AEMC

REVIEW

Australian Energy Market Commission

DRAFT REPORT - NATIONAL WORKSTREAM

Review of distribution reliability outcomes and standards

28 November 2012

Submissions due 25 January 2013. Reference: EPR0031
Draft Report - National workstream

Inquiries

Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

E: aemc@aemc.gov.au
T: (02) 8296 7800
F: (02) 8296 7899

Reference: EPR0031

Citation

AEMC 2012, Review of distribution reliability outcomes and standards, Draft Report - National workstream, 28 November 2012, Sydney

About the AEMC

The Council of Australian Governments (COAG), through its then Ministerial Council on Energy (MCE), established the Australian Energy Market Commission (AEMC) in July 2005. In June 2011, COAG established the Standing Council on Energy and Resources (SCER) to replace the MCE. The AEMC has two principal functions. We make and amend the national electricity, gas and energy retail rules, and we conduct independent reviews of the energy markets for the SCER.

Executive summary

Electricity distribution systems are designed, built and operated to deliver a reliable supply of electricity to customers. Generally, the more reliable the supply customers receive, the higher the cost of building and maintaining these networks. Deciding on the level of reliability that networks should be built and maintained to involves making a trade-off between cost and reliability. How that level is determined, who determines it, and how it is expressed and measured are critical to ensuring distribution networks operate in a transparent and accountable way and deliver electricity services that efficiently balance the cost of providing these services with the level of reliability desired by customers.

The Australian Energy Market Commission (AEMC) considers there to be merit in developing a nationally consistent framework for expressing, delivering, and reporting on distribution reliability outcomes in the National Electricity Market (NEM). This draft report sets out our advice on the benefits of a nationally consistent framework and the high-level design of a framework that we consider would deliver more efficient and effective reliability outcomes across the NEM.

There is currently a lack of consistency and transparency across the NEM in relation to how reliability standards for distribution networks are expressed, delivered, and reported on. This has contributed to differences in how reliability outcomes are delivered by distribution businesses, the level of reliability which is experienced by consumers, and the costs of building and maintaining distribution networks.

Benefits of a nationally consistent framework

The Commission considers that a nationally consistent framework that incorporates the key features explored in this draft report has a number of benefits. It would provide a consistent approach for jurisdictions to set efficient reliability targets that take into account the costs of investments to deliver a reliable electricity supply and the value that customers place on reliability. In addition, the framework has the potential to improve the Australian Energy Regulator's (AER) ability to benchmark performance and to determine efficient levels of expenditure to achieve reliability outcomes. It also has the potential to ensure flexible investment decision making by distribution businesses.

Features of the proposed framework

The key features of our proposed framework are:

- An outputs-based approach that provides flexibility to distribution businesses to achieve reliability outcomes through efficient and innovative means by removing requirements to meet strict input planning standards that currently exist in some jurisdictions.

- Output reliability targets developed by each jurisdiction under a nationally consistent economic assessment process and using a nationally consistent set of definitions and exclusion criteria.

- Reliability targets set and approved by the relevant jurisdictional regulator or government, which take into account customer preferences and community needs and expectations.

- Flexibility for the relevant jurisdictional government to transfer responsibility to the AER for the setting of output reliability targets.

- An incentive system with material financial rewards and penalties to strengthen accountability and encourage distribution businesses to perform to the level of the output reliability targets.

- An allowance for additional measures to be included and evaluated on a cost-benefit basis to address the requirements of worst served customers.

- A nationally consistent framework for public reporting to allow for more accurate comparisons of performance across the NEM and a better understanding of the relationship between reliability performance and network expenditure.

The intention of the proposed framework is not to result in a single harmonised level of reliability that will apply across the NEM. Rather, the focus is on implementing a consistent framework for setting, delivering, and reporting on reliability targets and outcomes. Jurisdictions will retain responsibility for determining the appropriate level of distribution reliability.

Next steps

We welcome the views of interested parties in relation to any of the matters discussed in this report. To help focus responses, we have set out a number of specific questions in each chapter. Responses to those questions, and any other issues raised by this report, are due by 25 January 2013.

We intend to provide a summary of submissions to the Standing Council on Energy and Resources (SCER) following the close of consultation on this draft report.

Following the SCER's consideration of this report and submissions, we will develop our high-level framework into a more detailed best practice framework that delivers nationally consistent reliability outcomes that could be adopted by NEM jurisdictions or used as a reference to amend aspects of existing jurisdictional frameworks, if requested to do so by the SCER.

Contents

1 Introduction

1.1 Purpose of this paper

Distribution networks in the National Electricity Market (NEM) are responsible for over 90 per cent of the supply interruptions experienced by consumers.[1] The frameworks which govern how reliability standards for distribution networks are set, delivered, enforced, and reported on are currently determined by each jurisdiction. This has contributed to differences in how reliability outcomes are delivered, the level of reliability which is experienced by consumers, and the costs of building and maintaining distribution networks across the NEM.

This draft report sets out the Australian Energy Market Commission's (AEMC) advice on whether there is merit in a nationally consistent framework for expressing, delivering and reporting on electricity distribution reliability outcomes in the NEM. The report also sets out high level features for a nationally consistent framework, including the costs and benefits of this framework and considerations for its implementation. This advice was requested by the Standing Council on Energy and Resources (SCER) under the national workstream of the AEMC's review of distribution reliability outcomes and standards.

In developing our draft report, we have had regard to submissions received on our issues paper and meetings held with stakeholders. A summary of these submissions and the Commission's response to the issues raised is set out in Appendix A.

1.2 Terms of reference for the national workstream

In August 2011, the SCER directed the AEMC to undertake a review of distribution reliability outcomes and standards. This review has two separate workstreams, working to separate, but overlapping, timetables:

- a review of the distribution reliability outcomes in New South Wales ("New South Wales workstream"), which was completed in August 2012;[2] and
- a review of the frameworks across the NEM for the delivery of distribution reliability outcomes ("national workstream").

Under the SCER's terms of reference for the national workstream, the AEMC is required to undertake three main tasks:

1. Identify and analyse the different approaches across the NEM jurisdictions for delivering distribution reliability outcomes.

---

1 AER, *State of the Energy Market Report 2011*, December 2011, p. 65.

2 The NSW workstream of the review was completed on 31 August 2012 with the publication of the AEMC's final report. Further details on the NSW workstream, including relevant reports and supporting documents, can be found on the AEMC website at www.aemc.gov.au.

2. Advise on whether there is merit in developing a nationally consistent framework for expressing, delivering and reporting on distribution reliability outcomes.

3. If requested by the SCER, develop a best practice framework that delivers nationally consistent distribution reliability outcomes that could be voluntarily adopted by jurisdictions or used as a reference to amend aspects of existing approaches. This task will only be undertaken if requested by the SCER following the SCER's consideration of the AEMC's advice on whether there is merit in a nationally consistent framework for distribution reliability outcomes in the NEM.

The appropriate level of distribution reliability outcomes in each jurisdiction will not be considered as part of the AEMC's advice on the national workstream and will remain a jurisdictional responsibility.

The AEMC was requested to undertake this review following concern by Energy Ministers about the contribution of rising distribution investment to recent increases in retail electricity prices.[3] Similar concerns have been raised by a number of bodies including the New South Wales Independent Pricing and Regulatory Tribunal (IPART), the Garnaut Climate Change Review, the Australian Energy Regulator (AER), and more recently, the Productivity Commission. In requesting the AEMC to undertake the national workstream of this review, the SCER note that distribution reliability is one aspect of the framework which affects distribution investment and seek to ensure that there is an effective balance between ensuring there is sufficient investment in distribution networks to maintain reliability and pricing outcomes for consumers.[4]

The AEMC has also received terms of reference from the SCER to provide advice on the implementation of a nationally consistent framework for transmission reliability standards, following the AEMC's recommendations from its Updated Final Report on the Transmission Reliability Standards Review.[5] In undertaking this work and the national distribution workstream, the AEMC will consider any potential interactions and linkages. Where appropriate, the AEMC intends to adopt an approach which provides consistency in the reliability frameworks which are developed for transmission and distribution.

The AEMC commenced the national workstream of the review in June 2012 with the publication of an issues paper for public consultation. This paper set out the proposed scope and approach for the national workstream, as well as a detailed description of the current approach to distribution reliability in each NEM jurisdiction.

---

3 SCER, *AEMC Review of distribution reliability outcomes and standards- Terms of reference,* August 2011.

4 Ibid.

5 SCER, *Transmission Reliability Standards Review: Ministerial Council on Energy Response to Australian Energy Market Commission Final Report*, November 2011.

1.3 Stakeholder engagement process

The closing date for submissions to this draft report is **25 January 2013**.

We have set out a number of issues in the report that we are seeking comment on, which include:

- considerations for the development of nationally consistent guidelines, which would set out the process that must be followed in setting reliability targets, including a process of customer consultation;
- considerations for the development of a nationally consistent economic assessment process, which will compare costs of undertaking and maintaining investments against the value placed on reliability by customers for setting reliability performance targets, and a consistent set of definitions and exclusions for the measurement of reliability performance;
- the ability of the proposed framework to provide sufficient flexibility to meet the specific locational characteristics of individual jurisdictions while achieving the benefits of national consistency;
- considerations for worst served customers;
- the costs and benefits of imposing a nationally consistent guaranteed service level (GSL) scheme;
- options available to provide confidence that Distribution Network Service Providers' (DNSP) actual reliability performance will be consistent with their reliability targets;
- performance incentive schemes; and
- nationally consistent reporting.

1.3.1 How to make a submission

Submissions must be on letterhead (if submitted on behalf of an organisation), signed and dated. Submissions should quote project number "EPR0031" and may be lodged online at www.aemc.gov.au or by mail to:

Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

1.4 Structure of the draft report

The remainder of the draft report is structured as follows:

- Chapter 2: Approach and principles for considering the merits of a nationally consistent framework.
- Chapter 3: Key features and proposed impacts of our nationally consistent framework.
- Chapter 4: Consultation on and selection of reliability outcomes.
- Chapter 5: Setting and approving reliability targets.
- Chapter 6: Investment decision making.
- Chapter 7: Enforcement and incentives.
- Chapter 8: Reporting.
- Chapter 9: Implementation of a nationally consistent framework.
- Appendix A: Summary of submissions on the national workstream issues paper.

2 Approach and principles for developing a nationally consistent framework

This Chapter outlines the Commission's approach to considering the merits of a nationally consistent framework, provides a discussion of the main elements common to current jurisdictional approaches to distribution reliability, outlines the principles used to guide the assessment of the merits of a nationally consistent approach, and sets out the Commission's conclusions on the merits of a nationally consistent framework.

2.1 Approach to considering the merits of a nationally consistent framework

The SCER's terms of reference require that the merits of moving to a nationally consistent framework for distribution reliability are assessed before consideration is given to a best practice approach that can be adopted by NEM jurisdictions.

The Commission considers that in order to assess the merits of a nationally consistent framework, the high-level content of a nationally consistent framework must be identified and explored.

This draft report outlines the high-level design of a nationally consistent framework and assesses the merits of that framework in the context of existing jurisdictional approaches. The Commission has focused on the advantages and efficiencies that can be obtained from a nationally consistent framework that incorporates certain key features.

The Commission's proposed approach to the delivery of nationally consistent reliability outcomes is designed as a framework that could be voluntarily adopted by jurisdictions or used as a reference to amend aspects of existing jurisdictional approaches.

Chapter 3 outlines the Commission's considerations for developing a nationally consistent framework. Chapters 4 to 8 explain each of the key elements of the proposed framework and the merits of moving to a nationally consistent approach with regard to each of those key elements.

Our analysis has drawn on the discussion provided in the issues paper of the existing approaches to jurisdictional reliability in the NEM. This includes an assessment of the methodologies and outcomes, the differences in approaches between jurisdictions, and the implications of these differences in the consideration of a nationally consistent framework.

In developing our proposed framework, we have also considered stakeholder submissions on the issues paper and the Brattle Group's assessment of national and

international approaches to distribution reliability which was published by the Commission in February 2012.[6]

2.2 Elements of a nationally consistent framework

The Commission has considered the following aspects of existing NEM jurisdictional approaches to distribution reliability in the development of the proposed design for a nationally consistent framework. Stakeholder submissions on the issues paper did not propose that any additional aspects should be considered.

- **Input planning criteria** – refers to obligations that govern the approach taken by the DNSP to determine planning and investment decisions in relation to security and reliability of supply. This could include undertaking network investments according to an economic assessment that discriminates projects on the basis of net benefit or undertaking projects in order to meet specific network redundancy requirements.

- **Output reliability performance standards or targets** – refers to the level of average service standards to which a DNSP is either required to, or should aim to, perform. The most common indices used for measuring service standards are System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI). SAIDI is used to measure the duration of outages, usually as minutes per customer per year. SAIFI measures the frequency of outages, and is usually measured as a number of outages per customer per year. Jurisdictions may use other measures such as Momentary Average Interruption Frequency Index (MAIFI) which is used to measure the frequency of outages of very short duration.

- **Governance arrangements** – refers to the administration framework for reliability standards and targets. This includes the approach to determining the standards and targets, the body responsible for setting, approving and enforcing the standards and targets, and the penalties for non-compliance.

- **Incentive schemes** – refers to schemes that provide incentives to a DNSP to maintain or improve reliability performance. Currently, the AER is in the process of applying the Service Target Performance Incentive Scheme (STPIS) to the DNSPs in each NEM jurisdiction.[7] The STPIS operates to provide financial incentives to maintain and improve service performance by assigning rewards or penalties to a DNSP, as a per cent of revenue, where performance is better or worse than the target performance level.

---

6 *Approaches to setting electric distribution reliability standards and outcomes*, The Brattle Group, January 2012.

7 DNSPs in Queensland, South Australia, Tasmania, and Victoria are currently subject to the STPIS. DNSPs in the Australian Capital Territory and New South Wales will be subject to the STPIS from the start of the next regulatory control period.

- **Monitoring and reporting** – refers to the requirements in relation to reporting of network reliability performance.

- **Requirements relating to worst served customers** – refers to obligations on the DNSP, such as improvement programs or annual reporting, directed at service standards for customers in poor performing parts of the network. These requirements can be used to complement the reliability performance standards and design planning criteria referred to above and protect customers that experience significantly worse reliability outcomes than the average required by the reliability performance standards or targets.

- **Guaranteed service level (GSL) payments** – refers to payments that a DNSP is required to make directly to customers when certain reliability standards or targets are not achieved. The threshold for GSL payments being made is usually defined relative to SAIDI and SAIFI targets.

A number of other matters that are not directly related to reliability have not been included in the consideration of the merits of a nationally consistent framework. These include aspects that relate to safety standards, customer service standards such as telephone answering times and responding to written queries, and quality of supply parameters such as operating voltage and frequency, as defined by the frequency operating standards. The Commission considers that these aspects are not key drivers of reliability performance and distribution investment, and are beyond the scope of this review.

2.3 Meaning of a nationally consistent framework

In order to assess the merits of moving to a nationally consistent framework, we have first considered the meaning of a "nationally consistent framework".

This draft report assesses the merits of having a common overarching framework for expressing, delivering and reporting on distribution reliability outcomes, which would allow for local differences. This could include, for example, differences in local network or geographic conditions.

Economic and social impacts of supply interruptions vary within and between jurisdictions. The costs of achieving a certain level of reliability also vary significantly between areas. As a result, areas of the distribution network in separate jurisdictions may not be suited to the same level of reliability standard, even where they have customers of similar size or critical importance. As noted in the terms of reference, "it is entirely appropriate for standards to differ across jurisdictions due to the different characteristics of distribution networks".

The intention of the proposed framework is therefore not to result in a single harmonised *level* of reliability that will apply across the NEM. Rather, the focus of a nationally consistent framework will be on implementing a consistent *framework* for setting, delivering, and reporting on reliability standards and outcomes. In accordance

with the terms of reference, the level of reliability will remain a jurisdictional responsibility.

2.4 Principles for designing a nationally consistent framework

We have developed the following principles to guide the design of the proposed nationally consistent framework.

1. **Transparency** – the process for setting reliability targets should be open and transparent, including the ability for stakeholders to provide input on any changes. The process and reasons for setting reliability target levels should be disclosed and the consequences for not meeting the targets should be clearly defined and consistently enforced.

2. **Customer preference** – the preferences of end use consumers should be taken into account in determining the types of reliability targets that are set, the level of the targets, and other key reliability obligations on DNSPs.

3. **Economic efficiency** – the level of reliability targets should be set using an economic assessment process that compares the costs of undertaking and maintaining distribution investments against the value placed on reliability by customers.

4. **Governance** – targets should be set by a body that is separate from the DNSP. However, the framework should allow for the targets to be determined on a collaborative basis between the target setter and DNSP, recognising that the DNSP has access to critical information needed to set efficient reliability targets. DNSPs should be accountable for meeting the targets.

5. **Fit for purpose** – the framework should allow reliability target levels to differ across networks and jurisdictions according to the value placed on reliability by end users and the costs of providing different levels of reliability.

6. **Effectiveness** – the framework should enable efficient investment to proceed in a timely manner and limit the potential for inefficient over-investment. DNSPs should be able to meet reliability targets through innovative and efficient means without the requirement to adhere to prescriptive input standards.

2.5 Conclusions on the merits of a nationally consistent framework

Based on our analysis and the principles outlined above, the Commission considers that there is merit in a nationally consistent framework if it is:

1. *Expressed effectively*

   Currently, different forms of reliability standards, and the variations of exclusions in calculating the standards, make it difficult for market participants

to compare and understand differences in network performance between NEM jurisdictions.

The development of a nationally consistent framework would ensure that reliability targets in separate jurisdictions are expressed transparently, predictably and consistently.

Consistency in the expression of reliability targets would allow the AER to better benchmark performance and improve the ability to determine an efficient estimate of cost forecasts for DNSPs. It would also allow participants to compare and identify trends and innovations in DNSP performance, which may assist in driving further efficiencies.

2. *Delivered efficiently*

Input planning criteria and reliability standards in existing jurisdictional frameworks have a significant impact on distribution reliability outcomes and the capital expenditure which is required to achieve these outcomes.

A nationally consistent framework would increase DNSPs' flexibility in undertaking investment decision making and operational management processes by removing requirements to meet specific input planning standards. This would also reduce the possibility of inefficiencies created through over-investment.

The development of a nationally consistent economic assessment process for the setting of output reliability targets would promote a more efficient allocation of resources by recognising the trade-off between the costs of investment to improve reliability and the costs to customers of interruptions to supply.

Application of a two-sided, transparent, and materially financial incentive structure, based on performance against jurisdictionally determined reliability targets, would remove conflicting incentives and strengthen the accountability of DNSPs for cost-effective achievement of reliability targets.

3. *Reported consistently*

A consistent approach to the expression of reliability targets would allow for consistency in the reporting of performance against jurisdictional output reliability targets by DNSPs and the AER.

Consistency in reporting would allow DNSPs to compare performance and for consumers to identify the relative performance of their local DNSP.

3 Key features and impacts of our proposed nationally consistent framework

As previously discussed in section 2.1, assessing the merits of a nationally consistent framework for the achievement of distribution reliability outcomes requires a consideration of the high-level design of such a framework. This Chapter provides an overview of our proposed nationally consistent framework. It also discusses the key impacts of moving to such an approach.

3.1 Key features of our proposed framework

We consider that there would be merit in adopting a nationally consistent framework for distribution reliability if it incorporates the principles set out in section 2.4 and includes the following high-level features:

- **An outputs-based approach**

  Our proposed framework would remove all input planning standards and would base the measurement of performance on the achievement of output reliability targets.

  Input planning standards dictate requirements for the design of the network. Strict input planning standards blur the bounds between the respective functions of the jurisdictional regulator or government and the DNSP. The jurisdictional regulator or government takes on the responsibility for determining the level of security or redundancy that is required, which is a function that may be better achieved by the DNSP.

  Strict regulatory control through the use of input planning standards reduces flexibility and may inhibit DNSPs from meeting their reliability targets through innovative and potentially more cost effective means.

  In contrast, output methods specify the desired reliability outcomes and allow the DNSPs to determine the most efficient way to plan and operate their networks in order to meet the desired outcomes.

- **A nationally consistent set of definitions and exclusion criteria**

  Output reliability targets would be developed by each jurisdiction in accordance with a nationally consistent set of definitions and exclusion criteria.

  A consistent expression of output reliability targets would allow DNSPs and jurisdictional regulators to accurately compare and evaluate levels of performance and would allow for trends and variations in performance across the distribution system to be assessed.

  In the calculation of output reliability targets, and the measurement of performance against those targets, some types of interruptions would be

excluded. The purpose of exclusions is to avoid distorting the measurements through events that are beyond the control of the DNSP. Exclusions currently vary between jurisdictions, making accurate comparisons difficult. For example, some jurisdictions exclude supply interruptions that occur on days of extreme weather, which are classified as major event days.

Consistent expression of reliability targets and outcomes would allow for more effective benchmarking and comparisons between jurisdictions and a better understanding of efficiency in network expenditure.

- **A nationally consistent economic assessment process**

  The development of output reliability targets would be based on a nationally consistent economic assessment process.

  The most efficient means of determining the appropriate level of output reliability in the network is to employ an economic assessment process that incorporates a comparison of the estimated value placed on reliability by customers against the estimated costs of undertaking investments.

  In order to ensure a consistent approach to setting targets, the form of measures used to value reliability and derive the output reliability targets would be consistent across jurisdictions and would be developed by a single independent body. However, the approach would recognise that the value customers place on reliability varies between jurisdictions, between customer types, and between different areas within a jurisdiction.

- **Consideration of customer and community preferences**

  Customer and community preferences would be assessed to determine the types and level of reliability targets which should be set.

  Customer consultation would consider customer preferences regarding different aspects of reliability performance. Customer opinions on reliability can be used to determine areas of relevance or importance to customers and the types of reliability measures that would best support community expectations.

- **Jurisdictional responsibility for setting and approving reliability targets**

  Output reliability targets would be set and approved by the relevant jurisdictional government or regulatory body.

  Governments are held responsible by the community for the provision of adequate levels of service and therefore have incentives to ensure that the needs and expectations of the community are met. Jurisdictional responsibility for setting and approving output reliability targets, in consultation with customers, supports measures that empower consumers to express their preferences with regard to cost and reliability and allows the community to also express its views on social and economic objectives.

- **An ability to transfer responsibility to the AER for the setting of reliability targets**

  The jurisdictional government would be able to transfer responsibility for the setting of output reliability targets to the AER. The AER would be obliged to select the level of reliability outcomes with the highest net benefit according to the nationally consistent economic assessment process.

  Allowing the responsibility for setting targets to be transferred to the AER increases the flexibility of the proposed framework.

- **A nationally consistent reliability performance incentive scheme**

  An incentives system would be applied to encourage DNSPs to meet the level of the output reliability targets.

  An incentive scheme with material financial implications, which is based on the value that customers place on reliability, would strengthen accountability of DNSPs for cost-effective achievement of the output reliability targets.

  A transparent and effective incentive structure is also likely to reduce the long-term costs of maintaining reliability, thereby reducing costs to consumers.

- **Considerations for worst served customers**

  The proposed framework would include a provision for additional measures to be added to address the requirements of poor performing parts of the network.

  Output reliability targets that are based solely on the estimated customer value of reliability are likely to result in particularly low levels of reliability for some areas of the network such as rural or remote regions. Flexibility would be included for the jurisdictional regulator or government to evaluate the costs of additional measures to increase levels of reliability for poor performing parts of the network, where there is a need for additional measures for worst served customers.

- **A nationally consistent framework for public reporting**

  Reporting of reliability performance would be undertaken on a nationally consistent basis to allow for accurate comparisons of performance, benchmarking across jurisdictions, and a better understanding of the efficient costs of providing distribution reliability outcomes.

3.2 Structure of the proposed framework

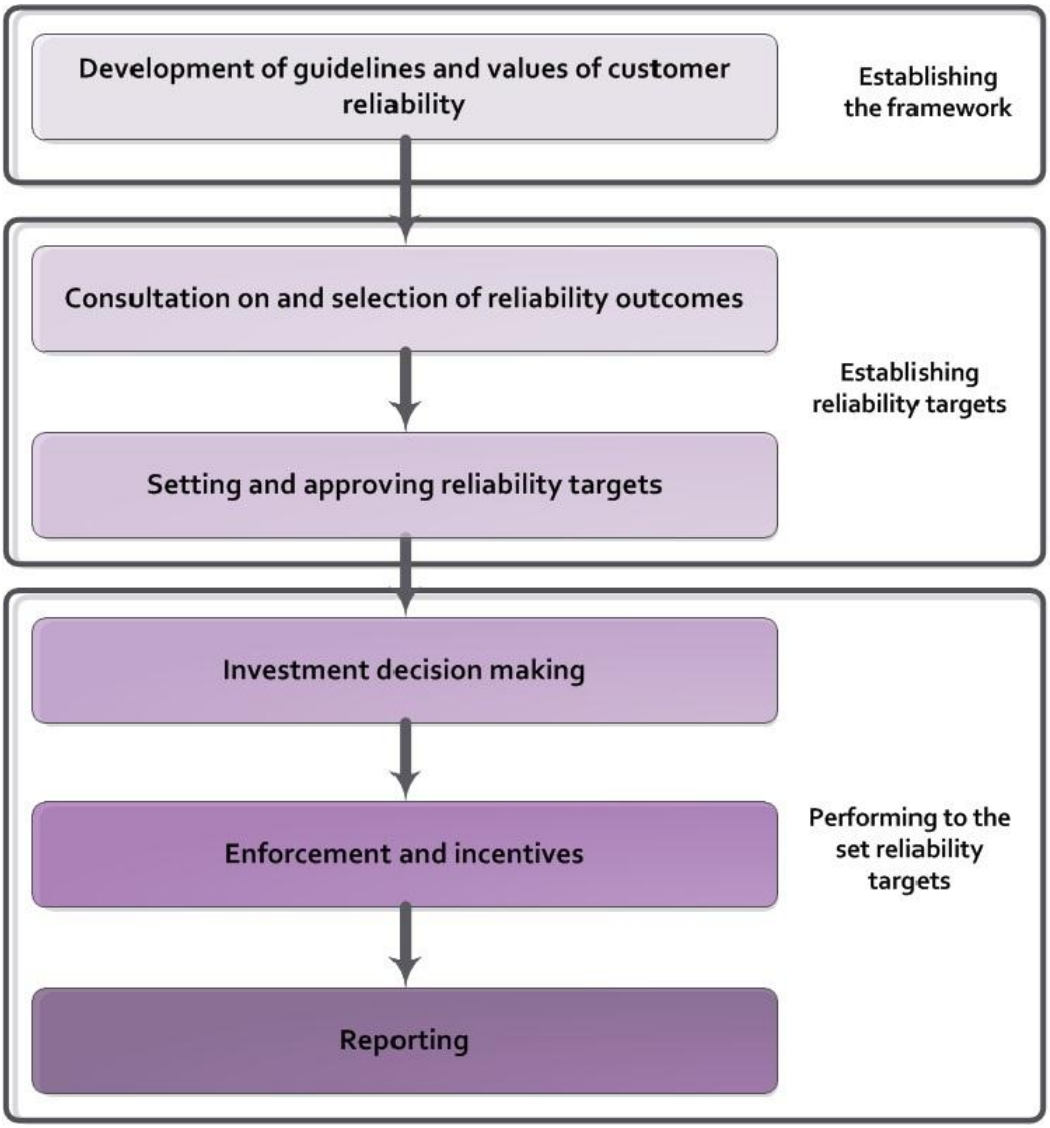
Chapters 4 to 8 outline the proposed design and merits of the nationally consistent framework in separate stages, which can be broadly considered to follow a chronological path in accordance with the practical implementation of the framework:

- the consultation and selection of reliability outcomes;
- the setting and approving of output reliability targets;
- the requirements for investment decision making and operational management;
- enforcement and incentives; and
- the requirements for reporting on performance and compliance.

The sequence of these stages is presented in figure 3.1.

The first two stages reflect the establishment of output reliability targets and the remaining three stages involve performing to the targets that have been set.

Figure 3.1 Proposed nationally consistent framework - sequence of stages



Figures 3.2 and 3.3 provide further detail on the design of the proposed framework and outline the process flow and interactions between relevant national and jurisdictional bodies and DNSPs. Figure 3.2 outlines the process of establishing output reliability

targets, including the consultation and selection of feasible reliability outcomes and the setting and approving of reliability targets. Figure 3.3 outlines the processes and requirements to ensure the achievement of those targets, including the requirements for investment decision making, enforcement and incentives, and the requirements for reporting on performance and compliance.

Figure 3.2 Establishing output reliability targets

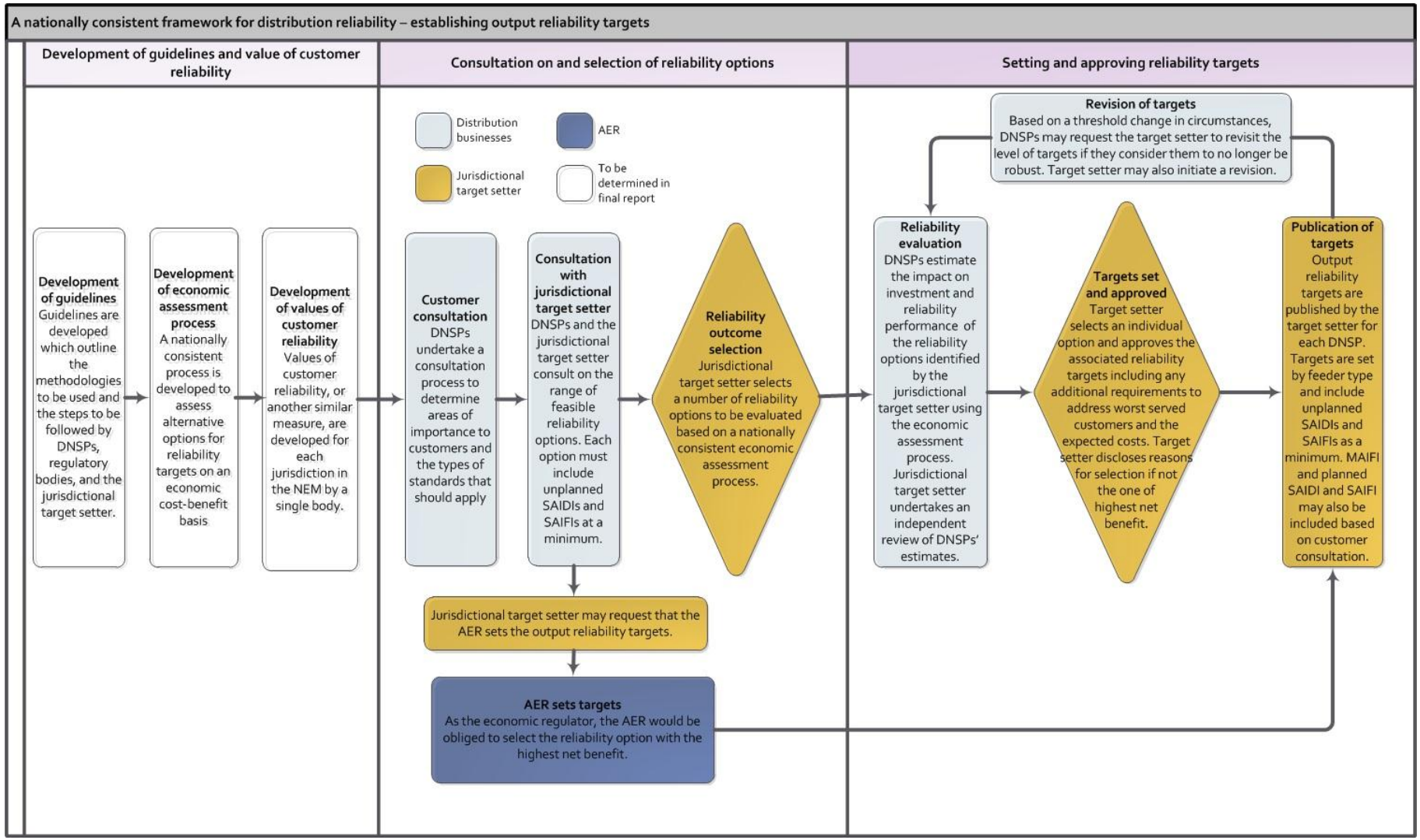
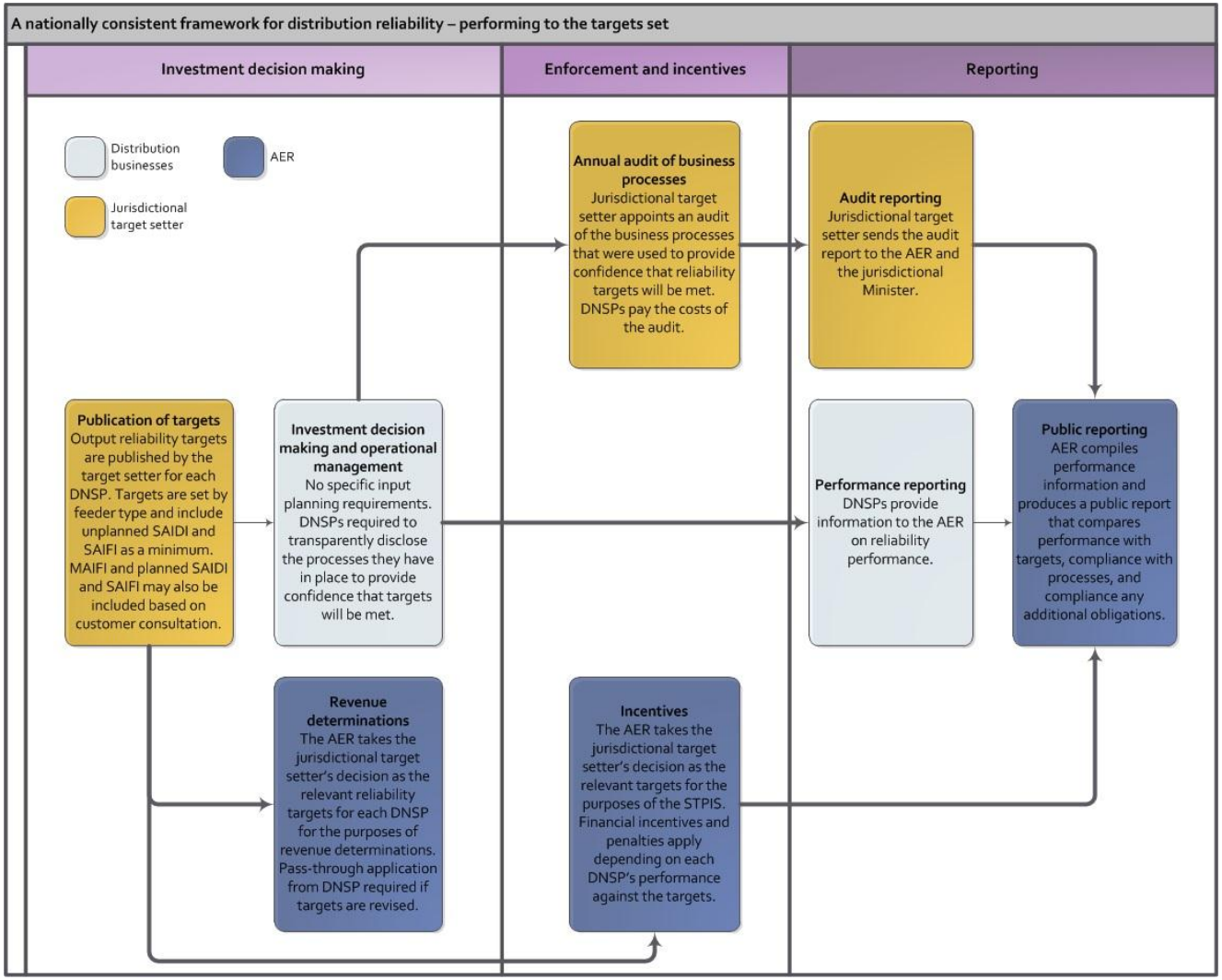


Figure 3.3 Performing to the targets set



3.3 Guidelines for the proposed framework

To streamline the establishment and implementation of a nationally consistent framework, the Commission proposes that a set of guidelines are developed that provide the necessary detail for the delivery of reliability outcomes. The guidelines would outline the processes and methodologies to be followed in the application of the framework. The development of the guidelines would be a precursor to the establishment of the nationally consistent framework and would act as the primary tool through which national consistency would be achieved.

In this draft report we do not recommend which body should be responsible for the development of the guidelines. However, we consider it necessary that the body have a sufficient technical understanding of the processes and measures used in the framework and be independent and not have a financial interest in any aspect of the framework. Responsibility for the development of the guidelines will be determined if the SCER requests us to develop a best practice framework.

The guidelines would achieve consistency in the setting of output reliability targets by including detail on the exact definition of reliability measures to be used, such as SAIDI and SAIFI, and by providing consistency in the treatment of excluded events, such as the classification of a major event day.

The relevant types of reliability performance measures under the proposed framework would also be informed through a process of customer consultation to determine customer preferences. Details on the process of customer consultation would be set out in the guidelines.

The guidelines would also outline the methodology to be used in undertaking economic assessments. We propose that the level of output reliability targets would be set in accordance with a nationally consistent economic assessment process that compares the costs of investments with the value placed on reliability by consumers.

In order to allow comparability of performance across jurisdictions, the economic assessment process used to value reliability and derive the output reliability targets must be consistent across jurisdictions and the process should be developed by a single independent body and set out in the guidelines.

Question 1 Customer consultation and development of guidelines

What should be included in nationally consistent guidelines and which body should be responsible for their development?

3.4 Estimating the value of customer reliability

A value of customer reliability, or similar measure, would be estimated using a nationally consistent process by a single independent body for each jurisdiction as an input into the economic assessment process.

There are a number of different ways of estimating the value placed on reliability by customers. The Victorian framework is based on the use of value of customer reliability (VCR) measures, while other NEM jurisdictions have employed the use of willingness to pay measures to varying extents.[8] The Productivity Commission has included a discussion on measuring the value of reliability in its draft report on electricity network regulatory frameworks.[9]

At this stage, the Commission does not have a view as to the best method available for estimating the value placed on reliability. Given the range of possible options and the considerable time required to properly assess the merits of each option, the methodology for estimating the value customers place on reliability would be more appropriately addressed in the final report if the Commission is requested by the SCER to develop a best practice framework.

Box 3.1: Estimating the value of reliability

Measuring the value that customers place on reliability can be a complicated and subjective process.

A clear consensus on the best method to value reliability does not currently exist. VCR measures that have been used previously in Australia have asked customers to estimate the costs to them of supply interruptions of varying lengths. Business customers can generally estimate costs directly such as through wastage or a fall in production quantities. However, estimates of the costs to residential customer are less direct. VCR studies seek to estimate costs for residential customers based on the economic cost of substitution by asking customers what actions they would take if there was an outage.

An alternative approach is to estimate customers' willingness to pay (WTP) to avoid outages, or willingness to accept more outages in return for lower electricity costs. Studies generally find that willingness to pay and accept do not match, which further complicates attempts to place a single value on reliability.

The value that a customer places on a reliable supply of electricity may be influenced both by the characteristics of the customer and the nature of the supply interruption.

Customer characteristics that influence how reliability is valued include the type of customer, the nature of their activities, whether they have access to alternative energy sources, their demographics, and the extent to which they have experienced interruptions in the past.

8 We also note that, in response to the AEMC's *Review of the Effectiveness of NEM Security and Reliability Arrangements in Light of Extreme Weather Events*, the SCER has requested AEMO to undertake a review of national and regional VCR levels in the NEM including providing advice on the methodology that should be used to calculate the VCR.

9 *Electricity Network Regulatory Frameworks – Draft Report*, Productivity Commission, October 2012, p470.

The nature of supply interruptions can be determined by factors such as duration, frequency, timing, and location. Customers may also value reliability differently depending on the information they have regarding the cause of the outage. For example, customers may place a different value on reliability if the reason for the interruption is evident (eg poor weather), or if information about the interruption is provided prior to its occurrence.

As any measure of the value placed on reliability by customers will represent an average of surveyed customer responses, it will not be able to fully reflect each of these factors. It is possible to disaggregate the results to an extent, but considerable averaging is unavoidable. For example, in the New South Wales workstream we estimated VCRs for each of the three New South Wales DNSPs. For each DNSP, VCRs were estimated for CBD, urban and rural feeder types, and for three different categories of customers. However, these estimates of VCR were still averages across four different lengths of outages and were an average of the responses from hundreds of different customers.

The measurement of the value of reliability is therefore likely to be a subjective exercise, and should only be viewed as an aggregate approximation. The setting of reliability targets is therefore likely to require some discretion and qualitative judgement.

3.5 Impacts of the proposed framework

Distribution reliability outcomes are currently set separately for each NEM jurisdiction by jurisdictional regulators, relevant government bodies or individual DNSPs, and different approaches are used between jurisdictions. While most NEM jurisdictions currently seek to regulate the same aspects of reliability, there are significant differences in how the jurisdictional frameworks are expressed, delivered and reported upon.

In making any recommendations to change the current arrangements, the SCER has requested that the AEMC have regard to the need for changes to be proportionate to the materiality of the issue, as well as the value of stability and predictability in the energy market regime.

While the Commission considers there to be merit in a nationally consistent framework that is guided in design by the key features outlined in section 3.1, it also recognises that, in most jurisdictions, the proposed framework would result in a greater level of administrative costs, time and involvement for jurisdictional regulators, governments and DNSPs. Additional resource requirements are likely to arise both from the initial establishment of the framework, including the development of guidelines and an economic assessment process, and also from the ongoing processes of customer and business consultation for the setting and approving of output reliability targets, and the compliance and reporting requirements involved in achieving reliability outcomes.

The Commission considers that the benefits of a consistent and more efficient approach to distribution reliability are likely to outweigh the costs and that the incorporation of customer preferences with regard to cost and reliability and other social and economic objectives are essential to the merits of a nationally consistent framework.

The proposed framework would also create consistency across NEM jurisdictions in relation to the timeframes for updating the economic assessment process, setting and approving reliability targets, and reporting on performance. The timing for setting targets in each jurisdiction would be consistent with the AER's regulatory control period, to allow reliability targets to be developed in time for each DNSP to prepare their regulatory proposal for the AER. The timing of revisions to changes in reliability targets would also be coordinated with the timing of the regulatory determination process. The customer value of reliability in each jurisdiction would also be updated every five years so that an updated measure is used as an input into the process for setting the output reliability targets to guide DNSPs' investment decisions, and in preparation of the AER's revenue determination process.

4 Consultation on and selection of reliability outcomes

This Chapter explores the design and merits of our initial stage of the proposed framework relating to the consultation on and selection of reliability outcomes for the purposes of establishing output reliability targets. Figure 3.2 shows the process flow and interactions between participants in the consultation and selection stage of the framework.

4.1 Customer consultation

This section outlines the merits of the proposed approach relating to the process of customer consultation as an input into the development of potential reliability outcomes.

4.1.1 Proposed approach

Following the establishment of nationally consistent guidelines, DNSPs would be required to conduct consultation with customers to determine which aspects of reliability are particularly important for customers in their distribution networks.

The purpose of gauging customers' opinions on reliability would be to determine areas of relevance or importance to customers and provide boundaries for the development of a range of feasible reliability outcomes.

For example, some customers may be particularly concerned about interruptions to supply that last longer than a specific period of time, while others may be more concerned about interruptions that, while short in duration, occur frequently. Customer consideration would influence decisions on the types of targets that should apply (eg whether there should be separate targets for MAIFI or planned outages), which targets DNSPs should focus on improving their performance, and whether any other reliability obligations should be considered.

4.1.2 Merits of the proposed approach

Customer preferences regarding different aspects of reliability

Customer consultation would consider customer preferences regarding different aspects of reliability performance. For example, the extent to which customers value shorter duration or less frequent interruptions to supply and whether customers place importance in measuring only unplanned outages given that interruptions to supply are the same from a customer's perspective regardless of their cause.

A process of customer consultation is consistent with views expressed in the submission from the AER which supports measures that empower consumers to express their preferences with regard to cost and reliability, allows communities to express their views on social and economic objectives, and enables DNSPs to respond

flexibly to these requirements.[10] Energex considers there to be merit in assessing reliability measures to ensure they reflect what is important to the customer at a customer segment level.[11]

A process of customer consultation supports the principle of basing the types of reliability targets used on customer preferences. Reliability measures can form an important signal for DNSPs as to which aspects of reliability performance to focus on. For example, including only unplanned outages in reliability performance measures may incentivise businesses to have more planned outages to avoid the likelihood of more unplanned outages. Excluding short outages from the calculation of SAIDI, and not having MAIFI targets, may incentivise DNSPs to implement systems that avoid longer outages but result in a greater occurrence of very short outages.

The Commission considers that, while there are clear benefits to the consideration of customer preferences in the use of reliability measures, there are likely to be cost and time implications involved in the process of customer consultation. However, we consider it likely that the benefits would outweigh the costs. An approach that seeks to minimise the costs will need to be considered in the development of a best practice framework.

Preferences regarding communications

Consultation with customers would also consider the extent to which customers value, and are willing to pay for, better information and communications systems regarding outages.

The majority of stakeholder submissions generally highlighted the benefits of increased customer communications with regard to planned and unplanned interruptions. However, some stakeholders, including Endeavour Energy, ActewAGL, and Jemena, noted that there would likely be significant costs associated with IT systems and there would therefore need to be a detailed cost-benefit analysis prior to any implementation.[12] Energex and Essential Energy suggested that increased communications should not necessarily be mandated but could be adopted voluntarily by DNSPs where customers have demonstrated a preference for increased communication and it is more cost effective than undertaking network investments to improve reliability.[13]

Given the additional expenses that are likely to be required in implementing improved customer communications, the Commission does not consider it appropriate to mandate this as part of the proposed framework unless there is clear evidence of a net benefit. However, customer consultation under the proposed framework would

10 AER, submission to issues paper, 13 August 2012, p7.

11 Energex, submission to issues paper, 9 August 2012, p3.

12 Endeavour Energy, submission to issues paper, 9 August 2012, p3; ActewAGL, submission to issues paper, 23 August 2012, p2; Jemena Electricity Networks, submission to issues paper, 9 August 2012, p4.

13 Energex, submission to issues paper, 9 August 2012, p4; Essential Energy, submission to issues paper, 9 August 2012, p3.

provide DNSPs with a means to demonstrate that customers would prefer improved communications. DNSPs would need to be able to evaluate whether it is cost effective to implement communications systems.

Question 2 Customer consultation

What are the important elements of customer consultation and what types of issues should customers be consulted on as part of the process of setting output reliability targets? Should customer consultation consider whether additional measures are warranted to inform customers of planned and unplanned interruptions?

4.2 Jurisdictional target setter and DNSP consultation

This section outlines the merits of the proposed approach relating to the process of consultation between the jurisdictional target setter and DNSP as an input into the development of a range of potential reliability options.

4.2.1 Proposed approach

Under the proposed framework, the process of customer consultation would be followed by a requirement for the DNSP to consult with the jurisdictional body responsible for setting the output reliability targets.

While the Commission does not propose that the responsibilities of setting the output reliability targets be assigned to any specific regulatory body, we consider that the jurisdictional energy ministers are likely to be the most appropriate body to decide on reliability outcomes in their jurisdiction. Making trade-offs between price and reliability on behalf of customers is likely to be a function that some governments consider is appropriately allocated to elected officials. Ministers are held responsible by the community for the provision of adequate levels of service and therefore have incentives to ensure that the needs and expectations of the community are met. It would also be possible for the relevant minister to delegate decision making to a jurisdictional or national regulatory body. For the purposes of this draft report, the appropriate regulatory body is referred to as the jurisdictional target setter.

The setting of output reliability targets would be achieved through a process of collaboration between the jurisdictional target setter and the DNSPs. While the jurisdictional target setter would have ultimate discretion over the targets set, the DNSPs are the best placed to determine the physical and financial constraints on the achievement of different levels of reliability performance.

The jurisdictional target setter and the DNSPs would develop a range of feasible options with different reliability outcomes that could be applied over the next regulatory period. The jurisdictional target setter would consult with the DNSP and subsequently select a number of the reliability options to be fully evaluated under an

economic cost-benefit assessment in accordance with the methodology set out in the guidelines for the national framework.

4.2.2 Merits of the proposed approach

The process of option selection would be undertaken collaboratively between the jurisdictional target setter and the DNSP. The purpose of developing a number of options is to establish the range of feasible reliability outcomes and to provide flexibility to the jurisdictional target setter to choose a level of reliability that best meets community expectations. Options would be developed both above and below current reliability levels in order that the jurisdictional target setter can see the full range of feasible reliability outcomes and their associated costs and benefits.

The process used by the DNSP to determine the options would be sufficiently open and transparent that the jurisdictional target setter could have confidence that the options represented an efficient and effective outcome for customers.

The Commission considers that allowing the jurisdictional target setter to determine the output reliability targets, in consultation with customers and the DNSPs, is consistent with the views expressed in the submission from the AER which supports measures that empower consumers to express their preferences with regard to cost and reliability and allows the community to also express its views on social and economic objectives.[14]

14 AER, submission on issues paper, 13 August 2012, p7.

5 Setting and approving reliability targets

This Chapter explores the design and merits of the proposed framework relating to the setting and approving of output reliability targets. Figure 3.2 shows the process flow and interactions between participants in the setting and approving stage of the framework.

5.1 Setting and approving targets

This section outlines the merits of the proposed approach relating to the process of setting and approving targets based on the range of reliability options determined through the processes of customer consultation and consultation between the jurisdictional targets setter and DNSPs.

5.1.1 Proposed approach

Based on the reliability options that were identified and selected in the consultation stage, the DNSP would provide information to the jurisdictional target setter on the comparison of costs and value of reliability for each option. This would involve an evaluation of the estimated capital and operating expenditure required by an efficient DNSP for a range of potential investments to meet the reliability targets. The level of expected capital and operating expenditure would be compared against the value that customers place on reliability to determine the net economic benefits of each selected option. In practice, the benefits of each option would most likely be evaluated with respect to current levels of reliability. This process is discussed further in the final report for the New South Wales workstream.[15]

The jurisdictional target setter may also elect to have additional requirements such as obligations for worst served customers evaluated under the economic assessment process, if the customer consultation had suggested they were particularly important to the community.

The proposed framework would remove the requirement to meet strict input planning standards and would base the achievement of reliability outcomes on the development of output reliability targets. Based on the economic evaluation, the jurisdictional target setter would select an individual option and approve the associated output reliability targets.[16]

As previously noted in section 3.2.1, the output reliability targets would include unplanned SAIDI and SAIFI measures as a minimum. This would ensure that reliability performance can be compared and benchmarked across the NEM.

---

15 *Final Report – NSW Workstream, Review of Distribution Reliability Outcomes and Standards*, AEMC, 31 August 2012.

16 The jurisdictional target setter would not determine which investments the DNSP is to undertake to achieve the output reliability targets or the efficient level of capital and operating expenditure required by the DNSPs.

Targets based on other measures such as MAIFI or planned SAIDI and SAIFI may also be included by the jurisdictional target setter. However, the target setter would be required to justify the use of these additional targets through reference to the customer consultation process outlined in section 4.1.

The output reliability targets would be disaggregated by feeder type (eg CBD, urban, long rural, and short rural) as customers on different categories of feeders tend to value reliability differently, although the exact types of feeders that should be used has not been considered by the Commission for the purposes of this draft report. Feeder types would be set out in the guidelines and applied on a nationally consistent basis.

The DNSPs' process for evaluating the reliability output options and the jurisdictional target setter's approach to selecting an individual option would be publicly disclosed. The jurisdictional target setter would undertake an independent review of the information provided by the DNSPs.

The DNSPs' evaluation of the capital and operating expenditure impacts of each of the reliability options would necessarily be based on a reasonably high level estimate of the investments required to meet the output targets under each option. These estimates would not be a substitute for the AER revenue determination process and the requirement for DNSPs to prepare detailed capital expenditure forecasts as part of their regulatory proposals to the AER.

The AER would not be bound to approve expenditure as part of the revenue determination process simply because that level of expenditure was consistent with the DNSPs' estimates at the time that the output reliability targets were set. The AER would assess whether the DNSPs' forecast expenditure in its regulatory proposal reflected the efficient costs that a prudent DNSP would require to achieve the output reliability targets.

The jurisdictional target setter would not be required to adopt the reliability output option with the highest estimated net economic benefit. However, the jurisdictional target setter would be required to publicly disclose the reasons for this selection, such as the accommodation of community preferences or the pursuit of uneconomic projects deemed necessary to meet the needs of specific areas of the network. The jurisdictional target setter would also be required to disclose the amount of any expected cost differences between the chosen option and the option of highest economic net benefit.

Any additional requirements on DNSPs that form part of the chosen option would also need to be disclosed along with an estimated cost of those requirements. For example, for worst served customers, this could include minimum service standards for certain individual feeders, improvements to customer communications, or reporting on areas of the network that fail to meet a threshold level of reliability performance.

5.1.2 Merits of the proposed approach

Economic assessment process

The Commission considers that the most efficient means of determining the appropriate level of reliability in the network is to employ an economic assessment process that incorporates a comparison of the value placed on reliability by customers against the costs of undertaking investments.

In most NEM jurisdictions, reliability standards are not currently set with reference to an economic assessment of the costs and benefits of different levels of reliability.

The majority of stakeholders have noted the benefits of setting reliability outcomes that consider a cost-benefit analysis based on the value placed on reliability by customers.[17]

Energex states that accurate valuation of reliability is key to efficient asset investment which leads to better outcomes for customers across the NEM.[18]

Submissions showed a diverse range of views on the exact form of any economic assessment process, with stakeholders debating the merits of existing economic studies such as VCR and WTP. Given these divergent views and the complexity of the issue, the way that the customer value of reliability is measured would be more appropriately addressed in the final report on a best practice nationally consistent framework. However, the Commission considers that, in order to allow comparability of performance across jurisdictions, the measure used to value reliability and derive the output reliability targets must be consistent across jurisdictions and should be developed by a single independent body.

The Commission's proposed framework would achieve consistency in the setting of output reliability targets as the guidelines would outline the definitions of the relevant measures, such as SAIDI and SAIFI, and methodology to be used in undertaking the economic assessments.[19] This is consistent with the submission from the AER which suggests that a consistent national framework should be implemented in accordance with guidelines which are developed independently of the DNSPs.[20]

The use of an economic assessment process in the setting of reliability targets supports the principle of economic efficiency. However, the development and revision of an

17 AEMO, submission on issues paper, 29 August 2012, p2; Citipower & Powercor, submission on issues paper, 9 August 2012, p3; Endeavour Energy, submission on issues paper, 9 August 2012, p2; Energex, submission on issues paper, 9 August 2012, p1; Jemena Electricity Networks, submission on issues paper, 9 August 2012, p3; SP AusNet, submission on issues paper, 9 August 2012, p1; MEU, submission on issues paper, 9 August 2012, p16; AER, submission on issues paper, 13 August 2012, p6; Ausgrid, submission on issues paper, 17 August 2012, p3; Victorian DPI, submission on issues paper, 21 August 2012, p3; Tasmanian DIER, submission on issues paper, 13 August 2012, p2; ActewAGL, submission on issues paper, 23 August 2012, p1; ETSA, submission on issues paper, 15 August 2012, p6; Aurora Energy, submission on issues paper, 16 August 2012, p10.

18 Energex, submission on issues paper, 9 August 2012, p1.

19 A discussion of consistency in the definition of relevant measures is contained in section 5.3.

20 AER, submission on issues paper, 13 August 2012, p6.

economic assessment process is likely to be expensive and resource intensive. These costs and benefits will need to be considered further in the development of a best practice framework.

Consideration of the economic assessment process and community expectations

The selection of the appropriate option would be guided by both the economic assessment process and by the areas of relevance or importance to customers determined through the process of customer consultation. An option that provides the highest economic net benefit may not provide a satisfactory level of reliability to all parts of the network in consideration of equity and other social factors. As such, the option selected by the jurisdictional target setter, and the associated output reliability targets, may not necessarily be the option with the highest net economic benefit, in order to satisfy community expectations.

Economic evaluations undertaken by the DNSPs would consider the costs of additional requirements to meet community expectations if requested by the jurisdictional target setter (ie in addition to average SAIDI and SAIFI targets). This allows the jurisdictional target setter to take into account relevant community expectations while maintaining transparency regarding the additional expected costs. This approach is reflected in Aurora Energy's submission which suggests that jurisdictions should retain the ability to prescribe a degree of reliability above that resulting from the most efficient economically derived approach.[21]

Through an open process of consultation, and in consideration of a nationally consistent economic assessment process, output reliability targets will be set and approved in a transparent and predictable fashion for a five-year period, thereby providing DNSPs with long-term certainty regarding target levels of reliability.

The Commission's proposed framework is consistent with the view put forward in SA Power Network's submission that the most appropriate body to establish the minimum standards would be the local jurisdiction, but that the jurisdiction needs to be cognisant of the costs of achieving the standards, the willingness of customers to pay and the price impacts.[22]

Question 3 Economic assessment process

What are the relevant considerations for the development of a nationally consistent economic assessment process?

21 Aurora Energy, submission on issues paper, 16 August 2012, p10.

22 ETSA, submission on issues paper, 15 August 2012, p5. In 2012, ETSA Utilities changed its name to SA Power Networks.

Requirements for worst served customers

For practical reasons, output reliability targets tend to focus on average or aggregated performance across networks. As a result, they are not likely to be able to ensure that the DNSP provides a level of reliability for every customer in the network that reflects that customer's value of reliability or willingness to pay for reliability.

The principal risk of average reliability targets with regard to poor performing areas is that it is often more cost effective to improve average reliability by providing even better reliability to those customers that already receive better than average levels of reliability, rather than targeting customers with poor performance.

The Commission's proposed framework partially addresses the issue of average performance by disaggregating targets so that different targets apply for different types of feeders in the network. For example, this approach would allow separate targets to be set for long rural feeders which are, in most cases, the areas of the network with the lowest levels of reliability performance. However, there is a limit to the level of disaggregation that is possible and tailoring the structure of targets to meet the characteristics of each jurisdictional network risks reducing the level of consistency and comparability between jurisdictions.

The Commission's proposed framework also provides the flexibility for the jurisdictional target setter to evaluate the costs of additional measures to increase levels of reliability to poor performing parts of the network, where the target setter considers there is a need for additional measures for worst served customers and that customers are willing to pay for those additional measures.

While a discussion of the best practice approaches to address worst served customers is beyond the scope of this draft report, examples of options that would be available to the jurisdictional target setter when establishing these additional requirements include:

- separate SAIDI and SAIFI targets for the feeders with the lowest levels of reliability (eg average SAIDI for the worst x number of feeders);
- reporting on individual poor performing feeders or areas that fail to meet minimum SAIDI or SAIFI standards and any actions proposed;
- guaranteed service level (GSL) schemes where payments are made automatically to customers with high or no annual cap on payments; and
- a separate component of the STPIS that provides incentives to address poor performing parts of the network.

This approach is supported in the Brattle Group report which notes that there may be benefits to including additional measures relating to worst served customers.[23]

23 *Approaches to setting electric distribution reliability standards and outcomes*, The Brattle Group, January 2012, p160.

Box 5.1: GSL schemes

One option available to address poor performing parts of the network is a GSL scheme where DNSPs make payments directly to customers when certain reliability standards are not achieved. GSL schemes act as incentives to DNSPs if the payments to customers are higher than the cost of improving reliability to avoid making those payments.

All NEM jurisdictions currently have some form of GSL scheme. However, a customer who experiences an interruption to supply can expect to receive a very different GSL payment depending on their residing jurisdiction. The AER has a GSL scheme under the STPIS. However, there are no NEM jurisdictions that have so far subscribed to the scheme.[24] GSL payments under the AER's STPIS relate to VCR studies unlike under jurisdictional GSL arrangements.

The Commission considers that there is likely to be merit in the development of a nationally consistent GSL scheme. One option for a nationally consistent GSL scheme would be for the AER to administer arrangements under the STPIS provisions. Alternatively, jurisdictions could retain their existing schemes but review the arrangements to ensure they are consistent with the national framework and in consideration of any other requirements that they have for worst served customers.

The details and costs and benefits of a nationally consistent GSL scheme will be assessed further if the SCER requests the AEMC to develop a best practice framework.

Question 4 Worst served customers

Should the jurisdictional target setter have flexibility in setting additional obligations for worst served customers?

Are there any other considerations that should be taken into account in addressing worst served customers?

What are the costs and benefits of imposing a nationally consistent GSL scheme?

24 The AER's scheme only applies in absence of a jurisdictional scheme. There are currently no jurisdictions that have adopted the AER's scheme.

5.2 Option for the AER to set targets

This section outlines the merits of having a provision in the proposed framework that allows the jurisdictional target setter to transfer responsibility for the setting of output reliability targets to the AER.

5.2.1 Proposed approach

In the proposed framework, the jurisdictional target setter may set reliability targets or it may elect for the AER to be responsible for the setting of the targets. As the AER is the economic regulator, they would be obliged to select the level of reliability outcomes with the highest net benefit according to the nationally consistent economic assessment process. A decision by the jurisdictional target setter to transfer responsibility to the AER would recognise that additional measures that take into account social or community needs or expectations would not be incorporated in the setting of targets.

5.2.2 Merits of the proposed approach

The Commission considers that placing the primary responsibility for setting output reliability targets in the hands of the jurisdictional target setter would allow for economically derived output reliability targets to be set that incorporate additional measures to ensure that the needs and expectations of the community are met. If, however, the jurisdictional target setter considers that there is not a significant need for any additional requirements to meet community needs and expectations, the target setter would be able to transfer responsibility for the setting of targets to the AER.

The Commission considers that allowing the jurisdictional target setter to transfer responsibility for the setting of reliability targets to the AER increases the flexibility of the proposed framework.

In addition, the Commission considers that allowing the AER to coordinate both the setting of reliability targets and the capital expenditure necessary to meet those targets could potentially provide an efficient outcome.

A number of stakeholders proposed that it would be more appropriate for a single regulator to regulate both reliability outcomes and investments.[25] This view is also supported in Brattle's report on best practice approaches to distribution reliability.[26]

While the Commission supports a role for the AER in developing output reliability targets, the Commission notes that there are limits to the level of discretion that the AER would be likely to have in setting targets to meet specific community

---

25 Endeavour Energy, submission on issues paper, 9 August 2012, p2; Essential Energy, submission on issues paper, 9 August 2012, p3; Jemena Electricity Networks, submission on issues paper, 9 August 2012, p4; ETSA, submission on issues paper, 15 August 2012, p4; ActewAGL, submission on issues paper, 23 August 2012, p1; Victorian DPI, submission on issues paper, 21 August 2012, p3.

26 *Approaches to setting electric distribution reliability standards and outcomes*, The Brattle Group, January 2012, p157.

expectations. As the economic regulator, it would be appropriate for the AER to select the level of reliability outcomes with the highest net benefit according to the economic assessment process. As discussed in section 3.4, measures of the value placed on reliability by customers are based on a survey of responses and represent an aggregate approximation that is influenced by a number of factors including customer characteristics and the nature of supply interruptions. Given the level of subjectivity associated with processes used to measure the value of reliability, the Commission maintains that the primary responsibility for the setting of output reliability targets should remain with the jurisdictional target setter.

Aurora Energy notes that current approaches to estimating the value that customers place on reliability, such as VCR and WTP, do not incorporate consideration of the value placed on reliability by the governments that are responsible for the jurisdiction.[27]

Aurora Energy further suggests that there is no merit in having a single entity regulating both reliability standards and investments, provided the economic regulator is required to consider reliability standards when approving capital expenditure for DNSPs.[28]

5.3 Consistent definitions of targets and publication of approved targets

This section outlines the merits of the setting and publication of reliability targets based on a nationally consistent set of definitions and exclusion criteria.

5.3.1 Proposed approach

The approved output reliability targets would be published by the jurisdictional target setter for each DNSP.

National consistency in the types of targets and the measurement of those targets would be enabled through the development of guidelines which would detail the methodology that must be used for the measurement of performance and the specific periods of service or events to be excluded.

The published output reliability targets would include unplanned SAIDI and SAIFI as a minimum. Targets based on other measures such as MAIFI or planned SAIDI and SAIFI may be included if considered as justified through the customer consultation process. The range of potential measures and how each of them is calculated would be set out in the guidelines.

Targets would be set and published by the jurisdictional target setter for each DNSP and the timing for setting and publishing targets in each jurisdiction would be

27 Aurora Energy, submission on issues paper, 16 August 2012, p10.

28 Aurora Energy, submission on issues paper, 16 August 2012, p11.

consistent with the AER's regulatory control period, to allow reliability targets to be developed in time for each DNSP to prepare their regulatory proposal for the AER.

The AEMC's final determination on the Distribution Network Planning and Expansion Framework outlines the requirements from 1 January 2013 for DNSPs to publish a Distribution Annual Planning Report (DAPR).[29] The DAPR requirements set out in the final rule will replace existing jurisdictional reporting requirements. Under schedule 5.8(j)(1) of the final rule, DNSPs will be required to provide a summary description of reliability measures and standards in the DAPR. These requirements on DNSPs would not replace the obligation under our proposed framework on the jurisdictional target setter to publish the output reliability targets.

5.3.2 Merits of the proposed approach

Consistency in expressing reliability standards

Consistency in reliability measures relies on clear definitions and exclusion criteria.

In current jurisdictional frameworks not all periods of service are included in the calculation of performance against reliability standards or targets. For example, in different jurisdictions the calculation of SAIDI may exclude outages that occur as a result of different events. Specific exclusions have been developed over time in each jurisdiction to accommodate specific locational factors and to design the measurements to the characteristics of the jurisdictional network. While this is effective in assessing the performance of the DNSP at a local level, it makes comparison of reliability performance and benchmarking across jurisdictions problematic.

Different forms and specifications of jurisdictional reliability standards also make it difficult for market participants to understand performance. In addition, differences between the definitions and exclusions used by jurisdictions and those used by the AER in the STPIS are an administrative burden for DNSPs and may create confusion for regulatory bodies and the public.

Consistency in the definition of reliability measures is supported in the submission from SA Power Networks which suggests that the methodology behind measures should be aligned with international definitions.[30]

While the specific content of the guidelines is beyond the scope of this draft report, it is considered that the guidelines would adopt a consistent set of definitions and exclusions in line with the AER's exclusions for the purposes of the STPIS or a similar consistent set of definitions and exclusions.

The AER considers there to be significant benefits associated with having a consistent framework that would allow the AER to make comparisons between cost forecasts to

29 *National Electricity Amendment (Distribution Network Planning and Expansion Framework) Rule 2012*, AEMC, 11 October 2012.

30 ETSA, submission on issues paper, 15 August 2012, p2.

achieve reliability targets and identify discrepancies between DNSPs in more detail.[31] The AER considers that better benchmarking would improve the AER's ability to determine an efficient estimate of forecast costs for DNSPs. These benefits are also identified in submissions from the Major Energy Users Inc. (MEU) and Origin Energy.[32] Origin Energy considers that a uniform framework for measuring reliability outcomes should allow for more effective benchmarking between jurisdictions and a better understanding of efficiency in network expenditure.[33]

A number of submissions, including those from Endeavour Energy, Energex, the Victorian Department of Primary Industries (DPI), and Essential Energy, also support consistency in the expression of standards as it would enable comparison of performance across DNSPs, improve transparency, and allow underlying performance and trends to be more easily identified and understood.[34]

Question 5 Consistent definitions and exclusions

What issues would arise from adopting a consistent set of definitions and exclusions for the development of output reliability targets across NEM jurisdictions?

Does the publication of unplanned SAIDI and SAIFI as a minimum provide a sufficient level of consistency for the purposes of benchmarking?

Applying consistency across jurisdictions

The Commission acknowledges that the benefits of consistency in expressing reliability targets across NEM jurisdictions may be limited due to the need to accommodate specific locational characteristics of distribution networks.

Submissions from the Tasmanian Department of Infrastructure, Energy and Resources (DIER), Aurora Energy, and Energex debated the benefits of consistency in the expression of standards and questioned whether consistency would enable effective comparisons of performance given the specific locational characteristics of jurisdictional networks.[35] DIER is particularly concerned about the enforcement of a nationally consistent approach to the expression and measurement of standards as a replacement for the existing framework in Tasmania. DIER suggests that the approach developed in Tasmania, while different to other jurisdictions, has been developed over time to meet the distinct aspects of the local jurisdictional network and does not lend

31 AER, submission on issues paper, 13 August 2012, p3.

32 MEU, submission on issues paper, 9 August 2012, p12; Origin Energy, submission on issues paper, 9 August 2012, p1.

33 Origin Energy, submission on issues paper, 9 August 2012, p1.

34 Endeavour Energy, submission on issues paper, 9 August 2012, p2; Energex, submission on issues paper, 9 August 2012, p3; Essential Energy, submission on issues paper, 9 August 2012, p3; Victorian DPI, submission on issues paper, 21 August 2012, p4.

35 DIER, submission on issues paper, 13 August 2012, p1; Aurora Energy, submission on issues paper, 16 August 2012, p11; Energex, submission on issues paper, 9 August 2012, p3.

itself to being expressed in the same way as on the mainland. The framework applied in South Australia has also been developed to accommodate locational characteristics.

A similar argument can be made regarding the level of disaggregation in the measurement and reporting of performance across jurisdictions. Under the proposed framework, reliability measures would be disaggregated by feeder type. This is inconsistent with the current frameworks that have been developed in Tasmania and South Australia where reliability performance is disaggregated by communities and regions respectively. However, it is worth noting that DNSPs in Tasmania and South Australia already report under feeder categories to the AER for the purposes of the STPIS.

The AER contends that DNSPs within the NEM do not differ so radically as to preclude classification using a consistent set of definitions.[36] The AER considers that, while reliability standards should utilise a single consistent set of definitions, the levels that apply may vary between different parts of the network.

The proposed framework would promote consistency in the expression of reliability targets across jurisdictions and would recognise the requirement for the levels of targets to vary by jurisdiction, and within jurisdictions, to accommodate specific locational characteristics of distribution networks.

SA Power Networks considers that locational differences within and between jurisdictions could be accommodated by establishing DNSP-specific reliability performance levels as part of the framework.[37] SP AusNet states that a national framework should focus on methodological consistencies rather than identical performance targets for jurisdictions and considers that similar absolute levels in performance outcomes should not be expected, as investment and reliability levels should reflect local economic justifications.[38] Our proposed framework is consistent with these comments.

The Commission considers that the use of SAIDI and SAIFI measures as a minimum in the proposed framework would promote consistency and allow for benchmarking of DNSP performance while at the same time maintaining the flexibility for measures to be developed based on customer consultation to accommodate specific locational characteristics and community expectations.

Question 6 Applying consistency across jurisdictions

Does the proposed framework provide sufficient flexibility to meet the specific locational characteristics of individual jurisdictions while achieving the benefits of national consistency?

36 AER, submission on issues paper, 13 August 2012, p8.

37 ETSA, submission on issues paper, 15 August 2012, p3.

38 SP AusNet, submission on issues paper, 9 August 2012, p4.

5.4 Revision of targets

This section outlines the merits of allowing the level of the output reliability targets to be revisited under certain circumstances.

5.4.1 Proposed approach

If, following the publication of output reliability targets, the DNSPs or jurisdictional target setter no longer consider the targets to be robust, the level of the targets may be revisited. Any such revision would only apply to the level of the targets and, for practical purposes, would not allow for a change to the types of measures used or their level of disaggregation.

This step is not a means for the DNSPs to avoid responsibility for meeting the targets based on low levels of performance or poor business practices. Rather, the revision to targets would be allowed on the condition of a significant change in circumstances or an event beyond the control of the businesses such that the information on which the level of reliability targets was based is no longer valid. An example would be a change in the cost of a project based on an increase in capital expenditure such as a requirement for undergrounding where it was previously considered that above ground infrastructure would be sufficient. Another example would be significant changes in demand forecasts. Both the DNSPs and the jurisdictional target setter would be able to initiate the process of revision.

A revision to the target levels would only be initiated where the change in circumstances is significant enough to affect the outcome of the decision on which the targets were set. The specific criteria for a valid change in circumstances, and the requirements on the jurisdictional target setter to publicly disclose any subsequent changes to the output reliability targets, would be contained in the guidelines referred to in section 3.3.

On condition of a revision to the level of the output reliability targets, a pass-through application to the AER would be required from the DNSP to address any necessary changes to the expected level of capital and operating expenditure incorporated in the revenue determination.[39]

5.4.2 Merits of the proposed approach

An ability to revise the level of the reliability targets ensures that the targets continue to be set at an economically efficient level even when circumstances change. A revision process, combined with the AER pass-through process, also ensures that an economically efficient level of capital and operating expenditure is provided to the DNSP under the AER's revenue determination process to reflect the reliability

39 In accordance with clause 6.6.1 of the NER, a pass-through may be requested by a DNSP to vary its revenue determination to reflect an expected change in costs on condition of the occurrence of specific events, such as regulatory change events or tax change events.

performance that can realistically be achieved. A revision to the targets may be initiated by either the DNSP or the jurisdictional target setter.

If a request for a revision resulted in a change to the level of targets, the DNSP would be required to make a positive or negative pass through application to the AER for either an increase or decrease in the level of capital and operating expenditure.

6 Investment decision making

This Chapter provides an overview of the initial stage of the framework relating to the DNSPs' performance against the output reliability targets. The purpose of this stage is to outline:

- the requirements on businesses for reliability-related investment decision making and operational management; and
- the process for the AER to assess reliability-related investments as part of its revenue determinations.

Figure 3.3 shows the process flow and interactions between participants in the investment decision making stage of the framework.

6.1 Investment decision making and operational management

This section outlines the merits of the proposed approach relating to the obligations on DNSPs regarding investment decision making and operational management in relation to reliability issues.

6.1.1 Proposed approach

Input planning

Rather than imposing any specific input planning or other reliability-related operational management requirements on DNSPs, output reliability targets would be developed to specify the desired reliability outcomes to be achieved.

Strict regulatory control through the use of input planning standards could reduce flexibility and inhibit DNSPs from meeting their reliability targets through innovative and potentially more cost effective means.

In contrast, output methods specify the desired reliability outcomes and allow DNSPs to determine the most efficient way to plan and operate their networks in order to meet the desired outcomes.

Compliance obligations

Under current jurisdictional frameworks, DNSPs are required to use either "best endeavours" or "reasonable endeavours" to maintain reliability at levels consistent with or better than the reliability standards every year. In New South Wales, absolute performance to the level of the reliability standards is a requirement of the distribution licence conditions.

The proposed framework would not enforce a strict obligation to comply with the output reliability targets every year.

The Commission acknowledges that the removal of strict compliance obligations to meet specific reliability performance outcomes means that there would be less transparency and assurance that the reliability targets would be met in any given year.

Incentive schemes such as the STPIS provide a degree of assurance over the longer term by applying a system of rewards and penalties for over and under performance against targets. The STPIS incentivises DNSPs to meet targets on average over the longer term. However, DNSPs are not strictly required to meet the targets and are free to depart from the targets in any given year.

Therefore, the Commission considers it prudent that process controls or performance safeguards are established by the DNSPs to provide confidence that the DNSPs are seeking to meet the reliability targets.

Process controls may include confidence interval monitoring where a range of hypothetical scenarios are assessed to determine the probability that the output reliability targets will be met. This is similar to the proposed amendments to the New South Wales distribution licence conditions made under the New South Wales workstream of this review, which require that licence holders must plan their network so as to expect, to a 50% or 75% confidence level (depending on the option chosen for changes to licence conditions), that they will not exceed their prescribed average SAIDI and SAIFI standards in any given financial year.[40]

Performance safeguards would place limits on the extent to which DNSPs may deviate from the output reliability targets over a given timeframe. While not enforcing a strict obligation to meet the output reliability targets in any given year, performance safeguards would aim to prevent repeated underperformance against reliability targets by requiring the DNSPs to generally perform to the level of the targets, eg based on a rolling average performance over four years or a requirement to meet the targets in three out of every four years.

These process controls and performance safeguards are example of the requirements that could be placed on DNSPs to provide confidence that reliability targets are likely to be met. At this stage, the Commission does not have a view regarding the merits of adopting any specific requirements on a nationally consistent basis.

The requirements on DNSPs to establish processes, the form of the processes, and the audit requirements to ensure compliance with the processes would be outlined in the guidelines referred to in section 3.3 and would be applied consistently across jurisdictions.

40 *Mark up of the NSW distribution licence conditions for the AEMC's scenarios for distribution reliability in NSW*, Review of distribution reliability outcomes and standards – NSW workstream, AEMC, 8 June 2012, p6.

6.1.2 Merits of the proposed approach

Responsibility for reliability planning

While distribution network planning would remain the responsibility of the DNSP, the Commission's proposed framework would increase DNSPs' flexibility in undertaking investment decision making and operational management processes by removing existing requirements in some jurisdictions to meet specific input planning standards.

A chief criticism of strict input planning standards is that they blur the bounds between the respective functions of the jurisdictional regulator or government and the DNSP. Under an inputs-based approach, the jurisdictional regulator or government takes on the responsibility for determining the level of security or redundancy that is required, which is a function that may be better achieved by the DNSP. Strict regulatory control through the use of input planning standards reduces flexibility and inhibits the DNSP from meeting their reliability targets through innovative and potentially more cost effective means.

The use of strict input standards can also reduce the flexibility of the DNSP to implement non-network solutions such as demand side participation or embedded generation as potentially more efficient means to meet targeted reliability levels.

A number of stakeholders asserted that input standards should not be imposed on DNSPs.[41] The MEU states that imposing input requirements precludes the DNSP implementing potentially more efficient solutions to achieving the required outcomes.[42] The AER suggests that while the use of input standards is relatively straightforward and transparent, there is a high risk that this simplicity is achieved through systematic over-building.[43]

The Commission's proposed framework does not preclude DNSPs from voluntarily setting their own planning criteria to guide investment decision making. The Commission considers that the voluntary adoption of planning criteria by the DNSP may give rise to additional benefits in the form of increased transparency while at the same time avoiding the jurisdictional regulator or government being overly involved in the planning process. Voluntary planning criteria would only be seen as a guide by the DNSP and would not be rigidly applied or used in regulatory determinations.

41 Endeavour Energy, submission on issues paper, 9 August 2012, p1; Aurora Energy, submission on issues paper, 16 August 2012, p10; Energex, submission on issues paper, 9 August 2012, p2; Jemena Electricity Networks, submission on issues paper, 9 August 2012, p2; SP AusNet, submission on issues paper, 9 August 2012, p3; MEU, submission on issues paper, 9 August 2012, p16; AER, submission on issues paper, 13 August 2012, p4; ActewAGL, submission on issues paper, 23 August 2012, p1; Victorian DPI, submission on issues paper, 21 August 2012, p3.

42 MEU, submission on issues paper, 9 August 2012, p12.

43 AER, submission on issues paper, 13 August 2012, p4.

Process controls and performance safeguards

The Commission considers that there is greater merit in a framework that is based on targeted reliability outcomes than one that enforces strict compliance with reliability standards every year.

In practice, strict compliance with reliability standards is difficult to enforce as financial penalties for non-compliance may only be limited relative to total DNSP revenue and other non-financial penalties such as the revocation of a distribution licence are likely to be impractical and counter-productive.

In addition, a requirement to comply with reliability standards every year may lead to over-performance on average as DNSPs design their networks with a "buffer" to ensure that reliability standards can be met in any given year, even under a worst case scenario.

While not considered as strict compliance obligations on the achievement of reliability targets, process controls and performance safeguards can provide a level of transparency and confidence that the output reliability targets are likely to be met, or that deviations from the output reliability targets will be limited over a given timeframe, while not distorting the DNSPs' ability to adopt the most efficient means of achieving the targets.

Question 7 Process controls and performance safeguards

To what extent should there be an obligation on DNSPs to meet their reliability targets in any given year?

What options are available to provide confidence that DNSPs are seeking to meet the output reliability targets on average?

6.2 Revenue determinations

This section outlines the AER's process for undertaking revenue determinations in light of jurisdictionally determined output reliability targets.

6.2.1 Proposed approach

Under the revenue determination process, the AER approves forecast capital and operating expenditure for each DNSP. The Rules currently require the AER to allow enough capital and operating expenditure to maintain reliability and meet regulatory obligations and requirements.[44]

44 In our NSW final report we recommended that the SCER submit a rule change proposal amending the references to maintaining reliability levels so that capital and operating expenditure allowances for reliability were only based on the relevant regulatory obligations and standards. The Commission has since received a rule change request from the SCER which it will be considering in due course.

Under our approach, the AER would take the jurisdictional target setter's decision as the relevant output reliability targets for each DNSP and would base revenue determinations on the achievement of these targets. We consider that the reliability targets would form the "regulatory obligations and requirements" under the capital and operational objectives in the Rules, which would allow businesses to request sufficient capital and operational expenditure to achieve them.[45]

As discussed in section 5.4, if the jurisdictional target setter decides to revise the output reliability targets on the basis of a material change in circumstances then, in accordance with clause 6.6.1 of the Rules, a pass-through application to the AER would be required from the DNSP to address any necessary changes to the expected level of capital and operating expenditure incorporated in the revenue determination.

Our proposed approach would not require any changes to the Rules relating to the revenue determination process.

6.2.2 Merits of the proposed approach

As part of the revenue determination, the AER would be required to provide the DNSP with a level of capital and operating expenditure that reflects the efficient costs that a prudent DNSP would require to meet the output reliability targets set by the jurisdictional target setter.

Aurora Energy considers that jurisdictions should retain the ability to prescribe the required level of reliability and the AER should give regard to the jurisdictional reliability requirements when approving expenditure.[46] Our proposed approach is also consistent with the submission from Energex which suggests that separate reliability standards could be established by a regulator using nationally consistent measures and the AER could assess the prudent and efficient expenditure required to meet the set standards.[47]

The AER would review whether the DNSP has adopted the most efficient means to achieve the reliability targets.

45 Clause 6.5.6(c) and 6.5.7(c) of the Rules.

46 Aurora Energy, submission on issues paper, 16 August 2012, p10.

47 Energex, submission on issues paper, 9 August 2012, p4.

7 Enforcement and incentives

This Chapter explores the design and merits of the proposed framework relating to compliance obligations and incentives on the achievement of the output reliability targets. While the framework does not impose strict compliance obligations on levels of performance, it is proposed that conditions are included to both incentivise the DNSPs to perform to the level of the output reliability targets on average and to provide assurance to the jurisdictional target setter that the targets are likely to be met on average.

Figure 3.3 shows the process flow and interactions between participants in the enforcement and incentive stage of the framework.

7.1 Audit of process controls and performance

This section outlines the merits of the proposed approach relating to the compliance obligations in relation to process controls and performance measurement.

7.1.1 Proposed approach

An objective of our proposed framework is to allow flexibility in the actions of the DNSPs in order to promote the achievement of targets through innovative and efficient means. As discussed in section 6.1.1, rather than applying strict input standards, or requiring absolute compliance with output standards every year, a system of process controls or performance safeguards would be required to provide a level of confidence that the output reliability targets are likely to be met on average or in most circumstances.

The jurisdictional target setter would appoint an auditor to review whether the DNSPs have effectively established and implemented the required process controls or safeguards and that the DNSPs have accurately and correctly measured performance in accordance with the definitions of measures contained in the guidelines.

The jurisdictional target setter would be responsible for the appointment of the auditor and the DNSPs would be required to pay for the costs of the audit process.

The requirement for an independent audit report is similar in scope to proposed amendments to the New South Wales distribution licence conditions made under the New South workstream of this review. The amendments require that licence holders in New South Wales submit an annual reliability standards report to the Minister detailing the methodologies adopted by the licence holder for determining its level of confidence of compliance with the prescribed SAIDI and SAIFI average standards.

Under the licence conditions, an independent audit is required after the end of each financial year, which assesses performance against the licence requirements.[48]

7.1.2 Merits of the proposed approach

In most NEM jurisdictions the reliability standards are currently either set out in codes or in licence conditions. Compliance with jurisdictional codes or licence conditions is enforced through the relevant jurisdictional legal framework and DNSPs are required generally to use either "best endeavours" or "reasonable endeavours" to maintain reliability at levels consistent with or better than the reliability standards. In New South Wales, absolute performance to the level of the reliability standards is a requirement of the distribution licence conditions.

A failure to perform to the level of the reliability standard may be considered a contravention of the code or licence conditions. In most jurisdictions, the penalties for contravention of the code or licence conditions are either extreme and potentially counter-productive, such as the revocation of a DNSP's distribution licence, or are financially-based but are small in comparison to total DNSP revenue.

Penalties are imposed to encourage the DNSP to perform to the level required by the standard. However, where the penalties are not financially material to the DNSP, it may be argued that the incentive is unlikely to be sufficient to encourage improvements. In addition, in cases where the incentives have only a punitive element there may be a one-sided effect where DNSPs are reluctant to invest to improve the reliability of their network beyond the minimum standard required if they believe they will not be rewarded.

The Commission considers these existing compliance obligations to be unnecessary in light of incentive payments under the STPIS and the requirement for DNSPs to establish processes to provide confidence that the DNSPs are seeking to achieve the reliability targets. The Commission considers that the adoption of the proposed nationally consistent framework would allow for a removal of inefficient compliance obligations from jurisdictional codes and licence conditions.

7.2 Performance incentives

This section outlines the merits of the proposed approach relating to performance incentives on DNSPs to meet the output reliability targets.

7.2.1 Proposed approach

Currently, the AER is in the process of applying the STPIS to each of the NEM jurisdictions.[49] The STPIS operates to provide financial incentives to maintain and

48 *Mark up of the NSW distribution licence conditions for the AEMC's scenarios for distribution reliability in NSW*, Review of distribution reliability outcomes and standards – NSW workstream, AEMC, 8 June 2012, p9,10.

improve service performance by assigning rewards or penalties to a DNSP, as a per cent of revenue, where performance is better or worse than the target performance level.

The proposed framework would continue the implementation of the STPIS in each NEM jurisdiction. However, in the proposed framework the AER would base the STPIS on the targets set by the jurisdictional target setter that were developed through the nationally consistent economic assessment process. The proposed framework will thereby replace the existing process of using the previous five years of reliability performance as the basis for setting reliability targets.

The per cent of revenue tied to the STPIS would remain at the discretion of the AER in consultation with DNSPs. Consistent with the setting of reliability targets, the level of incentive rewards or penalties would be based on the same value of customer reliability used to set the targets, for each jurisdiction, and would be revised on a five-yearly basis ahead of each regulatory control period.

7.2.2 Merits of the proposed approach

The STPIS has the potential to establish material financial incentives on DNSPs. The purpose of having an incentive scheme with material financial implications should be to strengthen the accountability of DNSPs for cost-effective achievement of the reliability targets, and to base those incentives on the value that customers place on reliability.

By basing the development of output reliability targets on an economic assessment process, the STPIS would create incentives to deliver an efficient level of reliability as valued by customers. The Commission considers that a transparent and effective incentive structure is likely to reduce the long-term costs of maintaining reliability, thereby reducing costs to consumers.

Under the Commission's proposed framework the AER would take the jurisdictional target setter's decision on output reliability targets as the relevant targets for the purpose of the STPIS.

Currently, reliability targets set under the STPIS are in addition to the standards or targets set out under electricity distribution codes or licence conditions in most NEM jurisdictions.[50] The proposed framework will create consistency in the targets that are set by the jurisdictional target setter and those that are adopted for the purposes of the STPIS.

The Commission considers that by using the output reliability targets developed by the jurisdictional target setter as the target levels for the STPIS, the proposed framework

---

49 DNSPs in Queensland, South Australia, Tasmania, and Victoria are currently subject to the STPIS. DNSPs in the Australian Capital Territory and New South Wales will be subject to the STPIS from the start of the next regulatory control period.

50 The exception is Victoria where DNSPs adopt the STPIS targets as their output reliability targets.

will avoid having two sets of applicable targets and conflicting incentives, which currently applies under some jurisdictional frameworks.

Under current jurisdictional frameworks, reliability standards can be very different to STPIS targets, which are based on five years of historical performance. This could lead to unclear incentives if the two sets of targets are not aligned and may incentivise DNSPs to provide a higher level of reliability than that set by the jurisdictional target setter.

In addition, the proposed framework would avoid any unnecessary costs associated with collecting and reporting two sets of data, which can occur under current jurisdictional frameworks. For example, New South Wales currently has different major event day definitions for SAIDI under the New South Wales licence conditions and under the requirements for the STPIS.

This aspect of the framework is consistent with views in submissions from Energex and the MEU which suggest that conflicting priorities exist from having a requirement to comply with jurisdictional reliability standards and a national incentive scheme.[51]

As discussed in section 6.2.2, as part of the revenue determination process, the AER would be required to provide sufficient capital and operating expenditure to the DNSPs in order that they are able to meet the output reliability targets set by the jurisdictional target setter. Therefore, the proposed framework will also create consistency in the targets that are used by the AER for the purposes of revenue determinations and those that are adopted for the purposes of the STPIS.

Question 8 Enforcement and incentives

What jurisdictional compliance obligations should apply?

Are there any further considerations that should be taken into account in the implementation of a nationally consistent incentives scheme?

51 Energex, submission on issues paper, 9 August 2012, p4; MEU, submission on issues paper, 9 August 2012, p17.

8 Reporting

This Chapter explores the design and merits of the proposed framework relating to reporting.

Figure 3.3 shows the process flow and interactions between participants in the reporting stage of the framework.

8.1 Compliance and performance reporting

This section outlines the merits of the proposed approach relating to the process of compliance and performance reporting.

8.1.1 Proposed approach

For the purposes of reporting, DNSPs would provide information to the AER on the level of performance achieved with regard to the reliability targets. In addition, the audit report on compliance with process controls and safeguards would be submitted by the auditor to the jurisdictional target setter and the AER.[52]

Under the proposed framework the AER would be required to produce an annual public report that compares performance with published targets (including any requirements for worst served customers) and compliance with required processes. Performance against output reliability targets would be reported for each DNSP according to a consistent set of definitions, exclusion criteria, and levels of disaggregation. The Reliability Panel's Annual Market Performance Report includes some information on DNSP performance, which may not be required should this be provided in the AER's report.

The AER would compile information received from DNSPs on levels of reliability performance and would produce a public report each year that compares performance of all DNSPs across the NEM with their respective targets. The report would also include information relating to processes implemented by the DNSP to provide confidence in the achievement of the targets and any non-compliance issues identified by the auditor.

Under schedule 5.8(j) of the AEMC's final determination rule on the Distribution Network Planning and Expansion Framework, DNSPs will be required to provide information in the Distribution Annual Planning Report (DAPR) on reliability performance.[53] This includes a summary of performance against reliability targets, a

52 As discussed in section 7.1, the jurisdictional target setter would appoint an auditor to review whether the correct steps have been taken in the implementation of the process controls or performance safeguards and that the DNSPs have measured performance accurately and correctly in accordance with the framework guidelines.

53 *National Electricity Amendment (Distribution Network Planning and Expansion Framework) Rule 2012*, AEMC, 11 October 2012.

description of the reasons for not meeting targets and the corrective action taken or planned, a description of the DNSPs' processes to ensure compliance with reliability targets, and an outline of information provided to the AER for the purposes of the STPIS.

Under the AEMC's final position paper on the *Economic Regulation of Network Service Providers*, the AER is required to publish annual benchmarking reports, setting out the relative efficiencies in capital and operating expenditure allowances of DNSPs.[54] The process of benchmarking will take into account differences in the environments of the different DNSPs, including factors that are outside their control.

The public report produced by the AER will be in addition to the DAPR and could potentially form part of the annual benchmarking reports.

8.1.2 Merits of the proposed approach

It is expected that public reporting of reliability performance will allow the AER to better benchmark performance and improve the ability to determine an efficient estimate of cost forecasts for DNSPs. It would also allow participants to compare and identify trends and innovations in DNSP performance, which may assist in driving further efficiencies and for consumers to identify the relative performance of their local DNSP.

The Commission considers that with consistent disaggregated reporting of data, it is more likely that the AER will be able to assess variations across the networks and that DNSPs, jurisdictional target setters, and consumers will be able to more accurately compare and evaluate levels of performance.

SP AusNet considers that the AER's comparative performance reporting process could be strengthened by using an agreed methodology for expressing output measures on a common basis.[55] The Brattle Report also supports the reporting of performance at a disaggregated level so that trends and variations across the distribution system can be assessed.[56]

The AER supports a comparison of jurisdictional performance through reporting and suggests that:

> "…a consistent national framework for reporting against reliability standards has the potential to create incentives for DNSPs to improve their performance. These benefits arise when it is possible to measure and report on the extent to which each DNSP is meeting its reliability targets, taking into account the differences between networks.

54 *Economic Regulation of Network Service Providers - Final Position Paper*, AEMC, 22 November 2012.

55 SP AusNet, submission on issues paper, 9 August 2012, p3.

56 *Approaches to setting electric distribution reliability standards and outcomes*, The Brattle Group, January 2012, p13.

Regulated businesses are typically sensitive about public reporting of their performance and often point to differences in underlying characteristics to argue that comparative reporting is not very meaningful."[57]

Question 9 Reporting

What are the important considerations for reporting on performance against reliability targets?

57 AER, submission on issues paper, 13 August 2012, p3.

9 Implementation of a nationally consistent framework

This Chapter outlines some initial considerations for the implementation of a nationally consistent framework for distribution reliability outcomes. As discussed below, implementation considerations will be discussed further should the AEMC be requested to develop a national best practice framework.

9.1 Development of a best practice framework

The terms of reference for this review provide that the SCER will consider this draft report and provide advice on whether the AEMC should undertake further work to develop a national best practice framework for expressing, delivering, and reporting on distribution reliability outcomes. Under the terms of reference for the national workstream, if SCER requests the AEMC to undertake this further work, the Commission would have four months following SCER's response to provide a final report which sets out this framework.

The terms of reference does not appear to contemplate a period of consultation on our recommenced best practice framework prior to the publication of our final report, and this four month timeframe would not allow for a consultation period.

The Commission would use the high level framework set out in this draft report as a starting point in developing a best practice framework and would also take into account any submissions it receives on this report. However, the Commission considers that the development of a best practice framework would require further stakeholder engagement. As a result, should the Commission be requested to undertake this further work, the Commission intends to consult with SCER on whether it would be appropriate to include an additional consultation period prior to publishing our final report and any amendments required to the timetable for the review to accommodate this. Submissions on the issues paper from Essential Energy, Energex, and Ausgrid supported adequate allocation of time for consultation on the best practice framework.[58]

9.2 Changes to jurisdictional instruments

The adoption of parts or the whole of any nationally consistent framework will remain voluntary for jurisdictions. Jurisdictions may also decide to use the nationally consistent framework as a reference in determining whether to amend aspects of their existing frameworks. As noted in Chapter 1, jurisdictions would also retain responsibility for determining the level of distribution reliability to be provided, to allow the differing characteristics of each network to be taken into account.

Any nationally consistent framework that is developed will represent a package of inter-related and complementary reforms. As a result, the benefits that may arise for

58 Essential Energy, submission on issues paper, 9 August 2012, p2; Energex, submission on issues paper, 9 August 2012, p6; Ausgrid, submission on issues paper, 17 August 2012, p7.

each jurisdiction, in terms of greater efficiency, transparency, and accountability in how distribution reliability outcomes are provided, are likely to be greatest when it is adopted as a complete package.

On a national level, one of the key benefits of a nationally consistent framework is the opportunity to improve the benchmarking of the reliability performance of distribution networks across the NEM. Where there is a common approach to expressing and reporting on distribution reliability outcomes in the NEM, the potential for benchmarking and with that the opportunity for improved efficiency and innovation in distribution networks, will be strengthened. Therefore, the merits of a nationally consistent framework rest on the adoption of the framework both within each jurisdiction and across the NEM.

Where jurisdictions decide to adopt the nationally consistent framework, this will require changes to jurisdictional legal instruments. If the AEMC is requested to undertake further work to develop a best practice framework, the AEMC's final report will include detailed implementation advice on the changes that would be required in each jurisdiction to implement the framework. In developing this advice, the AEMC would work closely with jurisdictional governments, regulatory bodies, and DNSPs, to minimise the costs of implementing the framework. However, as noted in Chapter 4, as the AEMC's proposed framework includes a more rigorous and transparent process for setting reliability targets than is currently applied in most jurisdictions, it is anticipated that the implementation of a best practice framework is likely to involve additional resourcing costs for DNSPs, jurisdictional target setters, and the AER.

Each jurisdiction would remain responsible for the timeframe and process for amending their jurisdictional instruments. However, where possible, the implementation of the framework in each jurisdiction should be undertaken in a co-ordinated process to ensure the adoption of the national framework under a common timetable.

9.3 Changes to the National Electricity Rules

The implementation of a nationally consistent framework will require changes to the National Electricity Rules to set out obligations relating to the methodologies and process that should be used in setting distribution reliability standards, reporting requirements, and changes to the incentive arrangements under the STPIS.

If requested to develop a best practice framework, the Commission's final report would include further detail on any required changes to the Rules. Following the Commission's final report, SCER would then be required to submit a formal Rule change request to the Commission. This rule change process would provide a further opportunity for stakeholders to raise any implementation issues prior to the introduction of the national framework.

The timing for changes to the Rules would need to be co-ordinated with the timing of changes to jurisdictional legal instruments, as the implementation of the national framework will require both of these processes to be finalised before it can be applied.

Question 10 Implementation considerations

Are there any further implementation considerations which should be taken into account in the development of a nationally consistent framework?

Glossary and abbreviations

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
DAPR	Distribution Annual Planning Report
DIER	Tasmanian Department of Infrastructure, Energy and Resources
DNSP	Distribution Network Service Providers
DPI	Victorian Department of Primary Industries
GSL	Guaranteed Service Level - payments made by the DNSP to customers according to the duration and frequency of supply interruptions or under a range of other circumstances related to the level of service
IPART	Independent Pricing and Regulatory Tribunal
MAIFI	Momentary Average Interruption Frequency Index - a measure of how many supply interruptions occurred in a year of a specific very short duration
Major event	A day that is excluded from the measurement of performance against reliability targets due to the occurrence of a major interruption to supply, defined as occurring when the daily total system SAIDI exceeds a pre-determined threshold which is based on historical SAIDI values
MEU	Major Energy Users Inc.
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
SAIDI	System Average Interruption Duration Index - the sum of the duration of each sustained customer

	interruption, multiplied by the number of customers impacted by each interruption, divided by the total number of customers serviced
SAIFI	System Average Interruption Frequency Index - the total number of sustained interruptions, multiplied by the number of customers impacted by each interruption, divided by the total number of customers serviced
SCER	Standing Council on Energy and Resources
STPIS	Service Target Performance Incentive Scheme - a scheme operated by the AER to provide financial incentives to maintain and improve service performance by assigning rewards or penalties to a DNSP where performance is better or worse than the target performance level
VCR	value of customer reliability - the costs that supply interruptions impose on end-use customers, as defined in the New South Wales draft report
WTP	willingness to pay - the willingness of customers to pay for an improvement to the level of reliability

A Summary of submissions

This appendix sets out a summary of the issues raised in submissions on the national workstream issues paper and the AEMC's response to the issues raised. Note where stakeholders views were broadly similar they have been grouped together.

Table A.1 Summary of submissions on the National workstream issues paper

Issue raised	Stakeholder	AEMC response
Aspects for consideration in the national workstream		
The aspects included in issues paper for consideration are appropriate.	Endeavour Energy, p1; Energex, p2; Jemena p2; MEU, p15	No response required.
Issues of safety, customer service standards and quality of supply are elements that are not intrinsic to the issue of reliability. However, there is merit in looking to standardise aspects covering quality of supply as they impinge on the way consumers see reliability.	MEU, p15, 10	The Commission considers that these aspects are not key drivers of reliability performance and distribution investment, and are beyond the scope of this review.
The review should consider definitions of reliability measures and make sure they are aligned to international definitions.	ETSA, p2	As part of the proposed framework, output reliability targets would be developed by each jurisdiction in accordance with a nationally consistent set of definitions and exclusion criteria. Specific definitions of reliability measures will be considered during the development of a best practice framework should the AEMC be asked to develop one.

Issue raised	Stakeholder	AEMC response
Consider how review aligns with recommendations in the Transmission Reliability Standards Review Final Report.	Ausgrid, p2	The AEMC has also received terms of reference from the SCER to provide advice on the implementation of a nationally consistent framework for transmission reliability standards, following the AEMC's recommendations from its Updated Final Report on the Transmission Reliability Standards Review. In undertaking this work and the national distribution workstream, the AEMC will consider any potential interactions and linkages.
Should consider aspects which address safety risk, such as the Victorian Power Line Bushfire Safety Program.	Vic DPI, p1-2	Issues of safety risk are not directly related to distribution reliability and are not considered to be within the scope of the review.
Support proposal for additional consultation step on best practice framework.	Ausgrid, p2; Energex, p2	The Commission intends to consult with SCER on whether it would be appropriate to include an additional consultation period prior to publishing our final report and any amendments required to the timetable for the review to accommodate this. See section 9.1.
Should review Steering Committee on National Regulatory Reporting Requirements (SCNRRR) approach to feeder category definition.	Energex, p2	Specific definitions regarding feeder categories will be considered during the development of a best practice framework should the AEMC be requested by the SCER to develop one.
Framework should improve customer involvement in cost versus reliability outcomes. Should consider how the reporting framework could assist customers' understanding of reliability outcomes that DNSPs are able to deliver.	ETSA, p2	Agreed. The AEMC discusses the potential benefits from customer consultation in section 4.1.
Should consider potential for windfall gains and losses by any change to the STPIS methodology.	Vic DPI, p2	Noted. This will be considered at the best practice design phase, if requested by the SCER to do so.

Issue raised	Stakeholder	AEMC response
Governance arrangements for distribution reliability		
Planning standards should be consolidated into a single regulatory instrument administered by the AEMC. This would still preserve no uniformity in the level of standards.	CitiPower & Powercor, p4	The AEMC considers that a nationally consistent framework would still retain jurisdictional responsibility for setting reliability targets. See section 4.2.
Performance standards may be set independently by the jurisdictional or national regulator.	Energex, p2	See section 4.2.
Network planning should be the responsibility of the DNSPs.	Energex, p2; Jemena, Annexure -1 p1; SP Ausnet, p3; Jemena, p3; Aurora Energy, p10; Endeavour Energy, p2; ActewAGL, p2	Agreed. See section 6.1.
Setting of standards and ensuring the funds are provided for their achievement must be done by the AER. It is inefficient and inconsistent for the jurisdiction to determine how the standards are to be achieved when the DNSP is required by the AER to achieve the outcomes in the most efficient manner. Cost of duplication of effort in relation to how reliability is achieved is a key aspect.	MEU, p15-17	The AEMC proposes that jurisdictions retain the primary responsibility for setting levels of reliability, but have the ability to transfer responsibility to the AER. See sections 5.1 and 5.2.
Agrees that having one regulatory body that sets reliability standards and also determines the amount of allowable expenditure to meet those standards may provide a more efficient outcome.	Essential Energy, p3; Endeavour Energy, p2; ETSA, p4; ActewAGL, p1; Vic DPI, p4	The AEMC proposes that jurisdictions retain the primary responsibility for setting levels of reliability, but have the ability to transfer responsibility to the AER. See sections 5.1 and 5.2.

Issue raised	Stakeholder	AEMC response
The AER would be well placed to develop an economic framework for planning standards that will affect the expenditures of the entities under regulation. However, the jurisdiction should retain the ability to prescribe a degree of reliability above that resulting from the general approach. It is appropriate that administrators for design standards are the jurisdiction and national safety regulators and the DNSPs themselves. No reason why both sets of standards need to be equal - although assumes economic regulator has regard to the jurisdictional reliability requirements when approving expenditure and economic standards are not more stringent than the jurisdictional ones.	Aurora Energy, p9-11	The AEMC proposes that jurisdictions retain the primary responsibility for setting levels of reliability, but have the ability to transfer responsibility to the AER. See sections 5.1 and 5.2.
May be benefits in one entity regulating both reliability standards and investments – AER should be that entity with a clear understanding between jurisdictional energy ministers of the level of reliability standards. Alternatively, AER could consult with jurisdictions and stakeholders on the level of standards.	Jemena, p4	The Commission supports the role of the AER in developing output reliability targets. However, the Commission notes that there are limits to the level of discretion and accountability that the AER would be likely to have in setting targets to meet specific community expectations. See section 5.2.
An approach which relies on a single entity to set standards and determine investments has the potential to give rise to questions of accountability, particularly if the entity making the decision is an unelected regulatory or technical organisation. Support measures which empower consumers to express their preferences with regard to cost vs reliability, allow the community to express its views on social and economic objectives, and enables DNSPs to respond flexibly to these requirements.	AER, p7	These views are consistent with the AEMC's proposed approach. See section 4.1 on aspects on customer and community preferences and section 5.1 on separation of setting targets and determining investments.

Issue raised	Stakeholder	AEMC response
Approaches for distribution reliability planning		
Outputs based regime gives DNSPs opportunity to make necessary decisions to deliver required reliability outputs in the most cost efficient manner using a measure of customer value against the cost of investments.	AER, p4; Jemena, p3; MEU, p3, p12; ETSA, p3; CitiPower & Powercor, p3; Vic DPI, p3; AEMO, p2; Energex, p1	Agreed. The Commission considers that the most efficient means of determining the appropriate level of reliability in the network is to employ an economic assessment process that incorporates a comparison of the value placed on reliability by customers against the costs of undertaking investments. See section 5.1.
Any national framework should take an outputs based approach.	Endeavour Energy, p1-2	Agreed. The proposed framework would remove the requirement to meet strict input planning standards and would base the achievement of reliability outcomes on the development of output reliability targets. Discussed at section 5.1.
Hybrid approach as described in the Issues Paper is unlikely to have merit in distribution networks as an inconsistency with the incentives of the STPIS would likely remain. A hybrid approach would likely be inferior to the status quo approach in Victoria.	SP AusNet, p3	Noted. Our proposed approach ensures consistency between jurisdictional targets and the STPIS.
Strongly support probabilistic approach as it ensures optimal reliability levels are achieved. Deterministic approaches do not have regard to the value of additional investment to customers and risk leading to sub-optimal investment decisions. Input standards should not be imposed on DNSPs.	SP AusNet, p2	The proposed framework incorporates a nationally consistent economic assessment framework and removes requirements for input standards on DNSPs. Consider the terms deterministic and probabilistic as insufficient to properly represent the full range of possible approaches to distribution reliability planning. See section 5.1.
Minimum standards should be defined in terms of outputs, rather than inputs.	ActewAGL, p1	Agreed. Discussed at section 5.1.

Issue raised	Stakeholder	AEMC response
Issues Paper does not accurately describe SA Power Networks' design planning criteria. SA Power Networks' risk-based approach utilises a design planning criteria using a deterministic N based criteria whilst ensuring that a recovery solution is available to restore customers' electricity supply within an acceptable period if a credible contingency event occurs.	ETSA, p3	Noted.
Should be a consistent approach to estimating VCR/WTP measure and be conducted independently of DNSPs.	SP AusNet, p2; AER, p6	Agreed. The AEMC proposes the development of a nationally consistent economic assessment framework by an independent body. See section 5.1.
Consideration of VCR and WTP studies are desirable, notes that the dichotomy between the two values creates difficulty in effecting customer desires. Neither approach incorporates consideration of the value placed upon reliability by the jurisdictional government.	Aurora Energy, p10	The way that the customer value of reliability is measured would be more appropriately addressed in the final report on a best practice nationally consistent framework. See section 5.1.2.
Hybrid approach where DNSP sets input standards based on VCR study, as used by the AEMC for the NSW review and recommended in Transmission Reliability Frameworks review. Regardless of approach, important to be with reference to VCR and WTP.	Ausgrid, p3	Noted.
Deterministic imposes costs without ensuring the most efficient method of achieving the desired outcomes. However, the setting of VCR is fraught and will vary between different classes of customers, time of day and year and with duration and frequency of the outage.	MEU, p16	Noted. The AEMC proposes to remove input standards. The form of the nationally consistent economic assessment framework will be determined as part of a best practice approach.
An incentive-based system that ensures networks make efficient investment decisions that balance price and reliability outcomes, and reflect the value that consumers place on reliability. Shouldn't mean a deterministic set of planning standards applied to all businesses.	Vic DPI, p6	Noted.

Issue raised	Stakeholder	AEMC response
Expected costs and benefits associated with consistent expression of reliability outcomes and how locational differences can be accommodated		
Consistent expression along with standardised definitions will enable comparisons between businesses.	Endeavour Energy, p2; Essential Energy, p3; MEU, p12, p17; AER, p3; Vic DPI, p4; Ausgrid, p4; Origin Energy, p1	Agreed. See section 5.3.
Location differences cannot be adequately accounted for through a consistent expression of standards.	Energex, p3; Ausgrid, p4; DIER, p1; Aurora Energy, p11	The AEMC acknowledges that the benefits of consistency in expressing reliability targets across NEM jurisdictions may be limited in order that specific locational characteristics of distribution networks are accommodated. However, the AEMC considers that some level of consistent reporting and normalisation can enable meaningful comparisons. Discussed at section 5.3.2.
Locational and jurisdictional differences could be accommodated by establishing DNSP-specific reliability performance levels within the framework which reflects that DNSP's historic performance and any applicable limits that relate to differences in characteristics between jurisdictional networks.	ETSA, p3	Noted. The AEMC recognises the requirement for the levels of targets to vary by jurisdiction, and within jurisdictions, to accommodate specific locational characteristics. See section 5.3.2.
Primary benefit is the potential welfare improvement from more closely aligning the price-reliability balance with the preference of consumers.	ActewAGL, p1	Noted. The AEMC considers that the most efficient delivery of improvements to reliability in the network are those that employ an economic assessment process that incorporates a consideration of the value of reliability with respect to the costs of investments. See section 5.1.
Need to address the additional costs of duplication between AER and jurisdictional requirements.	MEU, p17	Noted. The proposed framework will remove the duplication and inconsistencies that can potentially exist between jurisdictional reliability requirements and the STPIS. See section 7.2.

Issue raised	Stakeholder	AEMC response
Benefit in having a system to accurately record the causes of outages. DNSPs can use this information to prioritise and focus their network improvements. If the records are available on network outages, the cost to produce one or more reliability performance reports based on different exclusion criteria should not be an issue. Minor costs would be incurred in developing and maintain the system.	Jemena, p3	Noted.
Elements of distribution reliability reporting and value in nationally consistent approach		
Direct comparison of reliability performance must take account of network features and externalities peculiar to individual networks – emphasises the importance of disaggregating the network for comparison through feeder categorisation. Similar performance should not be expected as it will reflect local economic justification.	SP AusNet, p3	Noted. The AEMC recognises the requirement for the levels of targets to vary by jurisdiction, and within jurisdictions, to accommodate specific locational characteristics. See section 5.3.2.
Should be sufficient disaggregation that enables reasonable like for like comparisons to be drawn between distributors. National framework must recognise that some events should be excluded. Supports consistent approach and application of common exclusion criteria. Jurisdictional differences can be accommodated by having feeder categories.	Endeavour Energy, p2; Jemena, p3	The AEMC recognises the requirement for disaggregation to accommodate local network characteristics and to allow comparisons between DNSPs. The proposed framework would incorporate a consistent set of exclusions. See section 5.3.2.
Consistent reporting on reliability outputs and trends could benefit stakeholders and provide efficiency benefits in the NEM. AER's comparative performance reporting process could be strengthened by using an agreed methodology for expressing output measures on a common basis. Comparisons across DNSPs could also benefit from consistent definitions of 'worst served customers' and 'worst performing feeders'.	SP AusNet, p3	The AEMC considers that, through public reporting by the AER, variations across the network will be more easily assessed and DNSPs and jurisdictional target setters will be able to more accurately compare and evaluate levels of performance. See section 8.1. Treatment of worst served customers would remain at the discretion of the jurisdiction, considered as best placed to determine community expectations. See section 5.1.2.

Issue raised	Stakeholder	AEMC response
Consistent national reporting has the potential to create incentives for DNSPs to improve their performance when it is possible to measure and report on the extent to which each DNSP is meeting its reliability targets. Also valuable for consumer groups wishing to assess the performance of their local DNSP.	AER, p3, p8	Agreed. Jurisdictional target setters will be able to more accurately compare and evaluate levels of performance through public reporting on a consistent basis. See section 8.1.
Access to comparative data is likely to improve customer decisions in terms of their ability to make informed choices about reliability outcomes. Consistent approach would need to: • Address inconsistent reporting of planned outages in SAIDI and SAIFI and the definition and use of major event day exclusion. • Review the SCNRRR customer segmentation definitions to better reflect the diversity of customer types and preferences across the base.	Ausgrid, p5	The proposed framework would incorporate a consistent set of definitions and exclusions. The definitions and exclusions would form part of the best practice approach. See section 5.3.
Most important that measures reflect the customer experience which are valued by customers. Should report on overall reliability performance as well as normalised performance, using a robust exclusion methodology.	ETSA, p4	The types of reliability measurements would be determined through customer consultation but would include unplanned SAIDI and SAIFI as a minimum. See section 4.1. Reliability measures would incorporate a consistent set of exclusions. See section 5.3.
Costs and benefits of existing jurisdictional performance incentive schemes and the movement towards a more consistent approach across the NEM		
If required, national approach to reliability targets should be incorporated into the STPIS with full consultation on amendments. No uniformity in standards.	CitiPower & Powercor, p3	Noted. While the AEMC's approach incorporates the STPIS, the setting of reliability targets remains the responsibility of the jurisdictional regulator or government. See section 7.2.

Issue raised	Stakeholder	AEMC response
Transferring some reliability requirements to the STPIS could occur at minimum cost – would need arrangements for worst served customers since STPIS average.	Essential Energy, p2	The AEMC proposes to base the STPIS on jurisdictionally set reliability targets. Requirements for worst served customers remain at the discretion of the jurisdiction. See section 7.2.
Fines do not compensate customers for the losses they experience. Any fines should be remitted back to customers. May also not work as disincentive. STPIS should be used in combination with elements to address worst served customers. Current arrangements duplicative and impose costs. Imposing an incentive scheme embedded in the regulatory reset review provides a driver for the DNSP to achieve the expected outcomes in the most efficient manner.	MEU, p3, p8, p17.	The AEMC proposes to base the STPIS on jurisdictionally set reliability targets. Requirements for worst served customers remain at the discretion of the jurisdiction. See section 7.2.
Any move to more consistent STPIS needs to be based on development of reliable and recent VCR and WTP values.	Ausgrid, p5	Noted. AEMC proposes that the appropriate measure of value placed on reliability by customers be assessed and regularly reviewed in line with the timing of the revenue determination process. See section 6.2.
More consistent, incentive based approach will ensure that efficient trade-offs are made between investment and reliability in the long-term interests of consumers.	Vic DPI, p5	Noted. The AEMC proposes to apply the STPIS to incentivise DNSPs to achieve the expected outcomes. STPIS incentive payments would be based on a nationally consistent economic assessment process. See section 7.2.
Incentivise cost-effective investments by having a scheme like the STPIS which includes an appropriate value of customer reliability.	Endeavour Energy, p1-2	Noted. The AEMC proposes to apply the STPIS to incentivise DNSPs to achieve the expected outcomes. STPIS incentive payments would be based on a nationally consistent economic assessment process. See section 7.2.

Issue raised	Stakeholder	AEMC response
Accommodation of worst served customers in a nationally consistent framework		
Appropriate to recognise reliability for worst served customers. Under current incentive schemes difficult to justify projects.	Endeavour Energy, p3; SP AusNet, p5	The treatment of worst served customers would remain at the discretion of the jurisdiction, considered as best placed to determine community expectations. Discussed at section 5.1.2.
Practice of reporting on low-reliability feeders is effective.	SP AusNet, p5; Aurora Energy, p12; ETSA, p5	Noted. However, the most appropriate treatment for worst-served customers would be addressed in the consideration of a best practice framework.
STPIS may not be most effective way to address concerns with worst served customers. Another option is to have separately designed schemes which are tailored to improve reliability of worst served customers.	AER, p8	Noted. See section 5.1.2.
Separate reliability standards to meet worst served customers could be established by a regulator using nationally consistent measures. That national regulator could assess the prudent and efficient expenditure required to meet those standards. Alternatively, a further parameter with targets could be included in the STPIS.	Energex, p4	Noted. The costs of jurisdictional requirements for worst served customers would be assessed under the nationally consistent economic assessment process. See section 5.1.2.
Considerations for Guaranteed Service Level schemes		
A nationally consistent incentive scheme for worst served customers would be a GSL payment scheme where the DNSPs are automatically required to make payment.	Jemena, p4	The Commission considers that there is likely to be merit in the development of a nationally consistent GSL scheme. The details and costs and benefits of a nationally consistent GSL scheme will be assessed further if the SCER requests the AEMC to develop a best practice framework. See section 5.1.2.

Issue raised	Stakeholder	AEMC response
A GSL scheme should be consistent with the STPIS and vary amongst different segments of customers and incorporate a consideration of VCR or WTP. Changes to systems and processes for DNSPs may outweigh the benefits of a nationally consistent approach to GSLs.	Energex, p4	The Commission considers that there is likely to be merit in the development of a nationally consistent GSL scheme. The details and costs and benefits of a nationally consistent GSL scheme will be assessed further if the SCER requests the AEMC to develop a best practice framework. See section 5.1.2.
Expected costs and benefits associated with customer communications		
Voluntary communications may be useful to manage expectations where investment is prohibitively expensive.	Energex, p4; Essential Energy, p3	Noted. Customer consultation under the proposed framework would provide DNSPs with a means to demonstrate that customers would prefer improved communications. The Commission does not consider it appropriate to mandate customer communications as part of the proposed framework unless there is clear evidence of a net benefit. See section 4.1.
Customer communication costs are dependent on the extent and communication media used. Reduces costs to customers by allowing them to plan around the outages. Reduces customer complaints and the load on customer call centres. Survey and study would be required to determine the costs and benefits.	Jemena, p4	Noted. As above.
Communication only valuable if the consumer receives it in a form it can access which may require more than text message and may also require the DNSP to know who needs to be advised, eg in the case of a business.	MEU, p18	Noted.

Issue raised	Stakeholder	AEMC response
Meaning of a nationally consistent framework		
Should not mean the same level of reliability set for each network.	Endeavour Energy, p3; Energex, p5; Jemena, p5; SP AusNet, p6; Ausgrid, p6	Agreed. The intention of the proposed framework is not to result in a single harmonised level of reliability outcomes that will apply across the NEM. See section 2.3.
Process for setting standards should be transparent and open, with opportunity for stakeholder input.	Ausgrid, p6	Agreed. The proposed framework would involve consultation with customers and the DNSPs. See section 4.1.
DNSPs within the NEM do not differ so radically as to preclude classification using a consistent set of definitions. Output standards should utilise a single consistent set of definitions, even though the targets that apply are likely to vary between different parts of the network.	AER, p8	The Commission has proposed the use of a consistent set of measures with levels determined by the jurisdiction. See section 5.3.
Should only impose criteria or standards on jurisdictions that bring greater alignment with best practice than current practice.	SP AusNet, p6	The Commission considers that the high level features of the proposed nationally consistent framework are likely to provide merit in the context of existing jurisdictional approaches.
Appropriate governance arrangements for a nationally consistent framework		
Body responsible for setting standards should also be responsible for reporting.	Vic DPI; p6; MEU, p20	The Commission considers that the proposed nationally consistent framework will allow for the jurisdictions to set the targets and the AER to report on performance.
Local jurisdiction most appropriate to set standards but jurisdictional regulator needs to be cognisant of the costs of achieving the standards, the WTP and price impacts. The AER could then be charged to monitor/enforce the standards.	ETSA, p5	Noted. Consistent with the AEMC's proposed framework.

Issue raised	Stakeholder	AEMC response
Good governance requires a separation of the tasks of setting and enforcing standards.	Aurora, p14	Noted. Consistent with the AEMC's proposed framework.
Standards should be set by a party that is best placed to engage with customers to determine their WTP. Party should have technical capability to understand the standards set and the behaviours and outcomes they incentivise.	Energex, p5	Noted. The Commission proposes that reliability targets would be set by the jurisdiction in consultation with the DNSPs. See section 5.1.
Expected costs and benefits of moving to a nationally consistent framework		
Benefits of aligning jurisdictional and national reporting where duplicate reporting regimes are to be maintained.	Endeavour Energy, p3	Noted. The Commission proposes that the jurisdictional reliability targets would be used to set STPIS targets. See section 7.2.
How a nationally consistent framework contributes to the NEO		
A nationally consistent framework would contribute to the NEO if it leads to more targeted and efficient reliability investment that reflects VCR and WTP with appropriate incentives.	Energex, p5; SP AusNet, p6; Jemena, p6; MEU, p20; ETSA, p6; Ausgrid, p7	Noted. The Commission proposes that reliability targets be based on a nationally consistent economic assessment process. See section 5.1.2.
A nationally consistent framework would contribute to the NEO if it allows for benchmarking.	ETSA, p6; Vic DPI, p7	Agreed. The Commission considers that a consistent set of exclusions and measures will allow for benchmarking of performance. See section 8.1.
Important considerations in moving towards a nationally consistent framework		
Will depend on extent of difference from current jurisdictional arrangements – transitional period may be necessary.	Endeavour Energy, p4; ActewAGL, p2; ETSA, p7; Ausgrid, p7; Energex, p6	Noted. Implementation will be fully considered as part of a best practice assessment. See chapter 9.

Issue raised	Stakeholder	AEMC response
Should be adequate time for consultation on the best-practice framework.	Essential Energy, p2; Energex, p6	Should the Commission be requested to undertake this further work, the Commission intends to consult with SCER on whether it would be appropriate to include an additional consultation period. See section 9.1.
Other variants to an approach not discussed in issues paper are abolishing jurisdictional codes in place of an MOU between energy ministers and the AER or the AER being required to consult the ministers and stakeholders on the level of standards during the price review process.	Jemena, p7	Noted. The AEMC has proposed a framework in the draft report, which it considers likely to have the most merit as a nationally consistent approach.
Implementation costs include changes to systems and planning frameworks, depending on approach.	Vic DPI, p7; Aurora, p16; SP AusNet, p6	Noted.
Costs of implementation will be minimal if framework maximised use of STPIS.	MEU, p22	Noted. The Commission proposes to incorporate the use of the STPIS as part of the proposed approach. See section 7.2.