National Reliability Framework Review

Submission to the AEMC Consultation Paper

9 August 2013

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1. OVERVIEW

A reliable electricity supply is essential for households and industry. However reliability comes at a cost. The greater the reliability required the greater the cost in investment. Reliability is regulated to ensure that there is sufficient investment by electricity networks to meet community expectations.

In addition to jurisdictional reliability requirements in Codes and Licence conditions, the Australian Energy Regulator (AER) regulates reliability through the regulatory framework and through the Service Target Performance Incentive Scheme (STPIS). STPIS operates to provide the appropriate incentives to determine the trade off between cost and reliability.

Spending on improvements in reliability in some jurisdictions has been a driver of network price increases in recent years. In light of this issue, the Standing Council on Energy and Resources (SCER) has asked the Australian Energy Market Commission (AEMC) for advice on how the jurisdictional arrangements can be made more consistent, through a national approach, and how jurisdictional arrangements can be made more economically efficient.

The Energy Network Association welcomes the opportunity to comment on the AEMC's Consultation Paper on the Review of the National Frameworks for Transmission and Distribution Reliability. ENA is the national industry association representing the businesses operating Australia's energy transmission and distribution networks.

In undertaking the Review, SCER has requested that the AEMC ensure that the framework provides for consistency between transmission and distribution networks, to the greatest extent appropriate, given that there are differences between the nature of transmission and distribution networks. The terms of reference require the AEMC take these differences into account in developing different approaches.

ENA proposes that different approaches to reliability regulation are required. In our view consistency in the different frameworks for transmission and distribution networks can be ensured by ensuring that the frameworks are consistent with the principles of efficiency, effectiveness and transparency.

ENA supports the AEMC's proposed nationally consistent framework for transmission networks, based on jurisdictions setting targets for reliability. In ENA's view the AEMC's proposed nationally consistent framework provides an effective basis for determining whether existing levels of reliability delivered by transmission networks need to be adjusted ahead of each regulatory control period and the extent to which additional expenditure on reliability may be justified.

The ENA supports a nationally consistent incentive approach for the regulation of reliability on distribution networks and in this regard largely supports the thrust of the Productivity Commissions' recommendations in its final report on *Electricity Network Regulatory Frameworks*.

The ENA proposes a more light handed approach to regulating the reliability performance of distribution networks. Under this approach the AER would set reliability performance targets for distribution networks during the revenue determination process. The AER's incentive approach is already integrated with other aspects of distribution network regulation. It is therefore more efficient to continue with this national

approach rather than adopt the alternative prescriptive process of setting reliability performance targets as proposed by the AEMC.

The ENA is concerned that the current rule change proposal would:

- extend the duplication of reliability regulation which currently occurs in some jurisdictions to all jurisdictions in the national electricity market (NEM). This prescriptive approach is a far more costly framework than a more light handed incentive based approach and it is difficult to understand the net benefits to consumers.

- Imply the need for distribution businesses to undertake a cost benefit analysis of different scenarios for every feeder type, every five years.

ENA members would propose a more light-handed approach which is still founded on, and responsive to, the customer value of reliability but relies on the incentives provided by the Australian Energy Regulator's Service Target Performance Incentive Scheme (STPIS). This reflects the recommendations of the Productivity Commission in its Review.

Additionally, distribution businesses would respond to the consumer consultation process to identify reliability performance issues to be addressed through expenditure in their regulatory proposals. Negotiation may also occur with governments which wish to directly fund enhanced service outcomes.

While the ENA generally prefers output based reliability performance targets on distribution networks, there are two areas where the measurable economic value of reliability may be understated by applying a purely incentive based approach or a regulatory proposal supported by a cost benefit analysis. These include where investment is required to address:

- High Impact,Low Probability (HILP) events (eg. the blackout of critical central business districts;) and
- the Worst Performing Feeders (WPF) on the Network.

Expenditure on reliability improvements in such cases may have positive social and community benefits and externalities not reflected in a quantified cost/benefit analysis that when taken into account, justifies the expenditure.

In these limited circumstances, it is considered appropriate that jurisdictions retain the capacity, if they choose, to support expenditure proposals by specifying compliance obligations related to reliability for the regulatory control period. It would be essential however, that the framework also require that jurisdictions make explicit the justification for the requirement, its economic cost and its effect on pricing for network customers.

ENA therefore supports a framework to allow jurisdictional discretion to set additional measures to be applied to each distribution network if considered necessary. We look forward to working closely with the AEMC in coming months in the consideration of the alternative approaches.

This ENA submission consists of the following sections:

Section 2 Approach to regulating transmission network reliability

Section 3 Approach to regulating distribution network reliability

Section 4 Public reporting and benchmarking

Section 5 Responses to AEMC questions

ENA welcomes feedback from interested stakeholders on the ENA's proposed approach to the regulation of reliability performance on electricity networks. Any comments should be directed to Lynne Gallagher at the ENA by phone (02 6272 1515) or email lgallagher@ena.asn.au.

2. APPROACH TO REGULATING TRANSMISSION RELIABILITY

2.1. AEMC Position

The AEMC recommends that:

- transmission reliability standards would be expressed on an N-x basis for each connection point;
- the expression of reliability standards would be consistent across the NEM, in accordance with a national standards reference template, developed by AEMO;
- reliability standards would be set in advance of their application through a nationally consistent process in which:
  - jurisdictions set reliability standards for transmission networks, on the basis of a cost benefit analysis and after giving appropriate weight to any social or community expectations, or delegate this responsibility to the AER;
  - transmission networks consult with customers, provide jurisdictions with an assessment of the feasibility and costs of alternative reliability scenarios, and submit forecast expenditure based on the reliability standards as part of a revenue proposal;
  - AER determines the VCRs to be used by jurisdictions in their cost benefit analysis and determines the revenue of transmission networks consistent with the efficient delivery of reliability in the next regulatory period;
- transmission networks would be obliged to comply with the reliability standards under the National Electricity Rules (NER).

2.2. ENA Position

The ENA

- supports the expression of transmission reliability standards on an N-x basis with the ability to include additional parameters to define the most appropriate standard;
- recommends that transmission networks be actively involved in the development of the national standard reference template;
- supports HILP events being taken into account in the economic assessment process to the extent reasonably feasible;
- proposes that the reliability standard process commence 6 months earlier than proposed, to allow transmission networks 12 months at a minimum to reflect the new reliability standards in their revenue proposals;
- supports transmission networks consulting with their customers on reliability standards: and
- recommends that the requirement to comply with the applicable transmission reliability standard at a connection point should be a "reasonable endeavour "obligation.

2.3. ENA Comment

N-X standards for transmission networks

There are fundamental differences between transmission and distribution networks. While transmission networks are characterised by a very small number of major outages, distribution networks are characterised by a relatively large number of minor outages. These differences have implications for the appropriate form of reliability regulation.

ENA considers that the form of reliability standards for transmission networks should be based on the specification of input parameters, as it is difficult to observe reliability performance outcomes on these networks. This differs from the output based approach that should be applied for the regulation of reliability on distribution networks.[1]

ENA supports the AEMC's view that transmission reliability standards should be expressed on an N-x deterministic basis. The flexibility to include additional parameters as proposed by the AEMC, and supported by Grid Australia, will provide the granularity that is lacking in the current arrangements. Under these arrangements there are a number of defined categories into which different connection points can be classified.[2]

Further, the ability to complement N-x standards, with loss of load parameters has the potential to account for high impact, low probability events. The management of high impact low probability events is a critical consideration for transmission networks and sub transmission areas of distribution networks. These events are inadequately addressed through pure probabilistic assessments. ENA agrees that it is it is appropriate that the jurisdictional decision maker should be able to take the positive social and community benefits of additional expenditure, and externalities, into account in setting the standard. However, ENA also recommends that the economic adviser be required to consider HILP events in its analysis to the extent reasonably feasible to provide the most considered advice for the decision-maker.

In ENA's view the overall effect of this approach will be to provide:

- economically derived reliability standards that promote more efficient investment decisions and support the achievement of the National Electricity Objective; and
- reliability standards at each connection point that will facilitate effective compliance, public reporting and benchmarking by the AER.

National reference standard template

ENA supports the AEMC's approach of seeking to rationalise the process for setting reliability standards for transmission networks. The development of a national reliability standard template will assist

[1] It is worth noting that in meeting a transmission network N-x standard, that the joint planning process between transmission and distribution networks could identify that the standard could be met economically by an augmentation on the distribution network. For example, this could be achieved by transferring load to a different connection point.

jurisdictions in setting reliability standards and facilitate the AER's benchmarking of reliability standards for transmission networks across the NEM.

ENA agrees with the AEMC's view that AEMO would be well placed to undertake the role of determining the national reliability standard template for transmission networks, because of its technical expertise. Alternatively, as SCER has proposed there may be merit in the AER developing the national reference template. This is consistent with the AER's role of developing the reliability regulation guideline for transmission networks.

Whether SCER decides that AEMO or the AER is the most appropriate, ENA supports Grid Australia's recommendation that transmission networks should be actively involved in the process of formulating the national standard reference template. In particular, the rationalisation of existing transmission reliability 0standards will inevitably require compromises and trade-offs between the objective of greater granularity and simplicity. As transmission networks will have to apply the standards that are set out in the template it is appropriate that all transmission networks are engaged in this process.

Customer consultation on reliability

The AEMC proposes that the process for setting reliability standards for transmission networks would commence with a customer consultation process, to determine which aspects of reliability are particularly important to their customers. According to the AEMC, the consultation process would occur 18 months prior to the submission of a transmission network's regulatory proposal. This means that the reliability standards would be finalised 6 months prior to the transmission network lodging its regulatory proposal.

In ENA's view this time is not sufficient for transmission networks to develop their capital expenditure and operating expenditure plans based on the new reliability standards. ENA proposes that the reliability standard process commence at least 6 months earlier than proposed, to allow transmission networks 12 months at a minimum to reflect the new reliability standards in their revenue proposals.

ENA supports the AEMC's proposal that customers should be consulted on reliability standards, and that consultation by transmission networks should be consistent with the broader customer engagement required on revenue proposals. However, as noted in response to question 8(a), the consumer engagement process for the regulatory proposal is likely to be iterative, as the reliability standards will drive a significant portion of each transmission network's expenditure plans. Therefore, the consultation exercise for reliability standards will be one component of the consultation that is undertaken to develop the regulatory proposal.

It is also worth noting that the transmission networks' customer base is quite different to the customer base for distribution companies, which includes domestic, small industrial and commercial customers. Ultimately, transmission reliability standards affect the reliability enjoyed by end customers that are connected to the distribution network. In terms of consultation requirements, however, it would be helpful if the Commission clarified that transmission networks should be able to discharge their customer consultation obligations by working with distribution businesses to consult with end-use customers. ENA considers that the AER's reliability regulation guideline should not specify in detail how the consultation process should be conducted. A better regulation guideline on customer engagement, issued by the AER and currently in draft form, sets out the high level principles and

purpose, for all instances of networks customer engagement. ENA also notes that reliability issues are likely to vary across transmission networks and differ between transmission and distribution networks. It is therefore a matter for networks themselves to engage constructively with customers and to ensure that useful information regarding customers' preferences is incorporated into the reliability standard setting process.

Revenue setting process for transmission networks

The AEMC proposes a national consistent process that would apply across all jurisdictions in the NEM that is informed by an economic assessment of the costs and benefits. In ENA's view the same process should apply whether a jurisdiction is setting the reliability standards or delegates this responsibility to another body such as the AER. This means that in determining reliability standards, a jurisdiction or the AER should be able to consider factors which may not be able to be fully accounted for in an economic assessment, but that may nonetheless be of significance to consumers. For example, in the case of high impact low probability events it is difficult to quantify in a measure of the value of customer reliability for these events. There are proxy measures such as a notional insurance premium or value for money concepts that could be applied to quantify the significance of high impact low probability events.

The AEMC's process provides for the determination of the efficient reliability standards for each transmission network to apply in the next regulatory period. These standards will then form the basis of the transmission networks expenditure proposals submitted to the AER as part of its revenue determination. As reliability standards for transmission networks are input based, and reliability outcomes are difficult to observe, it is not possible to rely on an incentives approach to drive the efficient level of reliability over time.

In providing for the flexibility to update the reliability standards the AEMC has proposed that the cost impacts of a change in reliability standards should be addressed though the current pass through provisions in the National Electricity Rules. However, ENA considers that a balance needs to be struck between continuously updating the transmission reliability standards to fine-tune the transmission investment program and providing certainty to transmission networks in terms of the applicable transmission reliability standards and cost recovery over a five year period.

Compliance obligations under the NER

The AEMC proposes that compliance with reliability standards would be an obligation for transmission networks under the Rules. In ENA's view the requirement to comply with the applicable transmission reliability standard at a connection point should be a "reasonable endeavour" obligation. This form of obligation recognises that the reliability standards are based on input parameters and that factors beyond the transmission networks' control may prevent them from satisfying that standard.

Annual audit obligations

Transmission networks will be required to undertake annual audits to show that they have processes in place to meet their reliability standards. It is unclear why this additional obligation is necessary. The AER already has the power to audit to ensure compliance, so it is unclear why a more prescriptive obligation is needed.

3. APPROACH TO REGULATING DISTRIBUTION RELIABILITY

3.1. AEMC Position

The AEMC recommends that:

- reliability for distribution networks should be expressed as outputs based targets, at a minimum unplanned SAIDI and SAIFI for each feeder type;
- the expression of reliability targets should be consistent across the NEM, in accord with a national standards reference template, developed by the AER;
- no input planning standards to apply to distribution networks:
- reliability targets should be set in advance for each regulatory period through a nationally consistent process in which:
    - jurisdictions set reliability targets for distribution networks on the basis of a cost benefit analysis and after giving appropriate weight to social or community expectations, or delegate this responsibility to the AER;
    - distribution networks consult customers on their preferences and provide jurisdictions with an assessment of the feasibility and costs of alternative reliability scenarios; submit forecast expenditure based on reliability targets part of a revenue proposal; and
    - AER determines the VCRs to be used by jurisdictions in their cost benefit analysis; determines the revenue of distribution networks consistent with the efficient delivery of reliability in the next regulatory period.

3.2. ENA Position

The ENA :

- proposes a more light handed approach where the AER would set reliability performance targets for distribution networks during the revenue determination process, through STPIS, based on the average past five year's performance;
- proposes that HILP and worst performing feeders may need to be addressed by additional jurisdictional measures; and
- a national approach to Guaranteed Service Level regimes

3.3. ENA Comment

AEMC approach

The AEMC has proposed a nationally consistent framework for distribution networks where the jurisdictions retain responsibility for setting output based reliability performance targets in advance of each regulatory period, with the option of delegating this responsibility to the AER.

Under the AEMC approach targets would be set for the average unplanned frequency and duration of electricity outages for each and every feeder (or region or community in the case of South Australia and Tasmania respectively). The AEMC's proposed target setting process would involve selecting the reliability scenarios for economic assessment, providing costs and reliability impacts of each scenario and undertaking an economic assessment of the costs and benefits. Therefore there is a significant challenge and high costs involved in undertaking a cost benefit analysis for every feeder, and in validating and independently verifying the estimates of expenditure costs provided by distribution networks.

In addition to this approach to setting reliability targets, incentives under STPIS would apply in combination with performance controls and safeguards and the regulation of the inputs the process of delivering reliability through annual audits of network planning processes. In effect, the AEMC proposes three approaches to reliability regulation, when one is sufficient.

ENA's Preferred Alternative Approach

ENA proposes a more light handed approach to regulating the reliability performance of distribution networks. Under this approach the AER would set reliability performance targets for distribution networks during the revenue determination process, based on the average of the past five years' performance.

This approach recognizes that it is not necessary to set reliability targets for reliability performance to improve over time, given the incentives that are applied under STPIS which operates as a market based mechanism for efficient reliability outcomes. The Productivity Commission, in its final report on *Electricity Network Regulatory Frameworks*, recommended that the AER's STPIS should replace all existing jurisdiction-specific reliability requirements (Recommendation 15.1)[3], and should adopt STPIS as the basis for setting efficient reliability requirements.

In addition to the incentives provided by STPIS, distribution businesses would respond to the consumer consultation process to identify reliability performance issues to be addressed through expenditure in their regulatory proposals. Negotiation may also occur with governments which wish to directly fund enhanced service outcomes. Rather than undertaking a cost benefit analysis of different scenarios for every feeder type, every five years, under the ENA approach the distribution network, in concert with a jurisdictional government, will include expenditure in their regulatory proposals to address identified reliability problems.[4]

While the ENA generally prefers output based reliability performance targets on distribution networks, there are two areas where the measurable economic value of reliability may be understated by applying a purely incentive based approach or a regulatory proposal supported by a cost benefit analysis.

These include where investment is required to address:

[3] Productivity Commission, Final Report , Inquiry Report Volume 2, Electricity Network Regulatory Frameworks, p579

[4] Note that distributions businesses are already required to undertake economic assessments of capital expenditure proposals under the Regulatory Investment Test for Distribution (RIT-D). The RIT-D requires distribution networks to consider and assess all credible options before they choose the best investment option to meet their network's needs, for projects above $5 million threshold. The AER provides guidance on how to assess these options and the circumstances in which businesses are required to consider and quantify market benefits when undertaking a RIT-D.

- High Impact,Low Probability (HILP) events (e.g. the blackout of critical central business districts) and
- the Worst Performing Feeders (WPF) on the network.

Expenditure on reliability improvements in such cases may have positive social and community benefits and externalities not reflected in a quantified cost/benefit analysis that when taken into account, justifies the expenditure.

In these limited circumstances, it is considered appropriate that jurisdictions retain the capacity, if they choose, to support expenditure proposals by specifying compliance obligations related to reliability for the regulatory control period. It would be essential however, that the framework also require that jurisdictions make explicit the justification for the requirement, its economic cost and its effect on pricing for network customers.

High Impact Low Probability Events

ENA considers that the issue of HILP events on distribution networks could be addressed through a similar approach adopted for transmission networks. This approach creates the potential for reliability targets to be set on high security areas of distribution networks using a combination of both input based N-x reliability standards and output based reliability performance targets set through STPIS.

Worst Performing Feeders

For those worst served customers in poor reliability areas, the AER's STPIS has provisions that deal with making improvements to supply reliability where it is economic to do so. However, it is recognised that there are distribution areas where providing the target average level of reliability is not economically efficient or where it is uneconomic to make material improvements to supply reliability.

Jurisdictions may seek to improve reliability outcomes for customers by facilitating expenditure in these areas. However, this should be carried out through a separate jurisdictional process. Such a process could lead to the adoption of a more efficient solution for local circumstances which might not be a network solution. Quite feasibly consumer consultation carried out by a distribution network could identify the key considerations of both the network and a local community for the delivery of a reliable electricity supply. The outcome may involve action by both distribution network and the community to deliver the most efficient outcome. Further the new consumer consultation obligations placed on distribution networks under the NER provide impetus to further strengthen this avenue for resolving local issues. ENA notes that the NER require the distribution networks to address how the needs of consumers identified in consultation have been incorporated into their plans.

Jurisdictions may also address customer specific reliability issues through Guaranteed Service Levels (GSLs) regimes. GSLs place obligations on distribution networks to make a payment to customers where systemic poor service occurs. While ENA supports continuation of jurisdiction GSL regimes, or the use of the GSL provisions in the AER's STPIS, there could be benefit in reviewing a national approach to GSL regimes in the interests of consistency across the NEM.

Comparison with AEMC approach

The AEMC approach is costly because it appears to require a cost benefit analysis of all reliability targets at feeder level every five years, irrespective of past performance. In it addition requires that the

costs be verified and independently validated. Under the ENA approach the AER will provide the regulatory scrutiny through the appropriate regulatory processes.

The ENA's approach is more efficient than the AEMC's proposed approach both in terms of allocative efficiency and dynamic efficiency. It removes the additional costs on distribution networks of having to comply with jurisdictional regulation and regulation by the AER. Currently, Queensland, South Australia, Tasmania (and potentially NSW and the ACT from 2014) have reliability performance regulated by both jurisdictions and the AER. This will facilitate greater transparency of reliability performance and the efficient costs across distribution networks of delivering reliability performance.

The ENA's more light handed approach is also consistent with international practice as the same body, the AER, would be responsible for regulating both reliability and the price for electricity distribution network services.[5]

Overall, there a number of advantages in making the AER responsible for the governance of reliability, as proposed by the ENA:

- distribution businesses will have a single reporting framework for reliability target, reducing administrative costs;
- the AER's STPIS mechanism is well understood and will drive improvements in the balance between cost and reliability;
- the costs of changes in reliability will be reduced given time and incentive to innovate, whereas the AEMC approach will necessarily be based on tried and tested means of influencing reliability costs; and
- the approach is more light handed regulation, which avoids the costs of reviewing all reliability settings irrespective of past performance.

A centralized and more costly approach could possibly be justified where substantial and wholesale step changes in reliability performance are required. However, after significant improvement in reliability in recent years, the evidence is that for the foreseeable future there is little or no substantial investment planned by distribution networks for improving reliability. For example, in Tasmania and the ACT capital expenditure on reliability improvements in the current regulatory period is close to or at zero. In Victoria, reliability improvement expenditure is typically low as no expenditure provision is made in the regulatory determination and improvements rely more on innovative solutions driven by STPIS.

In NSW, lower demand and constraints on network expenditure suggest that expenditure in the next regulatory control period is likely to be very moderate. According to the AEMC's Review of the NSW Reliability Workstream:

> *"Indicative modelling prepared by the NSW distribution networks for the AEMC suggested that reliability-related capital expenditure over the 2014/15 to 2018/19 regulatory control period is likely to be significantly lower in total over the three networks compared to the current 2009/10 to 2013/14 period, if no changes are made to the current licence conditions. This indicates that the*

[5] The Brattle Group, Approaches to setting electric distribution reliability standards and outcomes, January 2012, p 147

majority of the capital expenditure to meet the existing licence conditions has already been included in the allowed revenues for the NSW DNSPs for the current regulatory control period.[6]

In Queensland, the scaling back of deterministic planning standards, implemented through the Electricity Network Capital Program (ENCAP) review has produced cost savings of $505 million in network expenditure.[7]

[6] AEMC, Final Report- NSW Workstream, 31 August 2012, p4
[7] Electricity Network Capital Program (ENCAP)Review 2011 Page 75

4. PUBLIC REPORTING

4.1. AEMC Position

The AEMC proposes that networks be obliged to publicly report on:

- their performance against their reliability standards and targets each year; and
- the outcomes of annual audits on whether they have processes in place to meet their standards and targets.

Networks would report on their performance and on the outcomes of their independent audits in their Distribution Annual Planning Reports (DAPR) and Transmission Annual Planning Reports (TAPR). The AER will summarise the performance and outcomes for the networks in its annual benchmarking report on the relative efficiencies of network businesses.

4.2. ENA Position

ENA response to the AEMC approach to public reporting

ENA supports public reporting through the DAPR and TAPR by networks of their performance against their reliability standards and targets, to ensure accountability, promote transparency and facilitate benchmarking.

ENA suggests that there are a number of implementation issues to be addressed including the implications of a rule change process to require transmission network reporting and the feasibility of aligning reporting years for the purposes of benchmarking.

ENA proposes that reporting of network reliability should be with and without exclusions with networks reporting on factors beyond their control and reasons for departure from the reliability targets.

ENA does not support automatic annual audits into whether a network has processes to meet the standards and targets.

4.3. ENA Comment

Consistency of reliability performance measures

ENA considers that it is appropriate for reliability performance targets for distribution businesses to be customer focussed.

Consistent definitions are readily achievable by adopting the ENA's more light handed approach to the regulation of reliability performance on distribution networks. The AER sets consistently defined

performance standards for the purposes of STPIS by feeder type using unplanned system average interruption duration index (USAIDI) and unplanned system average interruption frequency index (USAIFI). AER imposes momentary average interruption frequency index (MAIFI) indicators on some but not all distribution networks.

The development of the national reference standard template by the AER, with the active participation of distribution networks is an opportunity to resolve any issues concerning the measurement and application of reliability performance targets.

In this context the ENA notes that some jurisdictions set reliability targets for regions or customer categories rather than bye feeder type, while reporting performance to the AER for STPIS is on the basis of feeder type. There should continue to be flexibility of approaches under a nationally consistent approach.

Public reporting

ENA supports reporting in a consistent and comprehensive manner to enable comparisons and benchmarking across the NEM. However there needs to be a distinction made between public reporting and reporting for the purposes of measuring performance against the STPIS. The consistent definitions in the national standard reference templates for transmission and distribution networks will assist in facilitating consistent reporting throughout the NEM.

Transmission networks

ENA considers that there is merit in a public reporting regime including transmission networks, even though reliability outcomes are difficult to observe. Reporting should be against the parameters contained in the standard that the TNSP is required to comply with.

We note that the introduction of the AEMC's proposed reporting regime for transmission companies will require a rule change: a TNSP is not required to report its performance in the TAPR, unless expenditure is required to address a failure to meet performance standards[8]. On the other hand a DNSP must already report in the DAPR its performance against relevant standards[9].

Distribution networks

For distribution networks, any reporting regime needs to explain the context and the potential pitfalls of performing simple comparisons between networks. The reliability performance can be impacted by the density of customers, geography, events and the types of assets employed to deliver electricity to customers.

The level of disaggregation is important to provide stakeholders and customers with a clear picture of reliability in the distribution area in which they reside. The type of disaggregation that is appropriate depends upon the nature of the network being considered:

Accordingly, the ENA supports the full reporting of outages and associated analysis, including loss of supply attributed to generation, transmission and distribution. Moreover, the ENA supports the

[8] National Electricity Rules 5.12.2
[9] National Electricity Rules s.5.8 (j)

inclusion of a detailed reliability reporting in a network's Annual Planning Report, where deviations in performance can be analysed. This should assist in customers fully understanding the context of why performance has varied from the target. In addition, we consider that analysis of each Major Event Day (MED) event should be provided to inform customers the extent and cause of the MED event.

We support the AEMC's position that detailed definitions of what is and is not included in the calculation of reliability indices and how inputs are measured could be provided in national standard reference template.

ENA suggests that a national template could address reporting on both average (mean) performance, and appropriate reporting for worst served feeders or variations from the mean..

5. RESPONSE TO AEMC QUESTIONS

5.1. Expression of distribution reliability targets

Question 1 (a)

Does the proposed removal of input planning standards for distribution networks compromise the ability to deal with high impact low probability events such as city wide supply interruptions?

The removal of input planning standards on high security areas of the network does compromise the ability of distribution networks to deal with high impact low probability events such as city wide supply interruptions.

Security of supply requirements at high voltage and high volume levels on distribution networks are the main means of managing high impact risks. It is common for jurisdictions to designate supply security standards for central business districts and other major urban centres. For example in NSW, Queensland and Victoria and some parts of these distribution networks serve loads of hundreds of MW – comparable to many transmission elements. Even some zone substation assets can be serving loads in excess of 100MW. In rural and provincial areas it may be the area of customers that is impacted that is relevant. In rural areas loads over 15 MW can be significant if customers are without supply.

The AEMC proposes removing all input planning standards from distribution networks. This may present difficulties in justifying long term security investments to the AER. In particular it can be difficult to adequately capture the broader costs and impacts to society from the loss of wide-area or high security electricity supply in a value of customer reliability. The ENA therefore proposes that the AEMC approach be modified to apply input planning standards to networks on the basis of load served and community impact, rather than making the distinction based on transmission and distribution networks in these cases.

Question 1 (b)

Does the expression of distribution reliability measures by feeder type accommodate the specific locational characteristics of individual jurisdictions while achieving the benefits of national consistency?

No the expression of distribution reliability measures by feeder type does not accommodate the specific locational characteristics of individual jurisdictions. This is recognised by the AER in STPIS, where distribution networks are able to use feeder or alternative segmentation.

Some jurisdictions have set reliability performance targets by feeder type, other jurisdictions set targets by regional areas or customer categories.

Question 1 (c)

Is it possible to achieve consistency in the definitions of distribution reliability measures across the NEM, including consistency in exclusion criteria?

ENA considers that it is possible to achieve consistency on the scope of coverage of the measures (subject to the availability and the reliability of the data), with some unification around inclusion or exclusion of issues such as planned outages and customer initiated outages.

The AER under STPIS has adopted the internationally recognised Major Event Day methodology 2.5 Beta, while recognising that it may not be valid in the circumstances of some networks.

Question 1 (d)

Is the AER the appropriate body to be responsible for developing the national reference standard template for distribution? If not, which body should be responsible for this task?

ENA agrees that the AER is the appropriate body to be responsible for developing the national standard reference template for distribution networks, with the active participation of the distribution networks.

5.2. Expression of transmission reliability standards

Question 2 (a)

What would be the effect of expressing transmission reliability standards on an N-x basis and complementing this with the inclusion of additional parameters?

The AEMC's proposed approach of consistent transmission reliability standards across the NEM, expressed on a N-x basis and with the ability to include additional parameters, will result in more efficient investment decisions by transmission networks and more effective benchmarking of the efficient costs of delivering reliability..

Question 2(b)

Is AEMO the appropriate body to be responsible for developing the national reference standard template for transmission? If not, which body should be responsible for this task?

ENA agrees with the AEMC that AEMO is well placed to undertake the role of setting the national reference standard template. Whichever organisation is responsible for setting the national reference standard template ENA considers that all transmission networks should have the opportunity to be actively involved in its development. In particular, it is important that the national reference standard template appropriately balances the objectives of granularity and simplicity.

5.3. Structure of the standard setting process

Question 3 (a)

Is the proposed timeframe for undertaking the standard setting process able to be achieved in practice?

The time required for estimation of VCR by the AER should be incorporated in the time frame, for setting the relevant reliability standards or targets as part of the revenue determination process..

Under the ENA's approach the reliability targets for distribution businesses would be set by the AER under STPIS, as part of the revenue determination process.

Otherwise the timeframes envisaged for each of the three stages in the AEMC process for setting reliability standards for transmission networks appear sufficient. However, the setting of reliability standards 6 months in advance of revenue proposals being submitted does not allow sufficient time for transmission networks to develop their capital expenditure and operating expenditure plans based on the new reliability standards. ENA proposes that the reliability standard process commence at least 6 months earlier than proposed, to allow transmission networks 12 months at a minimum to reflect the new reliability standards in their revenue proposals.

Question 3 (b)

Are there any specific jurisdictional arrangements that would need to be considered in adopting the proposed frameworks, including how the responsibilities could be allocated?

There are no specific jurisdictional arrangements that are a constraint on the ENA's proposed more light handed approach for distribution networks based on the AER's incentive framework. On the other hand the existing jurisdictional arrangements in Victoria are inconsistent with the proposed AEMC framework for setting reliability targets for distribution networks.

In ENA's view it is desirable that SCER has the opportunity to consider a national framework that would be applicable to every jurisdiction, including the NEM.

5.4. Development of guidelines and the VCR

Question 4

(a)Which aspects of the proposed frameworks should be covered in the economic assessment process guidelines?

The guideline for the economic assessment process to be undertaken by transmission networks, should cover the stages of the process, the assumptions and information to be used as inputs in the process, the cost benefit methodology, the form of sensitivity analysis and the consultation requirements on the draft outcomes of the process.

The economic assessment guideline, should it apply to evaluation of expenditure options for improving reliability on distribution networks, should be consistent with the Regulatory Investment Test for Distribution (RIT-D). The RIT-D requires distribution networks to consider and assess all credible options before they choose the best investment option to meet their network's needs, for projects above $5 million threshold. The AER provides guidance on how to assess these options and the circumstances in which businesses are required to consider and quantify market benefits when undertaking a RIT-D.

Question 4 (b)

Is the AER the appropriate body to develop the guidelines, in light of its other roles under the proposed frameworks? If not, which body should be responsible for this task?

ENA considers that the AER is the appropriate body to develop the guidelines for the economic assessment process to be applied to reliability projects, for transmission and distribution networks..

Question 4 (c)

Is the AER the appropriate body to be responsible for updates to the VCR? If not, which body should be responsible for this task? Should the CPI be used to escalate VCRs each year?

While the AER is an appropriate body to be responsible for updates to the VCR, it is more critical that there is a commitment from governments and industry to the resourcing of the capacity to develop and update robust measures of VCRs.

ENA considers that there is value in integrating the work of the AEMO Review with the consideration of the appropriate nationally consistent reliability framework. In our submission to AEMO's review ENA supported AEMO's objective of seeking to develop better VCRs that could potentially drive more efficient market outcomes. In ENA's views VCRs will provide greatest benefit to allocative efficiency where they are calculated at a sufficiently granular level to inform relevant investment decisions in network reliability.

In this context it will be important for the VCRs calculated by AEMO to be displaced where more granular data is available and calculated according to an appropriate methodology. ENA proposes that where network businesses undertake specific estimates of local VCRs for network planning and reliability purposes at a network or feeder level that these VCRs should be given primacy over the AEMO derived VCRs.

Under either the ENA or the AEMC approach it is important that stakeholders have confidence in the robustness of the VCRs coming out of the VCRs review. For this reason ENA proposes that SCER should consider funding models to enable AEMO to engage both experts in non-market valuation and the Australian Bureau of Statistics (ABS) in the work of the Review. It is noted that the Government has agreed to the ABS involvement in principle, in the context of its response to the Productivity Commission's Final Report.

ENA supports the AER escalating the estimates of VCRs on an annual basis. Given the complexity of this issue, the AER should first determine if a "reset" of the VCR is required even on a five yearly basis. Changes in VCR value should be gradual in nature given the long planning horizons characteristic of networks. This may necessitate smooth transitions from the results of one review to another.

5.5. Customer consultation and reliability scenarios

Question 5 (a)

How should the customer consultation process be conducted to provide sufficient information to the standard setter to make an informed decision on the selection of a range of reliability scenarios?

The customer consultation process should conform to the principles being established by the AER guideline for customer engagement by network service providers. The results of the customer consultation should be provide a sound statistical basis to ensure a "representative" view of reliability performance is developed, and does not just represent the views of customers who have recently had particularly good or particularly bad experiences.

Customer consultation on preferences over various reliability scenarios would be covered by VCR surveys, particularly if a choice modelling approach is used (in accordance with AEMO's May 2013 Directions Paper). Research utilising focus groups to determine what aspects of reliability that customers care about would need to be undertaken as part of the process of deciding on how to define scenarios in the choice modelling survey. The problem of selecting reliability scenarios that are feasible in practice is not a question for customers, but rather an engineering/technical question for networks.

Question 5 (b)

Should limits or constraints be placed on the discretion that the standard setter has regarding the selection of reliability scenarios?

When deriving scenarios, under the framework for developing reliability standards for transmission networks, consideration will need to be given to the lag between expenditure decisions and reliability outcomes.

Under the ENA's more light handed approach there is no need to develop scenarios to test for the efficient level of reliability at different points on distribution networks.

Question 5 (c)

Should the evaluation of measures to address worst served customers for DNSPs be included in the economic assessment process?

For those worst served customers in poor reliability areas, the AER's STPIS has provisions that deal with making improvements to supply reliability where it is economic to do so. However, it is recognised that there are distribution areas where it may providing the target average level of reliability is not economically efficient or where it is uneconomic to make material improvements to supply reliability.

Jurisdictions may seek to improve reliability outcomes for customers by facilitating expenditure in these areas. However, this should be carried out through an independent process.

5.6. Economic assessment of reliability scenarios

Question 6(a)

What are the likely to be the main costs and resource implications for NSPs, economic advisers, and other stakeholders from the economic assessment process?

The AEMC's proposed approach would lead to higher costs of distribution networks delivering reliability performance over time than a more light-handed approach focussed on clear incentives.

First, administrative costs would be higher. As noted by the Productivity Commission, a target-setting approach would impose "the additional cost of a negotiation process between distribution businesses and the standard setting agency." The Productivity Commission also noted that "revelations of efficient reliability costs would be difficult and costly to obtain." [10]

Second, the marginal cost of reliability is likely to be higher than the levels that could be achieved when networks have clear incentives to innovate. The marginal costs of reliability estimated by NSPs as part of the proposed economic assessments would necessarily be based on 'tried and tested' means of influencing reliability. Given time and the incentive to innovate, networks may be able to find less expensive ways of improving reliability. For this reason, the economic assessment process proposed by the AEMC are unlikely to deliver as efficient a balance between cost and reliability as would an incentive-based approach in the long term.

Question 6 (b)

What are the main risks associated with the economic assessment process? Is the use of sensitivities during the economic assessment process likely to address risks around the uncertainty of key assumptions?

The risks in the economic assessment process, whether for transmission networks as part of the AEMC's proposed national framework or for distribution businesses in forecasting expenditure for their regulatory proposal, is the inherent uncertainty. This requires judgment to be exercised in setting reliability standards or in the development of expenditure proposals, rather than rigid observance of set parameters.

The estimation of VCRs is critical to the effectiveness and efficiency of the regulation of reliability on transmission and distribution networks, and therefore represents a key risk.

ENA notes that the AEMC proposes in the Consultation Paper (page 49 -50) that network costs should be compared with the value in the expected change in unserved energy. Consideration should be given to conducting any such analysis for distribution networks in terms of SAIFI and SAIDI measures, to be consistent with the STPIS.

[10] Productivity Commission, Final Report , Inquiry Report Volume 2, Electricity Network Regulatory Frameworks, p579p 578

5.7. Setting reliability standards and targets

Question 7

Does the Commission's proposed approach provide sufficient information to the jurisdictional minister to allow the minister to make an informed decision on the levels of reliability that appropriately meets community expectations?

The AEMC's approach provides information to the jurisdictional Minister to make informed decisions on measurable economic factors alone. Expenditure on reliability improvements in the case of HILP and worst served feeders may have positive social and community benefits and externalities not reflected in a quantified cost/benefit analysis that when taken into account, justifies the expenditure.

In these limited circumstances, it is considered appropriate that jurisdictions retain the capacity, if they choose, to support expenditure proposals by specifying compliance obligations related to reliability for the regulatory control period. It would be essential however, that the framework also require that jurisdictions make explicit the justification for the requirement, its economic cost and its effect on pricing for network customers.

5.8. Link to the revenue determination process

Question 8(a)

Should NSPs be required to align the consultation process at the commencement of the standard setting process with their consultation process on their regulatory proposal? Is this feasible and what costs or benefits may arise under this approach?

Under ENA's more light handed approach to setting reliability targets for distribution networks, the consultation process is already aligned with the development of distribution networks' regulatory proposals

Question 8

(b) What factors should the AER consider in taking into account any differences in the cost forecasts submitted during the standard setting process and in a NSP's regulatory proposal?

Under the ENA's more light handed approach for regulating reliability on distribution networks, the economic assessment of expenditure proposals to improve reliability are part of the regulatory proposal development process.

5.9. Updating reliability standards

Question 9(a)

Are the Commission's proposed criteria for when an update can be sought appropriate for TNSPs and DNSPs, noting the differing characteristics of these networks?

In ENA's view it is appropriate that the threshold for updates to the standards or targets should be the cost pass through threshold in the NER. This is consistent with ENA's view that the determination of reliability targets for distribution businesses should be part of the usual regulatory requirements governing networks.

Question 9 (b)

Do the Commission's proposed criteria represent a sufficiently high materiality threshold for updates?

ENA notes that it is desirable to limit the number of updates during a regulatory period so that all stakeholders have a reasonable degree of certainty regarding the applicable reliability standards. Frequent revaluations from one regulatory period to the next and within the regulatory control period will create uncertainties over future streams ,

Question 9 (c)

Would the proposed mechanism affect the incentives for efficient investment that exist under incentives based ex ante revenue allowances?

Provided the mechanism primarily relates to exogenous triggers, ENA understands that the mechanism should not interfere with the incentives under the ex-ante revenue allowances.

5.10. Compliance and performance reporting

Question 10 (a)

If the proposed framework for transmission reliability is adopted in Victoria, should AEMO be responsible for complying with Victorian transmission reliability standards?

For consistency, the proposed framework should also apply to AEMO.

Question 10 (b)

Does there need to be any changes to the current STPIS in order to enable it to be used to promote compliance with reliability targets for DNSPs?

ENA has concerns with the compliance framework proposed by the AEMC. The STPIS is not designed to enforce compliance with predetermined reliability levels. STPIS performance targets do not purport to be the efficient level of reliability. The purpose of the STPIS is to provide an incentive to deviate from those targets if the VCR, reflected in the rewards and penalties, exceeds

the cost of reliability improvement (or is exceeded by the cost savings from reliability deterioration).

Question 10 (c)

How should independent audits of NSPs' internal processes be conducted to demonstrate that NSPs have processes in place to meet their standards and targets?

Annual audits are an additional layer of regulation, albeit of inputs, and as such impose additional costs.

Under the AEMC framework, transmission networks will have a regulatory obligation to meet their N-x reliability standards. The AER already has the power to audit to ensure compliance, so it is unclear why an additional obligation is needed.

The proposed audit requirement for distribution networks is contrary to the purpose in removing regulation of planning standards in the first place. Distribution networks should be able to meet reliability performance targets through the best combination of building, maintaining and managing their networks and responding to outages. It goes without saying that under an outputs based approach, distribution networks will have plans and processes in place designed to achieve their targets.

In addition the AER collects auditable STPIS data as part of its Regulatory Information Notice.

Question 10 (d)

What issues should be considered in specifying how performance reporting should be undertaken by TNSPs and DNSPs?

To the maximum extent possible, reporting should be conducted within the existing AER reporting framework.

5.11. Next steps and implementation

Question 11

Do you have any views on the changes to the NEM regulatory architecture which may need to be made in light of our proposed frameworks?

ENA considers that no changes to the NEM regulatory architecture are required in so far as ENA is aware.