UPDATING THE REGULATORY FRAMEWORKS FOR EMBEDDED NETWORKS

STAKEHOLDER WORKSHOP

PRIMUS HOTEL, SYDNEY AND WEBCAST
22 FEBRUARY 2019

AEMC

Agenda

1.	Updating the regulatory frameworks for embedded networks - overview
2.	Questions and answers
3.	Presentation and discussion • Retailer framework • ENSP framework
4.	Presentation and discussion • Market system integration • Network billing
5.	*Lunch break*
6.	Presentations on roundtable topics • Legacy embedded networks • Gas • Jurisdictional regulations
7.	Breakout roundtables
8.	Recap and next steps

UPDATING THE REGULATORY FRAMEWORKS FOR EMBEDDED NETWORKS - OVERVIEW

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Overview

- The AEMC has developed a package of draft legislative changes to implement the recommendations made in the 2017 *Review of regulatory arrangements for embedded networks,* including:
  - drafting amendments to the NER and NERR
  - drafting instructions for recommended changes to the NEL and NERL
- At this stage, the majority of proposed changes would only apply to **new** embedded networks, set-up after the introduction of the new regime
- Potential transition of some legacy embedded networks discussed later in this workshop

- **Timing of implementation** of the proposed framework – mid to end 2020
  - AEMC to finalise and provide its recommended changes to COAG Energy Council in mid-2019 for endorsement
  - COAG Energy Council to progress and implement law changes
  - necessary amendments to jurisdictional instruments to provide a complete set of consumer protections and safety regulations
  - AEMO and AER will require a transitional period to consult on and update procedures and guidelines

Benefits for consumers in embedded networks

- **Improved consumer protections**:
  - o increased protections in the areas of disconnections, billing information, payment options and notification of planned outages
  - o new protections in the areas of new connection services, customer hardship programs and RoLR arrangements
- **Enhanced abilities for the AER to monitor and enforce compliance** of sellers in embedded networks to provide these consumer protections
- **Increased access to retail competition:**
  - o network billing arrangements require ENSPs to use standardised billing processes and data formats to facilitate transactions with retailers
  - o extend NEM metering arrangements and AEMO's market systems to embedded networks, appointment of a metering coordinator at child connection points
- **Changes recommended to jurisdictions**' arrangements and regulations to improve access to concession schemes, independent dispute resolution and reliability protections

Impacts on costs and benefits of setting up embedded networks

- The proposed changes aim to strike a balance between providing consumer protections without placing undue costs on owners and operators of embedded networks
- The objective is to provide the right incentives and facilitate the establishment of embedded networks where it is efficient to do so
- All developments still have the option of connecting directly to the LNSP's network, which may be more cost effective than establishing embedded network arrangements

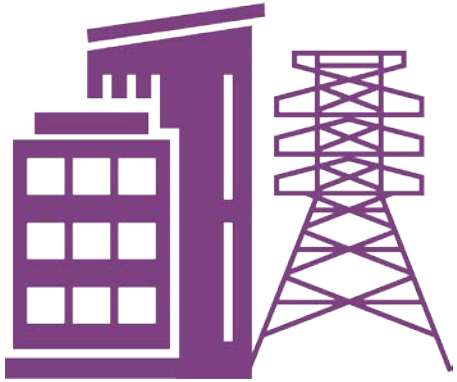
- Differing impact depending on the entity providing the service, type of development and number and types of customers:
  - **large entities** are of a scale similar to retailers in the NEM and it is appropriate that they bear compliance costs and risks in the same way
  - **small entities**, e.g. owners' corporations or a set of townhouses, may appoint a third party with the necessary registration and authorisation to minimise costs
  - **continuing exemption of some small operators** if they only supply temporary customers or are not undertaking the sale of energy

Recommended changes

The new regime aims to elevate embedded networks into the national regulatory regime.

The draft report sets out proposed changes in the areas of:

- Registration and exemption
- Market and system integration
- Network billing
- Connection services
- Consumer protections in the NERL and NERR
- Monitoring and compliance
- Jurisdictional regulations



A new regulatory regime for embedded networks

Registration and exemption

- Creation of two new roles under the new framework:
  - **Embedded Network Service Provider (ENSP)**, needs to register with AEMO and be subject to many of the existing regulatory requirements placed on DNSPs
  - **Off market retailer**, needs to obtain an authorisation from the AER and be subject to most requirements that existing authorised retailers are subject to
  - Obligations relating to consumer protections and retail market competition would be placed directly on these parties

- Reduced number of exemptions by clarifying the term ‘distribution system’:
  - network activities currently subject to some deemed exemptions would no longer be considered to be a network activity under the NER
  - exemptions would only be retained for exempt activities such as supply to some infrastructure sectors, EV charging stations and temporary accommodation
  - all exempt parties would need to register with the AER

Market and system integration

- Under the proposed framework, the application of the NEM metering framework will be extended to embedded networks
- Off-market retailers and ENSPs will be responsible for
  - **off-market retailers**: appointing a metering coordinator at their off-market child connection points
  - **ENSPs**: register all child connection points with AEMO and maintain information in AEMO's systems
- By making metering in embedded networks consistent with the rest of the NEM, customers at off-market child connection points will
  - be 'discoverable' to all retailers, enabling them to make competitive offers and thereby improve access to retail market competition
  - have improved access to information about their usage and bills

Network billing

- Introduction of standardised billing arrangements for the recovery of external network charges from embedded network customers who choose to go ‘on-market’
- For on-market customers the external network charges continue to be paid by ENSPs at the connection point to the LNSP’s network
- Embedded network tariffs and billing arrangements designed to allow alternative retailers outside the embedded network to make a market offer to child connection points - without operating manual processes to manage transactions with ENSPs

- The proposed changes require **ENSPs** and **existing exempt network service providers** to
  - set network charges at a level no greater than what the customer would have paid had it been directly connected to the LNSP’s network (the ‘shadow price’)
  - use standardised processes and data formats to bill retailers these charges for on-market customers
- The proposed network billing arrangements do not apply between ENSPs and off-market retailers in embedded networks

Connection services

- The AEMC recommends that ENSPs should have an obligation to make an offer to customers seeking connection services
- Under the proposed framework **ENSPs** would be required to make an offer for new connections and connection alterations within their embedded network area
  - unlike for DNSPs, the AER would design a single connection policy for all ENSPs
  - the connection policy would need to accommodate differences between embedded networks
- AER - determination of connection charges and dispute resolution
  - charges levied by the ENSP are proposed to not be directly regulated by the AER (unlike DNSPs' charges), but charges should be 'reasonable'
  - any disputes raised in relation to connection charges would be resolved by the AER

Consumer protections in the NERL and NERR

- Customers in new embedded networks will be customers of an authorised retailer, either a NEM retailer or an off-market retailer
- This will enable consumer protections for embedded network customers to be closely aligned with those of standard supply customers under the NERL and NERR
- A number of minor amendments to the NERL and NERR are required to accommodate the broader relationships in embedded networks
  - retailer and distributor interruptions and life support arrangements will require the involvement and coordination of multiple network service providers and retailers
  - the establishment of a modified RoLR scheme is proposed, where the retailer at the parent connection point would become the RoLR if an off-market retailer becomes insolvent, to provide continuity of supply and financial protection of retailers

Monitoring and compliance

- The proposed framework will provide increased regulatory oversight of parties providing services in embedded networks
  - **ENSPs**, as registered participants, will be subject to the AER's monitoring, investigation and conduct powers, general information gathering powers and reporting requirements
  - **off-market retailers** will become subject to the compliance framework applicable to NEM retailers

- To improve outcomes for customers in existing embedded networks and future exempt networks, the AEMC proposes that
  - exempt sellers be subject to compliance audit provisions
  - exempt network service providers be subject to general information gathering powers
  - any breaches of exemption conditions be enforceable by the AER as part of its monitoring, investigation and enforcement procedures with breaches being enforceable under the law

Jurisdictional regulations

- The AEMC proposes state and territories consider the following functions
  - access to state and territory concessions and rebates
  - access to independent dispute resolution for distribution and retail services
  - network reliability protection, including GSL schemes
  - other GSL payments
  - safety and monitoring regimes
  - technical regulation, such as equipment and performance standards

- The AEMC will discuss with jurisdictional governments what action is required, as
  - many of the jurisdictional regulations will apply automatically for retail activities, given that off-market retailers will be subject to authorisation
  - however, obligations on networks are usually put in place though jurisdictional licensing schemes rather than as a result of registration with AEMO – jurisdictional action is especially important with regard to network reliability and GSL payments

QUESTIONS AND ANSWERS

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PRESENTATION AND DISCUSSION - RETAILER AND ENSP FRAMEWORKS

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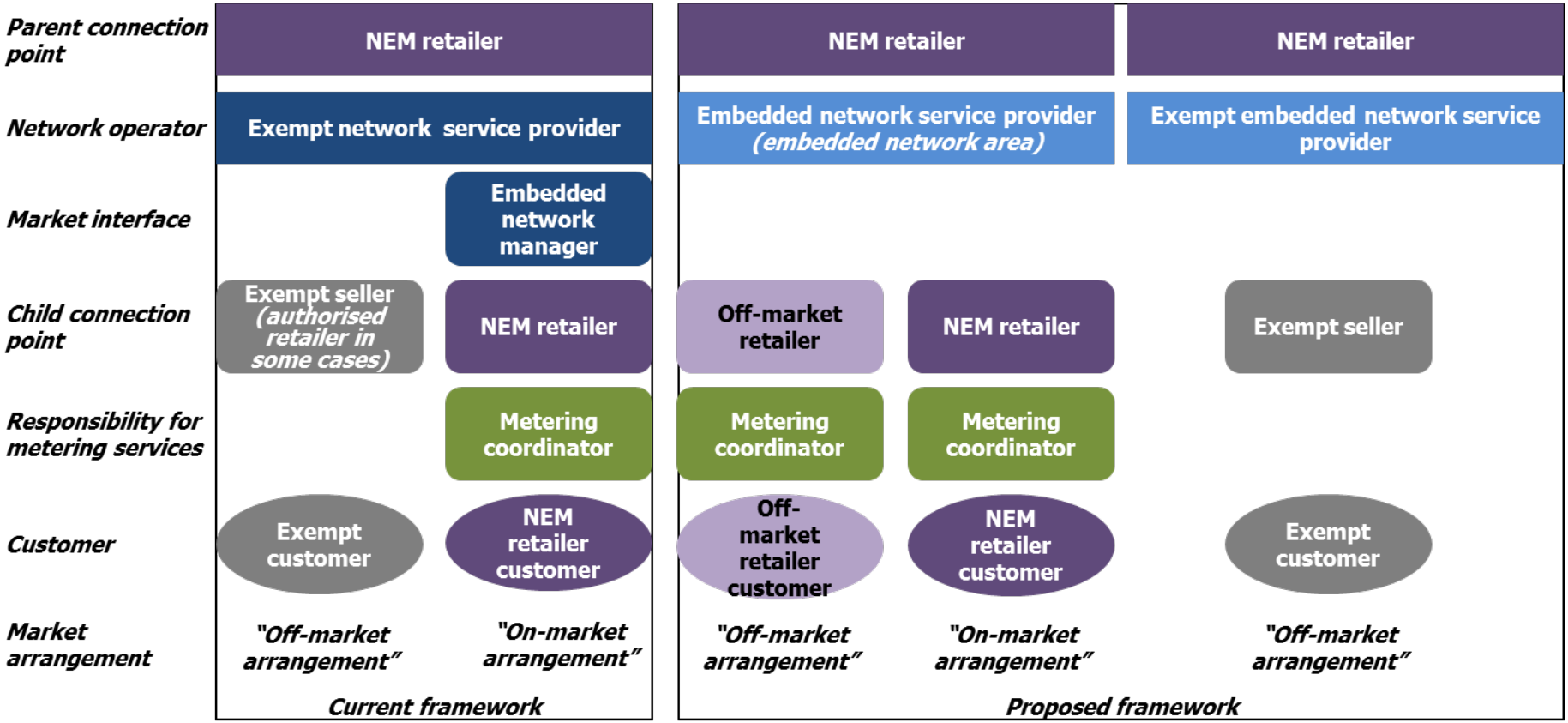
Embedded network participants – current and proposed framework



Current regime: standard supply arrangements vs. embedded networks

Standard supply arrangement	
Network service provider	• Chapter 2 of the NER defines a network service provider as a person who engages in the activity of owning, controlling or operating a transmission or distribution system and who is registered with AEMO as such • Network service providers are economically regulated by the AER
Retailer	• A retailer authorised by the AER under the NERL to engage in the activity of selling energy (electricity or gas) to a customer • As a market participant, the NEM retailer purchases electricity in the NEM and sells it to a customer, including to an embedded network customer (‘on-market customers’)
Exempt embedded network	
Exempt network service provider	• The party that owns, controls or operates an embedded network under an exemption to register as a DNSP from the AER, under the AER’s Network Exemption Guideline • Generally the same party on-sells electricity to customers within that embedded network as an exempt seller
Exempt seller	• The exempt seller is a person who is exempted by the AER from the requirement to hold a retailer authorisation under the AER’s Retail Exemption Guideline • The exempt seller on-sells electricity purchased from a NEM retailer to customers within an embedded network (‘off-market customers’)

New regime: standard supply, exempt networks and registered embedded networks

Standard supply arrangement	
As previously	
Exempt embedded network	
Exempt ENSP/Seller	Largely as previously – however, the AER will maintain a public register of exempt ENSP and exempt sellers and is able to set, modify and revoke exemption conditions on an individual or class basis
Registered embedded network	
ENSP	• A person who owns, controls or operates and embedded network and is registered with AEMO • The ENSP subsumes the market interface functions previously performed by the ENM
Off-market retailer	• An off-market retailer on-sells electricity purchased at a parent connection point from a NEM retailer to embedded network customers (not a market participant under the NER) • The off-market retailer will be required to appoint a metering coordinator • An off-market retailer authorisation may extend to embedded networks generally or to a particular or class of embedded network(s)
Embedded network area	• The geographical area, site or premises served by an embedded network • Upon registration with AEMO, the ENSP must also register the area of each embedded network it operates, defining the boundary for the ENSP's obligations (e.g. offer connection services) • ENSP to nominate a retailer to be the 'local embedded network retailer', that is required to make an offer to all off-market and new small customers in the respective embedded network area

Common embedded network types under the current and proposed framework

Activity	Current	Proposed
Short term holiday accommodation	Deemed exempt	Registered exempt
Electric vehicle charging stations	Deemed exempt	Registered exempt
Small commercial and residential complexes	Deemed exempt	Registered network service provider and retailer
Large commercial and residential complexes	Registered exempt	Registered network service provider and retailer
Retirement villages	Registered exempt	Registered network service provider and retailer
Long term holiday accommodation	Registered exempt	Registered network service provider and retailer
Shopping malls	Registered exempt	Registered network service provider and retailer

Network exemption framework

- Network activities eligible for a registrable exemption include (but are not limited to):
  - temporary accommodation
  - EV charging stations
  - electric traction infrastructure (e.g. rail networks)
  - **apartment complexes no longer eligible!**
- Proposed network exemption framework:
  - **no new deemed exemptions** (current deemed network exemptions transition to become registrable exemptions)
  - **no new individual exemptions**
  - **registrable exemptions only**
- Proposed changes to the **definition of distribution system** – not a distribution system, and no requirement to register for:
  - networks forming metering installations
  - networks forming part of a facility for broadcasting TV or radio signals
  - networks forming part of internet, telecommunications, wi-fi etc. infrastructure
  - networks within a construction site
  - networks forming part of plug-in or rack mounted equipment when used in premises, including NBN equipment

Retailer authorisation framework

- Proposed network exemption framework
  - **no new deemed exemptions**
  - **no new individual exemptions**
  - **registrable exemptions only**, under limited circumstances
- The proposed regime for retail exemptions should apply to **new sellers**
- **Current deemed retail exemptions** transition to become **registrable exemptions**

- Proposed energy selling activities eligible for an exemption include (but are not limited to):
  - selling metered energy to occupants of temporary accommodation
  - temporarily selling to construction sites
  - Selling energy as a supplementary supply through PPAs to customers connected to the national grid, where the agreement has a term of 10 years or shorter and can be terminated by the customer

Retailer exemption framework (continued)

- The AEMC recommends a single entry test for entities planning to sell energy to customers
  - Application for NEM retailer authorisation
  - Application for off-market retailer authorisation

- The AER has discretion to exempt NEM retailers or off-market retailers from a sub-set of obligations based on their customer type or size
  - NEM retailer authorisation (for sellers of electricity and/or gas)
  - NEM retailer authorisation, with exemption from some requirements or obligations (for sellers of electricity and/or gas)
  - off-market retailer authorisation (electricity sellers)
  - off-market retailer authorisation, with exemption from some requirements or obligations (electricity sellers)

ENSP responsibilities

The ENSP, for its embedded network area, will have a set of responsibilities, including:

- provide NEM retailers and off-market retailers in the embedded network with NMI standing data upon request
- comply with metering data provision requirements in relation to retail customers (clause 7.14 of the NER), including NEM retailer customers and off-market retailer customers
- fulfil market interface functions of a DNSP (Chapter 7 of the NER)
- implement network billing and settlement in line with AEMO procedures (including charging retailers of on-market child connection points network charges)
- provide connection services according to s. 66 of the NERL and Chapter 5A of the NER
- comply with requirements for supply interruption notifications, and other requirements for life support customers in the NERR
- disclose specified information on a website and report to the AER as required.

Off-market retailer responsibilities

The off-market retailer, for its embedded network area, will have a set of responsibilities, including:

- as local embedded network retailer, make a retail offer to all off-market and new child connection points
- any offer to sell electricity must include network charges and connection service charges
- appoint the metering coordinator for the off-market child connection point and ensure that the connection point has a NMI
- comply with requirements for supply interruption notifications, and other life support customer obligations
- maintain a 24-hour telephone line
- disclose information on website and report as required.

The retailer obligations that the Commission proposes **not to apply** to the off-market retailer are

- publication of a retail offer in a newspaper
- requirement that prices should not be modified within six months.

Differences between NEM and off-market retailers – issues for discussion

	NEM Retailer	Off-market retailer
Authorisation	**Full authorisation** To sell to any customer	**Limited authorisation** To sell in an off-market capacity to customers at child connection points in an embedded network
Function	**Seller of electricity / and or gas**	**Electricity seller**
Participant category	**Market participant** Purchases electricity in the NEM and sells it to a customer, including to an embedded network customer	**Registered participant** On-sells electricity purchased at a parent connection point from a NEM retailer to embedded network customers – the off-market retailer is not a market participant under the NER

Questions for discussion:

- Is there any need for the separate category of the off-market retailer?
- Are there any obligations that should not apply to the off-market retailer?

PRESENTATION AND DISCUSSION - MARKET SYSTEM INTEGRATION AND NETWORK BILLING

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Market integration

- The Commission recommended in the 2017 Review that the regulation of embedded networks should be elevated into the national framework and into the NEM.
- In part this would be achieved by extending the metering framework in the NER to new embedded networks, further integrating embedded networks into AEMO's market systems.
- These proposed changes are key to providing customers in embedded networks improved access to retail market competition and important consumer protections.
- These consumer protections include keeping customer metering data secure while also providing customers the rights and ability to easily access their electricity consumption data so that they can make more informed decisions about their energy consumption if they wish and to shop around different retailers for a better deal.

Overview of recommendations

- The draft report recommends amendments to the energy laws and rules in relation to:
  - o introducing the concept of an off-market connection point and activity into the NER
  - o extending the metering framework in the NER to new embedded networks
  - o the appropriate party to fulfil market interface functions in new and legacy embedded networks
  - o the arrangements for access to data in new embedded networks
  - o incorporating the new roles of ENSP and off-market retailer into the B2B framework
  - o allocating distribution loss factors for new embedded networks.
- These proposed changes are key to providing customers in embedded networks improved access to retail market competition and important consumer protections.

Extending the metering framework to new embedded networks

- Chapter 7 of the NER will apply to new embedded networks. The off-market retailer is responsible for appointing a metering coordinator for off-market connection points. That metering coordinator will in turn be responsible for appointing a metering provider and metering data provider.
- Metering coordinators, metering providers and metering data providers would have the same responsibilities at an off-market child connection point as they will have in relation to a standard supply customer's connection point or an on-market child connection point.

Market interface functions in new and legacy embedded networks

- The 2017 Review recommended that ENSPs be required to appoint an ENM for all new embedded networks to perform the market interface functions for embedded network customers.
- On further consideration, the Commission recommended subsuming the market interface functions into the new role of the ENSP (and not require ENSPs to appoint an ENM as a requirement under the proposed rules).
- This would not prevent the ENSP from sub-contracting these functions. However, it would be accountable for the delivery of these services under the NER.
- The ENSP, amongst other things, will be required to assign a unique NMI for each metering installation in its network.

Access to data

- Current arrangements in the NER for accessing energy data and metering data have been established to enable parties to obtain the metrology related data they require to support their market and settlement functions.
- The draft report recommends the access to data arrangements in the NER and NERR be extended to embedded network participants including the ENSP and the off-market retailer.
- These arrangements also provide rights to retail customers, or their authorised representative, to receive metering data, with the objective of providing retail customers the ability to make more informed decisions about their electricity consumption, including making decisions on switching retailers or energy plans.

B2B framework

- The B2B framework, which includes an electronic communications platform, the B2B e-hub, provided and operated by AEMO, contributes towards interoperability as participants only need to develop one set of processes in order to interact with other participants in the market.
- The draft report recommends that ENSPs and off-market retailers become B2B parties under the framework and be permitted to use B2B communications if they acquire accreditation with AEMO.
- This would not prevent ENSPs and off-market retailers from agreeing with other parties, including each other, to alternative communication methods.
- However, early feedback from some stakeholders has raised concerns the ENSP may not be incentivised to use B2B which could pose an impediment to retail market competition in embedded networks.

Network billing for on-market embedded network customers

- The 2017 Review recommended that network billing arrangements for embedded networks should be standardised and that the ENSP would issue a bill to the on-market retailer for network charges.
- Currently, an exempt on-seller generally provides a single bill to embedded customers bundling energy and external network charges.
- Where an embedded network customer goes ‘on-market’, an exempt network operator is permitted to recover the external network charges either directly from the customer or from the customer’s NEM retailer.
- The flexibility in current arrangements gives rise to uncertainty around who will charge the external network charges, the charging methodology and billing and payment arrangements.

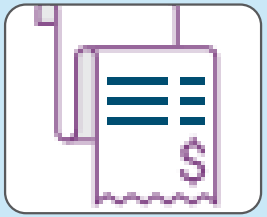
Proposed network billing arrangements

Customer at the parent connection point

- Standard retail arrangements will continue to apply at the parent connection point. The entity that is the customer at the parent connection point is responsible for paying the NEM retailer at the parent connection point. This will include external network charges.
- The framework does not regulate which entity must be the customer at the parent connection point.
- The customer at the parent connection point may be the off-market retailer, the ENSP or the strata body for an apartment building, for example

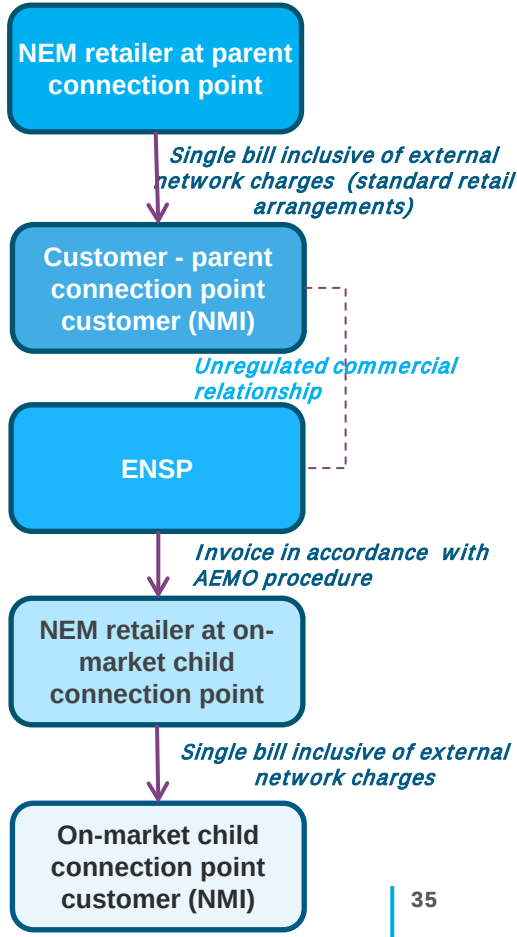
ENSP

- Under Ch 6B of the NER, the ENSP will be responsible for recovering external network charges from retailers of on-market embedded network according to AEMO's shadow network tariff procedure.
- Where they are different entities, the relationship between the customer at the parent connection point and the ENSP is not regulated.
- The arrangements for passing on recovered external network charges from the ENSP to the customer at the parent connection point will be a commercial arrangement.



NEM retailer at on-market child connection point

- The NEM retailer will be able to provide a single bill to on-market embedded network customers, inclusive of external network charges as it does with the majority of standard supply customers.
- The NER will require the NEM retailer to pay the ENSP.



Shadow network tariff and shadow network charging procedure

- ENSPs will be required to charge a shadow network tariff which would be the equivalent network tariff that a customer would have been charged by the DNSP if that customer were connected to the DNSP's network.
- AEMO will be required to establish a shadow network charging procedure.
- The shadow network charging procedure will include:
  - the approach to be used by AEMO in identifying the appropriate DNSP network charge to be assigned to a child connection point (i.e. the shadow network charge)
  - information to be included in a statement of charges
  - the detailed data and file format for the statement of charges
  - any other matter required for the efficient and timely billing, settlement and secure payment of network charges.

Implementation in legacy embedded networks

- Draft report recommends that the role of the ENM in existing embedded networks be expanded by requiring exempt network service providers, where an ENM is required to be appointed, to engage the ENM to provide network billing services.
- Expanding the ENM's market interface functions and capabilities is consistent with the proposed network billing functions and will reduce the numbers of parties that NEM retailers would need to transact with.
- ENMs will need to develop the capabilities to receive metering data and generate network bills which comply with the network billing procedures.

Other options - network billing and payment intermediary

- An intermediary may facilitate transactions between ENSPs and retailers.
- This could be made a default arrangement from which retailers could opt out.
- Potential parties that could perform an intermediary role include:
  - **AEMO** – similar wholesale market functions and has access to data
  - **DNSPs** – currently performs network billing for standard supply customers
- Stakeholders raised some concerns at the last workshop on the intermediary proposal.

Direct billing and payment between retailer and ENSP or introduce an intermediary?

Credit support

- The credit support requirements set out in Chapter 6B of the NER and Part 21, Division 4 of the NER serve to limit a DNSP's financial exposure to NEM retailer default.
- While the credit support arrangements in Chapter 6B of the NER will be extended to ENSPs, this would only address credit risk issues in respect to NEM retailers which have a record of failing to pay in the last 12 months.
- As such, where the ENSP is unable to require credit support, and a retailer fails, the ENSP will still be required to pay the DNSP for network charges for the child customer.
- The Commission acknowledges that some of the measures to manage the risk of NEM retailer default that are available to regulated DNSPs (such as cost pass-throughs) would not be available to ENSPs.
- The Commission is concerned that allowing ENSPs to place any further credit support obligations on retailers would dampen the prospects for retail competition in embedded networks.

Issues and questions for discussion

- Should using B2B communications be mandatory for ENSPs?
- Are there potential issues with the proposed network billing arrangements which would impede competition (ENSP and retail competition) in embedded networks?
  - Assignment of network tariff
  - Validation of correct network tariffs
  - Cost for ENSPs of establishing network billing capabilities
  - Cost for retailers transacting with potentially large numbers of ENSPs
- Balancing measures to assist ENSPs with risk of non-payment from retailers against the risk of dampening retail competition in embedded networks.

PRESENTATIONS ON ROUNDTABLES - LEGACY EMBEDDED NETWORKS

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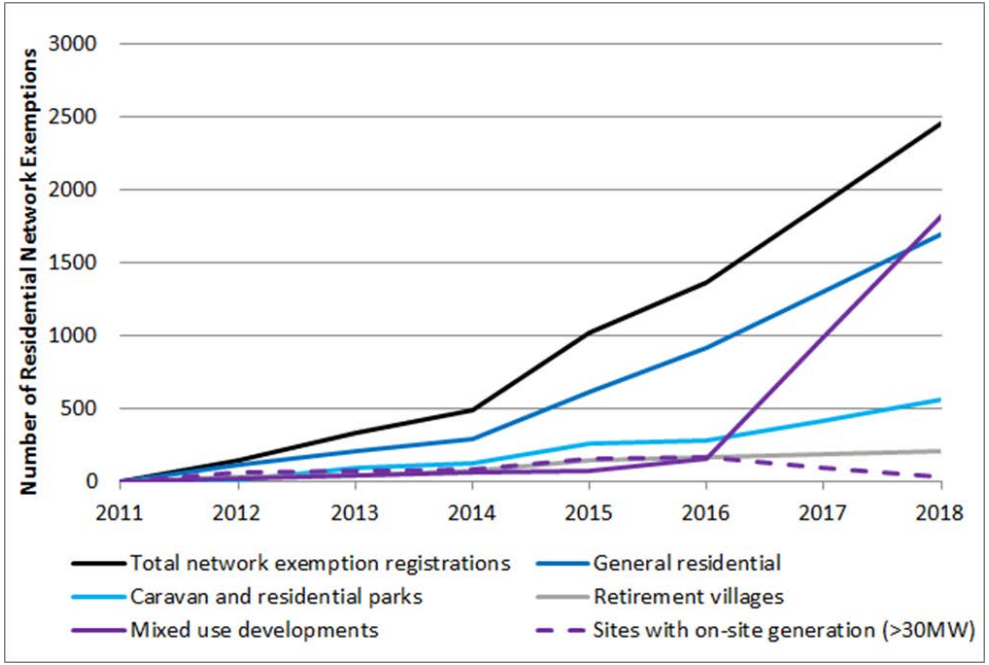
Growth in residential and mixed use embedded networks

- The number of residential network exemption registrations has grown significantly recently.
- The majority of residential network exemptions across NEM jurisdictions prior to 2017 have been related to general residential activities such as apartment buildings.
- Network exemption registrations associated with mixed use developments have also risen steeply from 2016 and overtook general residential network exemptions in 2018.
- Number of sites with embedded generation is low and decreasing from 2016 (data relates only to generating units larger than 30 MW). It is likely that significantly more embedded network sites exist with non-registrable small-scale generators such as solar PV.

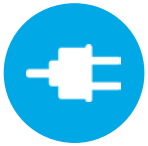


Key changes recommended for legacy exempt embedded networks

- AER's ability to monitor, investigate and enforce exemption conditions will apply to exempt ENOs and exempt sellers

- All connection points in an exempt embedded network where there is an ENM appointed must have a NMI

- Expand the ENM role to undertake network billing for exempt embedded networks



- Exempt ENOs to be elevated into the NERL so that 'shared customer' provisions in the NERR can apply where a customer has an authorised retailer

Issues will remain

- **Consumer protections** - Differences in protections and compliance framework between legacy embedded network customers and new embedded network and standard supply customers

- **Consumer choice** - Access to compliant metering will remain a barrier to going on-market with a retailer of choice for some legacy customers

- **Price** - In most jurisdictions, the price cap in embedded networks is linked to the local retailer's standard offer price which is high relative to market offers

Benefits of transitioning legacy embedded networks to new framework

The Commission considers transitioning some exempt sellers and exempt network service providers to the new regime would provide benefits for customers in these embedded networks:

- Address gaps in consumer protections with respect to protections that are provided under the NERR
- Improve access to retail market competition and place competitive pressure on prices in these embedded networks
- Remove regulatory complexity and provide clarity about the framework under which participants are being regulated
- Bring embedded network operators and on-sellers under a stronger compliance and enforcement regime.

Barriers to transitioning legacy embedded networks

However, there are also potential costs and barriers to transitioning legacy embedded networks:

- Metering infrastructure
  - Metering may need to be upgraded to be compliant with NEM standards
  - There may be physical constraints where insufficient space has been provided for NEM compliant metering
- Split incentives
  - The owners of legacy embedded networks and consumers may have split incentives arising from the fact that those paying for energy bills (tenants) are not the same entity that may be responsible for making capital investments (the landlord or building owner)
- Compliance challenges
  - The AER may face challenges communicating and enforcing requirements to transition to the new arrangements

Potential transition triggers

- An embedded network has met a trigger similar to the current ENM trigger. The appointment of an ENM is triggered under the NER when a small customer enters a market contract and the cooling off period expires.

- If replacement of metering is considered the most significant cost to transitioning, set a schedule for transitioning certain embedded networks based on the expected timeframes for meter replacements.

- A size threshold or class of embedded network. For example, embedded networks supplying more than a certain number of residential customers.

Questions for round table discussions

- What are the benefits and costs of transitioning existing embedded networks to the new framework?
- How do these benefits and costs differ for different classes of exempt networks and exempt sellers?
- What are appropriate criteria or triggers for transitioning?
- Will there be incentives for some embedded networks to voluntarily transition to the new framework?
- What would be an appropriate timeframe for transitioning legacy embedded networks to the new framework?

Current retail price regulation in embedded networks

- Under the NERR, the AER may impose price conditions on exempt sellers
- Where there is a price condition imposed, it must not be higher than the standing offer of the local retailer
- The AER Retail Exemption Guideline makes it a core condition that tariffs are not higher than this standing offer
- These price conditions do not apply to customers in embedded networks supplied by an authorised retailer
- As a ‘price cap’, the standing offer price is high relative to market offers available from retailers in the NEM
- Some state government legislation also regulates what exempt sellers can charge in some embedded networks (e.g. Manufactured Homes and Residential Parks) legislation)

Many embedded network customers pay up to the standing offer price

Questions for round table discussions

- Should stronger price conditions be introduced for legacy embedded networks which don't transition to the new framework?
- How should a 'price cap' be determined for legacy embedded networks?
- Should price conditions extend to legacy embedded networks in which there is an authorised retailer rather than exempt seller?
- Are there any circumstances where price conditions should be placed on off-market retailers in new embedded networks?
- Should price conditions be set by the AER under the NERR or by jurisdictional regulators?

PRESENTATIONS ON ROUNDTABLES - GAS

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7.	Breakout roundtables
8.	Recap and next steps

Overview

- Gas transmission and distribution networks operate under jurisdictional licenses
- Covered pipelines are economically regulated by the AER
- Pipeline assets are also regulated by state safety regulators
- NERL and NERR framework for selling exemptions covers dual fuel and gas sellers
- NGL and NGR do not set out a national exemptions framework for gas networks

Findings to date – NGL and NGR

- There is no national definition for a gas embedded network
- A gas embedded network would not fall within the definition of a pipeline in the NGL
- Gas embedded networks are outside the scope of the national regime
- Retail market measures such as obligations to register under the Retail Market Procedures do not apply

Findings to date – jurisdictional frameworks

- There are no jurisdictional definitions for a gas embedded network
- Not all jurisdictions have developed exemptions frameworks for gas embedded networks

Topics for roundtable discussion

- Can stakeholders provide examples of gas embedded networks? Is gas consumption measured?
- Do gas embedded network customers have adequate retail customer protections?
- Do jurisdictional concession schemes apply to gas embedded network customers?
- Do participants identify other issues?
- Do you see a benefit in developing a national framework for gas embedded networks in the NGL and NGR?
- Do you see a benefit in extending the electricity network exemption framework to gas embedded networks?

PRESENTATIONS ON ROUNDTABLES - JURISDICTIONAL ISSUES

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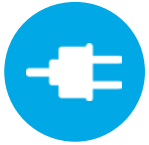
Overview

- To provide a complete set of consumer protection and safety regulations to consumers in embedded networks, state and territory energy regulatory functions need to be considered.
- Under the new framework, it is possible that some of these jurisdictional protections may automatically apply to customers in new embedded networks as the customers will be supplied by an authorised retailer and a registered distributor.
- Jurisdictions will determine which consumer protections and safety regulations should be extended to new embedded networks, and how.
- However, the Commission recommends that customers in embedded network should have consumer protections equivalent to those for standard supply customers so it is important that jurisdictional issues are considered in this review.
- The Commission will engage with jurisdictional regulators and provide advice on the issues that should be considered by jurisdictions in order to provide equivalent consumer protections and safety regulations to customers in embedded networks, where practicable and proportionate.
- We welcome stakeholder feedback on these issues.

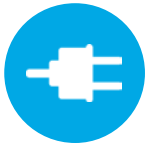
Areas of focus

Reliability - relates to the number and frequency of supply interruptions. For DNSP's, generally measured by SAIDI & SAIFI. Customers connected directly to the DSNP's network are subject to reliability guaranteed service levels (GSLs). DNSPs are also subject to SPTIS under the NER.



GSL schemes - some jurisdictions have many GSLs in addition to reliability, and some only a few. Examples of GSLs include: notice of planned interruptions, missed appointments, wrongful disconnection, reconnection, streetlight repair, time to respond to complaints.

State-based energy concessions and rebates - residential customers who meet certain conditions may be eligible for energy concessions and other payment assistance schemes. Not every otherwise eligible embedded network customer can currently access all rebates.



Independent dispute resolution - small standard-supply customers can access jurisdictional energy ombudsmen to resolve disputes and complaints with their retailer and/or distributor. In some jurisdictions, embedded networks are covered by ombudsman schemes.

Safety - of electricity is a key risk for the general public and workers. DNSPs must comply with detailed obligations, taking all reasonable steps to make the network safe. Obligations differ by jurisdiction; DNSPs generally held to a higher standard than 'electrical installations'.

Technical standards - include design standards relating to overhead lines, underground lines, substations, generators, services and customer installations. There are also quality of supply obligations for voltage range, frequency, and disturbances for DNSPs.

Draft report recommendations for new embedded networks

Reliability

- **DNSP reliability GSLs** – payments to be available to each impacted customer within embedded networks for supply interruptions due to an interruption on the DNSP's network
- **DNSP SAIDI and SAIFI** – incorporate the number of customers within an embedded network that are impacted by a supply interruption on a DNSPs network into jurisdictional SAIDI and SAIFI calculations, and STPIS
- **ENSP reliability GSLs** – introduce a jurisdictional reliability GSL scheme for supply interruptions within an embedded network

State-based concessions and rebates

- Access to energy concessions and rebates and emergency financial assistance should be the same for embedded network customers as grid supplied customers
- As customers in new embedded networks will be supplied by an authorised retailer they should be able to access rebates and concessions in the same way as standard supply customers

Independent energy dispute resolution

- Access to jurisdictional energy ombudsman should be the same for embedded network customers as grid supplied customers

Implementation and outstanding issues

Implementation of draft recommendations

Jurisdictional governments and regulators to review the relevant regulatory instruments to determine if amendments required to include off-market retailers in the definition of ‘retailer’ for concession schemes and to extend energy ombudsman schemes to embedded networks.

Outstanding issues

There are two jurisdictional areas of focus that the Commission considers key issues for embedded networks on which the Commission has not formed a draft position, and which are important to provide a full suite of protections for embedded network customers.

These are:

- Safety obligations
- Technical standards.

In the draft report, the Commission suggested that further analysis of the obligations relating to would be required to determine the appropriateness of applying them to embedded networks.

Safety obligations and technical standards

Safety obligations

- DNSPs have detailed safety obligations. Some jurisdictions require safety management systems expressly considering the safety of the public, workers, property, the environment, and safety risks arising from a loss of supply. There are usually different safety requirements for DNSPs and 'electrical installations'.
- For registered ENSPs, any safety obligations in the AER's network exemptions will not apply, however, it is unclear if jurisdictional safety obligations would apply, and if those that apply are proportionate.

Technical standards

- Technical standards for DNSPs include design standards relating to overhead lines, underground lines, substations, generators, services and customer installations. Additionally, there are quality of supply obligations for voltage range, frequency, and disturbances for DNSPs and compliance monitoring.
- The Wiring Rules (AS 3000) would likely apply in embedded networks, but most other technical regulations and design and performance standards do not.

Draft report recommendations

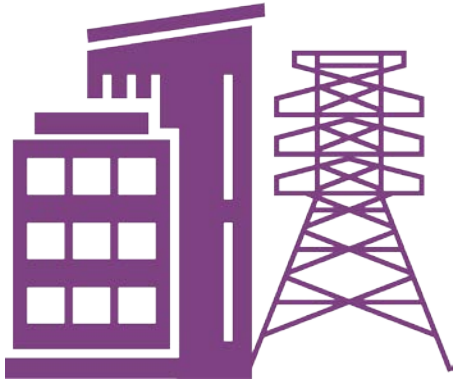
- Analysis of the safety obligations and technical standards in each jurisdiction, and the appropriateness of applying them to embedded networks, will be required. Network size may be a relevant consideration

Questions for stakeholders

- What are the key safety obligations and technical standards that should apply to embedded networks?
- Are there any DNSP safety obligations or technical standards which would be too onerous for ENSPs?

Other questions to consider

- Do you agree with the Commission's recommendations relating to reliability?
- Should embedded network customers be able to access energy rebates, concessions and emergency assistance?
- Should embedded network customers be covered under energy ombudsman schemes?
- Which GSLs should be extended to embedded networks?
- Are there any situations where different arrangements would be required under any of these areas?



What are your views?

BREAKOUT ROUNDTABLES

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RECAP AND NEXT STEPS

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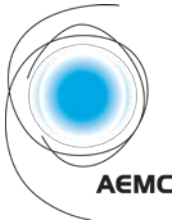

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