



19 May 2017

Mr Owen Pascoe
AEMC Director
Level 6, 201 Elizabeth Street
Sydney NSW 2000
Australia

Dear Mr Pascoe

Review of regulatory arrangements for embedded networks / RPR0006

Living Utilities is Lendlease's dedicated private utilities business specialising in precinct scale utility solutions such as the embedded network within the Barangaroo South Precinct. Living Utilities provides customers with better outcomes through smart, innovative and cost effective solutions helping create the best places for people to live and work in, today and in the future.

Our purpose is to develop and deliver smart utility infrastructure solutions for property developments, urban regeneration projects, master-planned communities, apartments and retirement living villages in Australia.

A key difference in our approach is to focus on resource productivity through design, in contrast to the traditional consumption model.

Where Lendlease seeks to deploy embedded networks, it bases its decision-making on a number of considerations, including:

- an evaluation of the value proposition to its customers;
- existing and lead-in infrastructure;
- the regulatory requirements;
- price of energy; and
- future deployment of value-add services such as renewables, energy storage and demand management.

Our business model is to develop, own and operate embedded networks. Within the Lendlease business several embedded network models are deployed with differing commercial arrangements with end-user customers:

1. 'Open' private distribution network – precinct scaled private high voltage network providing the 'poles and wires' services to the individual buildings within the precinct, mandating retail contestability.
2. Traditional 'closed' embedded networks including:

- a. retirement living sites with a managed pool generally administered through lease agreements; and
- b. apartments which are strata-titled with an owners corporation obtaining the embedded network supply contracts.

These sites tend to all remain off-market customers.

3. Hybrid embedded network – shopping centers with large national tenancies tending to be on-market and smaller tenancies or boutiques tending to remain off-market.

We are well-placed, through our ownership and operation of the Barangaroo South 'open' embedded network, to comment on the risks and issues that may emerge when the broader regulatory changes come into force through the Power of Choice changes.

As currently envisaged, authorised retailers (**Retailer(s)**) are not required to coordinate or cooperate with the embedded network in establishing correct charging mechanisms or communications with customers. Living Utilities has seen first-hand the actual outcomes of the provision of on-market retail services to customers on our Barangaroo South embedded network.

We see signals that Retailers will seek to shift their risk onto the embedded network and exploit the additional complexity in their dealings with customers. This would result in an erosion of customer value and experience.

We subsequently understand the short comings of the existing market mechanisms and regulations and how these can be tuned to deliver innovative, robust and customer-centric services enabled by investment in smart and efficient infrastructure.

We believe that the perceived risks to customers within larger embedded networks are exacerbated rather than overcome by the impending changes due to the lack of regulatory obligations on Retailers engaging customers inside embedded networks.

We believe that embedded networks are best placed to provide innovative, bespoke and efficient outcomes for customers. The traditional servicing model of large-scale shared infrastructure and Retailers with national footprints may provide a reference point to some extent, but this reference point should not be anything other than a floor in terms of efficiency and customer outcomes.

We consider that embedded networks can be more agile and connected to the specific requirements of their customers, in turn providing solutions that have little resemblance to those delivered through the traditional servicing model. This includes supporting the rise of prosumers, traditional customers who are seeking to take control and better manage their own energy needs.

Embedded networks can also enable better solutions at the convergence of smart digital technology, property and infrastructure. The sheer pace of technological advancement occurring in parallel with increasing urban density will quickly reveal the limitations of traditional servicing models. Without the ability to respond

appropriately, the economic prosperity and competitive advantage of Australia will be disadvantaged – customers will go elsewhere to get the services that they expect and deserve. Energy utilities have the potential to be a drag on the Australian economy.

Embedded networks should be enabled to deliver powerful solutions and respond to the advancement of technology and systems by leveraging and sharing their value across all customers. These networks create a future-proofed system that can adapt and adjust to not just technology but customer behavior and attitudes, and their needs and wants. The broader system benefits will be that the innovation and services will emerge in embedded networks that can be replicated, potentially, within other embedded networks and the traditional service providers should those innovations and services be relevant to their customers.

Regulatory change at times has been in response to poor behavior rather than to reward good behavior, and in the instance of embedded networks, may have been the result of uncompetitive and poor handling of customers by a small number of operators. However, we also think that regulation should not inhibit innovation and encourage it where it results in constructive market outcomes and system benefits. To that end, regulation that responds only to poor behavior without rewarding good behavior will limit the customer benefits that can be achieved through embedded networks. As an embedded network that has invested in, at our peak, 15 substations, notwithstanding Lendlease's values, we aspire to be a role model of good behavior.

As a result, we hope that our response to the questions where we believe we can add value below will help guide the AEMC in their review into the regulatory arrangements of embedded networks to achieve a balance between consumer protection, innovation and value.

We have focused our response on the core questions raised and in relation to our business activities mentioned above, however we would welcome a wider and more comprehensive engagement with the AEMC in relation to this review.

Living Utilities responses to questions raised in the consultation paper:

Question 1 Does the two tiered framework of requiring either registration / authorisation or exemption remain fit for purpose?

Response:

The current two tier framework is generally fit for purpose as it recognises that, given the small size of many embedded networks, the costs associated with registration and/or authorisation does not lead to equivalent benefits. Individual exemptions provide the Regulator with sufficient opportunities to capture any additional requirements given the circumstances surrounding the proposed embedded network on a case-by-case basis.

However, in some instances, there are unhelpful restrictions on some forms of embedded networks, for example the implied restrictions on tariffs and customer

charges that do not enable a network to be able to set tariffs that reflect cost drivers, enable value-added services or respond to customer preferences. These restrictions do not apply to larger networks such as precincts and shopping centres.

In the context of the growing number, scale and diversity of exemptions:

- a) What issues does the two tiered regulatory framework of requiring either registration as an NSP/authorisation as a retailer, or exemption give rise to?***

Response:

As referred to in the previous response, for some forms of embedded networks, it is extremely difficult to create unique site specific tariff structures that reflect cost drivers, enable value-added services and respond to customer preferences. The regulatory framework allows larger sites greater flexibility to incorporate generation, storage and demand response which can benefit a consumer; however, given small sites have to shadow the Local Network Service Provider (**LNSP**), this opportunity is made extremely difficult as there is general prohibition on the embedded network from charging any single customer more than they would have been charged by the LNSP were the embedded network not to exist.

There are also complexities arising as a result of the actions and behaviors of an on-market customer's retailer. Living Utilities has witnessed instances of a retailer charging their standing bundled offer, then refunding a portion on the same bill, with no explanation or rationalisation of the refunded portion made to the customer. This figure does not align to the network charges that the customer would receive from the exempt network for the network charges (whether more or less) and creates disputes which the exempt network is left to resolve.

Another example witnessed is a retailer charging their standing bundled offer and not informing the customer or the exempt network they are doing so. This then leaves the exempt network in a complicated position, attempting to recoup their network charges without an agreement in place with the retailer.

These examples highlight the challenges associated with allowing customers to churn away from embedded networks in terms of expecting market participants to behave reasonably and ensure the customer is well-informed of their new circumstances – rather the current framework allows the market participant to financially benefit from the complexity and information asymmetry.

As will be discussed later, it is Living Utilities' experience that the customer experience is eroded due to the absence of a documented and regulated relationship between Retailers and embedded networks which is exasperated by the fact that Network Use of System (**NUoS**) agreements are generally not agreed to by Retailers with exempt networks. An opportunity exists here for the Regulator to have the authority to create a better environment for the customers by either:

1. mandating the unbundling and a requirement to provide careful explanation of residential and SME tariffs (noting this is a better outcome for customers more broadly and beyond just embedded networks); and/or

2. establishing a default (deemed) form of NUoS between embedded networks and retailers to create a single bill environment for on-market customers inside embedded networks.
- a) ***Are there alternative regulatory arrangements, not based on a binary system of registration/authorisation or exemption, that would be more appropriate?***

Response:

Living Utilities believes that the current Rule change and AEMO procedural changes should be given time to identify if any alternatives to the current framework should be considered.

Question 2 Does the exemption framework remain fit for purpose?

- b) ***Does the exemption framework promote efficient investment and allocation of risks and costs? Specifically, does the exemption framework:***
 - i. ***Incentivise efficient investment in infrastructure and energy services within embedded networks***

Response:

It is Living Utilities' view and experience that the regulatory framework should encourage embedded network owners to invest efficiently in infrastructure and provide customer-focused, differentiated energy services. This differentiation from the normal LNSP/Retailer investment and services should be enabled to drive innovation and better customer outcomes as well as commercial returns to the investor.

The regulatory framework should be careful not to force embedded networks to replicate Retailers/LNSPs as the risks and scale efficiencies do not equate and customer benefits will be eroded. This can be done by enabling appropriate customer protections and appropriate risk/benefit sharing between embedded networks and their customers.

- ii. ***Appropriately allocate risks between exempt sellers and exempt network service providers and embedded network customers.***

Response:

Where retail competition exists and in the larger embedded networks where Living Utilities and more broadly Lendlease has operations, the risk exposure of the customer is kept to a minimum as the operator is incentivised to provide a high level of service and competitive pricing to retain the customer. Equally, the customer has the benefit of shadow pricing and consumer protections.

As shown in Figure 1, under a 'normal' arrangement, the allocation of risk between the customer and Retailer is determined by the market, whereas the allocation of risk between the customer, LNSP and Retailer are effectively established by the Regulator – in approving standard NUoS agreements and deemed standard connection agreements. Under an embedded network environment with customers

on-market, the relationship between the Retailer and customer is still established by the market, the relationship between the embedded network and the customer is established by pseudo-regulation.

It is the relationship between the Retailer and the embedded network which is relatively unknown, with a reasonable assumption that the Retailer will try to allocate risks to the embedded network that they would otherwise accept in dealing with an LNSP (such as bad debt). Under this scenario, there is little that an embedded network can do to address the commercial imbalance.

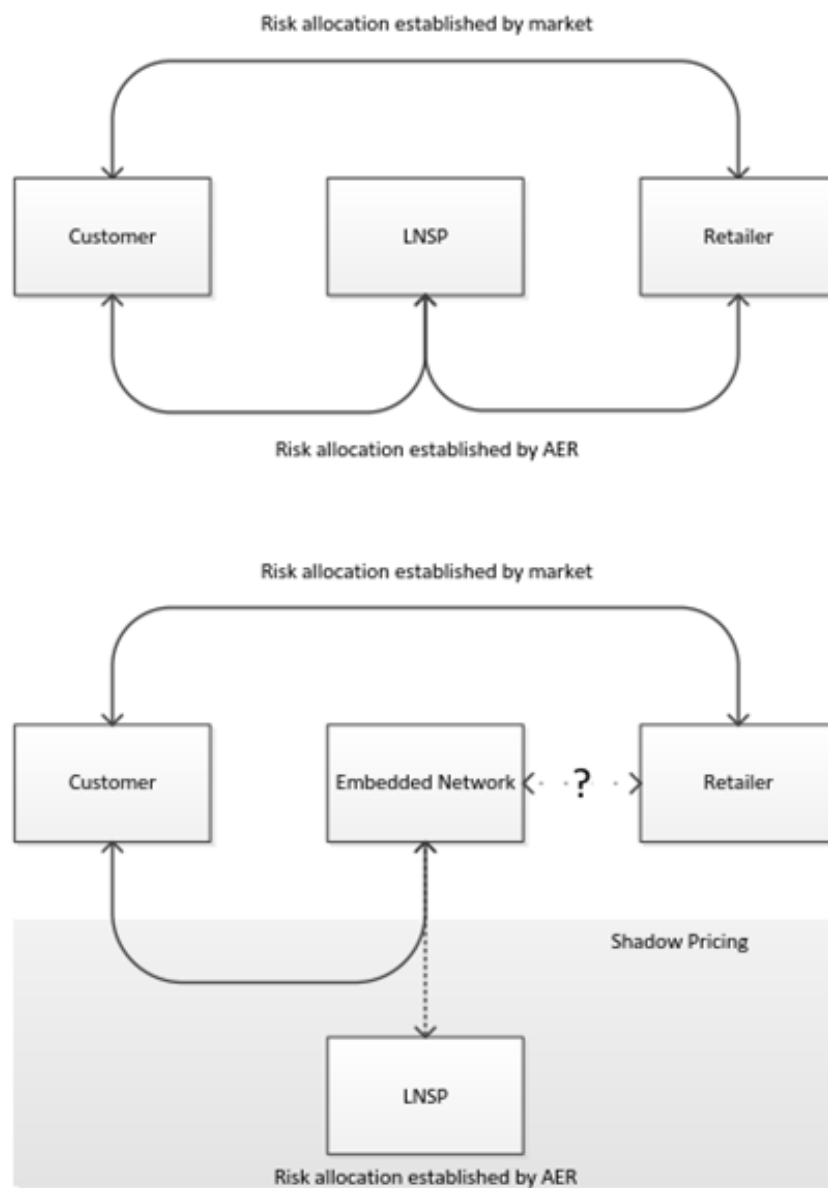


Figure 1 - Risk allocation within embedded networks relative to standard market

This is also seen in relation to recovery of network charges relating to on-market customers where there is a lack of disclosure by Retailers in notifying the embedded network that they have engaged a customer within their network and under what mechanism they are charging the customer, such as:

- Are they collecting a full bundled rate and the embedded network needs to seek recovery from them? If so under what mechanism, as the Retailer does not have any obligations imposed on it under the framework governing embedded networks (as previously advised).
- Are they not collecting network charges and the embedded network needs to seek recovery from the customer? If so, again how is the retailer charging the customer and what information are they disclosing?

Risk allocation as it relates to the Retailer is further illustrated in Figure 2. It is apparent that, under a 'normal' market arrangement, the Retailer arranges delivery of energy up to the customer's premises through a NUoS with the LNSP.

However, when an embedded network exists, and a customer is on-market, the customer needs to essentially arrange for the delivery of energy from the Retailer's generator to their premises by entering a separate agreement with the embedded network.

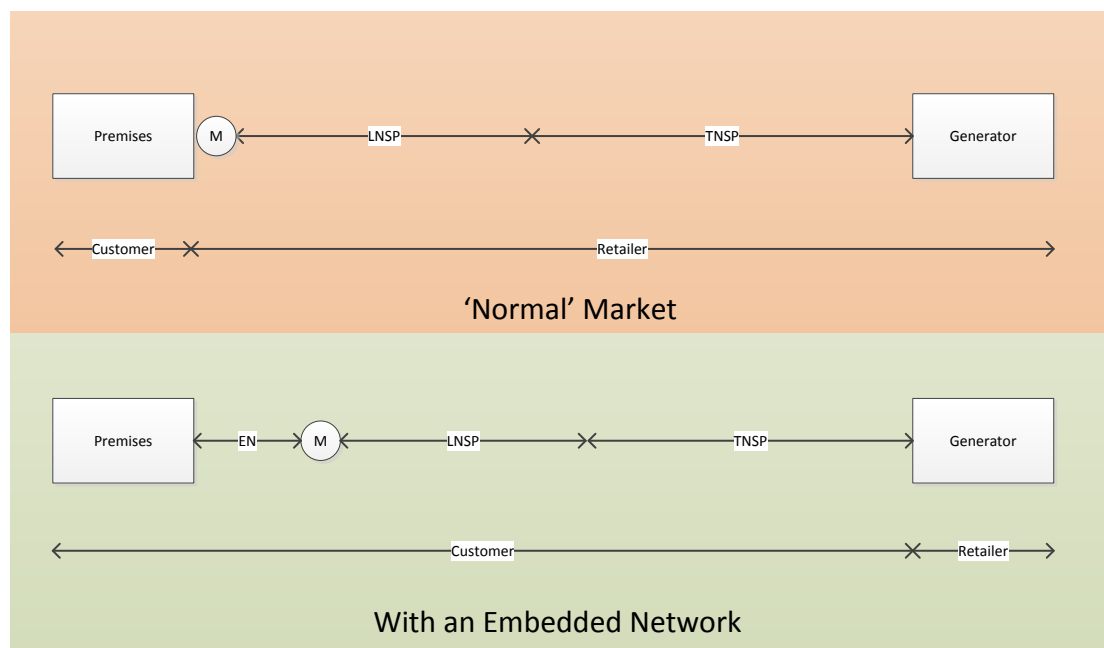


Figure 1 - Retailer's responsibilities relating to delivery of energy

It should be noted that the new Rules have not yet commenced operating and as such, the behavior of Retailers is yet to be tested under the new environment where they will have access to the embedded network through the Embedded Network Manager (ENM) and AEMO B2B systems.

However, it still remains that the relationship between the Retailer and the embedded network is not governed under a formal instrument and assigns all risk to the embedded network.

- c) Does an exemption framework continue to be necessary for some categories of embedded networks? If so:**
- i. What should the objectives of a network and retail exemption framework be?**

Response:

The exemption framework including the revised Rules are sufficient in relation to embedded networks. Issues do exist, however, in relation to the Retailer and embedded network relationship and interaction as mentioned in previous sections. Quality, safety and value of the services being provided to customers should be and are the objectives of a network and retail exemption/authorisation framework.

- ii. What types of embedded networks and on-selling arrangements should be eligible for exemption?**

Response:

The current framework captures the types of embedded networks and the individual exemption gives the AER the opportunity to place conditions on embedded networks that may be more complex in nature.

- iii. Do the three categories of deemed, registrable and individual exemptions remain appropriate? If not, what changes should be made to the exemption framework?**

Response:

The current framework categories are appropriate.

- d) Has the AER been provided the appropriate powers and functions in relation to exemptions under the NEL and the NERL?**

Response:

The AER is best placed to respond to this question.

- e) Are the current reporting, compliance and enforcement arrangements under the exemption framework appropriate? If not, what changes should be made to the current compliance framework for exemption.**

Response:

The current framework is appropriate.

Question 3 How do jurisdictional legal instruments affect the regulatory framework for embedded networks?

- a) Are there any relevant jurisdictional legal instruments or policy positions that affect the regulatory framework for embedded networks**

that were not identified in the embedded networks final rule determination?

- b) Have any of the jurisdictional legal instruments or policy positions been reviewed or amended since the embedded networks rule was made in December 2015?***

Response:

Although the framework strives to achieve a fair and equitable market for customers to be able to benefit from retail competition, the discrepancies that exist on the NEM in relation to jurisdictional legal instruments does create some impediment. We are not aware of any jurisdictional legal instrument amendments having come into effect to align the states and the ACT in relation to embedded networks.

Question 4 Can access to retail competition be improved?

- a) What barriers exist for small and large customers in embedded networks going on market?***

Response:

Under the revised framework, some jurisdictional legal and regulatory instruments still limit the customer's access to competition.

More broadly, for small customers, the customer's understanding of their offer is complicated by Retailers not un-bundling their products to clearly articulate the components of a bill, and as such, no clarity exists on how to compare an off-market offer to an on-market offer. This is a powerful means for customers to have access to the information required to make an informed decision and applicable to the normal market also.

Large customers are generally more savvy and informed of their energy requirements or at least have access to resources to be able to make an informed decision. Furthermore, the unbundled nature of large market offers makes it relatively easy to compare offers for value.

- b) Are retailers currently providing or planning to provide competitive market offers to embedded network customers? What barriers will remain to providing these offers after 1 December 2017 with the commencement of the embedded networks rule?***

Response:

Although the Retailers are best placed to respond to the question, Living Utilities can provide the following feedback on what it has observed and/or experienced in the embedded network market.

Our experience on existing sites has found some retailers are being more open and transparent than others in their offerings. Having created an open embedded network where all our customers are on-market, we have found most Retailers are generally not communicating information regarding their offers to small customers clearly. This has not been as much an issue in the large market as unbundled products exist. Reference was made to some issues observed in response to question 1 and 2.

This issue could be resolved if Retailers would accept invoices from embedded networks for their network charges, creating the same environment for the customer as the standard network. The agreement of a NUoS is practical and fair in consideration of the fact the Retailer is utilising infrastructure it does not own to access its customer for the purpose of profit, with their rights protected (see Figure 2). The creation of the ENM can potentially facilitate the B2B interaction if needed.

c) *Are there examples or cases of small and large embedded network customers going on-market? What were the circumstances that made going on-market desirable and possible for these customers?*

Response:

All connection points of Barangaroo Embedded Network are on-market. This network was designed as an embedded network to allow practical integration of generation and storage and ability to implement demand response, however Lendlease wanted to afford all customers the ability to access full retail competition.

All metering is established by accredited meter providers and NMIs allocated by our FRMP at the parent meter. Terms and conditions of the embedded network were established very early and included in all sales and lease contracts with a website established providing customer's relevant network and contact information.

Living Utilities has invested substantial time and effort in trying to establish relationships with Retailers to facilitate a streamlined experience for the customers, however to date, only Energy Australia has provided bundled single bill solution for small customers with Living Utilities collecting network charges through Energy Australia.

For large customers, a two-bill solution has been established and generally not being seen as a barrier to good customer experience.

d) *What is the level of competition to provide electricity to embedded network operators at the parent meter?*

Response:

Although some competition exists, our experience has been that some Retailers opt out of being a parent meter retailer when notified of on-market customers inside the embedded network. Some reasons provided in the past include:

- problems regarding subtractive metering to establish retail charges; and/or
- cost of managing the market interfaces that is now being assigned to the ENM; and/or
- desire to take all customers off-market to provide parent meter services.

e) *Is there an imbalance in negotiating power between embedded network customers and embedded network operators in negotiating terms and conditions, including price, due to barriers to accessing retail market offers?*

Response:

It is likely that a customer in an embedded network choosing to go on-market has quite a strong negotiating position when their jurisdictional laws permit access to competition. An embedded network will have an incentive to retain the customers to ensure that it has the ability to provide innovative, customer-focused products and differentiated services. Beginning from a small market position in the first place, an embedded network soon becomes paralysed to deploy this innovation if the customers were to churn away en masse.

We have already discussed difficulty presented to an embedded network to recover its charges from most Retailers when they take a customer on-market inside an embedded network for small customers. This provides further incentive for an embedded network to retain customers, although this is not a benefit that should be ascribed to 'market forces' – rather a gap in the regulations as relates to the arrangements between retailers and embedded networks.

Question 5 Issues for embedded network customers that are on- market or wishing to go on-market:

- a) ***Are there any other issues in addition to those set out in Appendix B that we need to consider?***

Response:

The issues covered under Appendix B are quite thorough; however, it is unlikely the terms and conditions set out in the Retailers' offer to the customers provide details of how the network charges pertaining to their connection are addressed. Examples of issues have previously been provided in response to questions 1 and 2.

- b) ***Where an on-market embedded network customer (being supplied by an authorised retailer under a market offer) has limited access to other retail market offers are there any additional consumer protections than those provided in the NERR that should apply?***

Response:

The provision of an offer within the embedded network (off-market) and some options from Retailers (on-market) should provide the customer sufficient ability to have a fair and reasonable offer and also provide the ability to negotiate. With the Rule change coming into effect in December 2017, it is to be seen how Retailers will respond as the implied barriers to competition will be significantly reduced.

Question 6 What consumer protections, in relation to the sale of energy, are appropriate for off-market embedded network customers?**Response:**

The current framework, applied properly by embedded networks, offers significantly aligned protections to those of on-market customers. Ability to access ombudsman schemes would also be beneficial, however the cost of this should be taken into consideration when considering the size of the embedded networks.

- (a) Is the objective of providing comparable consumer protections to exempt customers and customers of authorised retailers being achieved in practice?***
- i. What gaps or issues exist?***
 - ii. Do stakeholders consider the ACL and tenancy legislation to provide suitable complementary protection for embedded network customers alongside the energy specific consumer protections included the exemption conditions?***
- (b) Are there changes required to the consumer protection framework for off-market embedded network customers?***
- i. What should the guiding principles for consumer protections for embedded customers be?***
 - ii. What risks should be addressed by consumer protections for embedded network customers?***
 - iii. Should consumer protections continue to be contained in the retail exemption conditions or should they be elevated into another legal instrument, e.g. the NERR?***
- (c) What energy-specific consumer protections should apply to off-market embedded network customers in the context of market and technological changes and changing risks?***
- (d) How do the current arrangements for consumer protection impact on vulnerable embedded network customers? How can access to concessions and rebates be improved?***
- (e) An exempt seller may be providing a broader service than just electricity to embedded network customers. For example, the exempt seller may also be the embedded network customer's landlord, provider of strata services or water supplier. Does the different relationship between embedded network customers and the exempt seller as compared to the relationship between a retail customer and an authorised retailer have implications for consumer protections?***
- (f) What examples or case studies can stakeholders provide which demonstrate differences in the consumer protections provided to exempt customers and to customers of authorised retailers? Do the experiences of embedded network customers indicate poorer outcomes due to differences in consumer protections?***

Question 7 Are current regulatory arrangements for gas embedded networks appropriate?

- (a) What are the jurisdictional arrangements that apply to gas embedded network service providers?**
- (b) How do gas embedded networks currently operate? What metering and charging arrangements exist?**
- (c) What would be the advantages and disadvantages of moving to a national regulatory framework for gas embedded networks? If desirable, what form of national framework would be appropriate?**

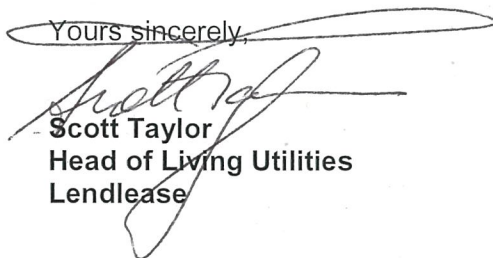
As referenced throughout the responses, Living Utilities believes some review of and attention is required in relation to the interactions and relationships between Retailers and embedded networks to improve the customer experience.

Currently it is our opinion that the framework is missing provisions for Retailers' accessing and handling of on-market customers inside embedded networks. It may be that some time should be granted to see the outcome of the ENM role coming into effect as, at the time of this response, it is still unclear how the market will respond.

We see embedded networks as a powerful instrument by which the multiple value streams of distributed generation, storage and demand response can be captured in the near to medium term to the benefit of the customers and more broadly the networks in general through efficient investment. As such, embedded networks should be afforded the right to operate in a competitive environment yet treated fairly by the regulatory instruments governing their operations.

We look forward to participating further in this review process and are available to discuss any of the responses or our experiences further should the AEMC require it.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Scott Taylor", is written over the typed name and title.

Scott Taylor
Head of Living Utilities
Lendlease