

Terms of Reference

National Electricity Network Reliability Framework and Methodology

SCER Directed Review

Under section 41 of the National Electricity Law (NEL) the Ministerial Council on Energy (MCE) may direct the Australian Energy Market Commission (AEMC) to review, amongst other things, any matter relating to the National Electricity Market (NEM) or any other market for electricity. Accordingly, under section 41 of the NEL, the Standing Council on Energy and Resources (SCER), as the successor to the MCE, directs the AEMC to:

- develop a nationally consistent framework and methodology for developing, describing and reporting on electricity network reliability and associated standards in the NEM that can be adopted by a relevant jurisdiction and/or be applied by the Australian Energy Regulator (AER); and
- develop a national framework and methodology that:
 - will apply an appropriate measure of the value customers place on the reliability of electricity supply;
 - considers options for taking into account local circumstances which may require different levels of reliability, for example for public health and safety reasons;
 - builds on the National Transmission Reliability Framework previously agreed by the Ministerial Council on Energy (MCE) in November 2011;
 - provides a methodology for establishing distribution reliability requirements that recognises variable network characteristics of relevance (whether physical, geographical or relating to the customer base) and the differences between jurisdictions; and
 - provides indicative costs of implementation, the indicative scope of appropriate legislative changes, and the costs and benefits of application.

In undertaking this work, the AEMC will ensure that the approach taken to setting reliability requirements reflects economically efficient outcomes in the long term interests of consumers, based on the value customers place on the reliability of electricity supply.

Recognising there are differences between transmission and distribution networks, the AEMC is requested to ensure the framework provides for consistency between transmission and distribution to the greatest extent appropriate. Where this is not feasible, the AEMC should take into account the differences in the nature of transmission and distribution networks in developing different approaches.

The terms of reference for this review are set out below.

Purpose for the Review

The required levels of reliability for electricity distribution and transmission networks are currently set and regulated in each jurisdiction. This has meant that it is difficult for regulatory bodies, customers, market participants, and jurisdictional governments to accurately compare and assess required levels of reliability and reliability performance across jurisdictions. The way that reliability is regulated, and in particular the settings chosen, also has impacts for the level of transmission and distribution investment that is required.

A consistent framework would provide an opportunity for an improved understanding of the target and actual level of reliability in each jurisdiction. It could also provide for a more economically efficient, transparent and robust methodology for setting the level of reliability that transmission and distribution networks provide, which more closely reflects the trade-off between the cost of investing in and maintaining networks and the value placed on reliability by customers. This has the potential to lead to more efficient investment decisions by transmission and distribution businesses, and in turn, more efficient pricing outcomes for customers.

Consequently, the SCER considers the AEMC, in consultation with Australian Energy Market Operator (AEMO) and jurisdictions, should evaluate existing jurisdictional practices and best practice approaches for determining the value customers place on the reliability of electricity supply and identify any wider costs and benefits to the community (to the extent they are not incorporated in consumers' valuations) which should be considered when establishing desired reliability outcomes.

On 7 December 2012, the Council of Australian Governments (COAG) endorsed a package of energy market reforms. This included an in-principle agreement to adopt a new best-practice framework for reliability standards and to transfer responsibility for applying the framework to the AER, with a final decision by the end of 2013.

In giving effect to this commitment, SCER notes the work around reliability standards to date, specifically:

- the MCE's response to the AEMC's National Transmission Reliability Standard Framework, published by the MCE in November 2011;
- the *Review of Distribution Reliability Outcomes and Standards* New South Wales workstream, finalised by the AEMC on 31 August 2012; and
- the ongoing national work stream for the *Review of Distribution Reliability Outcomes and Standards*, draft report published 28 November 2012.

In addition, SCER recognises related work being undertaken by market bodies, which raises interdependencies that must be managed. Key reviews include the AEMC's work around the delivery of cost-efficient investment in generation and transmission in the *Transmission Frameworks Review*. This review is expected to be finalised by 31 March 2013. Coordination with the work of AEMO to develop region-specific Values of Customer Reliability (VCR) will also be critical, both to inform the AEMC's consideration of appropriate measures and methodologies and to ensure these figures will appropriately support informed jurisdictional decisions on the application of the new framework. The AEMC work on this element should feed into AEMO's work in developing a methodology which it will subsequently apply to develop region-specific VCRs.

National Transmission Reliability Work Stream

Purpose of the work stream

On 16 November 2011, the MCE published its Response to the AEMC's Transmission Reliability Standards Review. The key aspects of the national framework agreed by the MCE include:

- improving market outcomes through increasing the transparency and specificity of reliability standards;
- improving regulatory outcomes by ensuring reliability-driven augmentations are underpinned by transparent and economically derived standards; and
- providing flexibility to ensure that individual jurisdictional requirements can be met.

Since the release of the MCE response and the tasking of the AEMC to develop an implementation plan for the framework in November 2011, there has been significant further consideration of the transmission frameworks, the rules around economic regulation of networks and additional work from AEMO on investment to meet reliability requirements. This terms of reference will supersede the MCE's previous tasking for the AEMC to develop an implementation plan as reflected in its response to the Transmission Reliability Standards Review. SCER may request the AEMC to provide advice on the implementation of the framework developed under this terms of reference following its consideration of the AEMC's final report, consistent with the COAG December 2012 agreement.

SCER notes that while the agreed transmission reliability framework provides for high level principles to apply when setting reliability standards, it does not assist the standard setting body in determining the best methodology to use. As the link between customer willingness to pay and reliability outcomes can be enhanced through using an appropriate methodology, SCER requests that the AEMC develop a nationally consistent and robust methodology for setting transmission reliability standards that could be adopted by jurisdictions. This methodology should build on the agreed principles set out in the national transmission reliability standard framework and recognise that it is entirely appropriate for standards to differ across different areas of the transmission system.

Approach to the work stream

In developing the framework and methodology for transmission reliability, the AEMC is requested to:

- develop a nationally consistent approach for expressing transmission reliability outcomes, building on that which was agreed by the MCE in its response to the AEMC's Transmission Reliability Standard Review;
- develop a nationally consistent approach for establishing transmission reliability settings, which takes into account the trade-off between the cost of investing in and maintaining transmission networks and the value placed on reliability by customers and that accounts for local conditions;

- assess the costs and benefits of the above approaches in line with the National Electricity Objective (NEO), with particular focus on assessing the outcomes delivered by different approaches with regard to the balance between customers' willingness to pay and the costs of delivering different reliability outcomes;
- with AEMO, and in consultation with jurisdictions, develop an appropriate mechanism for measuring and updating the value customers place on reliability, which takes into account an appropriate range of customer types and geographical and demographic differences;
- consider options to take into account local circumstances which may require different levels of reliability;
- develop a consistent approach to reporting on transmission reliability across the NEM, with any weightings and assumptions applied to different network elements made explicit;
- advise on appropriate changes to the institutional arrangements for setting and applying transmission reliability levels, either by jurisdictions or by the AER, and how these arrangements should operate in conjunction with an integrated national transmission planning system; and
- ensure that any proposed framework and methodology makes explicit the opportunity for jurisdictions to transfer responsibility for applying the framework to the AER.

Relevant considerations

The AEMC is to have regard to the following work when undertaking the transmission work stream:

- the MCE response to the AEMC *Review of Transmission Reliability Standards*;
- relevant aspects of the AEMC's work in its *Transmission Frameworks Review*;
- AEMO's 2012 *Economic Planning Study Report*; and
- the potential interactions between a national framework for transmission reliability and AEMO's role as national transmission planner.

National Distribution Reliability Work Stream

Purpose of the work stream

At the 10 June 2011 meeting of SCER, Energy Ministers considered drivers of the recent electricity price rises. Ministers noted that distribution network investment was a significant contributor to these rises and that in some jurisdictions, such as New South Wales, distribution network reliability standards were potentially driving the cost increases. As reflected in the meeting communiqué, Ministers agreed to direct the AEMC to conduct a review of the distribution reliability standards framework in the NEM. Further, on request of the New South Wales Premier, Energy Ministers agreed to direct the AEMC to conduct a review of New South Wales (NSW) distribution reliability outcomes.

On 28 November 2012, the AEMC released its draft report for the NEM work stream in its *Review of Distribution Reliability Outcomes and Standards* that noted that a national framework for distribution reliability outcomes would provide a transparent approach for jurisdictions to set efficient reliability targets that take into account the costs of investments to deliver a reliable supply of electricity and the value that customers place on reliability. It also identified the potential to ensure flexible investment decision making by distribution businesses by replacing prescriptive input planning with an outcomes-based approach. A consistent way of expressing reliability targets and outcomes would also improve the AER's ability to benchmark reliability performance and to determine efficient levels of expenditure to achieve reliability outcomes across different distribution businesses.

Under the terms of reference for the distribution review (signed 30 August 2011) the MCE is required to advise the AEMC, following publication of its Draft Report, on the need for any further work to develop a best practice approach to distribution reliability that could be applied by jurisdictions. The following tasking relates to that advice to the AEMC.

Approach to the work stream

In developing the national framework and methodology as it applies to distribution network reliability requirements, the AEMC is requested to:

- develop a nationally consistent approach for expressing distribution network reliability outcomes, which would allow distribution reliability outcomes to be compared and reported on across the NEM;
- develop a nationally consistent approach for establishing required distribution reliability settings, which takes into account the trade-off between the cost of investing in and maintaining distribution networks and the value placed on reliability by customers;
- assess the costs and benefits of the above approaches in line with the National Electricity Objective, and through a comparison with existing jurisdictional practices, with particular focus on assessing the outcomes delivered by different approaches with regard to the balance between consumers' willingness to pay for, and the costs of delivering, different reliability outcomes;
- with AEMO, and in consultation with jurisdictions, develop an appropriate mechanism for measuring and updating the value customers place on reliability, which takes into account an appropriate range of customer types and geographical and demographic differences;
- consider options to take into account local circumstances which may require different levels of reliability;
- develop a nationally consistent approach for reporting on distribution reliability outcomes on a regular basis, with any weightings and assumptions applied to different network elements made explicit; and
- ensure that any proposed framework and methodology makes explicit the opportunity for jurisdictions to transfer responsibility for applying the framework to the AER.

Relevant considerations

The AEMC is to have regard to the following work when undertaking the distribution work stream:

- the SCER response to the *Power of Choice Review*; and
- the AEMC's proposed national framework for distribution reliability outcomes in its Draft Report on the national workstream of the *Review of Distribution Reliability Outcomes and Standards*.

Relevant Publications and Considerations

In addition to the factors outlined above, the AEMC is to have regard to the following in conducting both work streams for the review:

- the National Electricity Objective;
- recent amendments in the AEMC's *Final Determination for the Economic Regulation of Network Service Providers Rule Change*;
- the potential implications of the frameworks developed for transmission and distribution reliability on the AER's revenue determination process for transmission and distribution businesses, including the implications on the Service Target Performance Incentive Scheme for those businesses;
- the AER's recently-commenced development of Capital Expenditure Guidelines for transmission and distribution networks, to be completed by 29 November 2013;
- the Productivity Commission's *Inquiry into Electricity Network Regulation*;
- other relevant reviews and rule changes; and
- any other relevant information.

Consultation for the Work Stream

In conducting the review, the AEMC must consult broadly with stakeholders. This must include, but is not limited to:

- AEMO;
- the AER;
- jurisdictional reliability setting bodies;
- Energy Ministers and their Officials;
- network businesses; and
- consumer representatives.

Where appropriate, the positions of the above parties should be represented in the AEMC's publications and reports, including an explanation of how these positions have been considered by the AEMC.

Timeframe and Deliverables

The AEMC is requested to provide to the SCER and publish:

- a final report on the distribution work stream by 27 September 2013; and
- a final report on the transmission work stream by 1 November 2013.

Both reports should be provided to SCER two weeks prior to publication.

At a minimum, the AEMC is requested to present formally on its work to date to the SCER's Officials by:

- 30 April 2013;
- 30 August 2013; and
- 30 September 2013.

As set out in section 41 of the NEL, any variation on these timelines requires formal agreement of the SCER.