



Alternatives to grid-supplied network services

Final determination recommends package of changes

A range of changes to laws, rules and state and territory instruments is needed to enable off-grid systems to be used where they are cost effective, while protecting customers. The Australian Energy Market Commission sets out recommendations regarding these changes in its final determination on the rule change request on alternatives to grid-supplied network services.

The rule change request

The rule change request from Western Power sought to remove certain barriers to distributors deploying alternative technologies and methods of providing distribution services, such as transitioning customers to off-grid supply, by amending the definition of “distribution service”.

The Commission supports enabling off-grid supply but considers that a broader package of changes to laws, rules and state and territory instruments is required to protect consumers. A change to the National Electricity Rules (NER) alone could not address a lack of customer protections for off-grid customers and may be invalid due to inconsistencies with the National Electricity Law (NEL).

Therefore, the Commission has decided not to make a rule on alternatives to grid-supplied network services at this time in response to the rule change request.

The final determination sets out recommendations regarding a package of changes to enable efficient off-grid supply, for consideration as the COAG Energy Council progresses its work in this area.

The Commission is participating in two COAG Energy Council working groups to address regulatory gaps in relation to off-grid supply and supports this work being completed as expeditiously as possible. The Finkel Review’s recommendation that, by mid-2018, the COAG Energy Council direct the Commission to review the regulation of off-grid systems, will also provide an opportunity for the Commission to advise on the details of law and rule changes that would be required to implement the recommendations set out in the final determination.

Benefits of off-grid electricity supply

Off-grid supply includes individual power systems, which supply electricity to one customer, and microgrids, which supply electricity to more than one customer, where there is no physical connection to the national grid. Off-grid systems typically include solar panels, batteries and a diesel generator.

The cost of providing off-grid supply has recently dropped significantly, as the costs of solar PV and batteries decline. In some cases, it can be cheaper to provide off-grid supply than to maintain and replace long power lines linking remote customers to the national grid. Some distributors have estimated that moving appropriate grid-supplied remote customers to off-grid supply could save hundreds of millions of dollars in network costs. These cost savings would benefit all of the distributor’s customers.

Distributors noted that moving to off-grid supply could potentially offer additional benefits such as improved reliability for remote customers, reduced bushfire risks, reduced local disturbance from line maintenance activities, and improved aesthetics and vegetation regrowth.

Barriers to off-grid supply

Notwithstanding the potential benefits of off-grid supply, a combination of factors prevent both distributors (as economically regulated entities) and the competitive market from providing off-grid supply to customers with a grid connection.

Customers can choose to move off-grid and purchase off-grid systems from the competitive market. However, few grid-connected remote customers have financial incentives to do so, even where the total system costs would be cheaper than maintaining the grid connection, because the tariffs they pay for grid-supplied power do not reflect the high costs of supplying them. Instead, a distributor's tariffs tend to reflect the average cost of supplying power to all customers in that distributor's area. A remote customer moving off-grid would lose the benefit of this flat pricing.

Second, off-grid supply is unlikely to be considered a 'distribution service' under the NER, and therefore distributors cannot provide off-grid supply as a regulated service. If distributors wished to provide off-grid supply as an unregulated service, the ring-fencing guidelines would apply and the service would need to be provided through a subsidiary or affiliate that is legally and financially separate from the distributor (unless the ring-fencing requirements are waived). Again, this would mean remote customers would lose the benefit of flat distribution pricing if they move to off-grid supply, and therefore customers are unlikely to choose this option.

Need for package of changes

The Western Power rule change request identifies a real issue that the Commission considers should be addressed.

However, without changes to the NEL, the change to the definition of "distribution service" in the NER proposed in the rule change request would likely result in inconsistencies between the NEL and the NER, which would make the proposed rule invalid.

Further, for a customer, the risk profile of off-grid supply is quite different from that of grid supply, as there are currently substantial differences between the energy-specific consumer protections available to grid-connected customers and those available to off-grid customers. In several states the full suite of protections under the National Energy Retail Law and Rules (NERL and NERR) cease to apply when a customer moves off-grid. The Commission is not able to address these issues through changes to the NER under this rule change request.

Therefore, the Commission's final determination is not to make a rule at this time, as a change to the NER could not address a lack of customer protections for off-grid customers and may be invalid due to inconsistencies with the NEL.

A co-ordinated package of changes to a range of laws, rules and state and territory instruments is required to fully address these issues. The COAG Energy Council is considering these issues through two working groups: one on harmonising jurisdictional protections for off-grid customers, and one on mechanisms for the transition of customers from grid supply to off-grid supply. The Commission has participated in meetings held by these working groups.

Proposed approach to off-grid supply

The final determination proposes a range of changes to allow off-grid supply to be provided efficiently to selected edge-of-grid customers, in a way which avoids unnecessary network expenditure while protecting the long-term interests of electricity customers. These recommendations include:

- Amending the NERL and NERR and/or relevant jurisdictional instruments to implement an appropriate regime of energy-specific protections for off-grid customers, including reliability standards and (if necessary) price controls.
- Amending the NEL and NER as required to allow distributors to provide off-grid supply as a distribution service, which could then be subject to economic regulation.
- Allowing distributors to provide off-grid supply only to customers with a grid connection and where appropriate consent provisions have been satisfied.
- Prohibiting distributors from investing in individual power system assets, so distributors must obtain these services on the contestable market (unless an exemption is granted).

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