

17th July 2018

Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

**Reference : National Electricity Amendment (Alternatives to grid-supplied network services) Rule 2017
– Response to Consultation Paper**

The Energy Made Clean (EMC) and Lendlease Joint Venture (EMC Lendlease JV) welcomes opportunity to respond to AEMCs Alternatives to grid-supplied network services Consultation Paper and applauds Western Power for its leadership and innovation in seeking to deliver the most economically efficient, safe and reliable outcomes to electricity consumers.

With the potential for new technologies to reduce electricity costs and improve reliability, there is a need to align regulations to benefit consumers.

Historically the most efficient method of supplying electricity to consumers was from a centralized power generation source and distributed with an interconnected grid. The high fixed costs to establishing this network infrastructure meant that it was best served as a natural monopoly, with regulation developed around this model to ensure safe, reliable and efficient electricity supply.

Technology has since advanced, making a decentralized power supply model a viable alternative. As shown by the Western Power and Horizon Power experiences in Ravensthorpe and Esperance, Western Australia, standalone power systems (SPS) can be used at fringe-of-grid areas to provide safe and reliable power at a fraction of the cost to upgrade ageing or destroyed networks. To harness this technology, regulations set in the previous era of centralized power supply will need to change to encourage efficient investment.

These SPS's should not be considered as a natural monopoly market. Technology can be easily sourced from the market and the cost is not prohibitive to limit market competition. An effective regulatory regime for this decentralized power model is needed to ensure that the market is properly serviced.

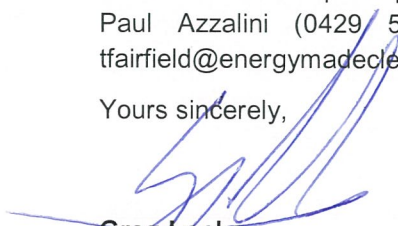
EMC Lendlease JV considers that a rule change is needed to help develop a contestable off-grid market. However, to help transition the users into this market, an intermediary stage led by the NSP with transitional rule amendments may be the easier approach to start the process.

In considering its position on the proposed Rule Change, the EMC Lendlease JV took the view that consumer benefits and protection are the highest priority. Consequently, the regulatory regime in relation to off-grid power supply must be such that customers can realise the full range of benefits. Additionally, consumers receiving an SPS as an alternative to network upgrade or replacement must be no worse off in terms of safety, reliability or affordability than when they were connected to the electricity network.

The EMC Lendlease JV considers that regulatory regime can deliver these outcomes, commencing with the proposed Rule Change, but including a sunset clause with a clear, time-bound transition to full competition in this sector.

We look forward to participating in any further discussions or clarifications on our response. Feel free to contact Paul Azzalini (0429 529 585; paul.azzalini@lendlease.com) or Tristy Fairfield (0411 220 704; tfairfield@energymadeclean.com) at any time.

Yours sincerely,



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Our response to each individual question proposed by the consultation paper is shown below:

Question 1: Nature of Issues

(a) Do Western Power’s concerns, as described in Section 2.2, accurately identify the nature of any problems associated with distributor-led transitions from grid-supply to off-grid supply in the jurisdictions that are part of the national electricity market?

We understand the desire for Western Power to change the definition of a distribution service to allow the adoption of new technology (e.g. SPS) that could improve the efficient, safe and reliable power supply. This technology needs to be adopted as it will reduce the cost borne by the distributor to maintain and/or replace ageing, or destroyed, poles and wires.

While there is greater economic efficiency in providing SPS, than replacing ageing network assets, there are regulatory barriers to achieving this efficiency. Including SPS as a regulated asset is not the most effective solution in the long term. However, a transition stage, where the NSP can control the delivery and management of the SPS for an initial term, may be needed before the desired outcome of a full contestable market is achieved.

(b) In relation to customers who currently have a grid connection, is there workable competition for off-grid supply systems, or are there barriers to that significantly impede businesses that are not economically regulated (non-distribution businesses) from providing off-grid supply to these customers?

There are no market barriers for businesses to supply off-grid systems. Technical solutions are available, proven and supplied by numerous market providers to deliver safe and reliable power. While off-grid Operations and Maintenance of previously grid-connected users is not an established service, the outsourcing of essential services (water, telecommunications, power and roads) has been prevalent in Australia for over the last 30 years.

However, we see a number of potential barriers:

1. Regulation – regulatory amendments will be required to provide mechanisms for the NSP to move the customer relationship to a 3rd party SPS provider.
2. “Trust” barrier – which can be overcome through applying the same levels of consumer protection as it applies to other electricity customers with respect to pricing, safety, reliability, access to the Ombudsman.
3. Commercial – a commercial barrier exists where tariffs are not cost-reflective. In the case of government owned utilities, electricity costs are subsidised in order to provide a uniform gazetted tariff. SPS providers would need access to subsidies to provide SPS at comparable retail tariffs, however it is worth noting that the amount of the subsidy would be significantly lower than would be required to pay for network replacement.

A suitable regulatory regime would provide incentives to NSPs to identify off-grid opportunities and to transition customers off grid where it is more economically efficient to do so, to avoid perverse incentives for NSPs to keep customers on grid, even when it is not the most economically efficient option.

(c) Does the issue identified by Western Power, and any barriers from (b), indicate that it may be appropriate to allow distributors to provide off-grid supply as a regulated service, in certain circumstances?

Off-grid supply should not be considered as a natural monopoly as the technology is available in the market and is not characterised by high cost. As such it does not need to be a regulated asset, in both the supply of the SPS asset and O&M services which both can be considered as a contestable market.

However due to the ‘trust’ barrier and commercial barriers associated with Government and cross-subsidies, there may need to be a transition stage for NSPs to initially deliver and manage off-grid supply until the contestable market is fully established.

There may be exceptions where there is inadequate market development in a region and no off-grid supplier is available.

- (d) Other than concerns as to whether off-grid supply would constitute a distribution service, what barriers (such as other regulatory barriers or license requirements) prevent distributors from seeking customers’ agreement to move off-grid where it would be cost effective?*

No Comment

Question 2: Costs and benefits of moving to off-grid supply

- (a) Do you agree with Western Power’s description of the costs and benefits of transitioning from grid supply to off-grid supply? What other costs and benefits should be considered?*

Anecdotally, we understand that the costs of maintaining a safe and reliable transmission and distribution network is increasing due to the ageing of the assets and that SPSs are more cost effective, safe and reliable in some circumstances.

EMC’s experience as the providers of Design and Construct and Operations and Maintenance services to both the Western Power and Horizon Power indicate that the costs of SPS provision are lower than network replacement costs in certain circumstances.

Other customer benefits include the removal from power poles from paddocks, which are a safety hazard, in particular for broadacre cropping enterprises, the reduction in bushfire risk from network assets, and the ability to retain electricity supply in bushfires.

- (b) What credible estimates are there of the current costs to procure, install and maintain (i) microgrids and (ii) individual power systems in fringe of grid areas of Australia? How are those costs broken down between electricity generation, network provision and retail costs / billing? How do these costs compare to the costs of providing electricity to such customers through the national grid?*

No Comment

- (c) Distributors, please provide information (to the extent you have any) on the number of your customers who are currently grid-connected but who you consider may be more cost-effectively served by (i) microgrids and (ii) individual power systems. Consider current and projected costs of those systems.*

No Comment

- (d) What are the key factors that make customers candidates for off-grid supply? For example, upcoming line replacements, local reliability or congestion issues, safety standards, line undergrounding requirements, declining costs of off-grid supply, presence or existing distributed generation?*

While SPS have been used in off-grid applications for some time (using lead-acid batteries), developments in solar costs and battery and inverter capabilities have resulted in SPS now being a more cost-effective, safer and more reliable alternative to network electricity supply in certain circumstances.

Consequently, SPS cost compared with network supply costs (across a network spur rather than by individual customer) are the key consideration in determining customer candidacy.

(e) Distributors, if you were permitted to supply the customers identified in question (c) through off-grid supply, please provide an estimate of your annual savings (if any). Please state any critical assumptions such as pricing approaches to be applied to off-grid customers.

No Comment

(f) Other than the costs of the off-grid supply itself, what costs and benefits are likely to arise from moving certain customers off-grid, for the customer, the distributor, the customers remaining on the grid, retailers, local generators, or any other parties? How could any costs be mitigated?

Other customer benefits from moving customers off-grid include:

- Removing power poles from paddocks, which are a safety hazard especially for broadacre cropping enterprises
- The reduction in bushfire risk from network assets (e.g. pole-top fires)
- The ability to retain electricity supply in bushfires
- O&M services for off-grid assets provide local employment opportunities

Question 3: Potential alternatives to the proposed rule

(a) If a rule change is considered necessary, are there alternatives to the proposed rule which relate to the issues in the request and:

- i. Are consistent with the Law*
- ii. Would allow all customers to benefit from lower costs by enabling electricity to be supplied in the most efficient way in each area; and*
- iii. Would result in customers who move to off-grid supply receiving electricity supply with appropriate reliability, quality, safety and other relevant consumer protections?*

EMC Lendlease JV consider that SPS assets do not constitute natural monopoly assets and as such, it is not appropriate to include them in NSPs Regulated Asset Base.

However, EMC Lendlease JV recognises that, in the immediate term, the proposed rule change enables considerable savings to be made, and reliability and safety improvements to be realised, by allowing NSPs to deploy SPS and other off-grid supply as an alternative to network upgrade and replacement.

EMC Lendlease JV is also realistic about the time taken to effect rule changes, and supporting regulatory amendments.

Ultimately, a rule change and regulatory regime should provide the following environment:

- NSPs identify customers, and groups of customers for whom it would be more economically efficient to supply with SPS or other off-grid supply
- NSPs issue a Statement of Opportunities for the provision of SPS or off-grid supply
- SPS or off-grid providers are registered market participants subject to suitable requirements

- Business model, including retail provisions enable customers under Full Retail Contestability regimes to churn, while enabling recovery of investment in SPS assets and replacement of components at end-of-life (i.e. PV, battery, inverters, diesel generators)
- Customers that are transitioned to off-grid power supply are no worse off in terms of costs and consumer protection than when they were on grid.

NSPs should be incentivised to identify off-grid opportunities and to transition customers off grid where it is more economically efficient to do so in order to avoid perverse incentives to keep customer on the network to include more assets in the RAB.

Determining such a fundamental change to the current market model will be time-consuming and complex, and attempting to move to this model immediately will create a significant opportunity cost for NSPs, SPS and off-grid providers, and ultimately, electricity consumers.

Consequently, EMC Lendlease JV consider that, while the proposed Rule Change should be approved, that it must contain sunset provisions to ensure that it represents a transitional arrangement, and that work continue to realise the potential of a contestable market in SPS and off-grid electricity service provision.

(b) Would alternatives in (a) be able to be achieved through changes to the Rules alone, or would changes to other instruments, such as the Retail Rules or other laws, regulations or licences (jurisdictional or national) be required or desirable?

No Comment

Question 4: Assessment framework

Do you agree with the approach set out in Section 3.3 to assessing whether the rule change request will, or is likely to, contribute to the achievement of the national electricity objective? If not, how should it be assessed?

We agree with the approach and assessment framework in Section 3.3

Question 5: Competition issues relating to moving from grid supply to off-grid supply

(a) To what extent do you consider that distributors' ability to average the costs of grid-connected distribution services across their customer base inhibits the development of competition in the off-grid supply as an alternative to grid connection?

In Western Power's case, with no cost reflectivity in the market, rural customers are heavily subsidised in the gazetted tariff that has been charged.

This subsidy is heavily distorting the market which affects competition in off-grid supply compared to the current grid connection model.

This subsidised arrangement should not be the driver for regulating off-grid SPS assets as these subsidies are at the discretion of State Government which can be changed in future circumstances. Instead, regulation should be drive for what's best for the customer, and in this case, setting up a mechanism to establish a contestable market.

(b) If the proposed rule (or a more preferable rule) is made, and the AER classified off-grid supply as a standard control service, would distributors' ability to offer below-cost off-grid supply hamper the development of competition in the off-grid supply market, as costs of off-grid supply fall in the future?

NSPs will still need to pay market prices for SPS and other off-grid supply assets, as well as the O&M requirements, including remote monitoring and site visits. However, giving NSP's an ability to offer below-cost off-grid supply will hamper the development of competition in this market in many other ways, such as:

- Dampen innovation in remote monitoring, predictive and remote maintenance platforms and systems, as these are likely to be centralised by the NSPs, particularly if they have multiple asset and O&M providers
- Dampen or remove incentives to find further value-add products that cross over retail and NSP jurisdictions, such as energy management, home-automation, and other behind-the-meter solutions that will benefit the customer
- Remove customer-facing element from SPS/ off-grid providers, removing the incentive for innovation in customer-facing solutions and new customer service methods for remote customers
- Remove innovation in retail market models for off-grid power supply, including establishing a market model that can separate retail (potentially including O&M) from asset provision and slowing the development of new retail tariffs that incentivise the most efficient use of the system (i.e. maximising use of PV and battery rather than diesel)
- Remove regulatory/policy incentive to resolve complexities and inefficiencies that results from the heavy cross- subsidisation of rural power supplied and seek more cost-effective solutions.

(c) In addition to the issues discussed in Chapter 4, what other factors affect competition for providing off-grid supply in place of grid supply?

To achieve the most economically efficient off-grid supply across Australia, common technical standards will need to be established.

These standards need to specify modular systems to be used (i.e. plug and play design) so that customers are not trapped into one provider and the retail arm providing O&M can easily replace components. Standardising the design elements will also benefit from economies of scale.

(d) Would the AER's process for classifying distribution services, including considering the potential for the development of competition, provide an adequate way in which to address these competition issues in practice?

No Comment

Question 6: Competition issues arising after moving to off-grid supply

(a) Should a monopoly provider of a service in one area of the supply chain for off-grid services be able to provide an integrated service whereby it provides all the services forming part of off-grid supply, in circumstances where competition is limited?

As off-grid supply is not a natural monopoly, commercial models can be set up to ensure that competition is developed.

A potential model is for SPSs to be installed and managed over a set period of time (say 10-15 years based on equipment life) and retendered for the replacement. It may be desirable to combine the retailer services with the generation and distribution if the customer interface infrastructure is in place. Separating the retail component only into a contestable market will deliver limited benefits.

An alternative model is to deliver SPSs under one contract and combine O&M and retail into another entity, which can be contestable. However, the O&M service is a key component affecting the life of the asset which can affect performance of this model.

(b) If a customer moves to off-grid supply where one entity is the monopoly off-grid retailer, generator and distributor, what disadvantages are they likely to face due to the lack of ability to change retailers?

Limiting competition will prevent access to innovative retail products (e.g. home automation, energy management and innovative tariffs) to the detriment of the customer.

(c) Do the extent of any disadvantages under (b) depend on which entity provides the monopoly services (eg. licensed, regulated distributor, compared to an entity that is exempt from registration and licensing provisions under the Rules and state laws)?

EMC Lendlease JV position is that existing consumer protections should be extended to the new SPS or off-grid market participants.

(d) How can any disadvantage under (b) be mitigated?

Customer protection needs to be place if consumers are unable to change retailers or there is a lack of competition in providing the SPS and O&M / retail component. A better approach is to enable competition to incentivise innovation and efficiency in the retail sector.

(e) Is it desirable (in light of the long term interests of consumers) that customers being moved to off-grid supply would be offered, or would be able to access, competitive offers for each component of off-grid supply (for example, provision of generating plant, maintenance of the plant, billing)? If so, what circumstances or policies would encourage this?

The proposal above could be complex and time-consuming for the customer and arguably the inconvenience would outweigh any competition benefits.

Customers need to experience minimal change from the status quo – a service provider takes care of everything and they pay a bill. Potentially the tariff structure may change over time to reflect the off-grid power supply structure and costs.

Question 7: Appropriate regulation of reliability of off-grid supply

In light of the varying reliability requirements that may apply to off-grid supply under the current arrangements, are specific consumer protections regarding the reliability of off-grid supply required before the Rules should allow distributor-led transition to off-grid supply?

While SPS supply arrangements are highly likely to be far more reliable in rural and remote applications than network supply, it is important that the existing (or equivalent) consumer protections in terms of safety and reliability continue to apply to off-grid supply, where customers are transitioned from network supply.

Question 8: Impacts on consumers or moving to off-grid supply – general questions

(a) Chapter 5 discusses various regulatory issues and considers the potential impacts of moving to off-grid supply under the current regulations. If you have further information on, or a different analysis of, any of these issues, please provide details

No Comment

(b) What are the impacts on off-grid customers of ceasing to be covered by the protections in the Retail Law and Retail Rules, bearing in mind the protections provided by the Australian Consumer law and by state laws?

EMC Lendlease JV's view is that existing (or equivalent) consumer protections should continue to apply to off-grid supply, where customers are transitioned from network supply.

(c) To what extent are customers who move to off-grid supply likely to face additional risks relating to electricity supply not faced by grid supplied customers? If additional risks arise, what is the nature of these risks and how material are they?

No Comment