Australian Energy Market Commission

RULE CHANGE

DRAFT RULE DETERMINATION

National Electricity Amendment (Embedded Networks) Rule 2015

Rule Proponent
Australian Energy Market Operator

10 September 2015

Inquiries

Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

E: aemc@aemc.gov.au
T: (02) 8296 7800
F: (02) 8296 7899

Reference: ERC0179

Citation

AEMC 2015, Embedded Networks, Draft Rule Determination, 10 September 2015, 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.

Summary

The Australian Energy Market Commission (the Commission or AEMC) has made a draft rule that seeks to clarify the regulatory arrangements for embedded networks and reduce the barriers to embedded network customers accessing retail market offers. Embedded networks are private networks which serve multiple premises and are located within, and connected to, a distribution or transmission system in the National Electricity Market. Common examples of embedded networks include shopping centres, retirement villages, caravan parks, apartment blocks and office buildings.

This draft rule determination also recommends a number of changes to jurisdictional regulations, the Australian Energy Regulator's network and retail exemption guidelines, and the consideration of changes to the National Energy Retail Rules to further reduce the barriers to embedded network customers accessing retail market offers.

The objective of these reforms is to empower embedded network customers to participate in the electricity market by allowing them to choose the products, services and suppliers of retail electricity services that suit them best.

The AEMC has made this draft rule determination in response to a rule change request from the Australian Energy Market Operator (AEMO). The rule change request stemmed from recommendations in the AEMC's reviews on Power of Choice and Energy Market Arrangements for Electric and Natural Gas Vehicles.[1] The interaction between this rule change process and other Power of Choice projects is explained in Chapter 8 of this draft rule determination.

The draft rule and draft rule determination relate to the AEMC's strategic priority of empowering consumers to participate in all parts of the energy supply chain where they desire to do so. The objective is to reduce the barriers to embedded network customers choosing the products, services and provider of retail services that suit them best.

A new regulatory framework for embedded networks

The regulatory framework regarding embedded networks is complex and depends on the interaction of various legal instruments as well as actions of the AEMC, AEMO and AER.

The changes to the National Electricity Rules set out in the draft rule will trigger changes in the relevant AEMO procedures and the AER's network exemption guideline. Together, these amendments will create, clarify the activities of, and specify which embedded network operators are required to appoint a new accredited provider – an embedded network manager. This new entity has been created to enable an

1 AEMC, Final Report, Power of Choice Review - Giving Consumers Options in the way they use Electricity, November 2012 and AEMC, Final Advice, Energy Market Arrangements for Electric and Natural Gas Vehicles, December 2012 .

embedded network customer to more readily access the competitive retail market and select an electricity service suitable for their needs.

The Commission has also recommended separate but supporting changes to the AER's network and retail exemption guidelines, state and territory legislation, and the consideration of changes to the National Energy Retail Rules.

The various facets of the new embedded networks regulatory framework are set out in Figure 1 below.

Figure 1 Embedded networks regulatory framework

AEMC	AER	AEMO	State and territory governments
National Electricity Rules create the embedded network manager	Network exemption guideline for embedded network operators	Procedures for embedded network managers	Policies and laws impacting on access to a competitive retail market
National Energy Retail Rules to clarify the roles of the embedded network operator, embedded network manager and retailer.	Retail exemption guideline for embedded network operators		

The framework illustrated above sits behind the day to day activities in providing electricity services to an embedded network customer.

For an embedded network customer that purchases electricity services from an embedded network operator, the new embedded network manager will be able to assist in them accessing the competitive retail market. From the customer's point of view, the relationships relevant to actively participating in the competitive electricity retail market will be with:

- the embedded network operator, who will continue to operate and maintain the embedded network;
- the embedded network manager, who will assist the customer in obtaining offers from authorised retailers as well as obtaining an AEMO recognised meter; and
- the retailer, who will provide electricity services.

For an embedded network customer who remains purchasing electricity services from an embedded network operator, there will continue to be no need to interact with either an embedded network manager or a retailer.

The draft rule

The draft rule is a more preferable rule. It responds to concerns that the National Electricity Rules are unclear and create barriers to customers within embedded networks accessing retail market offers for their electricity services.

The draft rule is largely consistent with AEMO's proposed rule, including the creation of a new accredited provider role in the National Electricity Rules – the embedded network manager – to perform the market interface functions that link embedded network customers to the electricity market systems. A key difference from AEMO's proposed rule is that the draft rule includes a more flexible approach to deciding which embedded network operators are required to appoint an embedded network manager.

Benefits of the draft rule

The draft rule is expected to:

- Promote competition in the retail market for electricity services for customers within embedded networks by decreasing the barriers to embedded network customers accessing retail market offers. Retail competition in these markets will be likely to lead to lower prices and a greater range of products and services for embedded network customers in the long run.

- Provide a clear, understandable and transparent regulatory framework for embedded networks. The draft rule removes the ambiguity in the current regulatory arrangements by identifying and assigning the market interface functions for embedded network customers to embedded network managers. This will enable embedded network customers to more readily access the competitive retail market for electricity services. This is likely to promote confidence in the regulatory framework which should encourage authorised retailers to participate in the supply of retail services to customers within embedded networks.

- Minimise compliance costs and administrative burden for stakeholders by:

    - providing an open market for the provision of embedded network management services by allowing any party (including an embedded network operator) which meets AEMO's accreditation requirements to provide embedded network management services. This will provide embedded network operators with a wide choice of suppliers of embedded network management services, including the option of performing the functions themselves;

    - aligning implementation obligations with those proposed in the AEMC's Expanding Competition in Metering and Related Services rule change to allow for the changes to systems, procedures and accreditation processes to be streamlined. The implementation timeframes for any rules arising from either the Meter Replacement Processes rule change or the AEMC's

Implementation Advice on the Shared Market Protocol are also expected to be aligned with these timeframes; and

- allowing the Australian Energy Regulator to determine which embedded network operators are required to appoint an embedded network manager taking into account the costs and benefits of doing so.

Benefits of the new embedded network framework

The benefits of the draft rule will be enhanced through implementation of a number of recommended changes to jurisdictional regulations, the AER's network and retail exemption guidelines. Further benefits may emerge following the consideration, and implementation, of changes to the National Energy Retail Rules. Notably, the Commission recommends:

- changes to jurisdictional regulations to remove the barriers to embedded network customers accessing retail market offers; and
- changes to the AER's network exemption guideline to reduce the barriers to customers accessing retail market offers by aligning metering standards within and outside embedded networks and allowing embedded network customers to compare offers from embedded network operators to authorised retailers; and
- consideration of changes to the National Energy Retail Rules to clarify the relationships between, and obligations on, authorised retailers, embedded network customers and embedded network operators.

Implementation

The draft rule also sets out a detailed schedule to implement the new embedded networks framework. This is displayed in Table 1.

Table 1 Embedded networks implementation schedule

Date	Action
17 December 2015	AEMC to publish final determination and rule
1 September 2016	AEMO to finalise systems and procedures changes
1 December 2016	AER to finalise ring fencing and network and reselling exemption guidelines
1 March 2017	AEMO to finalise embedded network manager services level (and accreditation) procedures
1 December 2017	Final rule commences, requiring specified embedded network operators to appoint an embedded network manager

The application of this implementation schedule will see the final rule take effect in Victoria, NSW and South Australia. Its application in Queensland, Tasmania and the ACT is dependent upon those governments making relevant legal changes to recognise the metering and other arrangements used in embedded networks.

In order to incorporate any amendments to the National Electricity Rules resulting from the Competition in Metering final rule determination, which is proposed to be published on 26 November 2015, the Commission has extended the time to make the Embedded Networks final rule determination by two weeks to 17 December 2015.[2]

The Commission invites submissions on this draft rule determination, including the draft rule, by 22 October 2015.

2 For information on the Competition in Metering timeframes see: AEMC, Information sheet, Extension of time for final rule on provision of metering services, 2 July 2015, p.1.

Contents

1 AEMO's rule change request

1.1 The rule change request

On 2 October 2014, AEMO submitted a rule change request to the AEMC proposing amendments to the regulation of embedded networks within the National Electricity Market (NEM).

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. AEMO 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 an authorised retailer participating in the NEM.

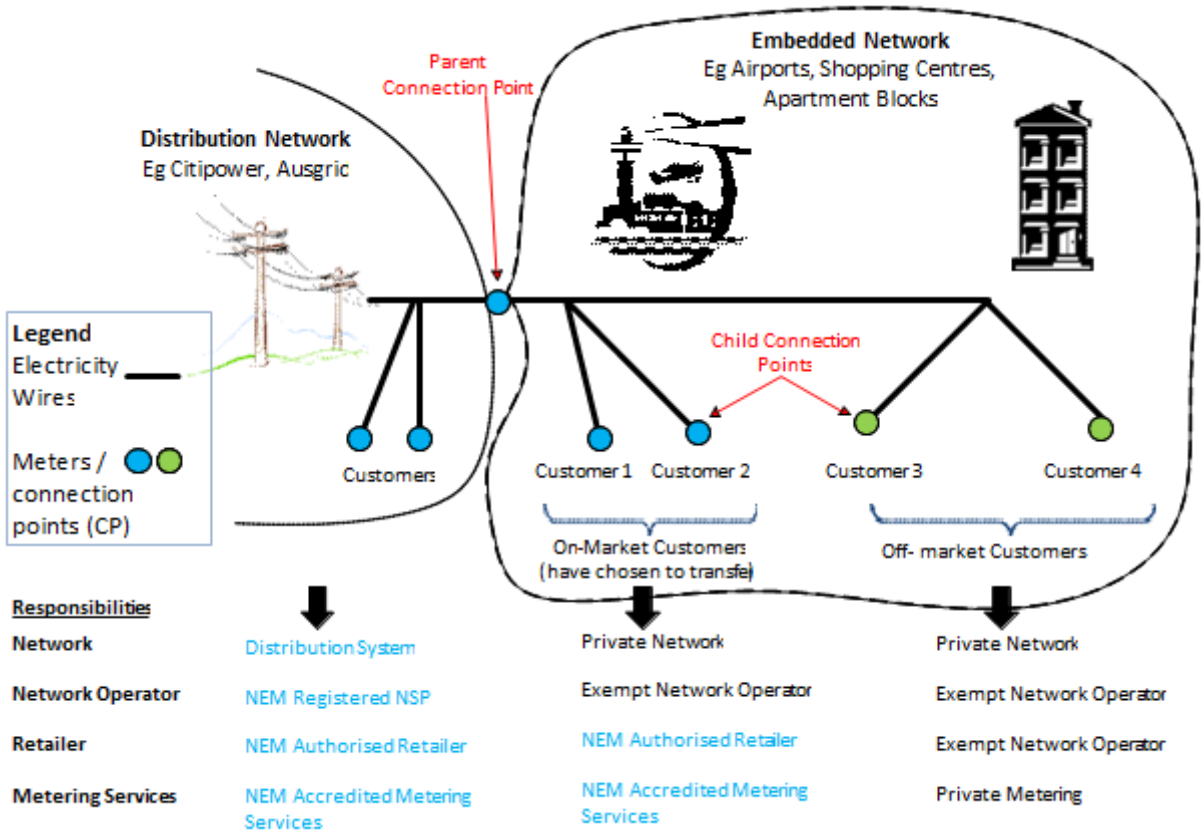
1.2 Current arrangements

1.2.1 Current operation of embedded networks

Embedded networks are private networks which serve multiple premises and are located within, and connected to, a distribution or transmission system in the NEM. Common examples of embedded networks include shopping centres, retirement villages, caravan parks, apartment blocks and office buildings.

Figure 1.1 shows an embedded network (within a distribution network) and contrasts the responsibilities of various parties to customers within and outside of embedded networks.

Figure 1.1 Embedded network operations in a distribution network



Source: AEMO Rule change request, September 2014, p.14

The standard arrangements for customers in the NEM are displayed on the left of Figure 1.1. 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. 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 on 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 respectively. These parties are not NEM registered network service providers (NSPs) and are not subject to economic regulation by the AER.

There are two possible arrangements for the provision of retail and metering services to customers within embedded networks. One arrangement, displayed on the far right of Figure 1.1, is that retail and metering services are provided by the embedded network operator, who is not an authorised retailer or accredited provider. This type of arrangement is known as "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 this is currently the arrangement for the majority of embedded network customers.

In the second arrangement, as displayed in the middle of Figure 1.1, customers have chosen an authorised retailer instead of the embedded network operator as their retailer. Customers are still provided with network services by the embedded network operator. 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 participants.

Where an off-market customer within an embedded network elects to become on-market, the customer must still pay the embedded network operator for the provision of network services. Typically this will occur by the customer paying the embedded network operator directly, but in some cases the retailer and the embedded network operator 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 embedded network operator.

Network charges to embedded network customers consist of embedded network operators passing on charges from LNSPs for the provision of network services to the parent connection point. Embedded network operators do not charge for provision of the embedded network through electricity charges. To charge for the embedded network the embedded network operator would require a formal determination by the AER under Chapter 6 of the NER.[3]

1.2.2 NER and NERR arrangements

There is currently no specific reference in the National Electricity Law (NEL), National Electricity Rules (NER), National Energy Retail Law (NERL) or National Energy Retail Rules (NERR) to embedded networks. Instead, to be able to provide network and/or retail services embedded network operators must gain (or be eligible for) exemption from registration as a NSP and/or authorisation as a retailer from the AER. Embedded network operators must then comply with the terms and conditions of these exemptions under the AER's Electricity Network Service Provider Registration Exemption Guideline (the network exemption guideline) and Retail Exempt Selling Guideline (the retail exemption guideline).

Embedded network operators and their agents are also subject to a number of jurisdiction specific requirements.

1.2.3 The exemption framework

The AER has discretion over the kinds of network service provider and retail exemptions and the conditions that apply to each kind of exemption.

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

The AER has split both network and retail exemptions into three classes; deemed, registrable and individual. Within these classes there are many kinds of exemptions for different types of embedded networks.

Each kind of exemption is subject to particular conditions. The conditions of exemption generally relate to safety, access to dispute resolution, network pricing, information provision, metering, consumer protections and access to competition.

Appendix D provides information on the kinds of network and retail exemptions and the conditions that apply to them.

1.2.4 Jurisdictional arrangements

Victoria, New South Wales (NSW) and South Australia (SA) currently have regulatory frameworks which allow for embedded network customers to access to retail market offers. In Queensland, Tasmania and the Australian Capital Territory (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 embedded network, the costs of which would be borne by the customer. Appendix E sets out the legislative instruments and policy decisions in each jurisdiction that influence embedded network customer access to retail market offers.

1.3 Rationale for rule change request

AEMO has identified three sets of issues with the current regulation of embedded networks that pose a barrier to customers accessing retail market offers.

1. The NER does not make it clear who has the obligation to support NEM activities for customers within embedded networks that are on-market or are off-market and are seeking to become on-market. This includes:

    (a) Who assigns embedded network customers a national metering identifier (NMI) when they seek to go on-market?

    (b) Who has the obligation to set up and maintain the market settlement and transfer solutions (MSATS) standing data for an embedded network?

    (c) Who performs the NEM processes for the transfer of embedded network customers between retailers, particularly between the embedded network operator and an authorised retailer?

    (d) Who has access to embedded network customers' metering data?

2. The terms and conditions of the AER's exemption guidelines do not fully facilitate customers accessing retail market offers because:

    (a) The bills that embedded network operators provide off-market customers are not required to be separated into network and retail components,

making it difficult for off-market customers to compare offers from retailers, which only include retail services, to offers from embedded network operators, which can include network and retail services; and

(b) The meter inspection, reading and testing standards for off-market embedded network customers are lower than for on-market customers, making it more likely off-market customers will need to purchase a new meter to go on-market.

3. Jurisdictional regulations create barriers to embedded network customers accessing retail market offers. Notably:

(a) Queensland, Tasmania and the ACT have not designed regulatory arrangements to facilitate the parent-child metering arrangements that are necessary for embedded network customers to access retail market offers; and

(b) The regulatory arrangements which allow access to retail market offers in NSW, SA and Victoria are inconsistent.

1.4 Solution proposed in the rule change request

AEMO proposed to create a new category of accredited provider – an embedded network manager – to manage embedded network customers in the NEM.

Under the proposed rule the AER would only be permitted to grant an embedded network operator a registrable or individual exemption from the requirement to be registered as a network service provider if an embedded network manager has been appointed for the embedded network.[4]

AEMO expects that the embedded network manager would facilitate the transfer of customers between the embedded network operator and authorised retailers. This includes carrying out the functions within MSATS and the Business to Business (B2B) procedures that are performed by registered network service providers, authorised retailers and accredited providers for customers outside of embedded networks.[5]

AEMO also recommended that the AER amend its network exemption guideline to require unbundling of embedded network customers' bills and increase the meter reading, testing and inspection standards for embedded networks to the same as those in place for the rest of the NEM. AEMO considered these requirements will make it easier for embedded network customers to compare offers from retailers and embedded network operators and reduce the likelihood of embedded network customers needing to purchase a new meter if they choose to go on-market.[6]

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

5 ibid.

6 ibid.

AEMO considered that if implemented, the proposed rule will provide clarity regarding the roles and responsibilities of managing embedded networks and provide a framework to facilitate embedded network customers accessing retail market offers.[7]

AEMO expects this would then allow relaxation of the jurisdictional regulations which currently prevent customers from choosing who should supply their electricity. 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. However, any such changes to jurisdictional regulations would need to be made by jurisdictions and are not within the scope of this rule change process.[8]

1.5 Context to the rule change request

1.5.1 Background

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.[9] These recommendations were further noted in the AEMC's Power of Choice final report which set out a substantial reform package for the NEM.[10] 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, developed a high level market design, a detailed market design and a proposed rule for the implementation of these initiatives.[11] During the design development process, AEMO separated the embedded network and MTR initiatives and submitted them as separate rule changes to the AEMC on 1 October 2014 and 17 December 2014.

---

7 ibid.

8 ibid.

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

10 AEMC, Final Report, Power of Choice Review - Giving consumers options in the way they use electricity, November 2012.

11 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.

1.5.2 Related rule changes

On 26 March 2015 the Commission released a draft rule determination for the Expanding Competition in Metering and Related Services (Competition in Metering) rule change request. The draft rule 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.[12]

The Competition in Metering 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 market participant registration requirements. Retailers are required to appoint a metering coordinator for their retail customers, except where a large customer has appointed its own metering coordinator. The draft rule also changes the minimum requirements for new and replacement meters for small customers.

There are close linkages between the Competition in Metering rule change and this rule change in terms of policy development, implementation and the draft rule. These linkages are discussed in Chapters 3-8 and Appendix C.

1.6 The rule making process to date

On 21 May 2015, the Commission published a notice advising of its commencement of the rule making process and the first round of consultation in respect of the rule change request.[13] A consultation paper identifying specific issues and questions for consultation was also published. Submissions closed on 2 July 2015.

The Commission received twenty nine submissions on the rule change request as part of the first round of consultation. They are available on the AEMC website.[14] A summary of the issues raised in submissions but not otherwise discussed in this draft rule determination is contained in Appendix A.

1.7 Consultation on draft rule determination

The Commission invites submissions on this draft rule determination, including the draft rule, by 22 October 2015.

Any person or body may request that the Commission hold a hearing in relation to the draft rule determination. Any request for a hearing must be made in writing and must be received by the Commission no later than 17 September 2015.

---

12 AEMC, Draft Rule Determination National Electricity Amendment (Competition in Metering) Rule 2015, March 2015, p.9.

13 This notice was published under s. 95 of the NEL.

14 www.aemc.gov.au

Submissions and requests for a hearing should quote project number "ERC0179" and may be lodged online at www.aemc.gov.au or by mail to:

Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

2 Draft rule determination

The Commission's draft rule determination is to make a more preferable draft rule. The draft rule creates a new accredited provider role, the embedded network manager, to assist embedded network customers to access retail market offers.

This chapter outlines:

- the rule making test for changes to the NER;
- the assessment framework for considering the rule change request; and
- the consideration of the draft rule against the national electricity objective.

Further information on the legal requirements for making this draft rule determination is set out in Appendix B.

2.1 Rule making test

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

The NEO 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."

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.

2.2 Assessment framework

In assessing the rule change request against the NEO the Commission has considered the following assessment criteria:

- 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 has assessed the degree to which the framework established by the rule

change request will promote competition in the retail market for electricity services for customers within embedded networks.

The Commission has also assessed the potential benefits from a competitive market for the provision of embedded network management services.

- 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 authorised retailers to participate in the supply of retail electricity services to customers within embedded networks (where allowed).

Similarly, confidence in the regulatory framework should encourage all potential providers, including distribution network service providers (DNSPs), retailers, embedded network operators 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 informed decisions. For example, for consumers within embedded networks to choose between authorised retailers and embedded network operators as their retailer they need to be able to compare the price of electricity services from each. This requires network charges to be transparent from electricity charges for embedded network consumers. Transparency is integral to consumers within embedded networks being able to make efficient decisions.

- 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 has considered 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 included reductions in administrative and compliance costs as a result of the introduction of NEM-wide consistent regulations arising from the rule change request.

2.3 Summary of reasons

The draft rule is attached to and published with this draft rule determination. The key features of the draft rule are:

- creation of a new accredited provider role – the embedded network manager – to perform the market interface functions for embedded network customers to facilitate embedded network customer access to retail market offers;

- in exempting an embedded network operator under the network exemption guideline, embedded network operators will be required to appoint an embedded network manager unless:
  - all of the embedded network customers will not be able to gain access to a retail market offer even if an embedded network manager is appointed; or
  - the AER considers that the costs of appointing an embedded network manager are likely to outweigh the benefits.
- where the AER has determined that an embedded network operator is not required to appoint an embedded network manager it will be required to do so if a customer within the network exercises its right to access a retail market offer; and
- an implementation schedule that allows AEMO, DNSPs and retailers to implement systems and procedures changes from this rule change simultaneously with proposed changes resulting from the Competition in Metering rule change process. Any implementation timeframes for changes arising from the Meter Replacement Processes rule change process or Advice on Implementation on the Shared Market Protocol are also expected to be aligned with these schedules.

The draft rule is a more preferable draft rule. It is consistent with the key features of AEMO's proposal but guides the AER's discretion over which embedded network operators are required to appoint an embedded network manager instead of requiring all embedded network operators with registrable or individual exemptions to appoint an embedded network manager. This provides more flexibility to the AER to examine whether the benefits of an embedded network manager being appointed for each individual kind of exemption outweigh the costs of appointment.

The AEMC is satisfied that the draft rule will, or is likely to, contribute to the achievement of the NEO. It is likely to:

- promote competition in the retail market for electricity services for customers within embedded networks by decreasing the barriers to embedded network customers accessing retail market offers. Competition between embedded network operators and authorised retailers in these markets will likely lead to increased productivity and efficiency, driving lower prices and a greater range of products and services for embedded network customers in the long run;
- provide a clear, understandable and transparent regulatory framework for embedded networks. The draft rule removes the ambiguity in the current regulatory arrangements by identifying and assigning the market interface functions for embedded network customers to embedded network managers. This is likely to promote confidence in the regulatory framework and encourage authorised retailers to participate in the supply of retail services to customers within embedded networks. Similarly, confidence in the regulatory framework should encourage all potential providers, including network service providers,

retailers, embedded network operators and other parties to participate, and invest in providing embedded network management services; and

- minimise compliance costs and administrative burden for stakeholders by providing an open market for the provision of embedded network management services by allowing any party which meets AEMO's accreditation procedure requirements to provide embedded network management services. This will allow embedded network operators to choose the supplier of embedded network management services that suits them best, including the option of performing the functions themselves.

The AEMC is also satisfied that the draft rule will, or is likely to, better contribute to the achievement of the NEO than the proposed rule. In particular, the draft rule allows the AER to determine which embedded network operators are not required to appoint an embedded network manager. This replaces AEMO's proposal of all embedded network operators with registrable or individual network exemptions being required to appoint an embedded network manager. The draft rule will decrease compliance burdens because the AER will be able to specify that an embedded network manager is not required where the costs are likely to outweigh the benefits.

The draft rule also sets out a detailed schedule to implement the proposed changes. This is displayed in Table 2.1. The AEMC has sought to reduce implementation costs by aligning these timeframes with the proposed implementation of the Competition in Metering rule change.

Table 2.1 Embedded networks implementation schedule

Date	Action
17 December 2015	AEMC to publish final determination and rule
1 September 2016	AEMO to finalise systems and procedures changes
1 December 2016	AER to finalise ring fencing and network and reselling exemption guidelines
1 March 2017	AEMO to finalise embedded network manager accreditation procedures
1 December 2017	Final rule commences, requiring specified embedded network operators to appoint an embedded network manager

Draft rule outlines amendments to the current version of the NER

On 26 March 2015 the Commission published the Competition in Metering draft rule determination. The Competition in Metering draft rule includes significant changes to the NER. The Commission proposes to publish the Competition in Metering final

determination and final rule on 26 November 2015 for commencement on 1 December 2017.[15]

The embedded networks draft rule amends the current version of the NER, not the draft rule published with the Competition in Metering draft rule determination. However, the Commission will make its final rule determination on the Competition in Metering rule change request on 26 November 2015, with an expected substantive commencement date of 1 December 2017. Therefore, any final rule in relation to this rule change request will be based on the changes made to the NER by the Competition in Metering final rule and will, as indicated, have the same substantive commencement date.

To assist stakeholders with their consideration of the embedded networks framework in the context of amendments proposed in the Competition in Metering rule change, the Commission has published indicative rule amendments to the version of Chapter 7 of the NER proposed in the Competition in Metering draft rule.

2.4 Strategic priority

This rule change request relates to the AEMC's strategic priority of empowering consumers to participate in all parts of the energy supply chain where they desire to do so. If made, the draft rule will directly contribute to this priority by reducing the barriers to embedded network customers choosing the products, services and provider of retail services that suits them best.

15 For information on the Competition in Metering timeframes see: AEMC, Information sheet, Extension of time for final rule on provision of metering services, 2 July 2015, p.1.

3 Benefits of retail competition

This chapter sets out the Commission's views on the benefits of competitive markets, the outcomes of retail competition in electricity in the NEM and the benefits of embedded network customers being able to access retail market offers.

While the Commission considers that providing embedded network customers access to retail market offers will likely result in significant benefits, it does not consider that this should prevent embedded network operators from providing retail services to embedded network customers. Rather, by removing the barriers to embedded network customers accessing retail market offers, embedded network operators will face greater incentives to compete with authorised retailers, and embedded network customers will benefit from such competition.

3.1 Competitive markets

A competitive market is where a number of suppliers compete to satisfy the wants and needs of a number of customers. In a competitive market, customers have the ability to choose from a range of suppliers and can reject a supplier's offer if the customer does not value the product or service under the conditions the supplier is offering.

No individual supplier or group of suppliers and no customer or group of customers can individually determine market outcomes. This is because both suppliers and customers can choose to accept or reject offers from one another. Most importantly, if customers choose not to accept an offer from a supplier there are alternative suppliers that they can purchase from.

As a result, suppliers in competitive markets face incentives to improve products, offer a variety of products that customers want and offer products with better conditions so that customers are likely to choose to purchase them. This incentive is the driver of product differentiation, innovation, quality improvements and cost reductions in a competitive market. Notably:

- suppliers can differentiate products by offering a range of options so that customers can select the products that best suits their wants and needs. In this way, a supplier can increase its market share if it can develop new products that are valued by customers;

- suppliers innovate by either improving the quality of the products offered, finding ways to supply products at a lower cost or by developing new products that have not been offered before;

- quality improvements may include providing customers with better information, improving customer service, supplying customers with more flexible options in how they use products and services or any other aspect that is valued by customers; and

- if a supplier can find ways to reduce their costs such as by improving billing and customer management systems, managing wholesale costs or any other cost reduction technique then a supplier may win market share by lowering prices.

In these ways, a competitive market offers customers choices between a range of products and services delivered by a number of suppliers at prices that reflect the underlying cost of the products and services provided. As a result, customers are able to choose the combination of product attributes and prices that best suit their needs at the lowest cost.

3.2 Benefits of retail competition in electricity

The AEMC conducts annual reviews of retail competition in the NEM. The 2015 Retail Competition Review (the 2015 Review) found that competition is continuing to be effective in retail markets in Victoria, SA, NSW and south east Queensland. Residential customers are actively shopping around and have a choice of between 11 and 21 retail brands offering a range of plans to suit different customer preferences. Effective competition is yet to emerge for small customers in electricity markets in Tasmania, regional Queensland and the ACT, though greater choice has emerged in the ACT with the entry of a third retailer for residential customers.[16]

The 2015 Review found that more customers were satisfied with their retailer and fewer customers were dissatisfied than the previous year. In particular, the majority of customers who switched retailer were happy with their decision to switch. Access to the competitive retail market provides customers with an increased ability to switch between retailers to get the best retail offer with minimal switching costs, increasing their overall satisfaction. Customers in the NEM continue to actively shop around for electricity deals, with 31 per cent of all residents surveyed stating they had actively investigated electricity options to switch to in the past 12 months.[17]

In Victoria, SA and NSW, customers have a greater choice of retailers and plans. In these states there are higher reported levels of customer activity and higher reported satisfaction with the level of choice available. In these jurisdictions:[18]

- between 16 and 21 electricity retail brands are available to residents;
- around 30 per cent of customers shopped around for a better energy deal in the last 12 months;
- around 60 per cent were satisfied with the level of choice available;
- a higher level of product differentiation is occurring; and

16 AEMC 2015 Retail Competition Review Final Report, 30 June 2015, p.i.

17 ibid. p.25.

18 ibid.

- customers were more confident they could choose the right energy deal than in other NEM jurisdictions.

Customers who shopped around were also more likely to have found savings and were generally more satisfied with their retailer. Those who had not investigated offers or switched were less likely to have saved or been satisfied with their retailer.[19]

Notably, when customer choice is introduced, significant benefits emerge quickly. For example, in the ACT, where Origin has recently entered to compete with incumbent retailers, the rate of residents investigating energy options almost doubled in 12 months.

3.3 Potential benefits of retail competition to embedded network customers

3.3.1 Prices

Embedded network operators source electricity from the retail market and then sell it to embedded network customers. Embedded network operators may be able to negotiate a lower price with an authorised retailer than each individual embedded network customer is able to negotiate due to the increased total load giving them additional bargaining power. The Commission notes that it is possible that if a number of embedded network customers elect a retailer, this bargaining power may be impacted.

However, where barriers to embedded network customers accessing retail market offers exist, some embedded network operators face limited incentive or obligation to pass those savings on to customers because the customers cannot source energy from an alternative provider and the embedded network operator is able to charge a price up to the standing offer price.[20] This may result in an outcome where embedded network operators have an incentive to bargain with a retailer to obtain the best price at the parent connection point, but they do not face a strong incentive to pass on any savings at the parent connection point to embedded network customers.[21]

The AEMC's retail competition review found that standing offers were generally at the top of the price range of market offers and sometimes above the top of the range of market offers. Customers on standing offers were also less able to benefit from discounts, if at all.[22] For example, Figure 3.1 below displays the relationship between the total estimated bill and the effective discount for offers to customers in NSW on

19 ibid. p.ii.

20 Under the AER's retail exemption guideline, embedded network operators may charge up to the standing offer price for small customers and any price for large customers.

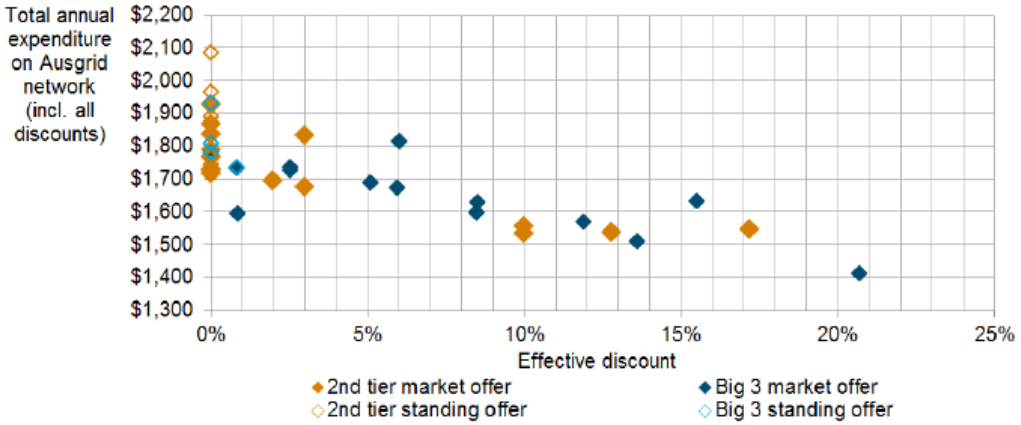
21 Some embedded network operators are run on behalf of embedded network customers (for example, a body corporate) and therefore do face an incentive to pass on all savings from the parent connection point.

22 AEMC, 2015 Retail Competition Review Final Report, 30 June 2015, p.122.

Ausgrid's network of a representative residential customer using 6,500kWhs per year. Notably:

- most standing offers have zero effective discount, with only one retailer offering a small effective discount;
- most market offers had significantly greater discounts, with one retailer offering an effective discount of greater than 20 per cent; and
- market offers without discounts were typically cheaper than standing offers.

Figure 3.1 Total annual expenditure vs. effective discount on flat rate market and standing offers available on the Ausgrid network



Source: Energy Made Easy accessed on 23 February 2015; AEMC analysis.

Note: analysis conducted for a representative residential customer using 6,500kWhs per year

Furthermore, even if the price negotiated by the embedded network operator with the authorised retailer at the parent connection point is directly passed on to embedded network customers, the embedded network operators' offer may still not be the best choice for each embedded network customer. This is because the particular service, and notably the tariff structure selected by the embedded network operator is unlikely to suit every embedded network customer in the embedded network. For example, Table 3.1 displays some tariff structures for residential customers in NSW which will have different effects on customers' bills depending on their total usage and load profile. Notably:

- customers which use a high proportion of their energy at off-peak times will likely be better off on a time-of use tariff structure;
- customers with low overall usage will likely be better off on tariffs with no fixed charge or an inclining block tariff structure; and
- customers with high overall usage will likely be better off on tariff structures with high fixed charges and low usage charges or on declining block tariff structures.

Table 3.1 Structure of selected retail tariffs

Retailer	Tariff name	Tariff structure	Description
Origin	Daily saver 10 per cent electricity usage discount	Three block inclining block tariff	Customers pay a daily charge for connection to the network and then pay energy charges that increase as they consume more energy.
EnergyAustralia	Rate fix - home - time of use	Three part time of use	Customers pay a daily charge for connection to the network and energy charges which vary depending on the time of use.
Simply Energy	NSW Australia Simply guaranteed 10 - peak only	Three block declining block	Customers pay a daily charge for connection to the network and then pay energy charges that decrease as they consume more energy.
Powershop	Powershop standard power	Flat rate (no fixed charge)	Customers pay one energy rate for energy consumed.

Source: Energy Made Easy accessed on 5 August 2015 for a residential customer in Newtown; AEMC analysis.

The 2015 Review found that in addition to the variety of tariffs and tariff structures offered in the retail market, there is significant variety in the way that retailers offer tariffs. For example, Table 3.2 below describes a range of features available for flat rate market offers to residential customers in Victoria and the number of retailers with offers for each feature.

Table 3.2 Variety in flat rate market offers for electricity in Victoria

	CitiPower distribution area		Other distribution areas	
	Range	Retailers	Range	Retailers
All offers	-	15	-	15
Unconditional discounts	2-23%	4	2-23%	4
Conditional discounts	2-30%	15	1-30%	15
Other incentives	Yes	7	Yes	7
No fixed term / benefit period	Yes	10	Yes	10
Fixed term / benefit period	1-3 years	8	1-3 years	8
No termination fee	Yes	11	Yes	11
Termination fee	$20-157.5	8	$20-157.5	8

Source: My Power Planner accessed on 27 February 2015; AEMC analysis

Over time, the Commission expects retailers will have a greater ability to meet the needs of customers through a range of retail market offers. Notably:

- the commencement of the Distribution Network Pricing Arrangements rule change in 2017 will encourage DNSPs to introduce network tariffs that more closely reflect the costs of using the network at times peak demand. This will facilitate retailers offering more dynamic pricing structures that allow customers to achieve savings through reducing or shifting peak usage;

- the introduction of any rule made from the Competition in Metering rule change process will facilitate a market-led approach to the deployment of advanced meters. Advanced meters will enable retailers to offer different services through their ability to measure energy usage over smaller intervals, measure energy demand (instantaneous usage) as well as usage, automate meter reading and provide real–time consumption information.

The Commission considers embedded network customers should be able to access retail market offers, allowing them to choose the contract that best suits them. This will not prevent embedded network operators providing retail services to embedded network customers. Instead, it will provide a stronger incentive for embedded network operators to pass on savings negotiated at the parent connection point and offer tariff structures to embedded network customers that they value.

3.3.2 Quality of service

The AER's network and retail guidelines specify minimum terms and conditions that embedded network operators must meet when supplying embedded network customers. The conditions address a range of quality of service issues, including:[23]

- information entitlements;
- metering requirements;
- billing and payment arrangements;
- connection and disconnection requirements; and
- dispute resolution systems.

Many of the terms and conditions in the exemption guidelines are designed to reflect the obligations that authorised retailers must meet under the NERR. However, some of the requirements have been adjusted, particularly for small embedded network operators, to accommodate their circumstances. This is because the AER takes into account that these operators lack the economies of scale and scope that most authorised retailers have to provide services. Furthermore, the requirements under the NERR for authorised retailers are only minimum standards and the competitive retail market provides incentives for authorised retailers to increase quality of services where customers value it.

The Commission considers that if embedded network customers value a higher quality of retail service than the embedded network operator is providing they should have the option to choose an authorised retailer's offer. Not only will this allow embedded network customers to choose the quality of service that they value, it will also provide embedded network operators with an incentive to increase the quality of service where embedded network customers value it.

3.3.3 Variety of products and services

Where barriers exist to embedded network customers accessing retail market offers, embedded network operators may have little incentive to offer customers a variety of products and services that embedded network customers may seek.

The retail market offers customers a variety of products and services. For example, Table 3.2 sets out some of the products which are currently available in the retail market in the NEM. These products range from long established products such as direct load control of hot water systems and dual fuel offers to solar power purchase agreements and storage combinations which have only recently begun to be offered in the NEM.

---

23 AER, Electricity Network Service Provider Registration Exemption Guideline, August 2013, p.25; AER, AER (Retail) Exempt Selling Guideline - Version 3, April 2015, p.46.

Table 3.3 Variety of products to residential customer

Product	Explanation
Direct load control	Customers receive discounted prices on electricity used by certain devices (e.g. hot water) within the premises in exchange for allowing the retailer or DNSP control over when the devices are used.
Duel fuel	Customers purchase bundled electricity and gas tariffs at discounted prices.
Solar PV	Customers purchase Solar PV and then receive a feed-in tariff for energy fed back into the grid and reduced bills by consuming energy from the panels instead of from the grid. Solar leasing and solar PV power purchasing agreements are also becoming more popular. In these arrangements a supplier installs a solar PV system on the customers home or business and the customer makes monthly repayments on the system for a period of time, instead of purchasing the panels up front.
GreenPower	Customers are able to pay retailers a premium to guarantee that a proportion of their electricity usage is matched with electricity from government accredited GreenPower sources.
Solar plus batteries and home energy management	Customers combine batteries with their solar PV to allow them to store energy for use when prices are high or as backup for when energy from the grid is unavailable. Retailers and other service providers are also making available home energy management systems to maximise the savings customers can make from their solar and batteries by feeding energy back in to the grid at times of high prices and charging the batteries at time of low prices.

Source: AEMC analysis; Energy Made Easy accessed on 5 August 2015 for a residential customer in Newtown.

Over the medium to longer-term the Commission expects a greater range of products to be offered and taken up in the retail market, supported by the roll out of advanced metering technology as a result of any rule made from the Competition in Metering rule change.

The Commission considers that where embedded network customers value products or services available from authorised retailers the customers should be able to select an authorised retailer's offer. Such access would also provide embedded network operators which have the capability to offer a range of products and services, an increased incentive to provide them.

Some embedded network operators will have a competitive advantage in providing a range of products and services to embedded network customers which could result in significant benefits to embedded network customers. For example, an embedded network operator of a retirement home in Victoria noted to the AEMC in discussions that it had responded to a critical peak price from AusNet Services at the parent connection point by providing its tenants with activities located outside of the retirement village on the five critical peak days of the year. This significantly decreased the embedded network operators' retail bills and allowed it to provide lower prices the

next year to its tenants. The Commission considers that embedded network operators should be incentivised to use their competitive advantages through exposure to competition and that this will likely result in a share of the reduced costs being passed on to embedded network customers.

3.3.4 Access to government schemes and consumer protections

Jurisdictional governments have a variety of government schemes and consumer protection mechanisms that are easily accessed by customers of authorised retailers. Key examples of these schemes include access to free dispute resolution services by the relevant state ombudsman and hardship policies.

While access to these schemes is not within scope of this rule change process and is available in some jurisdictions, an additional benefit of access to retail market offers for embedded network customers is likely to be their ability to easily access these schemes if they choose an authorised retailer's offer. This may in turn provide an incentive for embedded network operators to assist in allowing customers access to such schemes.

3.4 Conclusion

There are a number of benefits in allowing embedded network customers access to retail market offers. These benefits relate to price, quality of service, variety of products, and access to government schemes and consumer protections. Notably, access to retail market offers may allow embedded network customers to:

- choose the price, price structure and conditions of their electricity service that suits them best, which may result in prices below standing offer prices;
- choose from a wider variety or products and product offerings;
- choose the quality of services provided to them; and
- gain easier access to government schemes and consumer protections.

The Commission notes that access to retail market offers does not mean that embedded network operators will be prevented from providing retail services to embedded network customers. Instead, by removing the barriers to embedded network customers accessing retail market offers, embedded network operators will face greater incentives to compete with authorised retailers on price, quality of service and variety of products. This will also provide a greater incentive for embedded network operators to make effective use of their competitive advantages, including their natural small scale aggregation function, their existing commercial relationships with embedded network customers and their familiarity and regular use of the physical premises.

4 Regulatory framework for embedded networks

This chapter sets out the proposed regulatory framework for embedded networks, particularly in regard to allowing embedded network customers access to retail market offers. It provides:

- AEMO's view of the current barriers to embedded network customers accessing retail market offers and its proposed solution;
- stakeholders' views of the barriers to embedded network customers accessing retail market offers and AEMO's proposed solution; and
- the Commission's analysis and proposed changes to the regulatory framework for embedded networks.

The individual elements of the regulatory framework highlighted in this chapter are then addressed in more detail in Chapters 5-8 and Appendix C.

4.1 AEMO's proposal

4.1.1 Barriers to retail competition

AEMO's rule change request considers that there are three key areas of regulation which create barriers to embedded network customers accessing retail market offers. These include:

1. The NER does not make it clear who has the obligation to support NEM activities for customers within embedded networks that are on-market or are off-market and are seeking to become on-market. This includes:
    (a) Who assigns embedded network customers a NMI when they seek to go on-market?
    (b) Who has the obligation to set up and maintain the MSATS standing data for an embedded network?
    (c) Who performs the NEM processes for the transfer of embedded network customers between retailers, particularly between the embedded network operator and an authorised retailer?
    (d) Who has access to embedded network customers' metering data?
2. The terms and conditions of the AER's exemption guidelines do not fully facilitate customers accessing retail market offers because they do not require:
    (a) embedded network operators to separate off-market customers' bills into network and retail components, making it difficult for off-market customers to compare offers from retailers, which only include retail

services, to offers from embedded network operators, which include network and retail services; and

(b) the meter inspection, reading and testing standards for off-market embedded network customers to be the same as for on-market customers, making it more likely off-market customers will need to purchase a new meter to go on-market.

3. Jurisdictional regulations create barriers to embedded network customers accessing retail market offers. Notably:

(a) Queensland, Tasmania and the ACT have not designed regulatory arrangements to facilitate the parent-child metering arrangements that are necessary for embedded network customers to access retail market offers; and

(b) The regulatory arrangements which allow access to retail market offers in NSW, South Australia and Victoria are inconsistent.

4.1.2 Solution

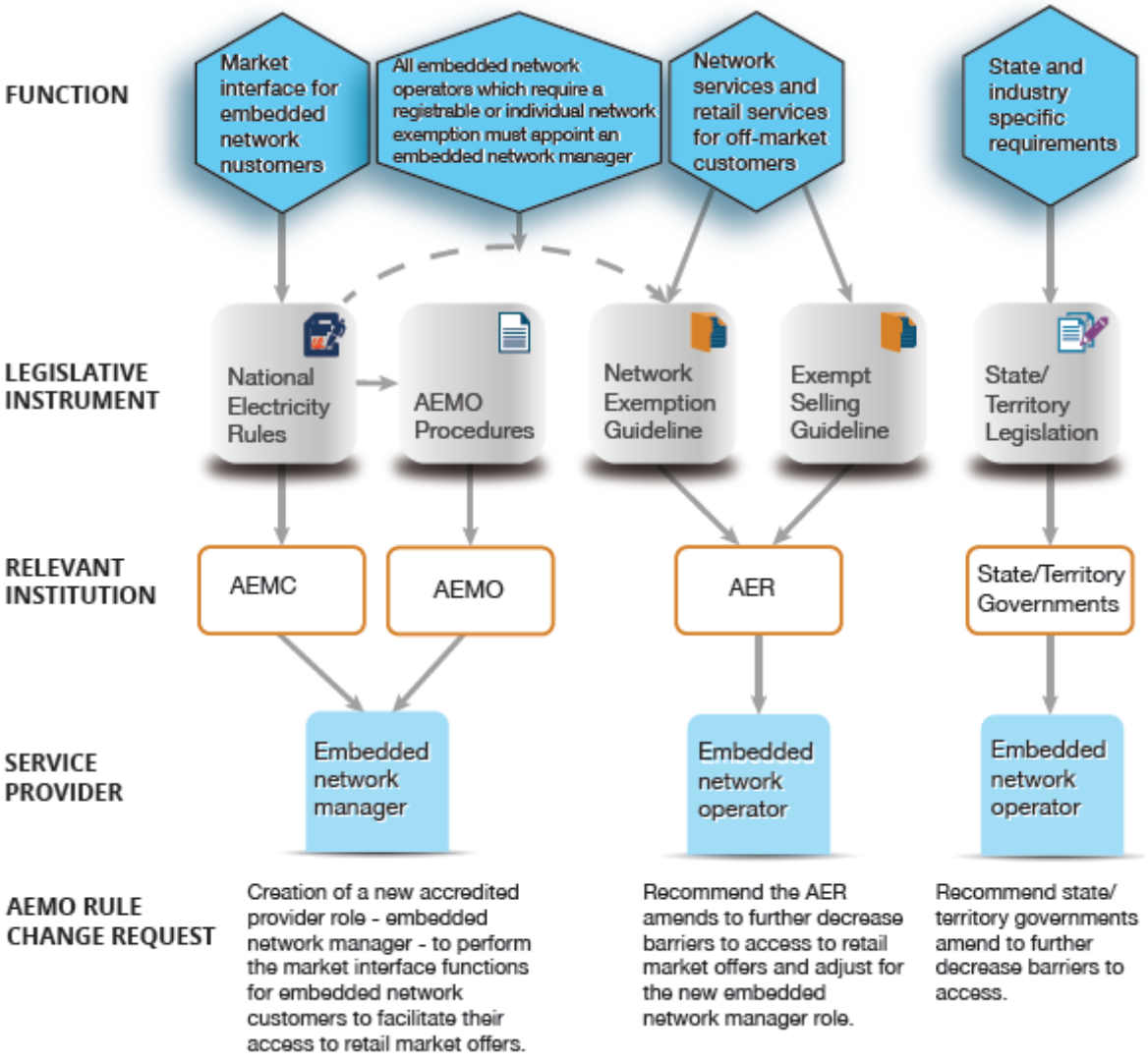
Figure 4.1 sets out AEMO's proposed changes to the embedded networks regulatory framework to remove these barriers to embedded network customers accessing retail market offers.

The key features of AEMO's proposed regulatory framework are:[24]

- creation of a new accredited provider role – embedded network manager – to perform the market interface functions for embedded network customers required to facilitate embedded network customer access to retail market offers;
- a requirement that the AER only grant an embedded network operator a registrable or individual network exemption if the embedded network operator has appointed an embedded network manager; and
- recommendations to the AER and jurisdictional governments to amend the network exemption guideline and jurisdictional regulations respectively to further reduce barriers to embedded network customers accessing retail market offers.

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

Figure 4.1 AEMO's proposed regulatory framework



4.2 Submissions

In regard to AEMO's proposed regulatory framework, submissions fell into three groups:

- stakeholders that supported the proposed regulatory framework;
- stakeholders that supported the framework but considered that substantial further changes are necessary; and
- stakeholders that opposed the framework.

4.2.1 Support for AEMO's embedded network framework

The AER, DNSPs, retailers, consumer groups and large embedded network operators generally supported AEMO's proposed regulatory framework. Table 4.1 provides examples of these views.

Table 4.1 Summary of submissions supporting AEMO's proposed regulatory framework

Stakeholder	Comment
AER	We have received numerous reports of difficulties in accessing retail competition from customers in embedded networks. The complaints relate to all jurisdictions where the policy position is that access to retail competition is available to customers located in embedded networks. Based on this experience we have concluded that it is timely to implement a rule change as proposed. This rule will address aspects of the NEM framework that have not adequately supported access to retail competition by customers in embedded networks. We consider the major issue is centred on the existence of appropriate metering arrangements, capable of integration into the broader market systems. We therefore support the AEMO rule change proposal as a solution that would enable this important objective to be attained.
AusNet Services	AusNet Services supports the establishment of a new fully contestable role of embedded network manager to facilitate access to retailer of choice in eligible jurisdictions.
AGL Energy	AGL supports the proposed Rule change. The changes will: • significantly increase the clarity of the role and responsibilities of embedded network operators; • enable customers within embedded networks to have greater access to the competitive market. This is expected to increase competition (especially for third party sites) within the embedded network; and • create a new market role, the embedded network manager, which is a new competitive service that will allow improved management of embedded networks.
Public Interest Advocacy Centre (PIAC)	In broad terms, PIAC supports the intent of the rule change and considers that AEMO's proposed solution will provide the customers of most networks with the option to access the competitive retail market.
Shopping Centre Council of Australia (SCCA)	Subject to the comments and recommendations in this submission, we broadly support the objective of the proposed rule change, along with the principal requirement for an embedded network operator to appoint and fund an embedded network manager; an appointment which will also become a condition of the AER's exemption framework.

Source: Submissions from: AER, 26 June 2015, p.1; AusNet Services, 2 July 2015, p.1; AGL Energy, 2 July 2015, p.1; PIAC, 2 July 2015, p.1; and SCCA, 2 July 2105, p.1.

4.2.2 Substantial other issues need to be addressed

Jemena, the SA Department of State Development and Metropolis Metering provided support for the intent of the rule change request but suggested there are further reforms that are necessary for the regulatory framework for embedded networks. These are described below.

Bottom up reform

Jemena supported both the intent of the rule change request and the introduction of the embedded network manager role to facilitate access to retail market offers.[25] However, it considered that the scope of the rule change request assessment should be expanded to review all of the regulatory framework for embedded networks, particularly the validity of the exemption framework. Jemena considered this fuller assessment should include consideration of:

- embedded networks in gas;
- whether the binary two tiered system of current regulation – registered DNSPs/authorised retailers compared to exempt network service providers/exempt retailers – is appropriate; and
- whether embedded networks have the potential to allow customers to benefit from new and evolving technologies.

Jemena stated there is a need to start from first principles to consider whether the current framework is appropriate.

Right to access standing and market offers

The SA Department of State Development submitted that a core problem for embedded network customers accessing retail market offers is the availability of offers for embedded network customers and their ability to compare these offers to those of embedded network operators. To address this problem the SA Department of State Development proposed that the Commission should consider:[26]

- a more preferable rule under which the embedded network customer has the right to access currently available standard and market offers which include the network component of the regulated network service provider at the parent connection point; and
- a more preferable rule which requires retailers to offer at least one generally available offer for embedded network customers.

Metering

The rule change request includes a recommendation that the AER change its network exemption guideline to require that the meter reading, testing and inspection standards that apply to metering of on-market customers also apply to off-market customers.[27]

---

25 Jemena submission, 2 July 2015, p.5.

26 SA Department of State Development submission, 30 June 2015, p.3.

27 As set out in section 6.1.2.

In response, Metropolis Metering and Jemena suggested that this requirement should be extended to require embedded network operators to adopt the full suite of metering provisions proposed in the Competition in Metering draft rule determination.[28] Primarily, this would require all embedded network operators to appoint a metering coordinator who would then contract with accredited metering providers and metering data providers for the provision of metering services.

Metropolis Metering and Jemena considered this would reduce the likelihood of customers needing to install a new meter when they elect to go on-market. This would therefore further reduce the barriers to embedded network customers accessing retail market offers.

4.2.3 Do not support the proposal

TradeCoast Central opposed the proposed rule. It considered that the costs of the rule change outweigh the benefits because the cost-benefit analysis undertaken by SKM Jacobs for AEMO only returned a marginally positive result and it did not take into account the cost of embedded network operators hiring embedded network managers.[29]

4.3 Commission's analysis

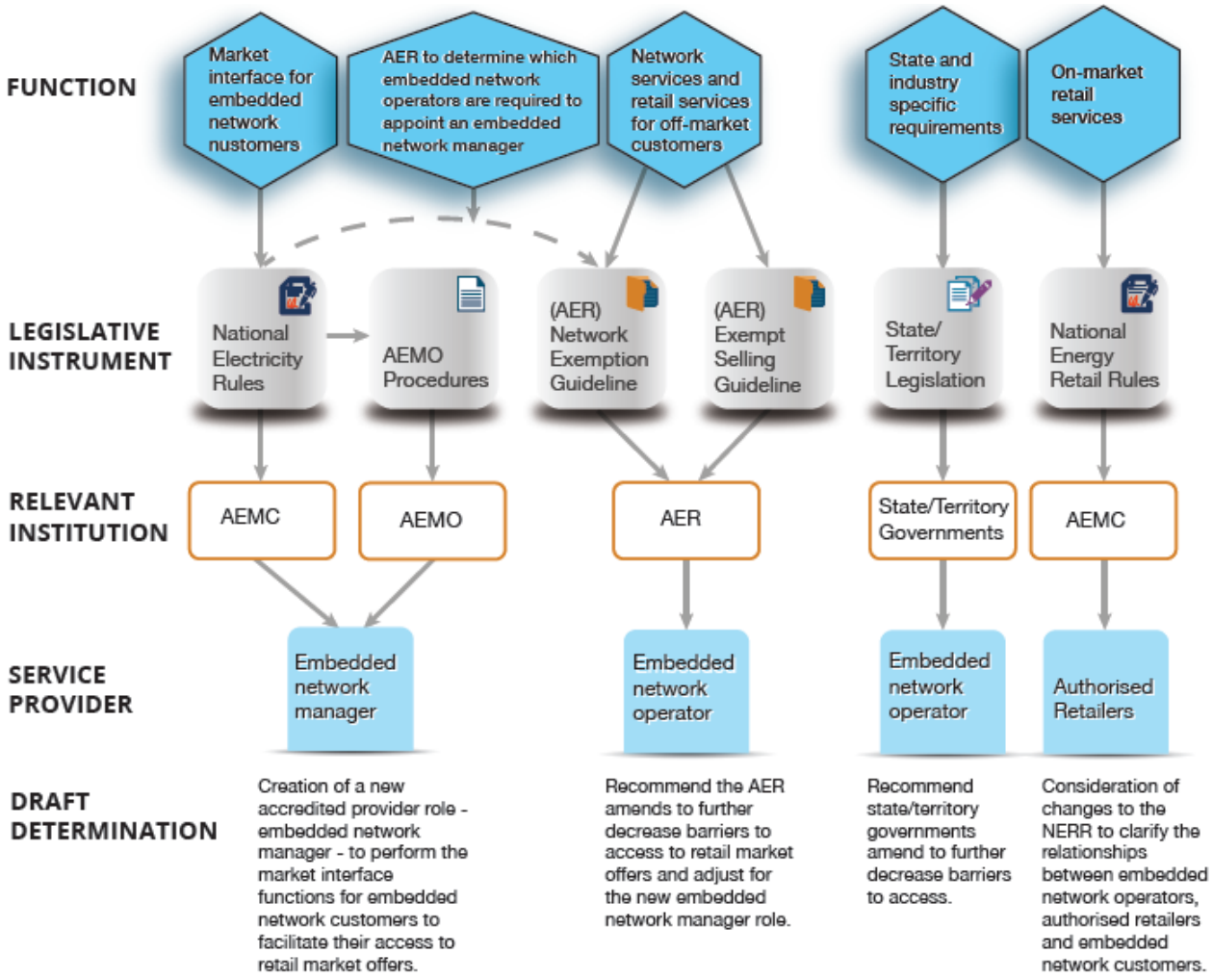
4.3.1 Regulatory framework

The Commission's draft rule is largely consistent with AEMO's framework but with some changes, amendments and additions. The Commission's framework is displayed in Figure 4.2.

28 Metropolis Metering submission, 2 July 2015, p.3; and Jemena submission, 2 July 2015, p.7.

29 TradeCoast Central submission, 2 July 2015, p.1.

Figure 4.2 AEMC's regulatory framework



The major differences between AEMO's framework and the Commission's are:

- Instead of requiring all embedded network operators with registrable or individual network exemptions to appoint an embedded network manager, the draft rule guides the AER's discretion to determine which embedded network operators are required to appoint an embedded network manager.
- The Commission considers changes to the NERR will clarify the regulation of authorised retailers supplying embedded network customers. However, it does not have the ability to make these changes as part of this rule change process. AEMO's rule change request only relates to the NER, not the NERR, and the Commission's limited power to make corresponding changes to the NERR is likely to be insufficient to make such changes. The key issues relevant to the NERR are therefore set out in Chapter 7 of this draft rule determination for information and to allow the consultation process to identify other issues arising.
- A proposed implementation schedule is set out in the draft rule. The proposed schedule removes the need for AEMO's proposed deeming and grandfathering

provisions by providing adequate time for interested parties to be accredited as embedded network managers and embedded network operators to appoint an embedded network manager prior to commencement of the proposed rule on 1 December 2017.

Each element of the Commission's framework is set out in Chapters 5-8. Specifically:

- Chapter 5 sets out the introduction of the embedded network manager role and the threshold for which embedded network operators will be required to appoint an embedded network manager;
- Chapter 6 sets out recommended changes to jurisdictional regulations and the AER's exemption guidelines;
- Chapter 7 sets out the nature of the NERR issues arising and points for consideration; and
- Chapter 8 sets out the Commission's proposed implementation plan.

Draft rule outlines amendments to the current version of the NER

As set out in section 2.3, the embedded networks draft rule amends the current version of the NER, not the draft rule published in the Competition in Metering draft rule determination. However, the Commission will make its final rule determination on the Competition in Metering rule change request on 26 November 2015, with an expected substantive commencement date of 1 December 2017.[30] Therefore, any final rule in relation to this rule change request will be based on the changes made to the NER by the Competition in Metering final rule and will, as indicated, have the same substantive commencement date.

To assist stakeholders with their consideration of the embedded networks framework in the context of amendments in the Competition in Metering draft rule, the Commission has published indicative rule amendments to the version of Chapter 7 of the NER proposed in the Competition in Metering draft rule.

4.3.2 Response to other issues

Bottom up reform

Jemena raised a number of important issues regarding the regulatory framework for embedded networks in both electricity and gas. Notably:

- the National Gas Law and Rules do not cater for embedded networks;
- while the NER provides a framework to incentivise network service providers to adopt new technologies in provision of network services and retail competition

30 For information on the Competition in Metering timeframes see: AEMC, Information sheet, Extension of time for final rule on provision of metering services, 2 July 2015, p.1.

provides incentives to retailers to do the same, the light-handed regulatory framework for embedded networks does not do the same; and

- the exemption framework was not originally designed to deal with embedded networks on the scale and scope that they have been recently developing.

Accordingly, Jemena advocated for a wholesale review of embedded networks.

These problems are substantial and require a broader review of the AER's exemptions framework for electricity and gas, and the issue of how third party providers (parties that are not retailers or NSPs) that offer products and services are regulated. These issues cannot be assessed in this rule change process. In addition, the Commission does not have the power as part of this NER rule change request to make changes to how gas embedded networks are regulated under the National Gas Rules.

Both the COAG Energy Council and the Victorian Government are currently conducting broader reviews that are linked to embedded networks. The outcomes of these reviews will be important for long term regulation of embedded networks.[31] These reviews, and any recommendations from them, are likely to take significant time to be conducted and recommendations to be acted on. The Commission considers that implementing the draft rule can provide valuable incremental reform in the short term. This solution provides:

- an interim means to protect customers by decreasing barriers to them moving on-market; and

- an opportunity to minimise implementation costs by making incremental reforms now while similar systems and procedures are being amended.

Furthermore, it is likely that any long term fundamental changes to embedded network regulation will be able to leverage off the embedded network manager role as there is a fundamental need for these market interface functions to be performed.

For these reasons, the draft rule does not address these particular matters raised by Jemena.

Right to access standing and market offers

The Commission supports the intent of the SA Department of State Development submission to provide easier access to retail market offers for embedded network customers. However, as these issues relate to issues arising under the NERL and NERR, they cannot be considered as part of this NER rule change process (see Chapter 7).

31 Energy Market Reform Working Group , Advice to the COAG Energy Council – New Products and Services in the Electricity Market, July 2015; and Essential Services Commission, Modernising Victoria's Energy Licence Framework – Issues Papers, June 2015.

The Commission also cautions against placing obligations on retailers binding them to make offers to embedded network customers where the offers have been designed for customers directly connected to DNSPs' networks. If such an obligation was to be imposed, more significant changes to the NERL and NERR would be likely to be required to recognise embedded networks.

Metering

The Commission considers that there are two barriers to embedded network customers being able to continue to use their current meter when they go on-market.

The first is whether the customer's current meter meets the on-market standard so that it could be used by an authorised retailer. This issue would be most appropriately addressed by the AER amending the meter reading, testing and inspection standards in its network exemption guideline to require the same standard within embedded networks as for on-market customers (see section 6.1.2). If this change occurs, both the minimum metering specification and the meter reading, testing and inspection standards for off-market customers' meters will be the same as for on-market customers. This will reduce the likelihood of customers needing to purchase a new meter if they choose to go on-market.

The second issue relates not to the meter itself, but to the incentives for embedded network operators to sell or lease the meter to an authorised retailer when a customer elects to go on-market. The incentives to balance include:

- an incentive not to sell or lease the meter with the purpose of placing a barrier to the customer going on-market and so increasing the chance of keeping the customer as a retail customer;
- an incentive to sell or lease the meter to earn revenue; and
- an incentive to develop commercial relationships with authorised retailers to sell or lease the meter so that authorised retailers will reciprocate if any customers seek to revert back to being off-market customers (and the barriers to reversion will be reduced).

Notably, these are the same incentives that apply to authorised retailers when a customer seeks to transfer to another authorised retailer. The Competition in Metering draft rule does not seek impose any requirements on authorised retailers for meters to be used by other authorised retailers. Instead, the Competition in Metering framework relies on the last two incentives noted above being stronger than the first. This is expected to arise because the regular exchange of customers between authorised retailers will be likely to result in the cost to retailers of not developing commercial relationships and selling or leasing meters being high.

The Commission considers that requiring embedded network operators to appoint a metering coordinator for all child connection points would be a significant regulatory obligation and will not solve the problem of some embedded network operators not

allowing meters to be used by authorised retailers. This is because appointment of a metering coordinator will not change the incentives faced by the embedded network operator. Instead, the Commission considers that improving customers' ability to switch between the embedded network operator and authorised retailers (and back) will provide embedded network operators with an incentive to create commercial relationships with retailers to prevent meters being replaced by both parties.

4.3.3 Response to submissions that do not support the proposal

The Commission notes TradeCoast Central's views on the SKM Jacob's cost benefit analysis. It also notes that the benefits of allowing embedded network customers access to retail market offers are likely to be substantially greater than those quantified in SKM Jacob's cost benefit analysis. While considering that there are likely to be a wide range of benefits, SKM Jacobs only quantified one benefit of embedded network customer access to retail market offers – the benefit of a reduction in dead weight loss from increased demand by embedded network customers responding to lower prices in the retail market. Further discussion on the wide range of benefits from allowing embedded network customers access to retail market offers is set out in Chapter 3 of this draft rule determination.

In addition, the Commission considers that the costs of implementing the draft rule are also likely to be less than SKM Jacobs estimated. SKM Jacobs cost estimation consisted of asking stakeholders what the cost of implementing and applying the embedded networks proposal as a stand-alone project or a project combined with the implementation of a specific design of the Multiple Trading Relationships rule change is likely to be. Stakeholders were therefore not able to take into account cost reductions from the Commission's proposed coordinated implementation with changes arising from the Competition in Metering rule change process. As stakeholders have highlighted in submissions, the incremental cost of the changes will be substantially below the stand alone cost.

Accordingly, as noted in Chapter 2, the Commission is satisfied that the potential benefits of the draft rule outweigh the potential costs.

The Commission's draft rule provides a regulatory framework for embedded network management that is likely to minimise the cost of provision of the market interface functions. By creating a market where any party that meets the accreditation requirements, including the embedded network operator itself, can provide embedded network management services costs will be minimised through competition to provide the services. Furthermore, in cases where customers under the current arrangement have managed or sought to go on-market, the draft framework is likely to result in cost reductions because the current arrangements are unclear and do not provide for any party to perform the functions.

5 Embedded network management

This chapter provides the Commission's assessment of AEMO's proposed new accredited provider role, the embedded network manager. This chapter sets out:

- a summary of market interface functions required to allow embedded network customers smooth access to retail market offers;
- the choice of market participants and accredited providers that the functions could be assigned to;
- consideration of applying a threshold over which embedded network operators are required to appoint an embedded network manager; and
- the potential market for embedded network management.

The detailed design and related issues the Commission has considered in relation to the embedded network manager role are addressed in Appendix C.

5.1 Market interface functions required to facilitate access to retail market offers

5.1.1 AEMO proposal

The market interface functions AEMO considers are required to allow embedded network customers access to retail market offers include:[32]

- The LNSP role provided for in MSATS and the B2B procedures for the on-market embedded network child connection points. For example:
  - requesting AEMO to provide NMIs and allocating these NMIs to child metering installations in MSATS when an off-market embedded network customer requests to become on-market;
  - maintaining all standing data required in connection with on-market embedded network child NMIs; and
  - managing MSATS and B2B interfaces for the embedded network connection points.
- Allocating a unique name for the embedded network, which would be an identifying embedded network code, to the parent NMI in MSATS and maintaining that code when embedded network customers become on-market customers. This demonstrates in MSATS that the parent and all of the on-market child connection points are part of the same embedded network.

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

- Maintaining and communicating information regarding embedded network customers to market participants and accredited providers. For example:
  - 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 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 of the parent connection point of the requirement; and
  - communicating with local retailers, market customers and distribution network service providers in relation to all on-market and prospective on-market embedded network customers.

5.1.2 Submissions

Retailers, DNSPs, large embedded network operators and consumer groups supported the need for AEMO's proposed functions to be performed to facilitate embedded network customers accessing retail market offers.[33]

While agreeing with the functions specified, DNSPs considered that network functions that would usually be the responsibility of DNSPs should also be added. For example, the Energy Networks Association (ENA) considered the functions should also include safe management of de-energisation and re-energisation, meter installation exchanges and fault/outage issues and responsibilities relating to maintaining and managing registers of life support customers.[34]

Several small embedded network operators did not agree that the market interface functions proposed by AEMO would be necessary. For example, the Caravan, Camping and Touring Industry and Manufactured Housing Industry Association of NSW (CCIA) considered that it is unnecessary for the NER to make it clear who has the obligation to support NEM activities related to customers within embedded networks because under the AER's exemption guidelines it is the responsibility of an embedded network operator to manage its own network.[35]

33 For example, submissions from: Origin Energy, 2 July 2015, p.2; Energy Networks Association, 2 July 2015, p.3; Shopping Centre Council of Australia, July 2015, p.11; and Consumer Utilities Advocacy Centre, 25 June 2015, p.4.

34 ENA submission, 2 July 2015, p.3.

35 CCIA submission, 1 July 2015, p.3.

5.1.3 Commission's analysis

Core functions

The Commission notes CCIA's view that the functions outlined by AEMO do not need to be performed because embedded network operators have the responsibility to manage their own networks. However, as set out in Chapter 4, the functions proposed by AEMO are separate from the provision of network, retail and metering services to embedded network customers. Instead, the functions proposed by AEMO relate to actions that need to be performed in the market systems to provide the link between embedded network customers and market participants.

Many of these functions, such as maintaining standing data in MSATS, are the same for small electricity customers generally as they are for on-market embedded network customers. However, while the NER specifies that the LNSP must perform these functions for non-embedded network customers, and the functions are not necessary for off-market embedded network customers, the NER does not currently assign responsibility to perform them to any party for on-market (or off-market customers seeking to become on-market) embedded network customers.

This lack of role assignment provides a significant barrier to embedded network customers accessing retail market offers because it is difficult for retailers to access information about the customers in MSATS. As a result, the smooth flow of information provided for in the B2B procedures is prevented from occurring. The Commission therefore considers that the NER should allocate responsibility to a specific party to remove these barriers to embedded network customers accessing retail market offers.

Life support

Currently, under the AER's network exemption guideline, responsibility for notification of life support requirements rests with the embedded network operator.[36] AEMO proposed that where electricity supply must be maintained for life support requirements within an embedded network an additional function to be performed by the embedded network manager is the notification of the financially responsible market participant (usually the retailer) at the parent connection point of the life support requirement.[37]

The Commission considers that life support notification responsibilities must continue to rest with the embedded network operator. This is essential because the new accredited provider – the embedded network manager – will not necessarily be appointed for all embedded networks and life support notification is likely to be needed in some embedded networks that do not have an embedded network manager. As no change to the current arrangements are needed, the draft rule does not specify

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

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

the allocation of this task in the context of an embedded network. Further discussion on life support notification requirements for embedded network operators is set out in Chapter 6.

Additional functions

Submissions from DNSPs identified a number of functions that could be the responsibility of an embedded network manager. It is important that these functions proposed by DNSPs are assigned to a specific party. However, as the DNSPs highlighted, these functions are 'network' functions. The Commission considers that network functions within embedded networks are most appropriately the responsibility of embedded network operators rather than embedded network managers. This is a matter for regulation through the AER's network exemption guideline. The draft rule does not include an allocation of such tasks within an embedded network.

5.2 Who should perform market interface functions?

5.2.1 AEMO's proposal

After identifying the list of market interface functions, AEMO examined who should perform the functions. AEMO proposed to create a new accredited provider role – the embedded network manager. AEMO proposed that the role would be contestable, using the approach taken in the NER for accrediting metering providers and metering data providers. AEMO considers that this approach would have a number of benefits, including:[38]

- the creation of a competitive market for embedded network management services which will allow embedded network operators to choose the lowest cost provider;
- allowing a wide range of parties to provide the services, including embedded network operators, 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.

Prior to concluding that the new role of embedded network manager should be created, AEMO considered a number of other entities to perform the required functions. These are set out below:[39]

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

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

1. 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, AEMO considered that if the functions were simply assigned to these parties the benefits of a contestable market for embedded network management services would be lost and other parties would be prevented from providing the services. Further, although the LNSP and retailer are capable in general, in the specific case of embedded networks, they have no relationship with embedded network customers. In this sense the functions – as applied in context of embedded networks – do not fit well with the LNSP or retailer.

2. The embedded network operator

The functions could be allocated to the embedded network operator by adding to the conditions of network exemptions under the AER's network guideline. AEMO considered some embedded network operators may be capable of performing the embedded network management functions (and will be able to be accredited under AEMO's proposal) but others will not have the expertise or resources to do so. This would therefore risk some embedded network operators breaching their exemption conditions, compromising the MSATS and B2B procedures, and impacting on the services provided to customers.

3. A new classification of market participant

AEMO considered market regulation is not warranted because the embedded network management functions are providing services to others rather than trading in the market. The increased costs of the registration requirements of a participant category are therefore unnecessary.

4. Some other entity

The Competition in Metering draft rule determination proposed to introduce a new market participant – the metering coordinator – that will take on the current roles and responsibilities of the responsible person and could be assigned the embedded network management functions. However, the proposed role primarily relates to coordinating accredited service providers, such as metering data providers, to undertake functions for customers, not performing functions themselves. Furthermore, similar to the parent retailer and LNSP, the parent metering coordinator will have no direct relationship with customers.

5.2.2 Submissions

Submissions from retailers, DNSPs, embedded network operators and consumer groups all supported the creation of a new accredited provider role to perform the market interface functions proposed by AEMO.[40]

5.2.3 Commission's analysis

The Commission has considered AEMO's analysis of the potential entities to perform the market interface functions. In particular, it notes that:

- DNSPs, retailers and metering coordinators of the parent connection point are not well placed to perform the functions as they are unlikely to have a relationship with the embedded network customers;
- the child connection point retailer or metering co-ordinator cannot perform the required functions as they are not in place to initiate the transfer from the embedded network operator to an authorised retailer and the customer may change retailer or metering coordinator at a later date;
- the functions could not become a requirement for all embedded network operators to perform under the AER's exemption guidelines because not all embedded network operators will have the expertise required to perform the functions; and
- a registered participant classification is not necessary.

The draft rule therefore provides for the creation of the new accredited provider role – the embedded network manager.

5.3 When should an embedded network manager be required?

5.3.1 AEMO proposal

AEMO proposed that all embedded network operators that are required to gain a registrable or individual network exemption from the AER under the AER's network exemption guideline also be required to appoint an embedded network manager. Embedded network operators eligible for deemed network exemptions would not be required to appoint an embedded network manager.[41]

Appendix D provides details of which embedded network operators are currently required to gain a registrable or individual network exemption. Broadly, the AER's network exemption guideline provides for deemed exemptions for embedded network

40 For example submissions from: Origin Energy, 2 July 2015, p.2; AusNet Services, 2 July 2015, p.7; Shopping Centre Council of Australia, July 2015, p.11; and Consumer Utilities Advocacy Centre, 25 June 2015, p.4.

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

operators operating embedded networks of a small scale and with a low number of customers. Registrable or individual exemptions are required to be sought for embedded network operators responsible for embedded networks of a larger scale or with a larger number of customers. For example, under the current network guideline, the deemed exemption class covers small industrial or commercial networks with less than ten customers. Larger networks or networks with more than ten customers are often required to gain registrable or individual exemptions.

However, as indicated in Appendix D, there are several important exceptions to this:

1. all retirement villages and caravan parks with permanent residents are required to gain registrable or individual exemptions regardless of the number of customers or size of the network; and

2. for those jurisdictions which have regulatory arrangements which allow for access to retail market offers (currently Victoria, South Australia and NSW), if an embedded network customer seeks access to a retail market offer, an existing deemed exemption becomes registrable, even if the embedded network is small and has less than ten customers.

AEMO's proposal would give the AER some discretion over which embedded network operators would be required to appoint an embedded network manager. The AER would not be able to require an embedded network operator to appoint an embedded network manager through the terms and conditions of the embedded network operator's exemption. Instead, it would need to change the embedded network operator's exemption from deemed to registrable to require appointment of an embedded network manager.

5.3.2 Submissions

Submissions highlighted that the threshold for appointing an embedded network manager is one of the key issues in assessing the rule change request and was the focus of many submissions. A wide range of views regarding AEMO's proposed threshold were expressed, including proposals for both a higher and lower threshold.

A number of stakeholders, including retailers, embedded network operators and metering providers supported AEMO's proposed threshold. They considered that it provides an appropriate balance between regulatory burden and access to embedded network management services by requiring larger embedded network operators to appoint an embedded network manager but not requiring small embedded network operators to do so until a customer within the network seeks access to a retail market offer.[42]

DNSPs generally considered that the threshold should be lower. For example, Jemena stated that there was no reason why any embedded network customer should face a

42 For example, submissions from: Origin Energy, 2 July 2015, p.3; Network Energy Services, 29 June 2015, p.2; and Metropolis Metering, 21 May 2015, p.2.

higher barrier to access retail market offers than other customers and therefore all embedded network operators (including those eligible for deemed exemptions) should be required to appoint an embedded network manager.[43]

While generally considering that the proposed threshold was appropriate, a number of stakeholders were concerned that it would require an embedded network manager to be appointed even where the customers would not seek to go on-market or are prevented from going on-market. For example, Strata Community Australia (Queensland) highlighted that under the proposed rule its members would be required to appoint, and bear the cost of appointing, an embedded network manager although there would be no benefit because under state policy embedded network customers in Queensland cannot access retail market offers.[44]

In addition, some embedded network operators opposed being required to appoint an embedded network manager even when a customer seeks to go on-market. For example, the CCIA considered that the requirement would mean that an embedded network operator would be faced with a potentially large compliance cost to manage just one on-market customer.[45]

5.3.3 Commission's analysis

Policy position

The Commission has concluded that there are significant benefits from allowing embedded network customers access to retail market offers and that smooth access to retail market offers requires an embedded network manager for the respective embedded network.[46] Ideally, all embedded network customers should have the right to access retail market offers and to facilitate this embedded network operators should be required to appoint an embedded network manager.

However, there will be a number of embedded networks where appointment of an embedded network manager would serve no purpose and therefore should not be required. For example, embedded networks in jurisdictions which do not allow customers access to retail market offers (currently Queensland, Tasmania and the ACT).

There are also some embedded networks where the benefits of appointing an embedded network manager before a customer seeks to go on-market are likely to be less than the costs. For example, an embedded network with only two customers is unlikely to have a customer seek to go on-market and therefore the potential benefits of appointing an embedded network manager would be small. In these situations

43 Jemena submission, 2 July 2015, p.9.

44 Strata Community Australia (Queensland) submission, 2 July 2015, p.3.

45 CCIA submission, 1 July 2015, p.7.

46 As set out in Chapter 3 and section 5.1.

embedded network operators should not be required to appoint an embedded network operator before a customer seeks to go on-market.

However, if a customer does seek to go on-market, then this should trigger the appointment of an embedded network manager as there will be a benefit to that customer and any others that may follow. This will result in a delay for customers in such embedded networks in accessing a retail market offer because they will have to wait for an embedded network manager to be appointed and therefore should not be the default position for all embedded networks.

If implemented, this policy position would require embedded network operators to appoint and bear the cost of an embedded network manager when a single customer or small number of customers seek to go on-market. This is essential to reduce the barriers to all embedded network customers (in jurisdictions which allow access to retail market offers) accessing, and therefore receiving the benefits of, access to retail market offers. This will also enhance regulatory certainty because every embedded network with an on-market embedded network customer will have an embedded network manager which removes the need for any arrangements for on-market customers without an embedded network manager.

Draft rule

The detailed assessment required to determine whether each specific type of embedded network operator should appoint an embedded network manager under the above framework is considerable. It also needs to be flexible, taking into account the particular circumstances of the embedded network, policy and market developments. It is most appropriately addressed in the AER's network exemption guideline, not directly in the NER. This will allow the AER to adjust which embedded network operators are required to appoint an embedded network manager based on the specific circumstances of the embedded network operator and embedded network customers. For example:

- when considering the costs and benefits of appointment of an embedded network manager the AER will be able to take into account the number of customers in the embedded network and the likely cost of appointing an embedded network manager in that area; and

- whether customers within the network will be able to gain access to retail market offers if an embedded network manager is appointed, may depend on jurisdictional regulations in place.

However, the Commission considers that the AER's discretion regarding the determination of the exemption should be guided to reflect the above policy positions. The draft rule therefore deems network exemptions to be subject to a new condition that the embedded network operator must appoint an embedded network manager unless:

- the embedded network customers are unable to gain access to a retail market offer in a relevant jurisdiction; or

- if the AER determines the costs of appointing an embedded network manager are likely to outweigh the benefits. In these cases the AER must require an embedded network manager to be appointed when a customer elects to go on-market.

In the latter case where the requirement to appoint an embedded network manager will be triggered by a customer seeking access to a retail market offer, it is expected the AER will specify the timeframe for the appointment of an embedded network manager to occur in its conditions to the network exemption.

The Commission considers that this approach has a number of advantages:

1. all customers in jurisdictions that allow access to retail market offers that seek a retail market offer will have access facilitated by an embedded network manager;

2. embedded network operators in jurisdictions that do not allow access to retail market offers, or with customers which are not potential market customers, will not bear the cost of appointing an embedded network manager;

3. embedded network operators operating embedded networks where the likelihood of customers seeking to go on market is low will not be required to bear the costs unless a customer seeks to go on-market; and

4. providing the AER with discretion to set the threshold will allow flexibility to adjust to evolutions in embedded networks.

5.4 The embedded network manager market

5.4.1 AEMO proposal

AEMO proposed to facilitate an open market for embedded network management services by allowing any party that meets the accreditation requirements to provide embedded network management services. AEMO considered this would have a number of benefits, including:[47]

- it would create a competitive market framework for embedded network management services, thereby allowing embedded network operators to choose the lowest cost provider of embedded network management services;

- allowing a wide range of parties to provide the services, including embedded network operators themselves, retailers and DNSPs; and

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

- assurance through an AEMO accreditation process of the capability of the parties to provide the services.

AEMO anticipates that a number of the existing embedded network operator businesses will become accredited as embedded network managers and offer to carry out embedded network management services for other embedded network operators. AEMO considered that many embedded network operators would either have, or could readily develop, the skills and systems required to undertake the specified tasks without major additional costs. AEMO also considered that existing market participants such as retailers and DNSPs may also seek to provide embedded network management services.

To assist embedded network operators in appointing an embedded network manager AEMO proposed to maintain a list of accredited embedded network managers on its website.

5.4.2 Submissions

Submissions indicated strong support for the competitive market framework proposed by AEMO. Stakeholders considered that there are a number of likely providers of embedded network management services. For example, AusNet Services considered that niche retailers (specialising in embedded network service provision), some large retailers, embedded network operators and some network service providers are likely to be able to provide embedded network management services.[48]

Several submissions anticipated a problem if no embedded network manager is available for an embedded network operator to appoint. To overcome this, the Shopping Centre Council of Australia suggested there may be merit in requiring DNSPs to provide the services at a regulated rate as a "fallback" option.[49]

5.4.3 Commission's analysis

AEMO's proposed market for embedded network management should result in the efficient provision of embedded network management services. Notably:

- allowing interested parties to compete to provide embedded network management services should provide incentives to decrease cost, lower prices and provide high quality services;

- AEMO's accreditation and monitoring processes should provide for minimum service standards to be met by all providers;

- embedded network operators should benefit from being able to choose the embedded network manager that suits them best, including the option of gaining accreditation themselves; and

48 AusNet Services submission, 2 July 2015, p.8.

49 Shopping Centre Council of Australia submission, July 2015, p.12.

- the requirement for AEMO to keep a list of accredited embedded network managers will result in a transparent market.

The Commission considers that a default arrangement, as suggested by the Shopping Centre Council of Australia, would result in significant costs because the AER would need to undertake detailed assessment of the costs of providing the services for each DNSP throughout the NEM. Furthermore, the Commission does not consider that a default embedded network manager is necessary because the prospects of a competitive market for embedded network management services are strong, notably:

- embedded network management services exhibit low barriers to entry for suppliers because the only requirement is to gain accreditation under AEMO's embedded network management procedures;

- there are a large number of potential providers that already have the skill sets to provide embedded network management services, including DNSPs, retailers, embedded network operators and metering data providers; and

- there are a number of parties that have an incentive to supply embedded network management services. For example, retailers seeking to provide retail services to embedded network customers could establish relationships with embedded network customers through the embedded network manager role and embedded network operator businesses seeking to operate more embedded networks could build relationships with embedded network owners.

For these reasons, the draft rule provides for any party who is able to satisfy the relevant criteria to become an embedded network manager. The Commission is satisfied that this open policy will result in a workably competitive market for embedded network management services and that a the creation of a regulatory framework to apply to DNSPs will not be necessary.

6 AER guidelines and jurisdictional regulations

This chapter discusses AEMO's recommended changes to the AER's network exemption guideline and jurisdictional regulations to allow easier access to retail market offers. Stakeholders also raised a number of other possible changes to the exemption guidelines and these are also discussed.

6.1 Changes to the exemption guidelines

In this section the Commission makes a number of recommendations in relation to possible changes to the AER's network exemption guideline. The Commission notes that under s. 13 of the NEL, the AER has the power to grant an exemption, subject to the NER and on whatever terms and conditions it consider appropriate, in accordance with the NER. It is implicit in the NER that the AER will develop guidelines in relation to the granting of these exemptions. The NER requires the granting of these exemptions to be in accordance with such guidelines.

The current network exemption guidelines are extensive. They outline the various classes and kinds of exemptions available, general requirements for a large number of possible conditions to an exemption and cover a very broad range of embedded networks. Granting an exemption can therefore be a relatively bespoke process, depending on the circumstances of the network, what class of exemption the relevant embedded network may fall within in and any particular unique features it may have. With this in mind, the Commission does not consider it appropriate, in relation to the issues discussed in this chapter, to include provisions in the NER that would direct the AER in relation to either the amendment of these guidelines, or otherwise guide its discretion in relation to them.

6.1.1 Comparability of offers

AEMO proposal

AEMO recommended that the AER amend its network exemption guideline to require all embedded network operators to unbundle retail bills into network and energy charges. AEMO considered this would allow embedded network customers to compare offers from authorised retailers and embedded network operators.[50]

Submissions

Submissions varied on this issue substantially.

The Shopping Centre Council of Australia considered that compulsory unbundling of bills would increase the complexity of offers and result in increased customer

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

confusion. It also considered that this requirement would be inconsistent with requirements relating to bills for customers outside of embedded networks.[51]

The Consumer Utilities Advocacy Centre (CUAC) supported AEMO's proposal, and considered that it would help customers compare offers from authorised retailers and embedded network operators, and provide greater transparency of network charges from energy charges.[52]

Retailers highlighted that while unbundling may provide benefits in some cases, it would be unnecessary and confusing in others. For example, Origin Energy noted that in many cases embedded network operators will bill the retailer directly for network costs and the retailer bills the customer a bundled charge for network and energy services, avoiding the need to unbundle bills for the customer.[53]

Commission's analysis

To assess whether unbundling of bills is necessary it is important to understand the two ways that embedded network customers can be provided retail services by authorised retailers. The first is that the retailer comes to an agreement with the embedded network operator for the embedded network operator to charge it for network services. The retailer then bills the customer for network and energy services. The second method is that the customer pays two separate bills, one to the embedded network operator for network services and one to the retailer for energy services.

For either method to work the embedded network operator must either inform the authorised retailer or the customer of the unbundled charges. For example, under the first method the retailer must know what the embedded network operator will charge it for network services for the customer otherwise it cannot make an offer for network and energy services to the customer and thus have a comparable offer. Under the second method, the customer needs to know the breakdown of the network and energy charges so that it can compare the energy component of the embedded network operator's charges to a retailer's energy only charges.

AEMO's proposal of compulsory unbundling of all embedded network operators' bills would solve this problem because both retailers and customers would have the required information. A potential retailer could make an offer based on either an energy only service or the energy and network bundled service.

However, AEMO's solution would require unbundling for every embedded network customer in the NEM. This would include within embedded networks where customers are already on-market, embedded networks where no customer is seeking to go on-market and embedded networks where customers have no ability to go on-market (currently in Queensland, Tasmania and the ACT). It would also be confusing and unnecessary for customers under the first arrangement where they can

51 Shopping Centre Council of Australia submission, 2 July 2015, p.11.

52 CUAC submission, 2 July 2015, p.4.

53 Origin Energy submission, 2 July 2015, p.5

simply compare the bundled charge from the embedded network operator and authorised retailer.

An alternative solution would be to require embedded network operators to provide information regarding the unbundled amount of charges on request from either a customer or a retailer that the customer is seeking an offer from. This would still allow any customer seeking to go on-market to compare offers from embedded network operators and authorised retailers but would not incur the cost of compulsory unbundling of all embedded network operators and not result in confusion for customers where the first method occurs.

The Commission therefore recommends the AER amend its network exemption guideline to include a requirement that embedded network operators provide information regarding the unbundled amount of charges when requested to do so by either a customer or a retailer that the customer is seeking an offer from.

6.1.2 Meter reading, testing and inspection standards

AEMO proposal

AEMO has stated that there is currently no requirement in the AER's network exemption guideline for the routine reading, testing and inspection of off-market meters.[54] AEMO proposed that the AER should require the same routine reading, testing and inspection standards for off-market customers as for on-market customers by embedded network operators.[55] It considered that this would decrease the barriers to embedded network customers accessing retail market offers by increasing the likelihood that the metering within embedded networks meets the NEM standard. This would decrease the likelihood that a replacement meter is required when a customer seeks to go on-market.

Submissions

Submissions from DNSPs, retailers and the Electricity and the Water Ombudsman of NSW (EWON) supported AEMO's proposal to increase the off-market meter reading testing and inspection standards.[56] EWON stated that:

> "In principle EWON supports the proposal that 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. EWON's investigation of complaints from customers in some of the older residential parks identified several examples of unorthodox meters – eg purchased by the park owner in a second-hand auction sale, or operated by tokens. The

54 AEMO, National Electricity Rule Change Request – Detailed Market Design, September 2014, p.22.

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

56 For example submissions from: Jemena, 2 July 2015, p.3; ERM Power, 2 July 2015; and EWON, 2 July 2015, p.3.

lack of a clear inspection and testing regime resulted in the customer having to source a private contractor to carry out the testing at their own expense."

ERM Power also noted that meter standards are not just an issue of a barrier to access to retail market offers. It considered that where the accuracy of off-market metering installations is not maintained appropriately, the correct level of consumption may not be recorded. This can result in real cost impacts for the customer using an off-market child and/or the embedded network parent.[57]

Commission's analysis

The Commission considers that all customers should have accurate metering and billing regardless of whether they are inside an embedded network. It also considers that accurate meter reading is important to reduce the barriers to embedded network customers going on-market by decreasing the likelihood that the meter will need to be replaced when a customer seeks to go on-market.

The Commission therefore recommends the AER change the standards for meter reading, testing and inspection for off-market customers by amending the conditions to exemptions in the AER's network guideline so that the conditions match the requirements in the NER.

6.1.3 Information requirements

AEMO proposal

AEMO did not propose any changes to the information requirements for embedded network customers.

Submissions

DNSPs, retailers and consumer groups considered that it will be important for the AER's guidelines to clearly set out the information that embedded network operators will need to provide to customers regarding embedded network managers.[58] For example, PIAC considered that:

"many customers of certain embedded networks will have no experience of accessing the competitive retail market. In addition, an engaged electricity consumer within an embedded network would know that they are unable to access retail energy markets. PIAC, therefore, submits that the rule change should include a requirement for embedded network operators to let customers know about the rule change and its implications once it

57 ERM Power submission, 2 July 2015, p.3.

58 For example submissions from: Jemena, 2 July 2015, p.8; Origin Energy, 2 July 2015, p.5; and the Public Utilities Advocacy Centre (PIAC), 2 July 2015, p.2.

comes into effect. Without a requirement for embedded network operators to inform their customers of the change, PIAC believes there is a risk that customers will not realise that they can now access the competitive market. This is particularly true as, without a requirement that they do so, embedded network operators have a clear incentive not to inform their customers of the changes (because they will potentially lose retail customers)."

Commission's analysis

As with electricity users in general, the Commission considers that embedded network customers should be informed of their rights and responsibilities in relation to the provision of electricity services so that they can make informed decisions about the products, services and providers of electricity services. Under the current regulatory framework for embedded networks this is provided for through provisions in the AER's network and retail exemption guidelines. These guidelines require embedded network operators to inform their customers of their rights and the embedded network operator's responsibilities (set out in Appendix D).

As noted by stakeholders, it is important that embedded network customers are informed of changes to their rights and the responsibilities of embedded network operators resulting from the rule change. The Commission considers the AER's network and retail guidelines, and the consultation process required to update these guidelines, will sufficiently address this issue.

6.1.4 Life support

Currently under the NER and NERR retailers do not have the ability to directly disconnect customers. Instead, retailers must arrange for disconnection with the LNSP.

As set out in section 5.3.1, embedded network operators are required, as part of their conditions to exemption, to notify the LNSP of any life support customers within the embedded network. These conditions also prevent an embedded network operator from disconnecting a life support customer.[59] Therefore, life support customers in embedded networks are 'protected' from disconnection because these obligations prevent disconnection by the only two parties – the LNSP and embedded network operator – that can perform disconnections.

Under the Competition in Metering draft rule:

- it will be possible for a retailer to arrange for remote disconnection without network involvement, that is, through the metering coordinator; and
- LNSPs will be required to advise a retailer a person residing at the premises requires life support equipment, in addition to the current notification requirements for the retailer to advise the LNSP.

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

Under these draft arrangements, when an embedded network operator informs the LNSP of a life support requirement within the embedded network, the LNSP will be required to inform the parent connection point retailer. However, there would be no requirement in the regulatory framework for the retailer of the child connection point to be informed. As a result, that retailer could potentially arrange for remote disconnection through the metering coordinator without being aware of the existence of the life support customer.

On the basis that the Competition in Metering draft rule is made, the Commission recommends that the AER amend its network exemption guidelines to require the embedded network operator to inform the child connection point retailer of the life support requirement as well as the parent connection point LNSP.

6.2 Change to jurisdictional regulations

6.2.1 AEMO proposal

AEMO considered that with the introduction of the embedded network manager role, and changes to the AER's network exemption guideline, the jurisdictional regulations in Queensland, Tasmania and the Australian Capital Territory which currently prevent customers choosing a registered retailer should be relaxed. AEMO also considers that harmonisation of the regulations in jurisdictions which already permit retailer choice would increase the benefits arising from making the proposed rule.[60]

6.2.2 Submissions

Submissions generally did not focus on changes to the jurisdictional regulations relating to embedded network customer access to retail market offers.

6.2.3 Commission's analysis

The Commission has set out the jurisdictional regulations that influence embedded network customers access to retail market offers in detail in Appendix E. However, it has no power to change these jurisdictional requirements.

The Commission agrees with AEMO that the jurisdictional regulations that prevent customers accessing retail market offers should be removed in Queensland, Tasmania and the ACT. Furthermore, the Commission considers that the jurisdictional regulations in Victoria, South Australia and New South Wales should be harmonised to provide a clearer and simpler system for all stakeholders. These changes would support the draft rule for embedded networks and result in the benefits of making the rule being more widely available. For these reasons, the Commission recommends that jurisdictional governments make the required adjustments to their instruments in time for the commencement of the rule on 1 December 2017.

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

7 NERR issues

AEMO's rule change request was made under the NEL and set out proposed changes to the NER. It did not propose any changes in relation to the NERR.

When an embedded network customer goes on-market they become the customer of an authorised retailer that is operating in the market. This retailer is subject to the NERL and NERR and not the conditions of the AER's retail exemption guideline. In the consultation paper, the Commission highlighted that this circumstance raises a range of retail market issues that may require consideration and possible changes to the NERR. For example, changes to the NERR may be necessary to clarify the obligations regarding the content of bills, de-energisation and re-energisation and how tariffs and charges are to be presented in contracts. Considering other complementary changes will maximise the effectiveness of the new embedded network framework.

Under s. 91B of the NEL, the Commission has the power to make, in relation to AEMO's request:

- 'necessary or consequential' rules under the NEL; and
- 'corresponding' rules under either the National Gas Law and the NERL.

Therefore, in order to consider and make changes to the NERR, the Commission is limited by its rule making powers to only making those changes that are 'corresponding'. While the precise nature of 'corresponding' is not defined in the NEL, it suggests that for any changes to the NERR to be within power, the changes would need to be equivalent to those being made under the NER.

Regardless of the exact scope of this rule making power, the nature of the likely and relevant retail issues arising are such that the Commission does not consider that such changes are likely to be 'corresponding' and so does not have the power to make any necessary changes to the NERR to address them as part of this draft rule determination. The nature of the issues and relevant matters for consideration are set out in Appendix F.

Accordingly, to allow for the consideration of such issues (and any necessary changes), a rule change request addressing them will need to be made to the AEMC under the NERL. At this stage, an overview of these issues to assist stakeholder consideration of the new proposed framework has been included in this draft rule determination, of the possible ramifications it may have for retail regulation, and how such ramifications may be best addressed.

Stakeholders are encouraged to provide their views on the issues, their ramifications and the importance or significance of addressing them. Depending on the nature of submissions made, the Commission may include suggested specifications for any amendments to the NERR as part of its final determination, to assist with the development of any subsequent rule change request to be submitted.

8 Timing and implementation

This chapter sets out the Commission's proposed implementation timeframes and transitional provisions. It includes:

- AEMO's proposed transitional provisions;
- a summary of submissions on AEMO's proposal; and
- the Commission's draft transitional provisions and implementation timeframes.

8.1 AEMO proposal

8.1.1 Coordination with Power of Choice projects

AEMO did not provide a timeframe for implementation of the proposed rule. However, it considered that there are potential synergies in the timing of implementing the proposed changes with other changes arising out of the Power of Choice review, particularly in relation to how these might be related to the costs of software systems changes.[61]

8.1.2 Grandfathering

AEMO proposed that existing embedded network operators with registrable or individual exemptions be allowed two years from the commencement of the rule to appoint an embedded network manager. This would provide existing embedded network operators sufficient time to budget any additional costs, undertake a tender process to appoint an embedded network manager or develop the systems and expertise to be accredited as an embedded network manager themselves.[62]

8.1.3 Deeming

AEMO included a provision in the proposed rule to ensure that there would be embedded network managers available at the commencement date of the rule. For six months from that date, existing market customers (for example, retailers) and network service providers who notify AEMO that they wish to be embedded network managers would be deemed to be embedded network managers.[63] Other interested parties would be subject to AEMO's accreditation process to become embedded network managers.

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

62 ibid. p.13.

63 ibid.

8.1.4 Transitional provisions

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

- 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 embedded network manager 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 and systems changes prior to the rule commencement date to have been validly undertaken under the NER consultation procedures for the purposes of the transitional requirement.[64]

8.2 Submissions

8.2.1 Coordination with Power of Choice projects

Submissions from retailers, DNSPs and metering providers supported a coordinated approach to implementation of the Power of Choice projects and noted that this could result in substantial implementation cost savings.[65] AusNet Services stated:[66]

> "there are synergies available in implementing the Embedded Network rules change co-incident with the Expanding Competition in Metering rule change. Both rule changes effect the role assignment in MSATS and B2B Procedures and have similarities in system and process changes. This allows the alignment of the procedure development, consultation, build packs, IT development, and test phases in the most cost effective implementation. Aligning the changes will likely save millions of dollars across the industry."

64 ibid.

65 For example submissions from: Origin Energy, 2 July 2015, p.4; AusNet Services, 2 July 2015, p.14; and Metropolis Metering, 21 May 2015, p.3.

66 AusNet Services submission, 2 July 2015, p.14.

8.2.2 Embedded networks timeframes

Grandfathering

Embedded network operators, retailers and DNSPs considered that there is a need for existing embedded network operators to have time to adjust to changes from the final rule before they are required to appoint an embedded network manager.[67] However, retailers, DNSPs and consumer groups stated a preference for a shorter time from the implementation date because the two year period would lead to delays in the benefits of the rule change being realised.[68]

Deeming

The SA Department of State Development, Metropolis Metering and CUAC opposed AEMO's proposed deeming provisions. These stakeholders considered that the provisions would create an unlevel playing field in the market for embedded network management services.[69]

CUAC proposed an alternative approach would be to invite businesses to seek accreditation as an embedded network manager well before the commencement of the rule so that there will be enough embedded network managers once the rule commences.[70]

Transitional provisions

A number of stakeholders supported the proposed transitional provisions to allow AEMO to commence work on its systems and procedures changes before implementation of the rule change. However, CUAC, Origin Energy and the Shopping Centre Council of Australia noted that this should not prevent requirements on AEMO to consult with embedded network operators and potential embedded network managers on the changes.[71]

8.3 Commission's analysis

8.3.1 Coordination with Power of Choice projects

The AEMC and AEMO have been working together to develop an implementation work plan for the Power of Choice recommendations and held an implementation

67 For example, submissions from: Network Energy Service, 29 June 2015, p.3; AGL, 2 July 2015 p.5; and United Energy, 2 July 2015, p.8.

68 Submissions from: AGL, 2 July 2015 p.5; Jemena, 2 July 2015, p.10; and CUAC, 26 June 2015, p.5.

69 Metropolis Metering submission, 21 May 2015, p.3; and CUAC submission, 26 June 2015, p.6.

70 CUAC submission, 26 June 2015, p.6.

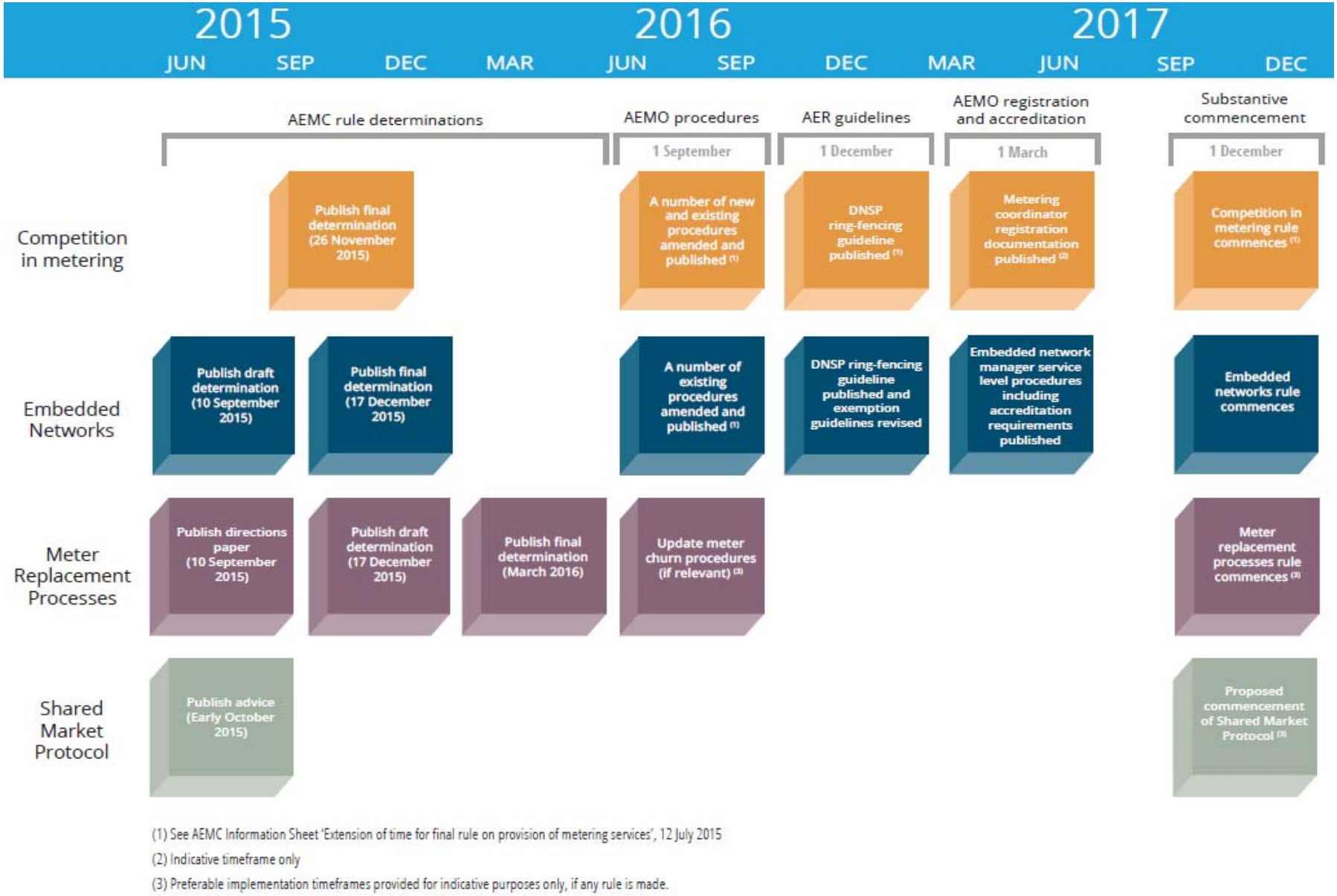
71 For example, submissions from: Shopping Centre Council of Australia, July 2015, p.14; CUAC, 26 June 2015, p.5; and Origin Energy, 2 July 2015, p.4.

workshop with stakeholders on 16 July 2015. Of particular relevance to the implementation of this rule change is the Competition in Metering rule change. The Meter Replacement Processes rule change and the Implementation Advice on the Shared Market Protocol may also be relevant.

Figure 8.1 displays the Commission's anticipated implementation schedule for this and the Competition in Metering rule change, noting that final rule determinations have not yet been made on either of these projects and timeframes can only be confirmed if and when the Commission makes final rules in relation to each rule change. It also displays how the timeframes in the other two projects are best co-ordinated to streamline implementation across all four projects, noting that the final implementation timeframe for each will be determined as part of that project. In particular, the timing for any shared market protocol proposed changes is dependent on a number of factors, including the timing of receipt of a rule change request from the COAG Energy Council.[72]

72 In particular, the timing for any shared market protocol proposed changes is dependent on a number of factors, including the timing of receipt of a rule change request from the COAG Energy Council.

Figure 8.1 Implementation plan for Power of Choice reforms



(1) See AEMC Information Sheet 'Extension of time for final rule on provision of metering services', 12 July 2015

(2) Indicative timeframe only

(3) Preferable implementation timeframes provided for indicative purposes only, if any rule is made.

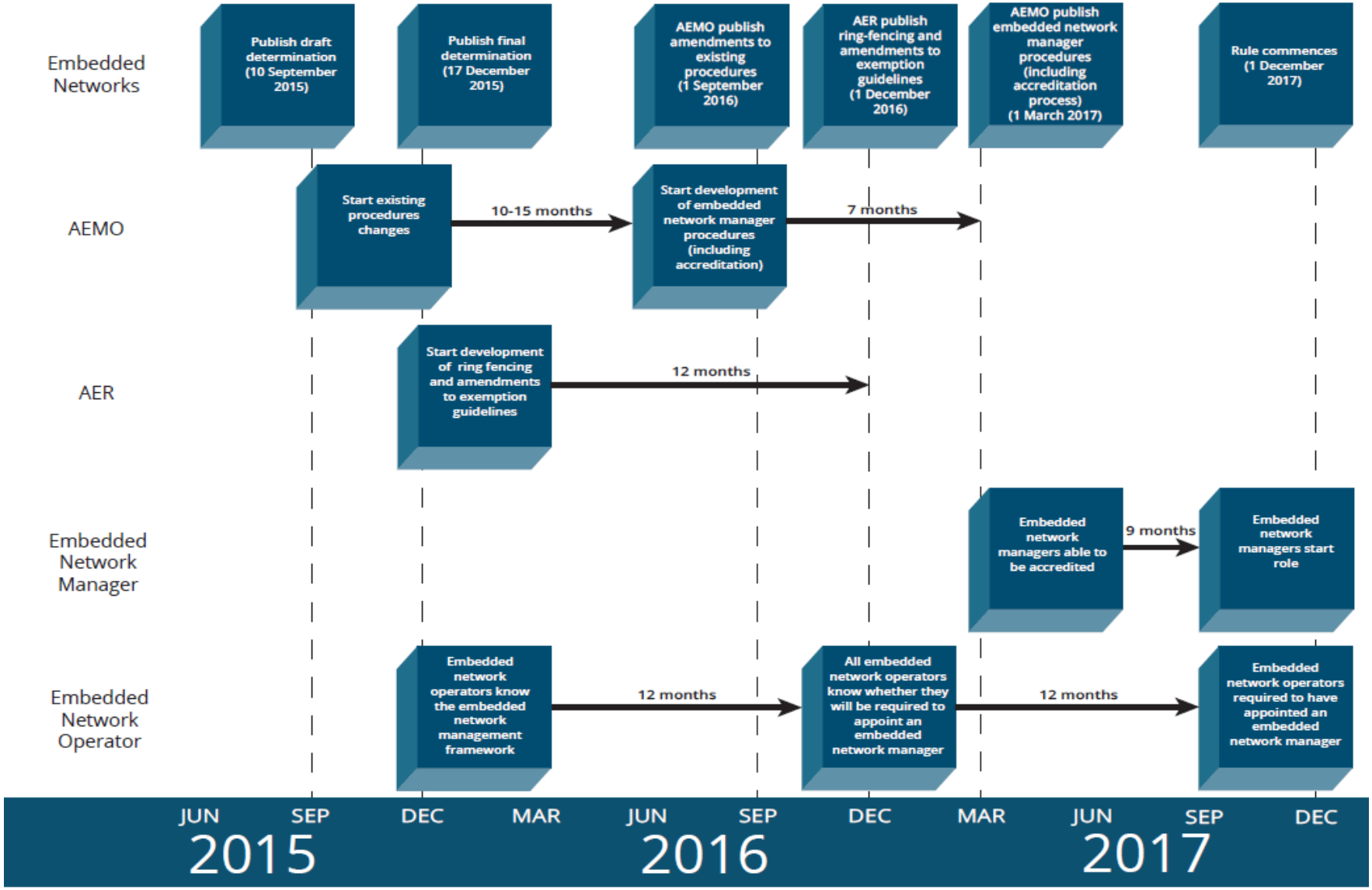
The Commission considers that there are likely to be significant reductions in implementation costs from coordinated implementation of these projects. The proposed timeframe will allow realisation of these benefits. The Commission notes:

- by implementing all of the proposed changes on 1 December 2017 all parties will only be required to implement and comply with one set of changes which will reduce costs for DNSPs, retailers, embedded network operators and managers;
- the synchronisation of the systems changes will reduce costs to AEMO, retailers and DNSPs; and
- the synchronisation of changes to the AER's ring fencing and exemptions guidelines will reduce costs for the AER and stakeholders.

8.3.2 Embedded networks timeframes

Figure 8.2 provides the Commission's proposed implementation schedule for the new embedded networks framework discussed in this draft rule determinations. It highlights the timeframes that each party will have to meet their obligations under the draft rule.

Figure 8.2 Proposed implementation schedule for embedded networks



* The above timeframes are indicative and based on the draft rule only.

Grandfathering

In light of the implementation plan above, the proposed grandfathering arrangements for existing embedded network operators are not required. Notably:

- the Commission expects to publish the embedded networks final determination and final rule on 17 December 2015. This provides existing embedded network operators almost two years to prepare for the introduction of the new regulatory framework on 1 December 2017;
- the draft rule proposes to guide the AER's discretion in determining which embedded network operators will be required to appoint an embedded network manager. This will provide embedded network operators with almost two years before the final rule takes effect in which they will have a strong indication of whether they will be required to appoint an embedded network manager; and
- the AER will be required to revise its network exemption guideline by 1 December 2016. This will provide embedded network operators with a definitive requirement of whether they are required to appoint an embedded network manager one year in advance.

This schedule provides similar notice to existing embedded network operators to adjust billing and contractual arrangements as proposed in AEMO's grandfathering provisions. However, it removes the delay in allowing embedded network customers within existing embedded networks the benefits of appointment of an embedded network manager.

Deeming

The Commission considers that the proposed deeming arrangements are not required under the implementation schedule set out above. Under the schedule, AEMO will be required to finalise and open its embedded network manager accreditation procedures by 1 March 2017. This will provide nine months for interested parties to be accredited as embedded network managers and embedded network operators to appoint an embedded network manager.

Transitional provisions

It is expected that AEMO may commence work on amending its IT systems and procedures and the creation of the embedded network manager accreditation procedures prior to commencement of the embedded networks rule. It is therefore essential that the draft rule provides for such steps and consultation on these systems and procedures to be validly undertaken under the NER consultation procedures. This does not remove AEMO's obligations under the NER to consult on these changes.

8.3.3 Other timing issues

In the event a rule change request is lodged under the NERL to address the issues raised in Chapter 7 of this draft rule determination, considerable synergies will arise by making any changes to the NERR commence at the same time as the new embedded network framework.

Abbreviations

ACT	Australian Capital Territory
AEMC	See Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CCIA	Caravan, Camping and Touring Industry and Manufactured Housing Industry Association of NSW
COAG	Council of Australian Governments
Commission	The Australian Energy Market Commission
Competition in Metering	Expanding Competition in Metering and Related Services
CUAC	The Consumer Utilities Advocacy Centre
DNSPs	distribution network service providers
ENA	Energy Networks Association
EWON	Electricity and the Water Ombudsman of NSW
FRMP	financially responsible market participant
IEC	Information Exchange Committee
LNSP	local network service provider
MCE	Ministerial Council on Energy
MSATS	market settlement and transfer solutions
MTR	multiple trading relationships
NEL	National Electricity Law
NEM	National Electricity Market
NEO	national electricity objective
NER	National Electricity Rules

NERL	National Energy Retail Law
NERR	National Energy Retail Rules
NGL	National Gas Law
NMI	national metering identifier
NSP	network service provider
NSW	New South Wales
PIAC	Public Utilities Advocacy Centre
SA	South Australia

A Summary of other issues raised in submissions

Stakeholder	Issue	AEMC response
United Energy (p.3)	It is not clear whether the set up costs and the ongoing costs of employing an embedded network manager and the embedded network managers accreditation costs could be charged to the child who caused the cost or smeared across all the customers within the embedded network.	The charging for network services by embedded network operators will continue to be governed by the AER through the network exemption guideline.
SCCA (p.13)	Clarification is needed on the frequency of AEMO compliance reviews to ensure these can be priced and funded.	Consistent with procedures for other accredited providers, the draft rule provides AEMO with discretion on the frequency of compliance reviews, their pricing and funding.
SCCA (p.13)	The obligation in relation to electricity wiring information should be amended to provide that only information in relation to the parent meter needs to be provided, upon request from a retailer whom an embedded network customer is proposing to transfer to.	Consistent with the other detailed aspects of the requirements on embedded network managers AEMO will have discretion in its procedures over the exact information that is required in relation to electricity wiring information.
ENA (p.1)	The rule change should ensure, in both the policy intent and in detailed drafting, that the obligations placed upon the LNSP relating to embedded networks are limited to provision of the parent connection point to the NEM. The LNSP must not be left as the default service provider or service facilitator for customers within an embedded network as the LNSP has no visibility, contractual or other connection with these customers.	A number of consequential amendments to Chapter 7 of the NER have been included in the draft rule to limit LNSP obligations to the parent connection point.
AusNet Services (p.5)	There is a gap in obligations on embedded network operators and embedded network managers to	The draft rule requires embedded network managers to comply with the confidentiality requirements under rule 8.6 of the NER. Confidentiality

Stakeholder	Issue	AEMC response
	maintain confidentiality of information received through B2B and MSATS under the current NER provision 7.7.	requirements for exempt embedded network operators are addressed by the AER as part of the network exemption framework.
EnergyAction (p.2)	We note from the discussion paper that LNSPs shall be required to apply ring fencing to their embedded network manager activities yet no such requirement is proposed for the retailers. This is somewhat odd particularly as the retailer will have its own commercial interests which may be in conflict with facilitating customer opt-outs where the incoming retailer is other than that holding the role of embedded network manager. Where existing retailers act in the position of embedded network managers ring fencing should apply.	The purpose of ring-fencing arrangements for LNSPs is to provide for the accounting/cost and functional separation of the provision of direct control services from other services provided by LNSPs. By separating regulated and non-regulated entities NSPs are prevented from gaining an unfair advantage in competitive activities. Ring-fencing arrangements are not required for retailers because they do not undertake such services.
United Energy (p.4)	7.2.2 (a) (2) drafting appears to cut across the current rights if the distributor to provide types 5,6 metering. UE has taken the view that an on market child could have type 5 metering provided by the distributor as responsible person or type 4 metering provided by the retailer as responsible person. Based on the current rules the drafting should be removed. If the drafting were to remain then there needs to be consideration of a grandfathering clause in Chapter 11 for the existing type 5 child meters.	Embedded network customers are not connected to the LNSP's network. LNSPs are therefore not the responsible person under the current version of the NER in the scenario described. This clause is expected to be removed under the Competition in Metering changes.
NSW DNSPs (p.4)	Considerations should also be given to arrangements for continuity of supply, should the embedded network operator and/or manager run into financial difficulty which may see its customers immediately lose supply if no alternative arrangements are in place. If the embedded	Default arrangements for embedded network operators will continue to be dealt with under the AER's exemption guidelines. Default of embedded network managers could be dealt with by AEMO under the proposed deregistration process or commercially by the embedded network operator in its contract with an embedded network manager.

Stakeholder	Issue	AEMC response
	network fails, connecting customers to the main network may take an extended period and require significant investment in new connection infrastructure to adhere to networks required safety standards.	

B Legal requirements under the NEL

This appendix sets out the relevant legal requirements under the NEL for the AEMC to make this draft rule determination.

B.1 Draft rule determination

In accordance with s. 99 of the NEL the Commission has made this draft rule determination in relation to the rule proposed by AEMO.

The Commission's reasons for making this draft rule determination are set out in section 2.3.

A copy of the more preferable draft rule is attached to and published with this draft rule determination. Its key features are described in section 2.3 and Appendix C.

B.2 Power to make the rule

The Commission is satisfied that the more preferable draft rule falls within the subject matter about which the Commission may make rules. The more preferable draft rule falls within s. 34 of the NEL as it relates to:

- regulating the operation of the national electricity system for the purposes of the safety, security and reliability of that system (s. 34(1)(a)(ii));
- the activities of persons (including registered participants) participating in the national electricity market or involved in the operation of the national electricity market (s. 34(1)(a)(iii)); and
- facilitating and supporting the provision of services to retail customers (s. 34(1)(aa)).

Further, the more preferable draft rule falls within the matters set out in schedule 1 to the NEL as it relates to:

- item 2 – the exemption of persons from the requirement to be registered participants;
- item 11 – the operation of generating systems, transmission systems, distribution systems or other facilities; and
- item 32 – procedures and related systems for the electronic exchange or transfer of information that relates to consumers of electricity, the provision of metering services and connection to the national electricity system, and requiring compliance with such procedures and use of such related systems.

B.3 Commission's considerations

In assessing the rule change request the Commission considered:

- the Commission's powers under the NEL to make the rule;
- the rule change request;
- submissions received during first round consultation;
- interactions with other relevant rule changes and review recommendations;
- the AEMC's final advice on Energy Market Arrangements for Electric and Natural Gas Vehicles;
- the AEMC's Power of Choice review final report; and
- the Commission's analysis as to the ways in which the proposed rule will or is likely to, contribute to the NEO.

There is no relevant Ministerial Council on Energy (MCE) Statement of Policy Principles.[73]

The Commission may only make a rule that has effect with respect to an adoptive jurisdiction if satisfied that the proposed rule is compatible with the proper performance of AEMO's declared functions.[74] The Commission considers that the draft rule is compatible with AEMO's declared network functions because it is unrelated to them and therefore it does not affect the performance of these functions.

B.4 Civil penalties

The Commission cannot create new civil penalty provisions. However, it may recommend to the COAG Energy Council that new or existing provisions of the NER be classified as civil penalty provisions. The new provisions that the Commission is recommending to the COAG Energy Council as civil penalty provisions are:

- the requirement for the provision of embedded network management services to only be carried out by an embedded network manager (clause 7.16.1 of the draft rule); and
- the requirement for embedded network managers to apply for, register and issue NMIs for child connection points (clause 7.3.1(fa)(2) of the draft rule).

---

73 Under s. 33 of the NEL the AEMC must have regard to any relevant MCE Statement of Policy Principles in making a rule. The MCE is referenced in the AEMC's governing legislation and is a legally enduring body comprising the Federal, State and Territory Ministers responsible for Energy. On 1 July 2011 the MCE was amalgamated with the Ministerial Council on Mineral and Petroleum Resources. The amalgamated Council is now called the COAG Energy Council.

74 See s. 91(8) of the NEL.

The Commission considers that the new provisions should be classified as civil penalty provisions because:

- embedded network management services include inputting data into MSATS which has implications for NEM financial accuracy, stability and system security. Furthermore, this is consistent with the civil penalty provisions on other parties which are able to input data into MSATS; and

- the obligations for NMIs have serious ramifications for customers and market integrity as without a NMI the customer cannot go on-market. Furthermore, this is consistent with the civil penalty provisions on the other parties which are able to apply for, register and issue NMIs to customers.

C Embedded network manager – detailed design

This appendix sets out the Commission's detailed design for introducing the embedded network manager role into the NER. It sets out:

- the requirements under the draft rule, including:
  - the requirement for interested parties to gain accreditation;
  - the embedded network management functions; and
  - the embedded network manager governance framework.
- analysis of key issues raised in submissions and the Commission's changes to AEMO's proposed rule.

C.1 Functions and governance of embedded network managers

C.1.1 Gaining accreditation

The draft rule (clauses 7.16.1, 7.16.2 and schedule 7.7) sets out key requirements for interested parties to be able to provide embedded network management services.

First, an embedded network manager must be accredited and registered by AEMO as an embedded network manager. To allow this to occur AEMO is required to establish a qualification process for embedded network managers, and to develop and publish guidelines to assist parties wishing to be accredited and registered with the preparation of their applications.

Second, the draft rule establishes a minimum set of capabilities for embedded network managers, including:

- detailed understanding of:
  - the NER and all procedures authorised under the NER, including the embedded network management service level procedures;
  - the terms and conditions of the AER's exemption guidelines; and
  - the participant role relationships and obligations that exist between Embedded Network Managers, Metering Data Providers, Metering Providers, financially responsible Market Participants, Local Network Service Providers, AEMO and responsible persons.
- the establishment of a system which will:
  - underpin all operational documentation, processes and procedures;

- facilitate good change control management of procedures, IT systems and software;
- provide audit trail management of embedded network wiring information;
- maintain security controls and data integrity; and
- maintain knowledge and understanding of the NER and relevant procedures, standards and guides authorised under the NER.

- understanding of the required logical interfaces necessary to support the provision of embedded network management services. This will include the interfaces needed to access AEMO's systems, support the metrology procedure, B2B Procedures, service level procedures and MSATS.

C.1.2 Performing functions

When performing embedded network management functions the draft rule requires embedded network managers to follow AEMO's embedded network management service level procedures. Under the draft rule (clause 7.16.4) these procedures must include:

- a list of embedded network management services;
- the requirements for the provision of embedded network management services;
- the requirements for the management of relevant embedded network wiring information;
- the requirements for the assignment of the parent connection point and child connection points on an embedded network;
- the application and notification of distribution loss factors; and
- information to ensure consistency in practice between the embedded network management service level procedures and other documents developed and published by AEMO, including the practices adopted in the MSATS procedures.

In addition to meeting these procedures the draft rule requires embedded network managers to:

- abide by the confidentiality and dispute resolution frameworks for accredited providers (as set out in clauses 8.2 and 8.6); and
- maintain information about the types and configuration of metering installations within the embedded network and about the subtractive or other arrangements used in respect of those metering installations relevant to settlements and, in accordance with the B2B Procedures, make that information available on request to:

- the financially responsible market participant (FRMP) for any child connection point on the embedded network or that market participant's metering provider; or

- any market participant to whom financial responsibility for any such child connection point is to be transferred or that market participant's proposed metering provider.

To assist embedded network managers in meeting the above requirements the draft rule requires AEMO to develop a guide for embedded networks, addressing, but not limited to:

- the nature of exemptions granted by the AER to embedded networks;
- which retailers and other persons are able to sell electricity to consumers whose premises are supplied with electricity conveyed through embedded networks; and
- the roles, responsibilities and obligations of embedded network managers under the Rules and procedures authorised under the NER.

C.1.3 Embedded network management governance framework

The draft rule provides if anyone other than a registered and accredited provider performs the functions of an embedded network manager a civil penalty will apply.

It also sets out that AEMO must establish, maintain and publish a procedure for deregistration of embedded network managers. This must include provisions for voluntary deregistration and deregistration for embedded network managers which have breached the NER or AEMO's procedures.

The Commission notes that under the draft rule if an embedded network operator does not appoint an embedded network manager when it is required to by the AER under the network exemption guideline then this is a breach of an exemption condition not a breach of AEMO's procedures. It will therefore be dealt with through the AER's network exemption framework.

C.2 Other detailed design issues

C.2.1 Ring-fencing

AEMO proposal

AEMO proposed that to ensure a level playing field, any embedded network manager activities undertaken by a registered DNSP should be ring-fenced from its regulated

business activities.[75] However, AEMO did not propose changes to the current ring-fencing arrangements in the NER. This would allow the AER to decide (subject to the NEO) which DNSP activities must be ring-fenced.[76]

Submissions

Submissions from retailers, DNSPs and consumer groups supported the proposed ring-fencing arrangements.[77]

Commission's analysis

The draft rule is consistent with AEMO's proposal to place responsibility for ring fencing of DNSPs from embedded network management services with the AER. The ring-fencing guidelines have a broader scope than just embedded network management services, and cover the accounting and functional separation of the provision of direct control services from other services provided by DNSPs. Ring-fencing measures that may be considered include legal separation, accounting separation, operational separation, information sharing requirements or non-discriminatory access provisions. The AER has the flexibility to decide which types of ring-fencing measures would apply to DNSPs in different situations. As part of the process of developing the guidelines, the AER may determine ring-fencing arrangements for a DNSP taking on the embedded network manager, metering provider, metering data provider roles and/or the metering coordinator in the event the Competition in Metering rule is made.

To provide certainty to DNSPs in providing embedded network management services upon commencement of this rule on 1 December 2017, the draft rule requires the AER to publish revised ring-fencing guidelines by 1 December 2016.[78]

C.2.2 Distribution loss factors

AEMO's proposal

AEMO proposed that embedded network operators would continue to be responsible for calculating distribution loss factors within their own embedded networks under instruction from the AER through the network exemption guideline.[79] However, because embedded network operators do not have access to MSATS, AEMO proposed

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

76 Clause 6.17 of the NER.

77 For example submissions from: Origin Energy, 2 July 2015, p.4; United Energy, 2 July 2015, p.6; and CUAC, 2 July 2015, p.5.

78 The Competition in Metering draft rule requires the AER to publish revised ring-fencing guidelines by 1 December 2016. If the Competition in Metering final rule includes this provision and is published before the Embedded Networks final rule this provision will not be required in the Embedded Networks final rule.

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

that the embedded network manager needs to apply and enter distribution loss factors into MSATS.

To achieve this, embedded network managers will need to determine the appropriate transmission connection point and assign the child connection point to that transmission connection point in MSATS. The embedded network manager will also need to determine the distribution loss factor for the parent connection point. The proposed rule introduced drafting to impose some obligations on embedded network managers to perform these functions.[80]

In order to assist in performing these functions AEMO also proposed that if an embedded network manager reasonably requires any information from a NSP in order to determine the distribution loss factor then the NSP should be required to provide the information within ten business days of the request.[81]

Submissions

DNSPs opposed the requirement to provide information regarding distribution loss factors to embedded network managers. DNSPs considered the requirements were unnecessary as all of the required information for MSATS will already be available to embedded network managers.[82]

Commission's analysis

It is appropriate that distribution loss factors continue to be calculated by embedded network operators under instruction from the AER through the network exemption guideline. Embedded network managers' role will therefore be limited to applying and entering distribution loss factors into MSATS.

The Commission does not consider it necessary to provide for the above in rules based obligations. Instead, the draft rule requires AEMO to inform embedded network managers how to apply and enter distribution loss factors into MSATS as part of its embedded network management service level procedures. This approach is consistent with other detailed requirements of embedded network management services in the draft rule.

Furthermore, the Commission does not consider it is necessary to require DNSPs to provide information to embedded network managers regarding distribution loss factors. The necessary information for embedded network managers to apply and enter distribution loss factors will be available without provision from DNSPs.

For clarity, this would mean the process for informing AEMO of an embedded network distribution loss factor in the majority of cases will be:

80 AEMO, National Electricity Rule Change Request – Appendix A: Draft Rule, September 2014, p.4.

81 ibid.

82 For example submissions from: United Energy, 2 July 2015, p.4; and the NSW DNSPs, 2 July 2015, p.4.

1. the embedded network operator will be responsible for calculating the distribution loss factor within its network in accordance with the requirements of the AER's network exemption guideline;

2. the embedded network manager will determine the appropriate transmission network connection point (or virtual transmission node) and assign the child metering installation to that connection point in MSATS. This information is available in MSATS to the embedded network manager and will be under instruction from AEMO in the embedded network management service level procedures;

3. the embedded network manager will need to look up the appropriate distribution loss factor for the parent connection point provided on AEMO's website under instruction from AEMO in the embedded network management service level procedures;

4. the embedded network manager will need to apply the child connection point distribution loss factor as the product of the distribution loss factor for the parent connection point and the distribution loss factor within its own network; and

5. the embedded network manager will need to enter this value in MSATS for the child connection point.

C.2.3 NMI allocation

AEMO proposal

AEMO proposed that embedded network managers be responsible for requesting AEMO to provide NMIs and then allocating these NMIs to child metering installations in MSATS when an off-market embedded network customer requests to become on-market.[83]

However, AEMO did not propose to make changes to the NER to reflect this.

Commission's analysis

Currently under the NER (see clause 7.3.1) it is the responsible person that must apply for a NMI for any metering installation. The draft rule amends clause 7.3.1 of the NER to place the obligation of requesting NMIs from AEMO and issuing them for embedded network customers to the embedded network manager instead of the responsible person. This achieves AEMO's proposed approach.

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

C.2.4 B2B procedures

AEMO proposal

AEMO proposed that:[84]

- as part of the proposed rule, embedded network managers would be included in the list of parties who have roles and responsibilities under the B2B Procedures and that they be required to comply with these procedures; and
- as part of the transitional arrangements for implementation of the rule in a timely manner, it be required to amend various of its procedures, including the B2B procedures (in accordance with a recommendation from the Information Exchange Committee (IEC)).

However, AEMO did not propose that embedded network managers be required to use the B2B hub, be included as a member of the IEC, or to allow embedded network managers to be able to submit proposals for changes to the B2B Procedures. Effectively, this would allow the IEC to recommend changes to the B2B procedures to incorporate embedded network managers, without being required to receive any input from embedded network managers as to the content of such procedures, with which they will be bound.

Submissions

Stakeholders supported the need for changes to B2B procedures and that embedded network managers would need to be bound by them.

Commission's analysis

The draft rule is consistent with AEMO's proposal that embedded network managers be included in the list of parties who can be have roles and responsibilities under the B2B Procedures and that embedded network managers be bound by these procedures. It also contains transitional provisions requiring the IEC to develop a recommendation to develop amendments to the B2B procedures to take account of the draft rule, and for AEMO to make such amendments, in anticipation of and prior to the commencement of the new embedded network framework.

To remove any doubt that the IEC has the ability to make procedures that include and bind embedded network managers, the draft rule makes consequential amendments to the B2B definitions that are key for the making of B2B procedures:

- B2B Communications, such communications being the subject of the B2B procedures; and

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

- B2B Objective and B2B Principles, as both of these definitions guide the IEC's decision making processes.

Each definition has been amended to include embedded network managers.

The Commission did not consider it necessary to require embedded network managers to use the B2B hub. There is nothing in the current provisions in the NER that will prevent embedded network managers from using the hub if the B2B procedures so require. If embedded network managers do, they will need to do so in accordance with the B2B Procedures. In addition, participants can currently opt out of B2B arrangements and instead enter bilateral information sharing arrangements outside of this arrangement. It is important to leave this possible avenue of communication open.

Broader changes to the B2B procedure provisions have not been included in the draft rule. For example, embedded network managers have not been included in the list of possible membership of the IEC, nor has provision been made for embedded network managers to propose changes to the B2B procedures. Such changes would require consideration to be given the B2B governance framework more generally. The Commission does not propose to so at this stage because the changes included in the draft rule are sufficient for the following reasons:

- B2B procedures govern the information exchange between market participants in relation to consumers who are currently market facing. DNSPs and retailers are therefore likely to be best placed to consider the relevant requirements to be addressed in a B2B procedure to facilitate an off market child in an embedded network becoming on-market. In fact, it is likely that most service orders under B2B procedures to facilitate retail contestability on an embedded network will be at a retailer's instigation.

- While existing IEC market members are empowered under the rules to take their own interests into account (as a whole) when exercising a relevant IEC right, power or discretion, this is subject to the B2B Objective and the B2B Principles. Both the objective and the principles are proposed to be amended to include embedded network managers. Therefore the interests of embedded network managers as a whole will need to be taken into consideration by all members of the IEC.

- The interests between embedded network managers as a whole, and those of DNSP or local retailers are likely to be sufficiently aligned. Given the limited scope of the embedded network manager role, it is unlikely that any of the existing market members would have a competitive, or other, interest in creating B2B procedures that may be disadvantageous to embedded network managers.

- There is nothing to prevent the IEC from seeking input from embedded network managers to the extent the IEC may consider that to be necessary. Embedded network managers would also be allowed to be present at IEC meetings and the IEC could invite embedded network managers to any relevant meetings.

Consideration of what broader changes may be necessary to the B2B governance framework, in light of the new embedded network manager role, should be considered as part of a broader review of B2B governance. The AEMC has been asked by the COAG Energy Council to provide advice on implementing a shared market protocol, which is a more appropriate forum for such issues.[85]

C.2.5 Minor changes

The Commission has made a number of minor changes to the detailed design within the draft rule to provide consistency within the NER between embedded network managers and other accredited providers. These include:

- the draft rule extends the confidentiality framework imposed under rule 8.6 to embedded network managers; and
- the draft rule extends the dispute resolution framework impose under rule 8.2 to embedded network managers.

The Commission has also made minor changes to facilitate the embedded network manager performing the LNSP role in MSATS for the customer. These include:

- the draft rule amends the metering register to reflect the embedded network manager;[86]
- the draft rule amends the security controls to allow metering providers to allocate 'read-only' passwords to embedded network managers;[87] and
- the draft rule amends the data management and storage provisions to require the metering data provider to provide corrected metering data to embedded network managers where it becomes aware of incorrect metering data delivery in relation to a child connection point.[88]

85 See AEMC, Draft Advice, Implementation advice on the shared market protocol, 25 June 2015.

86 Clause 7.5.2 of the NER.

87 Clause 7.8.2 of the NER.

88 Clause 7.11.3 of the NER.

D Summary of AER network and retail exemption guidelines

D.1 Who requires an exemption?

Under the NEL and NERL, NSPs and all energy sellers are required to register in the NEM[89] or be exempted from authorisation by the AER.[90]

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 embedded network operators, even those for very small networks, will be required to either register and be authorised as NSP and retailer respectively, or seek an exemption from both, NSP and retailer. Furthermore, as the registration and authorisation processes, and the requirements once registered and authorised are complex and expensive, the majority of embedded network operators either fall within deemed exemptions or otherwise seek the available exemptions from the AER.

D.2 Categories of exemptions

The AER's network and retail exemption guidelines outline three categories of exemptions to being registered as a NSP and authorised as a retailer: deemed, registrable and individual. Each category has a different set of eligibility requirements. Notably:

- small networks 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;

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

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

- larger networks are generally 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.

Tables D1-5 set out the network exemptions by class of exemption, under the AER's current network exemption guideline.

Table D1: Deemed classes of exemption - energy selling

Class	Activity	Deemed exemption applicable to:
ND1	Persons selling metered energy to fewer than ten small commercial/retail customers within the limits of a site that they own, occupy or operate	Current and future sellers
ND2	Persons selling metered energy to fewer than ten residential customers within the limits of a site that they own, occupy or operate	Current sellers and sellers who commence operation prior to 1 January 2015 and from 1 January 2015 holders of a retail exemption
ND3	Persons selling metered energy to occupants of holiday accommodation on a short-term basis	Current sellers and sellers who commence operation prior to 1 January 2015 and from 1 January 2015 holders of a retail exemption
ND4	DELETED	DELETED
ND5	Unmetered supply via plug-in or rack mounted equipment in any premises	All situations
ND6	Persons selling unmetered electricity to small customers in Queensland	Current sellers and sellers who commence operation prior to 1 January 2015 and from 1 January 2015 holders of a retail exemption
ND7	DELETED	DELETED
ND8	Persons selling energy to a related company	Current and future sellers
ND9	Persons selling energy to customers in conjunction with, or ancillary to, the provision of telecommunications information services	Current and future sellers
ND10	Government agencies, other than housing authorities, selling metered energy to non-residential customers	Current and future sellers

Note: Classes of exemption labelled 'ND_' are 'network deemed' classes. Classes ND1 through ND10 (but not ND5) are aligned to the retail exemption guideline. The activity description and application criteria in this table are indicative only. Applicants should refer to the retail exemption guideline to determine eligibility for a deemed exemption.

Note: Where the customers within a private network in New South Wales, South Australia or Victoria seek access to full retail competition the exemption will be registrable, not deemed. The applicable class of exemption is table 4, class NRO5.

Source: AER, Electricity Network Service Provider Registration Exemption Guideline, August 2013, p.18.

Table D2 – Deemed classes of exemption – other situations

Class	Activity	Deemed exemption applicable to:
NDO1 [91]	Off-market energy generation by equipment owned, operated or controlled by a third-party and connected to the NEM via a private electricity connection or equipment intended solely to provide emergency energy supply, or third-party solar energy system providers	Energy generation installations not intended to supply network support or demand management services to the NEM and not otherwise required to be registered with AEMO[92]
NDO2	Sites broadcasting television and radio signals	Current and future facilities
NDO3 [93]	Electric vehicle charging station within a private network (e.g. a privately owned charging station located in a public area, hotel, shopping centre, university, etc.)	Current and future facilities
NDO4	Temporary supply for the construction and commissioning phase of building, civil, construction industrial, transport, mining or other projects	Incidental supply to facilitate bona fide construction and commissioning of new facilities on the same or an adjoining site
NDO5	Electric traction systems supplying passenger or freight vehicles and associated infrastructure (i.e. rail networks) but not including commercial and/or retail activities	Current and future facilities
NDO6 [94]	Large corporate entities	Current and future facilities

91 This class applies only to the network to which the generator is connected. Generator registration and exemptions are handled by AEMO. Safety requirements are determined by each jurisdiction.

92 If you have a contract or agreement to supply network support or demand management services based on a generator or inverter you must register under the appropriate class (NRO1) of Table 4.

93 Note that no exemption is required if the charging facility is directly connected to a distributor.

94 A 'large proprietary company' as defined under clause 45A(3) of the Corporations Act 2001.

Class	Activity	Deemed exemption applicable to:
NDO7	Residential, commercial and industrial sites where demand-side participation equipment and facilities is installed, including the owners and operators of the equipment and facilities	Current and future facilities

Notes: Classes of exemption labelled 'NDO_' are 'network deemed other' classes, and have no equivalent class in the retail exemption guideline. Eligibility for a network deemed exemption is set out in this table. The supply of network services in accordance with a commercial agreement between private parties is permitted for each category listed in Table 2.

Notes: Simply owning a generator or solar inverter does not automatically mean exemption of your network is required. Exemption of the network is required only where a third party is involved. For example, a shopping centre will have tenants and often, a generator. The network must be exempted because of the supply to third parties, not because it has a generator. If the generator belongs to someone else, however, then the network must be exempted.

Notes: jurisdiction specific regulations exist which impose additional requirements on the installation of generators. Even if it is your network and it is your generator connected to the network you must still comply with the local safety requirements. Contact your local distributor for details.

Source: AER, Electricity Network Service Provider Registration Exemption Guideline, August 2013, p.19.

Table D3 – Registrable classes of exemption – energy selling

Class	Activity	Registrable exemption	Application for individual exemption
NR1	Persons selling metered energy to ten or more small commercial/retail customers within the limits of a site that they own, occupy or operate	Registrable for current and future sellers	Only where exempt seller believes conditions of exemption are not appropriate for their situation
NR2	Persons selling metered energy to ten or more residential customers within the limits of a site that they own, occupy or operate	Registrable for current sellers and those who commence selling before 1 January 2015	Required for those who commence selling on or after 1 January 2015
NR3	Retirement villages selling metered energy to residential customers within the limits of a site that they own, occupy or operate	Registrable for sellers commencing selling before 1 January 2015	Required for those who commence selling on or after 1 January 2015
NR4	Persons selling metered energy in caravan parks, residential parks and manufactured home estates to residents who principally reside there	Registrable for current and future sellers	Only where exempt seller believes conditions of exemption are not appropriate for their situation
NR5	Persons selling metered energy to large customers	Registrable for current and future sellers	Only where exempt seller believes conditions of exemption are not appropriate for their situation
NR6	Persons selling metered energy to small customers at a site or premises adjacent to a site that they own, occupy or operate	Registrable for current and future sellers	Only where exempt seller believes conditions of exemption are not appropriate for their situation
NR7	Persons selling unmetered energy to small commercial/retail customers at a site that they own, occupy or operate	Registrable for current sellers, until 1 January 2015	The AER does not support unmetered energy sales to small customers

Notes: Classes of exemption labelled 'NR_' are 'network registrable' classes. Classes NR1 to NR7 are aligned to the Exempt Selling Guideline. The activity description and application criteria in this table are indicative only. Applicants should refer to the Exempt Selling Guideline to determine eligibility for a registrable exemption.

Notes: For Class NR7, note that the AER does not support the sale of unmetered energy to small customers. The AER will only consider approving an individual exemption for unmetered selling in exceptional circumstances, based on an application made in accordance with sections 3.3 and 5.2. Class NR7 excludes networks in Queensland that are deemed exempt under Class ND6 in Table 1.

Source: AER, Electricity Network Service Provider Registration Exemption Guideline, August 2013, p.20.

Table D4 – Registrable classes of exemption – other situations

Class	Activity	Registrable exemption	Application for individual exemption
NRO1[95]	Off-market energy generation by equipment owned, operated or controlled by a third-party and connected to the NEM via a private electricity connection	Energy generation installations intended to supply network support or demand management services to the NEM	Only where exempt party believes conditions of exemption are not appropriate for their situation
NRO2[96]	On-market energy generation by equipment owned, operated or controlled by a third-party and connected to the NEM via a private electricity connection	Energy generation installations required to be registered with AEMO under clause 2.5.2 of the NER	Only where exempt party believes conditions of exemption are not appropriate for their situation
NRO3	Ongoing supply to a mining or primary production facility and associated residential, commercial, industrial, processing and ancillary support facilities[97] in areas with restricted access to NEM supply	All bona fide installations, subject to demonstrable circumstances of remoteness from existing NEM supply infrastructure	Only where exempt party believes conditions of exemption are not appropriate for their situation
NRO4	Industrial, commercial and 'mixed-use' facilities but not including residential or energy generation activity and any activity listed in table 3. Includes the unmetered supply of energy under an agreed commercial scheme between large customers	All installations	Only where exempt party believes conditions of exemption are not appropriate for their situation

95 This class applies only to the network to which the generator is connected. Generator registration and exemptions are administered by AEMO. Safety requirements are determined by each jurisdiction.

96 This class applies only to the network to which the generator is connected. Generator registration and exemptions are administered by AEMO. Safety requirements are determined by each jurisdiction.

97 The term 'ancillary support facilities' is intended to be interpreted broadly to encompass a wide range of sundry activities including, but not limited to, incidental supply to local residents, local tourism, communication, health, public safety and emergency services.

Class	Activity	Registrable exemption	Application for individual exemption
NRO5	Metered energy selling to customers in networks with metering infrastructure enabling access to full retail competition in a jurisdiction[98]	All installations	Only where exempt party believes conditions of exemption are not appropriate for their situation

Notes: Classes of exemption labelled 'NRO_' are 'network registrable other' classes, and have no equivalent class in the Exempt Selling Guideline. Eligibility for a network registrable exemption is set out in this Table.

Source: AER, Electricity Network Service Provider Registration Exemption Guideline, August 2013, p.21.

Table D5 – Individual network exemption class

Class	Activity	Registrable exemption	Application for individual exemption
NRI	Specific exemption of a network not otherwise described	All approved applications	Detailed application required

Notes: Exemption class 'NRI' is 'network registrable individual' exemption and has no equivalent in the Exempt Selling Guidelines. It applies to exemptions to individuals made in accordance with clause 2.5.1 of the NER.

Notes: The supply of network services in accordance with a commercial agreement between private parties is permitted for each class listed in Table 4, except class NRO5.

Source: AER, Electricity Network Service Provider Registration Exemption Guideline, August 2013, p.22.

98 This class applies only to private networks where customers have access to full retail competition via 'child' metering registered in accordance with applicable AEMO requirements. It does not apply where a customer arranges direct connection to a NEM registered network service provider or where customers within a network do not require access to full retail competition. In all other circumstances, table 1 or table 3 applies.

D.3 Requirements under the 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:

- safety;
- dispute resolution;
- network charging;
- metering; and
- access to retail market offers.

An overview of the exemption conditions relating to each of these is set out below. For more detail on the specific conditions and the applicability of each to the different categories of network exemption see the AER's network exemption guideline.[99]

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.

99 AER, Electricity Network Service Provider Registration Exemption Guideline, August 2013.

3. Network charging

Network charges being passed through from the LNSP may be apportioned to each customer in an embedded network on a 'causer pays' basis in proportion to the metered 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 SA, Victoria and NSW 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.

D.4 Requirements under the retail exemption guideline

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

- information requirements;
- dispute resolution;
- retail pricing;
- access to retail market offers; and
- consumer protections.

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. An outline of the exemption conditions is set out below. 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.[100]

100 AER, AER (Retail) Exempt Selling Guideline, Version 3, April 2015.

1. 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.

2. *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.

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.

4. Access to retail market offers

In SA, Victoria and NSW 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. 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
- reasonably payment periods.

E Summary of jurisdictional embedded network regulations

Table E.1 below sets out the jurisdiction specific legal instruments and policy positions that effect embedded network customer access to retail market offers in the NEM. In the consultation paper the Commission requested submissions on these instruments and policy positions. The Commission received many submissions regarding regulations that impose specific terms and conditions on embedded network operators but none that related to jurisdiction wide customer access to retail market offers.

Table E.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	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.[101] The Act does not otherwise regulate embedded networks. In defining which customers are contestable (referred to as non-franchise customers), the relevant Ministerial declaration[102]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

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

102 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.

Jurisdiction	Position in relation to retail competition in embedded networks	Summary of relevant local or other legal instruments
	an embedded network is allowable; and • the stated policy position referred to in MSATS does not appear to be supported by legal instruments.	and which are supplied with electricity under the same contract, with one person responsible for payment for electricity so supplied'[103] – this effectively being an embedded network; and • includes consumption of a person being supplied under a Resupply Arrangement.[104] Clause 2.5.1 of the Metrology Procedure: Part A National Electricity 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.[105] 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.[106]
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

103 See clause 1(b) of the Declaration.

104 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.

105 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.

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

Jurisdiction	Position in relation to retail competition in embedded networks	Summary of relevant local or other legal instruments
		choice'. An inset network is effectively defined as being an embedded network.[107] 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 customers are given 'an effective right of access to a licenced retailer of the customer's choice'.[108] 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.[109]
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 requires an on-supplier to be exempt from the requirement under clause 2.5 of the NER.[111] Neither the Act, nor the Electricity Regulation 2006 made under it, otherwise appear to explicitly regulate embedded

107 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.

108 Clause 44B Electricity (General) Regulations 2012.

109 Clause 7.2.1(a).

Jurisdiction	Position in relation to retail competition in embedded networks	Summary of relevant local or other legal instruments
	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:[110] "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 (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."	networks. MSATS reflects the Queensland Government's current policy position on the creation of embedded networks that it:[112] "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 recognises that a small number of embedded networks involving large, contestable customers were created prior to the commencement of full retail contestability in Queensland[113] 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'.[114] However, even if a customer in an on supply arrangement was a customer within the meaning of the Act, they are unlikely to be

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

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

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

113 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.

114 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)).

Jurisdiction	Position in relation to retail competition in embedded networks	Summary of relevant local or other legal instruments
		able to apply for retail services because their premises are not NMI premises, as defined in, and required by, the Act.[115]
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.[116] However, this restriction on who may sell energy to customers does not apply to exempt sellers,[117] owners of caravan parks selling to its occupants, owners of a building selling to persons occupying part of the building and owners or managers of a shopping centre selling to tenants of the centre.[118] The intention of these provisions appear 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

115 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.

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

117 Section 38A(3).

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

Jurisdiction	Position in relation to retail competition in embedded networks	Summary of relevant local or other legal instruments
		approved the use of embedded networks in their respective jurisdictions.'[119] 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.[120] 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 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[121] and in this case is presumably the LNSP at the parent connection point.
Victoria	Full retail contestability was introduced in Victoria with effect from	Under the Electricity Industry Act 2000 (Victoria) (the Act), there is a

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

120 Electricity Supply Amendment Act 2000.

121 Electricity Supply Amendment Act 2000.

Jurisdiction	Position in relation to retail competition in embedded networks	Summary of relevant local or other legal instruments
	January 2002. Retail contestability for customers in an on-supply arrangement is allowable.	prohibition on generating, transmitting, distributing or retailing electricity without a licence.[122] Exemptions from licencing can be made by way of an Order in Council. A current Order in Council[123] exempts the distribution and supply of, and sale of,[124] metered electricity[125] 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 a 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 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

122 Section 16(1).

123 Made with effect from 1 May 2002.

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

125 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
		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.

F NERR issues for embedded networks

This appendix sets out a number of issues in the NERR related to embedded networks. Stakeholder views on these or other NERR issues are welcomed.

Relevant aspect of the retail framework	Overview	Issues arising
Customer classification	For the purposes of the NERL, a customer on an embedded network is likely to be considered a customer with the meaning of the NERL[126] and is likely to fall within the definitions of both a small customer and a residential customer.[127] The framework for classifying customers is set out in Part 1, Division 3 of the NERR. Under this framework, the retailer will need to classify the customer. There is no 'corresponding distributor' for the purposes of the classification framework, the 'distributor' in this case being the owner/operator of the embedded network. However, these rules will still be relevant the extent that the customer makes application for re-classification.	• Are any amendments to this classification framework necessary to take account of retail contestability in embedded networks (especially as customers in embedded networks are not 'shared' between retailers and distributors)?
Standing retail offers and contracts	Under s22(5) of the NERL a designated retailer is not obliged to make a standing offer to a small customer if the customer's premises are not, or are not proposed to be, connected to a distributor's distribution system. The premises of a customer in an embedded network are not connected directly to the distributor's distribution system. The obligation to supply is unlikely to extend to customers in an embedded network. The AER's retail exemption guideline effectively replicates this obligation for such customers, by obliging the holder of the exemption to supply a customer	• Should the existing standing offer and contract framework be extended to customers in an embedded network seeking to go on-market? • Should a purpose specific Standard Retail Contract (SRC) be developed for inclusion in the NERR as a separate schedule for such

126 A customer is a person to whom energy is sold for premises by a retailer or who proposes to purchase energy for premises from a retailer (s. 5(1) NERL). Premises is not defined in the NERL or NERR. Its plain English meaning is usually a house, building, site or place which will capture the premises associated with a customer on an embedded network.

127 Assuming they purchase energy principally for personal, household or domestic use at premises and consume below relevant consumption thresholds: s. 5(2) NERL)

Relevant aspect of the retail framework	Overview	Issues arising
	who meets the criteria for the exemption class. A retailer can only provide customer retail services to small customers under either a SRC or a MRC.[128]	customers? • Is the Market Retail Contract (MRC) framework sufficient for making retail offers to customers in an embedded network seeking to go on market?
Market retail offers and contracts	Under the existing retail framework, there is no barrier to a retailer making a market retail offer to a customer in an embedded network seeking to go on-market. Section 33 of the NERL provides: *A small customer and a retailer may, subject to and in accordance with this Division and section 147, negotiate and enter into a market retail contract for the provision of* *(a) customer retail services; and,* *(b) any other services, as agreed between the small customer and the retailer.* However, a retailer will need to ensure that the MRC is not inconsistent with the applicable minimum requirements set out in the NERR.[129] MRCs can also deal with other things so long as the rules do not prohibit such things being dealt with in the contracts.[130] "Subject to and in accordance with this Division" means that any MRC offered to a small customer will need to meet "minimum requirements". The terms and conditions of a MRC	• Are any amendments to the MRC framework necessary to take account of retail contestability in embedded networks? • Are the current minimum requirements set out in the NERR relevant to customers on embedded networks? Are there any additional requirements? Should the application of any of these requirements be amended as they relate to customers in an embedded network seeking to go on market?

128 Section 20 NERL.

129 Section 34(2) NERL which provides the NERR may set out (a) minimum requirements that are to apply in relation to small customers who purchase energy under a market retail contract; and (b) minimum requirements that are to apply in relation to the terms and conditions of market retail contracts.

130 Section 34(3) of the NERL.

Relevant aspect of the retail framework	Overview	Issues arising
	have no effect to the extent they are inconsistent with any minimum requirements, and the minimum requirements are to apply to the extent of the inconsistency (unless the terms and conditions provide for a higher level of service to the customer).[131] To be able to offer a valid MRC to a customer on an embedded network, a retailer will need to comply with the minimum requirements set out in the NERR. If it cannot meet these requirements, the retailer will have the following options: a) not offer a MRC at all if it cannot meet the minimum requirements; b) offer a MRC which meets the 'spirit' of the minimum requirements so as to avoid inconsistency; and c) offer a MRC which contains terms and conditions that are better than the minimum requirements in. A range of minimum requirements may give rise to issues in the context of customers on embedded networks and these are discussed below.	
Minimum requirement: Pre-contractual duty of retailers (NERR rule 16)	This rule applies where a retailer is contacted by a small customer who is seeking to purchase energy for premises. The rule outlines the obligations for a retailer who is 'the designated retailer for the premises' and for the retailer who isn't. Under the NERL, a designated retailer is defined in terms of where there is and isn't an existing connection in relation to a small customer's premises. Connection is defined as being a 'physical link between a distribution system and a customer's premises to allow for the flow of energy'. There is no physical link between the premises of a customer on an embedded	• Is a pre-contractual duty of retailers, of the kind provided for under this rule necessary for customers on embedded networks, especially as they are cannot (currently) access standing offers?

131 Section 36 of the NERL.

Relevant aspect of the retail framework	Overview	Issues arising
	network and the distribution system. Therefore, at pre-contractual stage, there cannot be either a designated or financially responsible retailer for a customer who is seeking to go on market.[132]	
Minimum requirement: Contents of bills NERR rule 25	This rule requires a retailer to prepare a bill so that a small customer can easily verify that the bill conforms to their customer retail contract. It outlines what it must include: Relevantly, the bill must include: *(a) tariffs and charges applicable to the customer;* *(b) the basis on which tariffs and charges are calculated;* *(c) a separate 24 hour telephone number for fault enquiries and emergencies, the charge for which is no more than the cost of a local call, being the telephone number for the distributor and giving the name of the distributor.* This rule is classified as a civil penalty provision.	• In its current form, strict compliance with this rule may be difficult, depending on the arrangements in place between a retailer and the operator of an embedded network. What amendments are necessary? • Further, contact details of the operator of an embedded network may be more relevant to a customer on an embedded network seeking to go on market. What other changes will be of assistance to customers in embedded networks seeking retail contestability?
Minimum requirement: Tariffs and charges NERR rule 46	This rule provides relevantly: 1. *A retailer must set out in a market retail contract with a small customer all tariffs and charges payable by the customer.*. 2. *The retailer must give notice to the customer of any variation to the tariffs and charges that affects the customer.*	• In its current form, strict compliance with this rule may be difficult, depending on the arrangements in place between a retailer and the operator of an embedded network. What amendments are necessary?

132 However, once a customer on an embedded network goes on market, the retailer that accepts that customer will; then be the 'financially responsible retailer', this being "the retailer who is the financially responsible Market Participants responsible for the premises under the NER".

Relevant aspect of the retail framework	Overview	Issues arising
	3. *The notice must be given as soon as practicable, and in any event no later than the customer's next bill.* 4. *The retailer must set out in the market retail contract the obligations with regard to notice that the retailer must comply with where the tariffs and charges are to be varied.*	
Minimum requirement: Liabilities and immunities NERR rule 51	This rule prohibits a retailer from including any term or condition in a MRC with a small customer that limits the liability of the retailer for breach of the contract or negligence by the retailer. This rule is classified as a civil penalty provision.	• Is such a prohibition still relevant in the embedded network context? Are any amendments necessary?
Move-in customer or carry over customer	The NERL deems particular arrangements between the financially responsible retailer and a move-in or carry-over customer.[133] Once a customer on an embedded network goes on market, the relevant premises will be assigned a NMI and have a retailer that is financially responsible for those premises (currently). Such premises could therefore be subject to the move in or carry over arrangements. These arrangements are premised on the basis of the SRC and standing offer framework set out in the NERL (see above).[134]	• Should the move-in or carry-over customer arrangements apply in the situation of an on-market customer in an embedded network? • How should such arrangements apply (if at all)? What changes will be necessary? • Can this issue be addressed through other means?

133 Section 54(1) NERL. Carry-over customer means a small customer who continues consuming energy at premises after the customer's previously current customer retail contract expires or terminates: (a) without provision in that contract for the terms and conditions to apply after expiry or termination for the continued provision of those services; and without applying to a retailer for the provision (after that expiry or termination) of those services. Move-in customer means a small customer who starts consuming energy at premises without first applying to a retailer for the provision of customer retail services, including rules 53 and 54 of the NERR.

134 Including rules 53 and 54 of the NERR.

Relevant aspect of the retail framework	Overview	Issues arising
De-energisation and re-energisation of shared customer's premises	The NERR provides for a how premises can be de-energized (disconnected). A retailer is prohibited from arranging de-energisation of a customer's premises except in accordance with Division 2 of Part 6. This division applies to MRCs and is premised on the basis that the retailer arranges disconnection with a distributor. However, it is the owner of the embedded network that will be responsible for disconnection. Division 4 of Part 6 relates to re-energisation and also applies to MRCs. It, like de-energisation, is premised on the basis that the retailer arranges re-energisation with a distributor. However, it is the owner of the embedded network that will be responsible for re-energisation. These rules are classified as a civil penalty provisions.	• What arrangements need to be in place for the de-energisation and re-energisation of premises of customers in embedded networks who are on-market? • Is there a gap in existing arrangements (including various conditions to exemptions that may be in place) for customers on an embedded network seeking to go on market?
Life support equipment	The NERR provides for various retailer obligations in relation to life support equipment.[135] Many of these obligations require notification to a distributor. However, it is the owner of the embedded network that has similar responsibilities to that of a distributor in relation to life support equipment, which obligations are usually addressed in conditions applying to the exemptions held by embedded network owners. The rule applies to any MRC and is a civil penalty provision.	• What arrangements need to be in place for life support equipment for customers in embedded networks who are on-market? • Is there a gap in existing arrangements (including various conditions to exemptions that may be in place)?
Retailer of last resort (RoLR)	Under the NERL the contractual arrangements for small customers and the relevant designated RoLR are the terms and conditions of the designated RoLR's standard retailer contract.[136] The prices that are applicable are the relevant designated RoLR's standing offer	• What arrangements should be in place for customers in embedded networks who are on-market in the event of

135 NERR rule 124.

136 Section 145(3) NERL.

Relevant aspect of the retail framework	Overview	Issues arising
	prices.[137]That is, the current RoLR arrangements are premised on the basis of the SRC and standing offer framework set out in the NERL (see above). Currently, the retail exemption guideline makes little provision for the eventuality of exempt seller failure.	retailer failure? • Is there a gap in existing arrangements (including various conditions to exemptions that may be in place)? • Should these gaps be addressed in the retail framework? Are there other avenues (e.g. network service provider exemptions)? • Are there other gaps in the RoLR arrangements arising in relation to customers in embedded networks who are on-market in the event of retailer failure (e.g. RoLR regulatory information notices)?
Presentation of market offer prices	Under the NERL a retailer must present (and publish on its website) its market offer prices (including any variation of those prices) in accordance with the AER's Retail Pricing Information Guidelines.[138] Market offer prices are the tariffs and charges that a retailer charges a small customer for or in connection with the sale of energy to a small customer under a market retail contract.	• Depending on the arrangements in place between a retailer and the operator of an embedded network, a retailer may not necessarily be able to present any offer to customers on embedded networks in accordance with such requirements. What requirements should be in place for the presentation of such offers? Are

137 Section 145(4) NERL.

138 Section 61 NERL.

Relevant aspect of the retail framework	Overview	Issues arising
		the AER Guidelines able to sufficiently address this?
Explicit informed consent (EIC)	Currently the entry by the customer into a market retail contract with the retailer is a transaction that needs EIC.[139] As customers in embedded networks seeking to go on market are likely to be offered MRCs (subject to any change to the SRC framework- see above) EIC will be necessary for the entry into such contracts.	• Are the current EIC requirements appropriate?

139 Section 38 NERL.