AEMC

INFORMATION

Promoting efficient reliability investment in transmission networks

Recommendations on a framework for transmission reliability

The Australian Energy Market Commission has developed a framework for setting and regulating transmission reliability in the National Electricity Market (NEM). This framework will promote efficient network investment and allow reliability levels to better reflect the needs of customers.

Reliability in transmission networks

Reliability refers to the extent to which customers have a continuous supply of electricity. Transmission networks play an essential role in ensuring that the power system operates in a stable manner. They also facilitate competition between generators so that customers can be provided with electricity at the lowest price.

The reliability of a transmission network relates to whether the network is adequate to transport power to demand centres and whether it can withstand various risks without serious consequences for customers.

The level of reliability that transmission networks are required to provide affects the level of investment that networks undertake. This ultimately feeds through to the electricity prices paid by customers.

As it would not be cost effective or feasible to remove all potential supply interruptions faced by customers, determining the level of reliability that transmission networks must provide requires trading-off the costs of building and maintaining transmission networks against reliability outcomes for customers.

There is scope to improve the efficiency of network investment in the NEM through applying a transparent framework which informs this trade-off and a consideration of the value that customers place on reliability.

Benefits of an efficient framework for transmission reliability

The Australian Energy Market Commission has recommended a framework which promotes greater efficiency, transparency, and community consultation in how transmission reliability levels are set and provided across the NEM. In particular the framework would:

- Compare the costs of building and maintaining electricity networks against reliability outcomes. The costs to customers of outages can then be used to guide the setting of reliability standards. This would provide for a more economically efficient way to determine the appropriate level of reliability that transmission networks must provide. It would also lead to more efficient investments by transmission businesses and electricity prices that are consistent with the needs of customers.

- Provide an independent process for setting reliability standards that separates the body responsible for providing reliability from the body which sets standards.

- Set reliability standards ahead of the need to invest to provide transparency and certainty to market participants regarding the level of reliability they can expect to receive and increase the accountability of transmission businesses for the level of reliability provided.

- Provide consistency in how reliability standards are expressed, which will allow standards and performance to be compared across the NEM. This will assist the Australian Energy Regulator (AER) to determine revenues for transmission businesses that are consistent with the efficient delivery of their standards.

The intention of the framework is not to result in a single harmonised level of reliability that will apply across the NEM. Rather, the focus is on implementing an effective framework for setting, delivering, and reporting on transmission reliability standards which includes greater consideration of the value customers place on reliability.

The Australian Energy Market Commission has recommended a framework which promotes greater efficiency, transparency, and community consultation in how reliability levels are set and provided across the NEM.

In most jurisdictions, the regulation of reliability is primarily the responsibility of jurisdictional governments. The framework would allow jurisdictions to maintain their existing responsibility for setting transmission reliability standards or they could delegate their responsibility to the AER or an independent jurisdictional body. Jurisdictional ministers would also receive independent economic advice on the costs and benefits of meeting different levels of reliability.

As part of the framework, the AER would also become responsible for estimating and updating the value that customers place on reliability (VCR). This will assist jurisdictions in determining the appropriate level of their reliability standards. With this responsibility the AER will be able to improve the VCR methodology through repeated application. This will allow customer preferences to be more accurately revealed over time.

In light of current limitations in the measurement and application of VCR estimates, the framework would include the ability for jurisdictional governments to consider additional factors which may not be fully accounted for in the VCR, such as the risk of city wide outages. The framework provides ministers with the ability to exercise these judgements in an informed and transparent manner to best reflect the needs of customers.

Next steps

Given current expectations of lower network investment and limited demand growth, the Commission considers that this is the opportune time to reform existing regulatory arrangements for network reliability. Changing the arrangements in these circumstances is unlikely to result in significant shifts in reliability performance or costs in the short term, but allows the framework to be introduced and adapted under relatively stable network conditions. The implementation of the framework will also reduce the risks of inefficient network investments over the longer term.

Some of the benefits can be captured in the near term through establishing key elements of the framework. The final report sets out an interim stage which could be undertaken to improve the existing arrangements for setting, delivering, and reporting on transmission reliability standards ahead of the implementation of the full framework.

This interim stage would include the Standing Council on Energy and Resources (SCER) developing a rule change request to require the Australian Energy Market Operator to work with industry and jurisdictional governments to develop a common approach to expressing transmission reliability standards. As part of the interim stage, SCER would also request the AER to become responsible for VCR estimates to assist jurisdictions to make decisions about the appropriate level of their reliability standards.

The AEMC has also been requested by SCER to develop a framework for distribution reliability in parallel with the transmission framework. Common arrangements have been recommended in relation to the standard setting process and the allocation of responsibilities to reduce the cost of implementing and applying the frameworks. However, differences in the expression of standards and compliance obligations are recommended to reflect the differing characteristics of transmission and distribution networks.

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