recognising the commercial processes that may be involved.[38]

Question 6 Grandfathering

a) Taking into account potential implementation timing, how long should ENOs with current registrable or individual network exemptions be provided to appoint an ENM?

b) Should the transition period be set in the AER's network guideline or within the NER?

Transitional provisions

Implementation of the proposed rule would require AEMO to make changes to its existing procedures and systems. To implement the proposed rule in a timely manner, AEMO requests transitional provisions requiring it to amend the:

36 Clause 6.17 of the NER.

37 AEMC, *Draft Rule Determination National Electricity Amendment (Expanding competition in metering and related services) Rule 2015*, March 2015, p.228.

38 AEMO, *National Electricity Rule Change Request – Embedded Networks, September 2014*, p.13.

- MSATS procedures;
- Metrology procedures; and
- B2B procedures (in accordance with a recommendation from the information exchange committee).

The proposed rule also requires AEMO to develop the ENM service level procedures. The proposed transitional provisions would deem any consultation steps for the development of the new service level procedures and other relevant procedure changes prior to the rule commencement date to have been validly undertaken under the NER consultation procedures for the purposes of the transitional requirement.

Question 7 Transitional provisions

a) Are the proposed transitional provisions appropriate?

b) Are any other transitional arrangements necessary to facilitate the implementation of the proposed rule?

Implementation timing

AEMO has not proposed a timeframe for implementation of the proposed rule. However, AEMO considers that there are potential synergies in the timing of the proposed changes with other recommendations arising out of the Power of Choice review, particularly how these might be related to the costs of software systems changes.[39]

The Commission and AEMO have been working together to develop an implementation work plan for the Power of Choice recommendations, which AEMO is currently consulting on with stakeholders. Of particular relevance to the implementation of this rule change is the Expanding Competition in Metering and Related Services rule change, the Meter Replacement Processes rule change and the Implementation advice on the Shared Market Protocol.

The second phase of implementation of Power of Choice initiatives includes the Multiple Trading Relationships and Demand Response Mechanism rule changes, if these rule changes are made by the Commission. These rule changes are not likely to be able to be coordinated with the above projects as the timeframes for these rule changes will be significantly different.

Question 8 Implementation timing

a) Are there potential synergies available from implementing the proposed rule in co-ordination with the Expanding Competition in Metering and Related Services rule change, the Meter Replacement Processes rule change and/or the advice on the Shared Market Protocol? If so, to what extent?

39 AEMO, *National Electricity Rule Change Request – Embedded Networks,* September 2014, p.20.

5.3.5 Competition in the ENM market

AEMO anticipates that a number of the existing ENO businesses will become accredited as ENMs and offer to carry out ENM services to other ENOs. Many ENOs would either have, or could readily develop, the skills and systems required to undertake the specified tasks without major additional costs. Many existing market participants such as retailers and NSPs may also be able to realise the opportunities from providing ENM services to embedded network owners.

To ensure that there are ENMs available at the commencement date of the rule, AEMO proposes that for six months from that date, existing market customers (ie retailers) and NSPs who notify AEMO that they wish to be ENMs are deemed to be ENMs.[40]

To assist embedded network owners/operators or controllers in appointing an ENM, AEMO will maintain a list of accredited ENMs on its website.

Question 9 Competition in the ENM market

a) Will AEMO's proposed six month deeming of ENMs assist ENOs in finding an ENM or aid in the development of ENMs?

b) Are any other regulatory arrangements necessary to facilitate competition in the provision of ENM services?

c) Are retailers, NSPs, ENOs or other parties likely to seek to provide ENM services?

5.4 Consequential or corresponding changes to the NERR

AEMO's rule change request includes a proposed rule in relation to the NER. The Commission may make changes to the NERR where it considers such changes are necessary or consequential, or are corresponding to the rule change request.[41]

When an embedded network child customer goes on-market it will become the customer of a registered retailer who is currently operating in the market, subject to the NERL and not conditions of the AER's retail guideline. A range of retail market issues may therefore arise which may be appropriate to consider as part of the assessment of this rule change request. These include:

- Standing offers: A standing offer must be made to small customers[42] at the 'standing offer prices' under the retailer's form of standard retail contract. However, under AEMO's proposal the retailer will not be charging the customer for network services and therefore offering standing offer prices, which include a network component, may not be possible. Further, the retailer's form of standard retail contract[43] is premised on market customers having a DNSP (via a connection contract) and includes requirements relating to the DNSP which do

40 AEMO, *National Electricity Rule Change Request – Embedded Networks*, September 2014, p.13.

41 NEL s. 91B.

42 NERL s. 22(1).

43 Contained in Schedule 1 of the NERR.

not accommodate the relationship an embedded network customer has with the ENO.

- Explicit informed consent: The NERL sets out the transactions that require explicit informed consent, including the transfer of a customer from one retailer to another. In this case a retailer is defined as a person holding a retail authorisation, and therefore does not include ENOs. A retailer would therefore not need to obtain explicit informed consent to transfer a customer from an ENO and an ENO would not need explicit informed consent to transfer a customer from an authorised retailer.
- Content of bills: rule 25 of the NERR requires a retailer to prepare a bill so that a small customer can easily verify that the bill conforms to their customer retail contract and includes the tariffs and charges applicable to the customer. However, under AEMO's proposal, a retailer will not have access to, or be billing for network charges.
- Re-energisation: The re-energisation provisions under rules 121 and 122 assume there is a DNSP to re-energise customers' premises in specific situations. These do not accommodate the ENO's role in re-energisation.

Question 10 Consequential or corresponding changes to the NERR

a) How should the potential corresponding issues in the NERR be addressed?

b) Are there are other necessary, consequential or corresponding changes to the NERR that may be relevant to the making of the proposed rule?

6 Lodging a submission

The Commission has published a notice under s. 95 of the NEL for this rule change request inviting written submission. Submissions are to be lodged online or by mail by 2 July 2015 in accordance with the following requirements.

Where practicable, submissions should be prepared in accordance with the Commission's Guidelines for making written submissions on rule change proposals.[44] The Commission publishes all submissions on its website subject to a claim of confidentiality.

All enquiries on this project should be addressed to Ben Davis on (02) 8296 7800.

6.1 Lodging a submission electronically

Electronic submissions 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 "ERC0179". The submission must be on letterhead (if submitted on behalf of an organisation), signed and dated.

6.2 Lodging a submission by mail

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

Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Or by fax to (02) 8296 7899.

The envelope must be clearly marked with the project reference code: ERC0179.

44 This guideline is available on the Commission's website.

Abbreviations

ACT	Australian Capital Territory
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Commission	See AEMC
DNSP	distribution network service provider
EIC	Explicit informed consent
ENM	embedded network manager
ENO	embedded network operator
FRMP	financially responsible market participant
LNSP	local network service provider
MSATS	Market Settlement and Transfer Solutions
MTR	multiple trading relationships
NEL	National Electricity Law
NEM	National Electricity Market
NEO	national electricity objective
NERL	National Electricity Retail Law
NERR	National Electricity Retail Rules
NMI	national metering identifier
NSP	network service provider
NSW	New South Wales

Appendix A Conditions under the AER's network guideline

The specific conditions that apply to each embedded network depend on the type of exemption required. The conditions relate to five key areas:

1. safety;
2. dispute resolution;
3. network charging;
4. metering; and
5. access to retail market offers.

For more detail on the specific conditions and the applicability of each to the different categories of network exemption see the AER's network guideline.[45]

1. Safety

All embedded networks must, at all times, be installed, operated and maintained in accordance with all applicable requirements (within the jurisdiction in which the network is located) for the safety of persons and property. This includes, where relevant, an industry code or guideline otherwise applicable to a network service provider providing similar services.

The exempt party is also required to co-operate with reasonable requests for information from LNSPs, maintain safety plans, be capable of load shedding in emergency situations and be capable of shutting down or disconnecting local generation in the event of loss of supply from the LNSP's network.

Where notified by a customer of the existence of a requirement to maintain supply for life support equipment ('life support customer'), the exempt party must promptly notify the LNSP of the existence of a life support requirement in accordance with the reasonable requirements of the LNSP. Further, the exempt party must not disconnect supply to a life support customer without making arrangements for the safety of that life support customer.

2. Dispute resolution

The exempt party must have in place dispute resolution procedures which customers can access at no cost or on a fee for service basis. The process must be of a type ordinarily applicable to disputes of the kind, be reasonably accessible, timely, binding on the parties to the dispute and not subject to excessive or unnecessary costs nor to costs disproportionate to the amount in dispute.

3. Network charging

Network charges being passed through from the LNSP may be apportioned to each customer in a embedded network on a 'causer pays' basis in proportion to the metered

45 AER, *Electricity Network Service Provider Registration Exemption Guideline*, August 2013, available at http://www.aer.gov.au/sites/default/files/AER%20electricity%20NSP%20registration%20exemption%20guideline%20-%2027%20August%202013_0.PDF.

energy consumption of each customer over the equivalent period. Alternatively the charges borne by each customer may be determined on a 'shadow price' basis. In this context a 'shadow price' requires charging each customer a tariff no greater than the tariff that would have applied had that customer obtained supply directly from the LNSP.

Network charges for the internal network are generally not permitted.

4. Metering

All meters used for the measurement of electrical energy whether delivered to, or exported by, a customer must comply with the requirements of the *National Measurement Act 1960* (Cth) and regulations made under that Act for electricity meters and sub-meters and with the requirements set out in Schedule 7.2 of the NER.

5. Access to retail market offers

In South Australia, Victoria and New South Wales the exempt party must not block customers accessing retail market offers. The exempt party must provide information regarding the parent NMI upon request, not impose unfair or unreasonable terms on the customer, and provide reasonable access to the customer's metering installation within the embedded network.

Appendix B Conditions under the AER's retail guideline

The specific conditions that apply to each embedded network depend on the type of exemption required. The conditions relate to five key areas:

1. consumer protections;
2. information requirements;
3. retail pricing;
4. access to retail market offers; and
5. dispute resolution.

The conditions generally attempt to mirror the rights that embedded network customers would have if the exempt seller was subject to the NERL and NERR. For more detail on the specific conditions and the applicability of each to the different categories of exempt seller see the AER's retail guideline.[46]

1. Consumer protections

The consumer protection conditions relate to a wide variety of issues including:

- obligation to supply;
- provision of flexible payment options;
- regularity of bills;
- application of government concession and rebate schemes;
- requirements for life support customers;
- termination of supply contracts;
- estimation of bills; and
- reasonable payment periods.

2. Information requirements

The exempt seller is required to provide information to customers at the commencement of supply regarding the customers' access to retail markets, contact details for complaints and inquiries, the terms and conditions of the exemption and the rights the customer has within the exemption.

3. Retail pricing

For small customers where access to retail market offers is not available, or is not cost-effective to provide, the price to that customer may not be higher than the standing offer price that would otherwise be charged by the local retailer.

46 AER, *AER (Retail) Exempt Selling Guideline, Version 3*, April 2015, available at http://www.aer.gov.au/sites/default/files/AER%20%28Retail%29%20Exempt%20Selling%20Guideline%20-%20version%203.pdf.

4. Access to retail market offers

In South Australia, Victoria and New South Wales the exempt party must not discourage or prevent embedded network customers from accessing retail market offers. The exempt party must not: require a customer to waive their ability to choose a retailer, unreasonably hindering their efforts to find another retailer and unreasonably hindering any metering or network changes required to enable choice of retailer.

5. Dispute resolution

Where disputes arise the exempt seller must make reasonable endeavours to resolve the dispute and advise the customer of rights to access to energy ombudsman schemes and other relevant external dispute resolution bodies in the relevant jurisdiction.

Appendix C Jurisdiction specific requirements

Table C.1 Jurisdiction specific requirements

Jurisdiction	Position in relation to retail competition in embedded networks	Summary of relevant local or other legal instruments
ACT	Full retail contestability was introduced in the ACT with effect from 1 July 2003. Under the terms of the relevant Ministerial declaration made under the Utilities Act 2000 (the Act), retail contestability for customers in an on-supply arrangement appears to be allowable (assuming consumption thresholds are met). However, the position is unclear because: • an ACT specific clause in AEMO's Metrology Procedures makes the position somewhat unclear, though the drafting of the clause seems to suggest that a separately metered child in an embedded network is allowable; and • the stated policy position referred to in MSATS does not appear to be supported by legal instruments.	Under the Act, electricity services (which includes the distribution of electricity though an electricity network) cannot be provided except in accordance with a licence or Ministerial exemption.[47] The Act does not otherwise regulate embedded networks. In defining which customers are contestable (referred to as non-franchise customers), the relevant Ministerial declaration[48]provides for a methodology to determine such customers. The methodology: • includes customers occupying premises that are connected to 'a distribution system or transmission system through a common meter and which are supplied with electricity under the same contract, with one person responsible for payment for electricity so supplied'[49] – this effectively being an embedded network; and • includes consumption of a person being supplied under a Resupply Arrangement.[50] Clause 2.5.1 of the Metrology Procedure: Part A National Electricity

47 Section 22(1) and (2) of the Act.

48 Utilities (Non-franchise electricity customers) Declaration 2003 (No1), made under the section 18 of the Act as in force on 1 July 2007, which at the relevant time stated: The Minister may, in writing, declare a person to be a non-franchise customer in relation to the supply of electricity, gas or water to premises.

49 See clause 1(b) of the Declaration.

50 Relevantly meaning an arrangement under which the costs of electricity can be passed on to others so long as the relevant premises are separately metered, the price didn't exceed what would otherwise would be chargeable directly to that customer and no other charge was levied in relation to the supply of that electricity: s. 98 of the Utilities Act 2000, as at 1 July 2003.

Jurisdiction	Position in relation to retail competition in embedded networks	Summary of relevant local or other legal instruments
		Market outlines variations in accordance with jurisdictional policy. Clause 2.5.1 also seems to foreshadow that a 'child' in an embedded network in the ACT can have a metering installation of its own, which would be necessary for retail contestability in an embedded network.[51] MSATS notes that 'the ACT and Tasmanian regulators have not approved the use of embedded networks in their respective jurisdiction.' However, no legal instrument in support of this position could be located.[52]
South Australia	Full retail contestability was introduced in South Australia with effect from January 2003. Retail contestability for customers in an on-supply arrangement is allowable.	The Electricity (General) Regulations 2012 (made under the Act) exempts an inset network operator or inset network retailer from holding a licence under the Act on the condition that inset customers are given 'an effective right of access to a licenced retailer of the customer's choice'. An inset network is effectively defined as being an embedded network.[53] The regulations outline that the above effective right of access must allow a customer to choose its retailer, install and use meters or equipment for that purpose, without having to pay a charge to the operator of the private network for doing so. The framework has been extended to exempt sellers within the meaning of the NERL. That is, exempt sellers can only carry on operations as either an inset network operator or inset network retailer if inset

51 Clause 2.5.1 – Australian Capital Territory: (1) the responsible person must ensure that the metering installation is not for a child in an embedded network. (2) Where the metering installation is for a child in an embedded network, the responsible person must ensure that additional metering is installed accordingly which ensure that the requirements of clause 2.5.1[ACT(1)] above met.

52 MSATS Procedures: CATS Procedure Principles and Obligations v4.1, Note to Table 9-A.

53 An inset network is defined to mean 'a transmission or distribution network that serves only a group of premises in the same ownership or community or strata title premises': clause 15(8) Electricity (General) Regulations 2012.

Jurisdiction	Position in relation to retail competition in embedded networks	Summary of relevant local or other legal instruments
		customers are given 'an effective right of access to a licenced retailer of the customer's choice'.[54] Clause 2.5.1 of the Metrology Procedure: Part A National Electricity Market reflects the above policy position. It allows for retail contestability in an embedded network, by outlining the responsible person's metering obligations for the child, in the event the child elects to purchase electricity from a retailer other than the parent's retailer. A responsible person is defined in Chapter 7 of the NER and in this case is presumably the LNSP at the parent connection point.[55]
Queensland	Full retail contestability was introduced in Queensland with effect from 1 July 2007. However, retail contestability for customers in an on-supply arrangement was excluded and provisions in the Electricity Act 1994 (the Act) reflect this position. Amendments to the Act, proposed as part of Queensland's implementation of NECF, leave these restrictions in place. The Queensland Government's current policy position is that adopted in 2006:[56] "Queensland will delay the introduction of Free Retail Competition (FRC) to customers in an on-supply arrangement until a national harmonised solution is introduced. NEMMCO	The Act requires an on-supplier to be exempt from the requirement under clause 2.5 of the NER.[57] Neither the Act, nor the Electricity Regulation 2006 made under it, otherwise appear to explicitly regulate embedded networks. MSATS reflects the Queensland Government's current policy position on the creation of embedded networks that it:[58] "QLD jurisdiction has not approved embedded networks for "small" consumers and determined that there will be no new embedded networks for "large" consumers." The reference to 'no new' embedded networks for large customers

54 Clause 44B Electricity (General) Regulations 2012.

55 Clause 7.2.1(a).

56 Energy Competition Committee Policy Decisions Paper No. 2: Electricity Full Retail Competition Final Policy Decisions. 26 July 2006.

57 That is, the requirement to register as a NSP when owning, controlling or operating a distribution system.

58 MSATS reflects the Queensland Government's current policy position on the creation of embedded networks: Note to Table 9-A.

Jurisdiction	Position in relation to retail competition in embedded networks	Summary of relevant local or other legal instruments
	(now AEMO) should continue to develop a national harmonised solution on embedded networks, including the allocation of responsible person to child customers. Queensland will adopt this national solution once the appropriate changes to the National Electricity Rules have been gazetted."	recognises that a small number of embedded networks involving large, contestable customers were created prior to the commencement of full retail contestability in Queensland[59] on 1 July 2007. Under the Act, customers in an on supply arrangement are generally not 'customers' within the meaning of the term in the Act, but are 'receivers'.[60] However, even if a customer in an on supply arrangement was a customer within the meaning of the Act, they are unlikely to be able to apply for retail services because their premises are not NMI premises, as defined in, and required by, the Act.[61]
Tasmania	Full retail contestability was introduced in Tasmania with effect from 1 July 2014. While a policy position has been reflected in the MSATS noting retail contestability for customers in an embedded network is not allowed, there do not appear to be local instruments in place that support this position.	Under the Act, up until 1 July 2014, Aurora Energy was the only retailer able to supply all residential customers and small business customers on mainland Tasmania.[62] However, this restriction on who may sell energy to customers does not apply to exempt sellers,[63] owners of caravan parks selling to its occupants, owners of a building selling to persons occupying part of the

59 Arrangements in place immediately before full retail contestability were grandfathered under Queensland Electricity Act 1994 s. 313. See: Queensland Department of Energy and Water Supply, Electricity On-Supply in Queensland, Discussion paper, 2013.

60 A receiver is 'a person who owns, occupies or has the right to use premises and to whom electricity is supplied, or supplied and sold, by an on-supplier for the premises.' (s. 20). Section 23 of the Act sets out who can be a customer and the various customer types. Relevantly, a receiver is only a customer if the receiver's premises has an electrical installation that, to the reasonable satisfaction of the distribution entity whose distribution area includes the premises, is capable of receiving supply directly from a distribution entity's supply network (subsection 23(2)).

61 These are defined as follows: 1 A premises, part of a premises or a group of premises is an NMI premises if—(a) it is, or is proposed to be, connected to a distribution entity's supply network that is part of the national grid and the premises has, or is proposed to have, a connection point; or (b) it is, or is proposed to be, connected to a distribution entity's supply network that is not part of the national grid and the premises has, or is proposed to have, a supply point for the delivery of electricity. 2 However, the term does not include premises of an excluded customer. See s. 48C(2) of the Electricity Act 1994.

62 Electricity Supply Industry Act 1995 s38, 38A. See clause 4 of the Electricity Supply Industry (Customer) Regulations 2012 where a 'contestable customer' is defined.

63 Section 38A(3).

Jurisdiction	Position in relation to retail competition in embedded networks	Summary of relevant local or other legal instruments
		building and owners or managers of a shopping centre selling to tenants of the centre.[64] The intention of these provisions appears to be to provide for the exempt selling framework as it existed in Tasmania prior to NECF to operate unchanged. The drafting does not lend itself to an interpretation which would allow retail contestability for customers in an embedded network. The Act does not otherwise appear to explicitly regulate embedded networks. MSATS notes that 'the ACT and Tasmanian regulators have not approved the use of embedded networks in their respective jurisdictions.'[65] However, no legal instrument in support of this position could be located.
New South Wales	Full retail contestability was introduced in NSW with effect from January 2002. Retail contestability for customers in an on-supply arrangement is allowable.	The Act was amended in 2000 to introduce arrangements for introducing full retail contestability.[66] Among other things, the Act (at the time) established a regulatory regime for smaller customers (and removed the distinction between franchise and non-franchise customers) and provided for new market rules. The legislative framework necessary to effectively implement full retail competition was completed on 1 July 2001 under the 2000 amending Act by addressing arrangements for metering, customer transfer and the Electricity Tariff Equalisation Fund. No restrictions were placed on customers accessing retail competition. The Act does not otherwise appear to explicitly regulate embedded networks. Clause 2.5.1 of the Metrology Procedure: Part A National Electricity

64 Section 38A(1) and (2); National Energy Retail Law (Tasmania) Act 2012, section 23(2).

65 MSATS Procedures: CATS Procedure Principles and Obligations v4.1, Note to Table 9-A.

66 Electricity Supply Amendment Act 2000.

Jurisdiction	Position in relation to retail competition in embedded networks	Summary of relevant local or other legal instruments
		Market reflects the above policy position in allowing for retail contestability in an embedded network by outlining the responsible person's metering obligations for the child, in the event the child elects to purchase electricity from a retailer other than the parent's retailer. A responsible person is defined in Chapter 7 of the NER[67] and in this case is presumably the LNSP at the parent connection point.
Victoria	Full retail contestability was introduced in Victoria with effect from January 2002. Retail contestability for customers in an on-supply arrangement is allowable.	Under the Electricity Industry Act 2000 (Victoria) (the Act), there is a prohibition on generating, transmitting, distributing or retailing electricity without a licence.[68] Exemptions from licencing can be made by way of an Order in Council. A current Order in Council[69] exempts the distribution and supply of, and sale of,[70] metered electricity[71] in embedded networks from licensing on a number of conditions. In relation to distribution and supply of electricity in embedded networks, the exemption granted does not apply to existing or new premises, if the premises are structured in such a way as to have the effect of denying a licenced retailer the ability to sell electricity to a customer with an approved meter. In relation to the sale of metered electricity in an embedded network, an express condition of the exemption includes: "in the case of the sale of electricity to a large business customer or a small business customer, the exempt

67 Electricity Supply Amendment Act 2000.

68 Section 16(1).

69 Made with effect from 1 May 2002.

70 Order in Council, 1 May 2002, Schedule Part A, clause 2.

71 Order in Council, 1 May 2002, Schedule Part A, clause 3.

Jurisdiction	Position in relation to retail competition in embedded networks	Summary of relevant local or other legal instruments
		person must, when it commences selling electricity to the customer, inform the customer in writing that it may have the right to elect to purchase electricity from a licensed retailer of its choice." Clause 2.5.1 of the Metrology Procedure: Part A National Electricity Market reflects the above policy position in allowing for retail contestability in an embedded network, by outlining the responsible person's metering obligations for the child, in the event the child elects to purchase electricity from a retailer other than the parent's retailer. A responsible person is defined in Chapter 7 of the NER (Clause 7.2.1(a)) and in this case is presumably the LNSP at the parent connection point.