



Clean Energy Council submission to the Essential Services Commission of South Australia SA Power Networks 2020 reliability standards review

Executive Summary

The Clean Energy Council (CEC) welcomes the opportunity to provide input to the Essential Services Commission of South Australia (ESCoSA) review of SA Power Networks reliability standards.

The CEC is the peak body for the clean energy industry in Australia. We represent and work with hundreds of leading businesses operating in solar, wind, hydro, bioenergy, marine and geothermal energy, energy storage and energy efficiency along with more than 4,800 solar installers. We are committed to accelerating the transformation of Australia's energy system to one that is smarter and cleaner.

In future microgrids will play an increasingly important role in delivery of electricity supply. The Australian Energy Market Commission (AEMC) in its determination in response to a rule change proposal by Western Power has given its in-principle support to allowing network service providers to provide microgrid or off-grid supply as a distribution service, which could then be subject to economic regulation.

We support the AEMC's recommendation that relevant jurisdictional instruments be amended to implement an appropriate regime of energy-specific consumer protections (including reliability standards) for customers served by a microgrid supply. We therefore welcome ESCoSA's review of SA Power Networks' reliability standards.

We recommend:

- A reliability target for microgrids should be added to the Electricity Distribution Code,
- The reliability target for microgrids should be at least as high as the reliability target for a long rural feeder (less than 300 minutes per year duration of interruptions and fewer than 1.95 interruptions per year).

We would be very happy to discuss these issues in further detail. We look forward to contributing further to this important area for policy development.

Opportunities for significant cost savings

The National Electricity Rules (NER) do not permit network service providers to provide electricity to customers from microgrid or off-grid supply as a distribution service. This denies customers the benefits of delivery of not only the most cost-effective services, but also potentially more reliable and safe services. In many cases it will be cheaper to provide off-grid supply than to maintain and replace long power lines linking remote customers to the national grid. Moving to off-grid supply could potentially offer additional benefits such as improved reliability for remote customers and reduced bushfire risks.

Remote customers with an existing grid connection have no incentive to move off-grid on their own, as they do not face the full costs of maintaining the network assets, which are spread across all customers. An off-grid solution is only likely to eventuate if undertaken by the network service provider as an economically regulated service.

The total potential savings across the National Electricity Market are unknown but would be very significant. Of note are the following estimates of savings from providing off-grid power supply compared to the cost of replacing existing network assets:

- Western Power estimates a net benefit of \$388 million from providing off-grid power supply to 2,702 candidates on its network, and
- Essential Energy estimates a \$513 million saving from supplying off-grid power to up to 8,430 customers.

Importance of customer protections

The AEMC has pointed to the importance of reliability standards to ensure that customers continue to have access to reliable electricity supply in the event that network service providers are permitted to provide microgrid or off-grid supply as a distribution service.

The CEC agrees with the AEMC's observation that customers should not be expected to move to off-grid supply unless it is offered to them at a price, and with protections, similar to those for electricity supplied via the national grid.

Setting the standard

Clean Energy Council members who provide microgrid solutions have expressed confidence in their ability to meet and exceed the reliability standard currently required of long rural feeders in South Australia. There are few sources of published statistics on microgrid performance and reliability in Australia that could serve as a guide to the anticipated reliability of microgrids. One of the few published Australian case studies indicates that the reliability of a Western Power stand-alone power system is far superior to the long rural feeder it replaced – see table below.

Supply reliability of network versus stand-alone power system (July 2016 – July 2017)

Site No	Network		SPS	
	Number of outages	Hours	Number of outages	Hours
SPS-01	20	72.19	1	14.95
SPS-02	20	72.19	0	0
SPS-03	20	72.19	0	0
SPS-04	19	71.87	1	6.73
SPS-05	19	71.87	2	2.78
SPS-06	10	57.24	2	3.48
Average		69.59		4.66

Source: Western Power (2017), *Stand-alone Power System Pilot, One Year On*, p.6, available at <https://westernpower.com.au/about/reports-publications/stand-alone-power-system-pilot-one-year-on/>

ESCoSA has an important role to play by establishing reliability standards for microgrids that are at least as high as the equivalent standards for long rural feeders.

Enforcing an agreed standard

It could be argued that *ideally* customers should be able to negotiate with networks regarding their preferred standard for microgrid reliability at an agreed price. This would, however, raise issues regarding the extent to which ESCoSA could enforce an agreed reliability standard. We would appreciate understanding ESCoSA's views on this matter, including the following questions:

- If reliability standards were negotiated between customers and network providers and if those agreed standards differ from the regulated minimum standards for networks in South Australia, would ESCoSA have the legislative authority to enforce the agreed standards under its current governing legislation?
- If not, what changes would be required to its governing legislation to enable ESCoSA to undertake the role of enforcing agreed reliability standards?