AEMC

REVIEW

Australian Energy Market Commission

UPDATED FINAL REPORT

Transmission Reliability Standards Review

Commissioners

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Updated Final Report

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About the AEMC

The Council of Australian Governments, through its Ministerial Council on Energy (MCE), established the Australian Energy Market Commission (AEMC) in July 2005 to be the rule maker for national energy markets. The AEMC is currently responsible for rules and providing advice to the MCE on matters relevant to the national energy markets. We are an independent, national body. Our key responsibilities are to consider rule change proposals, conduct energy market reviews and provide policy advice to the Ministerial Council as requested, or on AEMC initiative.

Executive Summary

Introduction

On 30 September 2008, the Australian Energy Market Commission (AEMC or Commission) provided the final report of its Transmission Reliability Standards Review to the Ministerial Council on Energy (MCE). Given the intervening passage of time, and a number of significant developments that have occurred during this period, the Commission has prepared this Updated Final Report for the MCE's consideration.

Background

On 3 July 2007, the MCE directed the Commission to conduct a review into:

1. the development of a national electricity transmission planning function and the development of a new form of regulatory test; and

2. electricity transmission network reliability standards, with a view to developing a consistent national framework for network security and reliability.

The MCE's direction originated from recommendations made by the Energy Reform Implementation Group (ERIG) in its final report published in January 2007. The Council of Australian Governments (COAG) responded to ERIG's final report at its meeting on 13 April 2007, agreeing to a broad ranging reform agenda including measures for achieving a fully national electricity transmission grid.

In response to part 1 of the direction, the Commission provided the MCE with a report on 30 June 2008 containing recommendations, and supporting legal text, for:

1. establishing a National Transmission Planner (NTP) as one of the functions of the then proposed new Australian Energy Market Operator (AEMO);

2. a revised project assessment and consultation process for transmission investment called the Regulatory Investment Test for Transmission (RIT-T) to replace the existing Regulatory Test; and

3. reforming the economic regulation for Transmission Network Service Providers (TNSPs) to reflect the new arrangements.

In undertaking part 2 of the direction, the Commission requested the Reliability Panel (the Panel) to review jurisdictional transmission reliability standards and provide advice to the Commission. The Panel provided its final report (the Panel's Final Report) to the Commission on 31 August 2008, which included recommendations for a national framework for transmission reliability standards.

The Commission endorsed the major recommendations from the Panel in its final report to the MCE (the Final Report), as well as making a number of enhancements in the broader policy reform context including the NTP and RIT-T.

However, since the submission of the Final Report to the MCE on 30 September 2008, a significant period of time has passed, and the Commission has identified that certain key developments in the interim have impacted upon its recommendations.

Key developments since September 2008

The most notable relevant development to affect energy market frameworks since the publication of the Final Report has been the establishment of AEMO on 1 July 2009. In addition to the introduction of the new NTP function, this also impacted on the jurisdictional transmission planning processes for Victoria and South Australia, in particular the legal frameworks and institutional arrangements. Further, the way in which these changes have been implemented through national legislation allows for these new arrangements to subsequently be adopted by other jurisdictions.

In light of these significant framework changes, the Commission has updated and clarified its recommendations, in particular to better recognise the processes for jurisdictional transmission planning where this is undertaken by AEMO. The Commission notes that implementation of the proposed national framework is of considerable importance in the context of the COAG national reform agenda, and is therefore submitting this Updated Final Report to best position the MCE to progress this initiative in light of recent developments.

Features of the national framework recommended by the Commission

In this report, the Commission recommends a national framework for transmission reliability standards governing the supply of electricity from transmission networks to load, and makes recommendations in relation to the implementation of the framework. This will represent a major series of reforms with the potential to improve planning effectiveness and transparency for infrastructure development in the National Electricity Market (NEM).

Key features of the recommended national framework include:

- Transmission reliability standards that are economically derived using a customer value of reliability or similar measure. These would be capable of being expressed in a deterministic manner, either as specified pre-set standards (i.e. a "hybrid" form of standards) or through reporting on an equivalent basis.

- Standards would be determined on a jurisdictional basis, by a body independent of the transmission asset owner. Each jurisdiction would also have the option of appointing the AEMC to set that jurisdiction's transmission reliability standards.

- Guidelines would stipulate the common assumptions and the methodology for economic modelling that must be applied when determining the transmission reliability standards for a jurisdiction.

- A national reference standard template would be used as a basis for comparison of the transmission reliability standards applying in each jurisdiction. The national reference standard template would be developed by AEMO and approved by the AEMC. Jurisdictional standard setting bodies would be required to justify any divergence from the national reference standard template.

- AEMO would establish and publish an information base of reliability standards applying in the NEM, including reasons provided for any divergence from the national reference standard template.

Implementation

The Commission recommends that the national framework be specified in the National Electricity Rules (NER or Rules).

Implementation of the national framework would require changes to the Rules, state based legislation and other state based legal instruments, and possibly the National Electricity Law (NEL). This would be a sizeable task, and the Commission considers that appropriate transition arrangements and stakeholder consultation would be an important element of the implementation process.

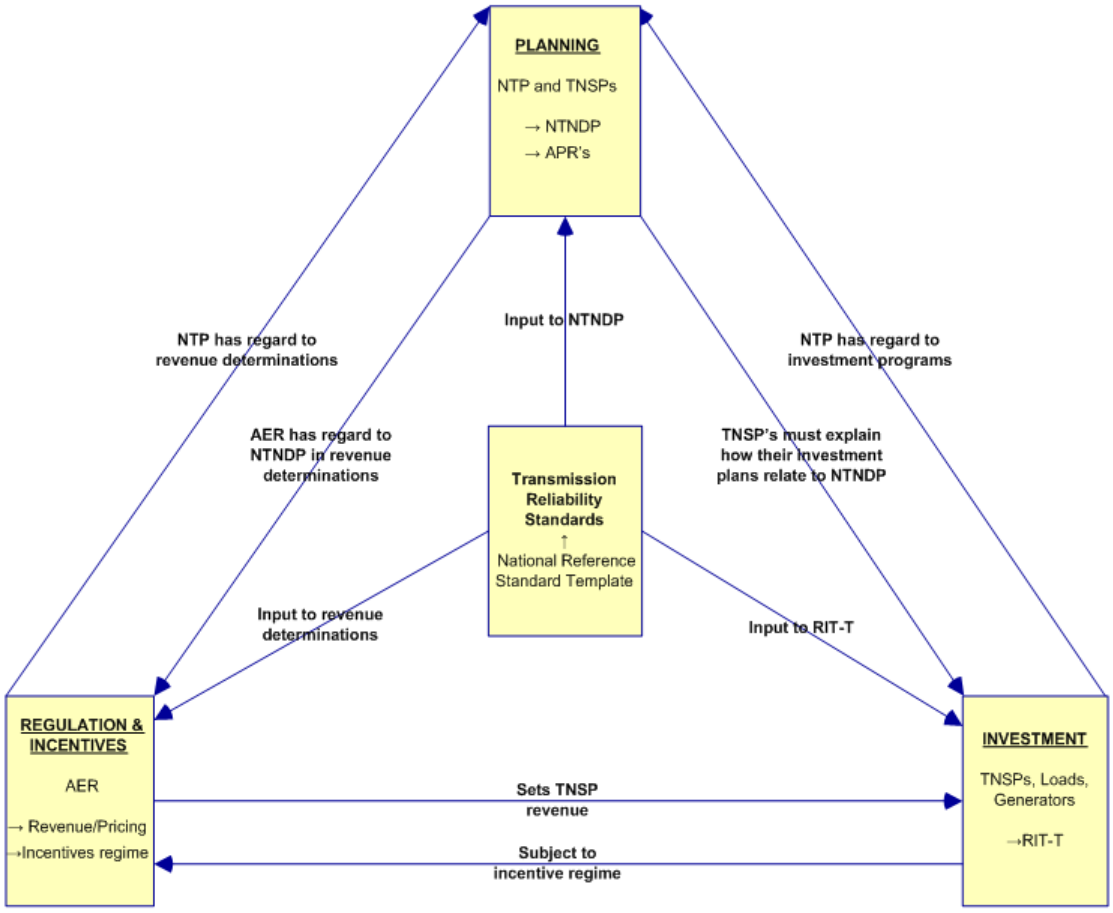
The Commission therefore recommends that the MCE should task the Commission with managing a program to implement the national framework. This would include developing the detailed Rule changes required, as well as considering the impacts for the NEL and state based legislation in consultation with the MCE and participating jurisdictions.

Following receipt of the Commission's implementation recommendations, the MCE will be able give its consideration to the Rule amendments developed by the Commission. The MCE would then be able to submit these to the Commission as formal Rule change proposals, as well as to task MCE members with progressing the required changes to jurisdictional instruments.

Overall Package of Reforms

The transmission grid plays a crucial role in facilitating competition and efficient resource use in Australia's wholesale and retail electricity markets. The Commission considers that the recommendations, in combination with the NTP and RIT-T reforms, would support the development of an efficient national grid and would achieve the objectives for a national market agreed to by COAG in its response to ERIG's Final Report.

The national framework has been developed to be consistent with, and to complement and enhance, the NTP and RIT-T. The following diagram illustrates how the roles and institutions under the Commission's proposals would interact.



A key concern raised by ERIG was the lack of transparency in information provided to the market. The proposed national framework, in combination with the NTP and the RIT-T, would contribute more transparent and specific information to the market, and would increase the depth of that information. This would help to guide private and public investors to optimise investment in the power system.

The complete package of reforms recommended would also help overcome the current regional basis in transmission planning through establishing a national perspective in the transmission planning regime.

The NEM is currently undergoing a significant period of change. Large scale investment in generation and transmission is required to maintain secure and reliable electricity supplies. Government policy initiatives in response to climate change are likely to drive much of this new investment. These factors will create new challenges for planning efficient transmission development. The introduction of the proposed national framework for transmission reliability standards, in combination with the other recent reforms to the transmission planning arrangements, would enhance the ability of the market to respond to those developments.

Contents

1 Background

1.1 What led to this Review

1.1.1 Ministerial Council on Energy Direction

On 3 July 2007, the Ministerial Council on Energy (MCE) directed the Australian Energy Market Commission (AEMC or Commission), under section 41 of the National Electricity Law (NEL), to conduct a review into electricity transmission network reliability standards in the National Electricity Market (NEM), with a view to developing a consistent national framework for network security and reliability.[1]

The MCE's direction also required the Commission to conduct a review into the development of a national electricity transmission planning function and the development of a new form of Regulatory Test.

1.1.2 Energy Reform Implementation Group

The MCE's direction originated from recommendations made by the Energy Reform Implementation Group (ERIG) in their Final Report published in January 2007.[2]

ERIG was established by the Council of Australian Governments (COAG) in February 2006 to develop proposals for:

- achieving a fully national electricity transmission grid;
- measures to address structural issues affecting the ongoing efficiency and competitiveness of the electricity sector; and
- measures to ensure transparent and effective financial markets to support energy markets.

In relation to developing an efficient national transmission grid, one of ERIG's conclusions was that there is a need for a consistent national framework for transmission reliability standards. ERIG noted the following concerns with existing transmission reliability standards:

- There is a lack of specificity in transmission reliability standards providing Transmission Network Service Providers (TNSPs) with considerable discretion in the application of reliability obligations at various locations across the network.

1 The MCE's letter is available at: http://www.aemc.gov.au/electricity.php?r=20071221.150018

2 ERIG 2007, *Energy Reform – The Way Forward for Australia*, A report to the Council of Australian Governments by the Energy Reform Implementation Group, Canberra, January 2007. (URL http://www.erig.gov.au)

- There may be conflicts of interest where responsibility for setting reliability criteria or for interpreting criteria contained in transmission licence conditions is delegated to the TNSP.

- Investors in generation may face uncertainty due to the lack of specificity in the current transmission reliability standards and the diversity of approaches to transmission planning across jurisdictions.

ERIG recommended that "… reliability standards should at least be clear and specific as to how they are applied, be set by a body independent of the entity responsible for meeting these obligations and be cast in a technology neutral manner. Any technical standard should be defined as narrowly and clearly as possible. A consistent and clear national framework should be implemented through redrafting schedule 5.1 of the National Electricity Rules (NER or Rules). The Reliability Panel would be an appropriate body to undertake the necessary review and devise such a framework before the actual standards applying to individual connection points are specified by jurisdictions."[3]

ERIG's recommendations on the development of a consistent national framework for reliability standards were linked to its other recommendations concerning the function and form of the Regulatory Test.

1.1.3 COAG Response to ERIG

At its meeting on 13 April 2007, COAG responded to the ERIG's Final Report agreeing to a broad ranging reform agenda, including that the Reliability Panel review jurisdictional transmission reliability standards and develop a consistent national framework.[4]

COAG agreed that this review should be progressed with "…appropriate caution noting the different physical characteristics of the network, existing regulatory treatments in balancing reliability and costs to consumers, and that these standards underpin security of supply".[5]

1.2 The Commission's Approach and Processes

The MCE's Terms of Reference required the Commission to conduct a review into: 1) the development of a national electricity transmission planning function; and 2) electricity transmission network reliability standards. The Commission considered these requirements as two discrete, but related, pieces of work. As such the

3 ERIG 2007, p.182

4 COAG 2007, "Council of Australian Governments' response to the final report of the Energy Reform Implementation Group", Attachment to COAG Communiqué, 13 April 2007. (URL http://www.coag.gov.au/coag_meeting_outcomes/2007-04-13/docs/coag_nra_competition_reforms.pdf)

5 COAG 2007, p. 5

Commission undertook the MCE's requirements as two separate, but related, projects, as follows.

1.2.1 National Transmission Planning Arrangements

The Commission published its Final Report on the National Transmission Planning Arrangements Review on 22 July 2008.[6] The National Transmission Planner (NTP) Final Report provides the Commission's recommendations and supporting legal text, for a) establishing a NTP as one of the functions of the Australian Energy Market Operator (AEMO), b) a revised project assessment and consultation process for transmission investment called the Regulatory Investment Test for Transmission (RIT-T) to replace the Regulatory Test and c) reforming the economic regulation for transmission network service providers to reflect the new arrangements.

NTP

The key role of the NTP is to provide information to the market on the strategic and efficient long term development of the power system through the annual publication of a National Transmission Network Development Plan (NTNDP).

The NTP function was assumed by AEMO at its establishment on 1 July 2009. It published an interim NTNDP (called the National Transmission Statement) on 17 December 2009, with a full NTNDP to follow in December 2010.

RIT-T

The new process of consultation and assessment for transmission investment, termed the RIT-T, will provide a single framework to apply to all transmission investment. It removes the distinction between reliability driven projects and projects motivated by the delivery of market benefits, and requires further consultation and consideration of the range of options and associated market benefits for any given transmission issue.

The purpose of the RIT-T is to identify the transmission investment option that maximises the net economic benefits, and where applicable, meets transmission reliability standards. Any additional reliability benefits above those delivered to meet a transmission planning standard is valued as a market benefit.

The arrangements for the RIT-T commenced operation on 1 August 2010.

1.2.2 Transmission Reliability Standards

ERIG recommended that the Reliability Panel would be the appropriate body to undertake the review of transmission reliability standards. Consistent with this recommendation, on 17 August 2007 the Commission requested the Panel, in accordance with section 38 of the NEL, to undertake the review of the jurisdictional

6 Available at: http://www.aemc.gov.au/electricity.php?r=20070710.17234

transmission reliability standards and provide advice to the Commission.[7] The Panel provided its final report on a national framework for transmission reliability standards (the Panel's Final Report) to the Commission on 31 August 2008.[8]

The Commission considered the recommendations made in the Panel's Final Report in a broader policy context, including the NTP and RIT-T, and made recommendations for a national framework for transmission reliability standards in a Final Report submitted to the MCE on 30 September 2008.[9]

1.3 Policy Context

The Commission considered the Panel's Final Report to be comprehensive, and the recommendations to be robust and well reasoned. As such, the Commission took that report as the basis for its recommendations to the MCE on developing a national framework for transmission reliability standards.

In developing its recommendations, the Commission also had specific regard to the following:

1. ERIG's findings and recommendations in relation to transmission reliability standards;[10]

2. COAG's decisions on electricity planning and regulation made in response to ERIG's Final Report; and

3. The Terms of Reference provided by the MCE for this review.

The Commission has also had regard to cautionary qualifications outlined by COAG in its response to ERIG's Final Report.

1.4 Key developments since September 2008

Since publication of the Final Report in September 2008, a significant period of time has passed, and the Commission has identified that certain key developments in the interim have impacted upon its recommendations.

The most notable relevant development to affect energy market frameworks has been the establishment of AEMO on 1 July 2009. In addition to the introduction of the new NTP function, this also impacted on the jurisdictional transmission planning processes for Victoria and South Australia. Further, the way in which these changes have been implemented through national legislation allows for these new arrangements to subsequently be adopted by other jurisdictions.

7 Available at: http://www.aemc.gov.au/electricity.php?r=20071221.150018

8 Available at: http://www.aemc.gov.au/electricity.php?r=20071221.150018

9 Available at: http://www.aemc.gov.au/electricity.php?r=20071221.150018

10 ERIG 2007, p.181

In Victoria, transmission planning for the shared network was previously undertaken by VENCorp, using a probabilistic planning approach. Under this approach, each investment decision is made following probabilistic modelling to determine the degree of reliability that should be provided. An explicit value of customer reliability is a key input to the modelling and planning process.[11]

This transmission planning activity now forms part of AEMO's statutory functions in relation to "declared networks", and the use by AEMO of the probabilistic approach in planning augmentations to such networks has been enshrined in the NEL.[12] Currently, only Victoria has applied the relevant provisions of the NEL through nominating its transmission network as a declared network, but this option is now available to all other jurisdictions.

In South Australia, the duties previously undertaken by the Electricity Supply Industry Planning Council are now the responsibility of AEMO. These activities form AEMO's "additional advisory" functions under the NEL,[13] and relate to the preparation of reports on the "adoptive" jurisdiction's power system, including the derivation of supply and demand forecasts and the making of recommendations regarding jurisdictional transmission reliability standards. Currently, only South Australia has opted to apply these provisions relating to additional advisory functions, but, again, the ability of other jurisdictions to do so is now accommodated by the NEL.

In light of these significant framework changes, the Commission has updated and clarified its recommendations, in particular to better recognise the processes for jurisdictional transmission planning where this is undertaken by AEMO. The Commission notes that implementation of the proposed national framework is of considerable importance in the context of the progression of the COAG national reform agenda, and is therefore submitting this Updated Final Report to best position the MCE to progress this initiative in light of recent developments.

1.5 Consultation

The Commission acknowledges the extensive consultation undertaken by the Reliability Panel in developing its recommendations. The Panel published and consulted on three reports (comprising an Issues Paper, a Draft Report and an Interim Report) before submitting its Final Report to the Commission. In addition, the Panel held a public forum on the Draft Report, and together with the Commission, held a stakeholder workshop on the Interim Report.

The Commission notes the general support for the Reliability Panel's recommendations from a broad range of stakeholders.

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11 A description of probabilistic planning, and an overview of the debate of the merits of deterministic, hybrid and probabilistic reliability standards can be found in the Panel's Final Report, available at: http://www.aemc.gov.au/electricity.php?r=20071221.150018

12 Section 50F of the NEL

13 Section 50B of the NEL.

1.6 Decision Making Criteria for the Review

In undertaking all of its functions, including this Review, the Commission is required to have regard to the National Electricity Objective (NEO).

The NEO is set out in section 7 of the NEL, which states:

> "The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to-
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system."

The Commission has interpreted the NEO as encompassing productive, allocative and dynamic efficiency and also taken the scope of the NEO to cover the means by which regulatory arrangements operate as well as their intended ends.

In the NTP Final Report, the Commission set out the following decision making criteria for the Review:

- consistency with the specific wording of, and the broad intent underpinning, the direction provided by the MCE to the Commission in its letter of 3 July 2007;
- solutions which promote more efficient outcomes over time, and which are proportionate to the materiality of the problems being addressed;
- application of good regulatory practice and design;
- application of effective corporate governance and accountability principles; and
- minimisation of implementation costs and risks – including costs associated with any duplication of functions.

Due to the close interaction between this review and the NTP review, the Commission decided to also use the decision making criteria outlined above in evaluating policy options in this review.

The Commission has also had regard to the principles developed by the Reliability Panel.

1.7 Structure of this Report

The remainder of this report is structured as follows:

- **Section 2** discusses the principles for a national framework identified by the Reliability Panel, and endorsed and further developed by the Commission;

- **Section 3** outlines the Commission's updated recommendations to the MCE for a national framework for transmission reliability standards;
- **Section 4** provides detailed discussion of individual policy positions and the supporting reasoning;
- **Section 5** outlines how the Commission considers the national framework would promote the NEO and meet the Commission's decisions making criteria; and
- **Section 6** discusses how the national framework is consistent with and complements the NTP and RIT-T.

2 Principles for Developing a National Framework for Transmission Reliability Standards

In developing its recommendations to the Commission, the Reliability Panel identified a set of principles for assessing the range of competing options for a national framework for transmission reliability standards. These principles were endorsed by the Commission in its Final Report to the MCE.

In preparing this Updated Final Report, the Commission has reviewed these principles, and confirmed their ongoing relevance. However, it has clarified and revised slightly the detailed application of these principles, as set out in this section.

2.1 Detailed principles adopted by the Commission

The following represents the set of principles that the Commission considers are appropriate to underpin the development and implementation of a national framework for transmission reliability standards:

1. **Transparency –** The processes for setting standards should be transparent and open, with ample opportunity for stakeholder input. The degree of transparency should be the same as that specified in the NEL for the assessment of Rule changes by the AEMC.

   The standards should be published and consistently applied by relevant bodies making investment decisions through transmission planning. Where the use of probabilistic planning is specified, transparent reporting should be undertaken on a deterministic equivalent basis.

   The consequences of not following the standards must be clearly defined along with the processes for enforcing the standards and reviewing or appealing any enforcement action.

2. **Governance –** The standards should be set by a body that is separate from the body that must apply the standard. Where the use of probabilistic planning is specified in a jurisdiction, investment planning should be undertaken by a body separate from the transmission asset owner.

3. **Economic efficiency –** The framework should result in standards being derived from economic analysis that relates transmission system costs to the value customers place on reliability.

4. **Specificity of standards –** Where pre-set standards are used, they should be clearly specified by connection point or on some other readily understandable basis (e.g. by geographic area, such as CBD, metro and rural areas).

   The standards should be clearly specified in a manner that:

   - identifies the starting condition for the transmission studies;

- defines the test that would be performed on the system; and

- states what constitutes acceptable system performance.

5. **Fit for purpose –** The framework should not be a "one size fits all" approach. Rather it should allow for standards to differ according to, say, the significance or criticality of the load centre — e.g. between CBD, metro and rural areas of a jurisdiction — or according to an explicit customer valuation of reliability at each connection point.

6. **Amendable –** The specific requirements and many of the processes should be able to be amended without requiring legislative approval; either through approval by the various regulatory bodies involved or through an open consultation process.

7. **Accountability –** Transmission planners should be accountable to the appropriate authority for ensuring that the transmission standards are met, as well as to the Australian Energy Regulator (AER) for compliance with the resultant service standards, as this is an integral part of the regulatory incentive regime. If standards were to be set by a jurisdictional authority, it would most likely follow that the planner would be accountable to that jurisdictional authority.

8. **Technology neutral –** Standards should be technologically neutral, and not be biased towards network solutions where non-network options can provide a comparable level of reliability.

9. **Maintains the ability to achieve consistency between transmission and sub-transmission standards –** The ability to achieve consistency between the form of standards and associated planning methodologies at the transmission and sub-transmission level is one important element in least-cost joint planning of transmission and sub-transmission networks to deliver the appropriate level of reliability at each connection point.

   Other important elements that contribute to economically efficient network design include:

   - the consistency of the different regulatory tests for transmission and distribution networks;

   - the effectiveness of any joint-planning arrangements; and

   - the regulatory incentive regime for transmission and distribution networks.

10. **Effectiveness –** The framework should enable investment to proceed in a timely manner and meet customers' expectations for reliability and minimise the potential for disputes.

The framework should recognise customers who have made long term investments in the expectation that the standard of reliability would be at least maintained into the future.

The framework should allow for national and international comparison of standards in consistent formats.

2.2 Principles not adopted by the Commission

The Reliability Panel recommended that the potential principle of *Maintenance of Past Performance* should not be adopted, and the Commission supports this position.

The Commission believes the Panel's reasoning for not including this principle is consistent with the recommendations made by the Commission in relation to the NTP and RIT-T. A requirement to maintain past network performance could result in the maintenance of uneconomically high levels of reliability at a connection point where the network supporting that connection point has been overbuilt in the past.

2.3 Ongoing relevance of principles

In its report, the Reliability Panel noted that the principles were established for the purpose of "developing and assessing the range of competing frameworks for nationally consistent transmission reliability standards".[14] This could imply that the Panel's intention was for the principles to fall away now that a preferred framework has been selected. The Commission believes that there is an ongoing role for the principles in developing the implementation details and in developing the national reference standard template.

In developing any amendment to the Rules, the NEO must be the primary guiding principle. However, in addition to the NEO, the Commission proposes to have regard to the principles developed by the Reliability Panel when developing the arrangements to implement the national framework.

14 Page (xi) of the Panel's Final Report.

3 The Commission's Recommendations

In the Final Report, the Commission made two recommendations for the MCE's consideration. The first comprised the detailed features of a national framework for transmission reliability standards; the second concerned the actions required to implement this framework.

This section sets out these recommendations, which have been clarified and updated in light of developments since the submission of the Final Report.

3.1 Recommended national framework for transmission reliability standards

The Commission's proposals for a national framework for transmission reliability standards governing the supply of electricity from transmission networks to load are as follows:

1 Form

1.1 Transmission reliability standards should be economically derived using a Customer Value of Reliability (CVR) or similar measure. They should be capable of being expressed in a deterministic manner, either as specified pre-set standards (referred to elsewhere in this document as a "hybrid" form of standards) or through reporting on an equivalent basis.

1.2 The national framework would make allowance for reliability standards to differ between connection points or on the basis of some other readily understandable categorisation (e.g. by geographic area, such as CBD, metro or rural areas), depending on the criticality of load or an explicit CVR.

2 Coverage

2.1 Transmission reliability standards developed under the national framework would apply to connection points on all transmission networks owned by TNSPs.

3 Application

3.1 The framework would provide the flexibility for jurisdictions to choose whether standards should be specified in jurisdictional instruments or determined through national governance arrangements, and whether pre-set standards should be defined or if standards should be derived from probabilistic cost-benefit analysis of network investments.

3.2 Where transmission reliability standards are to be pre-set deterministically, the jurisdictional body responsible for determining the standards should be separate from the body that must apply the standards. The determination should be based on economic analysis, which would be publicly reported.

3.3 Jurisdictions would also have the option of appointing a body to provide recommendations to the standard setting body. The recommendations, together with the analysis underlying them, would be published. This advisory role could be performed by the body that applies the standards or by another appropriately resourced organisation, such as AEMO.[15]

3.4 Each jurisdiction would also have the option of appointing the AEMC to determine the appropriate pre-set reliability standards for the jurisdiction. The AEMC's decision would be informed by recommendations made to it by a body appointed by the jurisdiction under 3.3 above.

3.5 Alternatively, jurisdictions may allow the making of transmission investment decisions using probabilistic cost-benefit analysis, either through jurisdictional governance or through the application of the relevant provisions of the NEL.[16] In such circumstances, planning of the relevant transmission system must be undertaken by a body independent of the transmission asset owner, and the independent planner should undertake reporting in planning timescales on a deterministic equivalent basis.

3.6 The national framework would be applied in a clear and transparent manner, with the process for setting standards including full stakeholder consultation.

3.7 Guidelines would be published by the AEMC that stipulate the assumptions and methodology that must be applied when conducting economic analysis, including the determination of pre-set reliability standards. The assumptions and methodology must be consistent with the RIT-T. Where use of probabilistic planning is specified in a jurisdiction (either through the NEL or otherwise), the planning process to be followed by the relevant independent planning body should be consistent with the economic analysis guidelines.

4 National reference standard template

4.1 A national reference standard template would be introduced to identify the structure and parameters within which pre-set levels of standard should be specified. This would not stipulate any particular level of standard to be applied, but would promote consistency in the form and levels of jurisdictional standards, and would provide a basis for comparison between each jurisdiction.[17]

4.2 The national reference standard template would be developed under the national framework, and would thus be consistent with the economic modelling assumptions and methodology used to determine jurisdictional transmission reliability standards.

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15 AEMO currently has this function in South Australia.

16 In particular, section 50F of the NEL, relating to the augmentation of declared networks.

17 The categories of reliability standard applying to connection points in South Australia are detailed in Table 4.1. This illustrates a current application of "hybrid" standards, and therefore represents one potential approach to specifying a national reference standard template.

4.3 The national reference standard template would be developed by AEMO and approved by the AEMC, in full consultation with stakeholders.

4.4 A jurisdictional transmission reliability standard setting body would be required to justify any inconsistency between the form of jurisdictional transmission reliability standards and the national reference standard template.

4.5 Where use of probabilistic planning is specified in a jurisdiction (either through the NEL or otherwise), the reporting undertaken by the relevant independent planning body in a deterministically equivalent manner should be on a basis consistent with the national reference standard template. The independent planner would be required to justify any divergence of its reporting from the template.

5 Publication of information

5.1 Where the transmission reliability standards applying in a jurisdiction are specified through jurisdictional instruments, the standards would be published by the jurisdictional reliability standard setting body. This would include the justification for any inconsistency with the national reference standard template.

5.2 Where use of probabilistic planning is specified in a jurisdiction, reporting on a deterministic equivalent basis should be published by the relevant independent transmission planning body.[18]

5.3 Where pre-set, transmission reliability standards would also be available in TNSP annual reports and TNSP revenue determinations.

5.4 AEMO would establish and publish an information base of reliability standards applying in the NEM, including reasons provided by jurisdictions for any inconsistency with the national reference standard template. This information base would include deterministic equivalent reporting in jurisdictions specifying the use of probabilistic planning (noting that is also the responsibility of AEMO to undertake planning for declared networks using the probabilistic approach).

6 Specification

6.1 The national framework would be specified in the Rules. Where the transmission reliability standards applying in a jurisdiction are specified in jurisdictional instruments, these would be capable of being amended without legislative approval.

6.2 While use by AEMO of the probabilistic approach in planning augmentations to "declared networks" is stipulated in the NEL, requirements relating to the process to be followed and reporting on a deterministic equivalent basis would be specified in the Rules.

7 Accountability

7.1 Where standards are set by a jurisdictional authority, the transmission planner applying the standards would be accountable to the jurisdictional authority, as well as to the AER (for ensuring that service standards were met under the regulatory incentive regime). The jurisdictional transmission reliability standards setting body would be accountable to the jurisdictional government.

7.2 Where standards are set under national governance rather than by a jurisdictional authority, relevant national bodies would have statutory responsibilities to comply with the requirements of relevant national legislation and would be accountable to the AER for complying with requirements specified in the Rules.

3.2 Recommended implementation actions

The Commission recommends that the MCE task the Commission with managing a program to develop the detailed implementation arrangements for the national framework.

This further work program will provide the mechanism through which detailed arrangements supporting the national framework, such as the national reference standard template and deterministic equivalent reporting in jurisdictions specifying the use of probabilistic planning, can be developed. Stakeholder consultation and the development of appropriate transitionary arrangements would be important elements of this process.

The national framework would be specified in the Rules. However, changes to state based legislation and other state based legal instruments would also be required.[19] In addition, in light of the recent amendments to the NEL to give effect to AEMO's statutory activities in relation to declared networks and additional advisory functions, it will be necessary to examine any implications for the NEL.

The implementation program would therefore include developing the detailed Rule changes required, as well as considering the impacts for the NEL and state based legislation in consultation with the MCE and participating jurisdictions. The Commission has previously developed Rule changes for the NTP and RIT-T, and is thus well placed to maintain consistency in the implementation of these three related reforms.

Following receipt of the Commission's implementation recommendations, the MCE will be able give its consideration to the Rule amendments developed by the Commission. The MCE would then be able to submit these to the Commission as

18 As part of the further work program to implement the national framework, it may be necessary for consideration to be given to the appropriateness of reporting the standard of reliability at connection points where only one customer is connected.

19 The prevailing jurisdictional sources of transmission reliability standards were identified by the Panel in section 9.4 of the Panel's Final Report.

formal Rule change proposals, as well as to task MCE members with progressing the required changes to jurisdictional instruments.

Given the significance of this package of work, the Commission considers this process to be appropriate as it gives the MCE a formal role in assessing that the Rule changes reflect the MCE's agreed policy position before the Rule change process commences. The MCE is also best placed to hold jurisdictions accountable for making the required changes to jurisdictional instruments in a timely manner.

4 The Commission's Reasoning

The Commission endorsed the Reliability Panel's recommendations for a national framework for transmission reliability standards, subject to a number of enhancements. This chapter discusses the Commission's reasoning for these amendments and the further updates made since the submission of the Final Report.

4.1 National Framework

In its Final Report, the Reliability Panel recommended a high level national framework to promote consistency in transmission reliability standards. The proposed national framework:

1. is supported by robust analysis in the Panel's Final Report;[20]

2. was developed through a process of extensive consultation;[21]

3. is supported by comparisons with international experiences with developing transmission reliability standards;[22]

4. is consistent with the arrangements for the NTP and RIT-T;[23] and

5. satisfies the NEO and the Commission's decision making criteria.[24]

The Panel's reasoning for its recommendations is provided in its Final Report to the Commission, and this is supported by the Commission.[25] However, the Panel's description of the framework is set at a high level. In reaching its recommendations, the Commission has further specified the framework. The following section discusses the Commission's reasoning for these enhancements, including the updated recommendations made in this report.

4.1.1 Form of Standard

The Panel recommended that the form of standard for the national framework would be a hybrid that is economically derived using a CVR or similar measure, and capable of being expressed in a deterministic manner. Additionally, jurisdictions would be able to apply a flexible application, where investment that would otherwise be needed to meet the standard could be deferred or advanced if it could be demonstrated that it would be economic to do so.

20 Sections 6 and 7 of the Panel's Final Report.

21 See Section 1.5

22 Section 8.14 of the Panel's Final Report.

23 See Section 6.1

24 See Section 5.1

25 Sections 6 and 7 of the Panel's Final Report.

The Commission agrees that it is appropriate to allow the flexibility for the making of transmission investment decisions on a direct economic cost-benefit basis. However, the Commission considers that where probabilistic planning is employed in this manner, reporting should be undertaken in planning timescales on a deterministic equivalent basis. This would allow for comparisons of standards to be made across the NEM, increasing transparency and giving greater certainty to market participants.

The recommendations made in this Updated Final Report have therefore been clarified to reflect these requirements. They also recognise the changes to the NEL that took effect with the establishment of AEMO on 1 July 2009. These require AEMO to undertake a cost benefit analysis (using a probabilistic approach to determining benefits) when planning augmentations to declared networks.

The national framework therefore accommodates these arrangements, while also allowing jurisdictions the option to retain responsibility for standard setting and to use a pre-set standard which is more consistent with the forms of standard currently applied in most jurisdictions.

4.1.2 National Reference Standard Template

The national reference standard template forms an important part of the national framework. It would identify the structure and parameters within which pre-set levels of standard should be specified. It would not stipulate any particular level of standard to be applied, but would promote consistency in the form and levels of jurisdictional standards, and would provide a basis for comparison between each jurisdiction.

Currently, the only application in Australia of the hybrid approach to setting transmission reliability standards is in South Australia. The South Australian reliability standards allocate each transmission connection point to a defined reliability category and require the TNSP to maintain that particular level of reliability. The categories represent increasing levels of reliability, and the broad requirements of each category are summarised in the following table:

Table 4.1 Categories of transmission reliability standard in South Australia

Category	Level of standard
Category 1	N line, N transformer
Category 2	N line, N-1 transformer
Category 3	N+ (allows for an hour's interruption before restoration)
Category 4	N-1 line, N-1 transformer
Category 5/6	N-1, with N-2 for a proportion of demand

Source: Derived from South Australian *Electricity Transmission Code ET/05 (V.2)*

(It should be noted that there are also a number of other, more detailed requirements for each category, relating to factors such as service restoration times, use of non-network solutions and grace periods for remedial action to be taken to restore compliance with the standard.)

The South Australian reliability standards are therefore illustrative of one potential approach through which a national reference standard template could be structured and specified. Under such an approach, connection points could be allocated on a jurisdictional basis to categories of standard defined in the national reference standard template.

The Commission believes that a jurisdictional reliability standard setting body should be required to explain and justify any inconsistency between the form of jurisdictional transmission reliability standards and the national reference standard template. This justification should be published with the jurisdiction's transmission reliability standards. This should promote national consistency in the form of standards as far as practicable, given the differences in power system characteristics across the NEM. This practice is also consistent with the arrangements in which a TNSP must explain how their investment plans relate to the NTNDP in their Annual Planning Reports.

Where use of probabilistic planning is specified in a jurisdiction , reporting should be undertaken on a deterministically equivalent basis, in a manner consistent with the national reference standard template. Any divergence of the reporting from this should be justified.

The national reference standard template would be developed under the national framework, and would therefore be consistent with the economic modelling assumptions and methodology used to determine jurisdictional transmission reliability standards. The process of setting the national reference standard should be transparent and consultative.

4.1.3 Methodology for Economic Modelling

The Reliability Panel's Final Report touched on the need for the economic modelling underpinning the reliability standards in each jurisdiction to be based on a common set of assumptions and to follow a common methodology. However, the Panel's description of the national framework was silent on this matter.

The Commission believes that the economic modelling underpinning the reliability standards should form part of the national framework. This would further promote national consistency in transmission reliability standards, and would simplify the task for stakeholders to understand and analyse transmission reliability standards across the NEM.

The economic modelling and the CVR should also be consistent with that for the RIT-T to avoid conflicts within the transmission planning process.

As such, the Commission considers guidelines should be developed stipulating the assumptions and methodology that must be applied when developing and setting the transmission reliability standards for a jurisdiction. Where use of probabilistic planning is specified in a jurisdiction, the planning process to be followed by the planning body should be consistent with the economic analysis guidelines.

The Commission has updated its recommendation as to the appropriate body to set these guidelines. The Commission considers that this role should be undertaken by the AEMC, in order to ensure consistency with the updated recommendations for the approval of the national reference standard template and for the setting of jurisdictional transmission reliability standards by a national body (as described in section 4.2). The process for developing the guidelines would include full stakeholder consultation, which would provide for consistency with the application of the RIT-T.

4.1.4 Scope of the National Framework

The Commission has clarified what transmission network definition should apply under the national framework.

The Panel's Final Report stated that the national framework should apply to transmission. This is consistent with the MCE's Terms of Reference for this review which required the Commission to conduct a review into "transmission reliability standards".

The Rule definition for *transmission network* is:

> "A network within any participating jurisdiction operating at nominal voltages of 220 kV and above plus:
>
> (a) part of a network operating at nominal voltages between 66 kV and 220 kV that operates in parallel to and provides support to the higher voltage transmission network;
>
> (b) any part of a network operating at nominal voltages between 66 kV and 220 kV that is not referred to in paragraph (a) but is deemed by the AER to be part of the transmission network."

But under this definition, parts of a Distribution Network Service Provider's (DNSP) network could be captured by the national framework (i.e. that network operating at voltages between 66 kV and 220 kV that operates in parallel to and provides support to the higher voltage). This could result in a requirement for a DNSP being required to plan its lower voltage network against jurisdictionally derived distribution reliability standards, and plan parts of its higher voltage network against transmission reliability standards established under the national framework.

The Commission believes the Reliability Panel did not intend for any of a DNSP's network to be captured by the national framework. This belief is based on the many references made by the Panel in its Final Report to the differences between reliability

standards applying to transmission and sub-transmission. Sub-transmission is not a term defined under the Rules, but the Commission understands the term sub-transmission can be used to describe that part of a DNSP's network that satisfies part (a) of the definition for *transmission network*.

The Commission believes that the national framework should not apply to any network owned by DNSPs. Requiring a DNSP to plan their network against two potentially different reliability standards would add complexity and costs to their planning processes for minimal benefit. The Commission therefore recommends that the national framework for transmission reliability standards should apply to transmission network owned by TNSPs only.

However, during the course of the review, the issue of consistency between transmission and distribution planning regimes was raised. The Commission notes that it has since published the final report of its Review of National Framework for Electricity Distribution Network Planning and Expansion. In this report, the Commission made a number of recommendations including the introduction of a new Regulatory Investment Test for Distribution and suggested that it should be tasked with a review of Distribution Reliability Standards. The Commission considers that these recommendations would allow for these issues of consistency to be addressed.

4.2 Institutions to undertake roles under the national framework

The Panel recommended that the Commission consider the appropriate institutions to:

- determine the national reference standard template; and
- set the level of the standards if standard setting is referred to the national level by a jurisdiction.

The Panel also recommended that the NTP establish an information base of standards in the NEM.[26]

4.2.1 Institution to determine the National Reference Standard Template

The Commission recommends that the national reference standard template should be developed by AEMO and approved by the AEMC.

This represents a revision to the recommendation made by the Commission in the September 2008 Final Report. In that report, the Commission proposed that the Reliability Panel would be the appropriate body to determine the national reference standard.

However, the intervening passage of time has allowed the Commission to give further consideration to this matter. In particular, the Commission has undertaken a detailed assessment of closely related governance matters during the Review of the

26 Under Item 6 of the Panel's description of the national framework.

Effectiveness of NEM Security and Reliability Arrangements in light of Extreme Weather Events.[27]

The Commission has concluded that the Reliability Panel would not be best placed to determine the national reference standard template because of potential perceived conflicts of interest due to the composition of its membership. Further, the Panel itself is not appropriately resourced to conduct the technical analysis required to assess the structure and parameters within which pre-set levels of standard should be specified.

The Commission instead considers that the role of developing the national reference standard template should be assigned to AEMO. AEMO has access to the necessary resource and expertise through its roles in transmission planning in Victoria, in making recommendations as to the appropriate levels of transmission reliability standard in South Australia, and as NTP. The Commission therefore believes that AEMO would be well placed to perform this task.

Allocating this role to AEMO would also best allow for consistency between reporting for declared networks (for which the use of probabilistic planning is required) and the national reference standard template.

However, the Commission further proposes that a separate role of approving the national reference standard template should be identified and allocated. While AEMO's role in the NEM is to make day to day decisions around technical operations, under the current energy market governance framework it is the AEMC that makes decisions of an economic and market framework nature.

The Commission therefore recommends that the AEMC is the appropriate body to approve the national reference standard template, based on recommendations made to it by AEMO. This allocation of roles would be akin to the process for the setting of transmission reliability standards in South Australia, in which AEMO makes recommendations to the Essential Services Commission of South Australia (ESCOSA) for its determination.

4.2.2 Institution to set Jurisdictional Reliability Standards when referred to it

For the same reasons outlined above, the Commission has revised its recommendation that the Reliability Panel should be the institution to set jurisdictional reliability standards when a jurisdiction refers these to a national body.

The Commission instead recommends that the AEMC would be the appropriate national body to set jurisdictional transmission reliability standards, if requested by a jurisdiction. As noted, under the existing market governance framework, the AEMC is tasked with making decisions of an economic and market framework nature, and the Commission considers that performance of this additional role would be consistent with the AEMC's existing functions.

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27 AEMC 2010, *Review of the Effectiveness of NEM Security and Reliability Arrangements in light of Extreme Weather Events*, *Final Report*, 31 May 2010, Sydney, Chapter 7.

However, the Commission further considers that the AEMC's decision should be informed by recommendations, based on economic analysis, made to it by a body appointed by the jurisdiction. This body could be the entity that must apply the standards, or another appropriately resourced organisation. Given its other roles in relation to transmission reliability standards, including developing the national reference standard template, AEMO would be well placed to undertake this task. AEMO currently has a similar role in providing recommendations to ESCOSA in South Australia.

In practice, the Commission anticipates that the recommendations provided to it would be for the allocation of connection points within a jurisdiction to levels of standard consistent with the structure and parameters provided by the national reference standard template. The AEMC would then consider and assess these recommendations, including through public consultation, before reaching a final determination.

4.2.3 Information Source

The Reliability Panel recommended the NTP as the body to establish an information base of transmission reliability standards in the NEM.

The Commission agrees that AEMO, in its role as NTP, is the appropriate body to collate and publish the transmission reliability standards from each of the jurisdictions. Information provision is the primary NTP function so it is logical that this new role should be assigned to it. In addition, the NTP is required to consider transmission reliability standards as an input to the NTNDP, and thus would need to collect this information anyway.

In Section 3.1, the Commission recommended that a jurisdictional transmission reliability standards setting body should be required to publish justification for any divergence between the jurisdictional transmission reliability standards and the national reference standard template. The Commission believes it is logical for this information to also form part of the information base of transmission reliability standards in the NEM. This would provide a single source of information for stakeholders seeking information on transmission reliability standards.

5 Assessment of the National Framework against the NEO and the Commission's decision making criteria

This chapter outlines how the Commission considers the national framework would promote the NEO and meet the Commission's decision making criteria.

5.1 NEO

The Commission considers the national framework would promote the NEO.

The national framework would establish a nationally coordinated approach to setting transmission reliability standards in the NEM. This would promote consistency in the form of transmission reliability standards across jurisdictions, and ensure that the standards are economically derived and are established using a consistent economic modelling methodology, including common assumptions.

The national framework, which would be applied in a transparent manner, would therefore provide NEM participants with greater confidence in the reliability standards set in each jurisdiction. The framework would also allow standards to be more precisely replicated and analysed. These benefits would improve the ability of NEM participants to assess the commercial risks of new investments and existing operations, and allow them to better optimise their investments across the NEM.

The national framework has been developed as part of a package of work which includes the NTP and RIT-T. Transmission reliability standards are inputs to both the NTP and RIT-T. The increased level of transparency and specificity of the reliability standards would help the NTP and RIT-T process to deliver economically efficient transmission planning and investment information. The Commission believes the national framework would complement the NTP and RIT-T, and would make a significant contribution to COAG's goal of "providing sufficient guidance to private and public investors to help optimise investment between transmission and generation across the power system".[28]

Efficient investment in generation and transmission would benefit consumers through efficient prices for wholesale electricity. The national framework would also benefit consumers through more efficient investment to manage reliability. Under the national framework, the value that consumers place on reliability would be a key input into the economic modelling. This would result in consumers (or groups of consumers) that place a high value on reliability receiving that level of reliability though appropriate investment. Whereas consumers that place a lower value on reliability would receive a lower level of reliability, and also lower network prices to reflect the lower level of investment required to achieve the desired level of reliability. In simple terms, under the national framework consumers would receive a level of reliability that better reflects what they are willing to pay.

28 COAG 2007, p. 4

5.2 The Commission's decision making criteria

Section 1.6 outlined the decision making criteria adopted by the Commission for the NTP review. The Commission believes the national framework meets those criteria for the reasons outlined below.

1. **Consistency with the specific wording of, and the broad intent underpinning, the direction provided by the MCE to the Commission in its letter of 3 July 2007.**

   The MCE's letter of 3 July 2007 required the Commission to "conduct a review into electricity transmission network reliability standards, with a view to developing a consistent national framework for network security and reliability." The Commission believes the national framework satisfies this requirement because it will promote consistency to the development of transmission reliability standards across the NEM. The national framework was developed through a process of extensive consultation, and is consistent with the NTP and RIT-T arrangements, and with COAG's response to ERIG's Final Report.[29]

2. **Solutions which promote more efficient outcomes over time, and which are proportionate to the materiality of the problems being addressed.**

   As outlined in Section 6.1, the Commission considers the national framework would result in more efficient investment in generation and transmission. The Commission recognises that the national framework is a significant reform to the transmission planning regime, however it believes this response is proportionate to the materiality of the problem.

3. **Application of good regulatory practice and design.**

   The national framework would establish a regime that is transparent and information based. Transmission reliability standards in each jurisdiction would be developed in a transparent manner using a nationally consistent economic modelling methodology. This would enable stakeholders to understand and replicate decisions made by transmission reliability standard setting bodies, thus giving stakeholders confidence in these decisions on which to base their own investment and operational decisions.

   The national framework would provide additional information giving both generators and consumers greater confidence in the decisions of the transmission reliability standard setting bodies. This information includes the central publishing by AEMO of the transmission reliability standards applying in jurisdictions, the establishment of a national reference standard template, and the requirement for the transmission reliability standard setting bodies to provide justification for any divergence from this.

29 See Section 6.2

4. Application of effective corporate governance and accountability principles.

Effective corporate governance is achieved by separating the bodies that set the transmission reliability standards from the bodies that apply those standards. This addresses a clear short-coming of the existing arrangements identified by ERIG.[30] In addition, the framework nominates clear accountabilities for these bodies.

The roles of developing the national reference standard template and setting jurisdictional transmission reliability standards if required, have been allocated to the appropriate national bodies under the proposed national framework. AEMO has access to the relevant resources and expertise to develop the national reference standard template and to undertake the required economic analysis to make recommendations regarding standards, if required. The AEMC was established to make decisions within market frameworks, and the additional functions proposed for it are consistent with this role.

5. Minimisation of implementation costs and risks – including costs associated with any duplication of functions.

There would be implementation costs as jurisdictions and TNSPs transition to the national framework. These costs have been minimised through consistency with the NTP and RIT-T. Costs have been further minimised by maintaining the ability to achieve consistency between the form of the standards and planning methodologies at the transmission and distribution levels. This would help facilitate least cost planning.

30 ERIG 2007, p.181

6 Overall Transmission Planning Regime Reform Package

6.1 National framework linkages with the NTP and RIT-T

This section of the report describes how the proposed national framework for transmission reliability standards is consistent with and complements the new NTP and RIT-T arrangements.

The national framework would inform the planning of transmission projects considered by the NTP and individual TNSPs. The Commission believes the national framework would greatly assist the NTP when preparing the NTNDP and evaluating the TNSPs' Annual Planning Reports. One of the key goals of COAG for the new transmission planning arrangements is the provision of sufficient guidance to private and public investors to help optimise investment between transmission and generation across the power system. Overall, the national framework would help the NTP meet this goal through the increased level of transparency and specificity of the reliability standards.

In developing its recommendations on the NTP, the Commission recognised that a high quality NTNDP must be based on robust and transparent analysis and that therefore the NTP should be required to maintain a public database of information, data and methods used in producing the annual plan. This is consistent with the national framework under which the NTP would establish an information base of transmission reliability standards in the NEM.

The RIT-T is consistent with either a deterministic or probabilistic approach to transmission reliability standards. Therefore the RIT-T can accommodate the national framework's hybrid approach, and the flexibility allowed for each jurisdiction in selecting how transmission reliability standards should be expressed.

There is clearly a need for the economic modelling undertaken by the jurisdictional transmission reliability standards setting bodies to be consistent with the RIT-T methodology. To achieve this, the Commission has recommended that guidelines should be developed that stipulate the assumptions and methodology that must be applied when setting the transmission reliability standards for a jurisdiction.

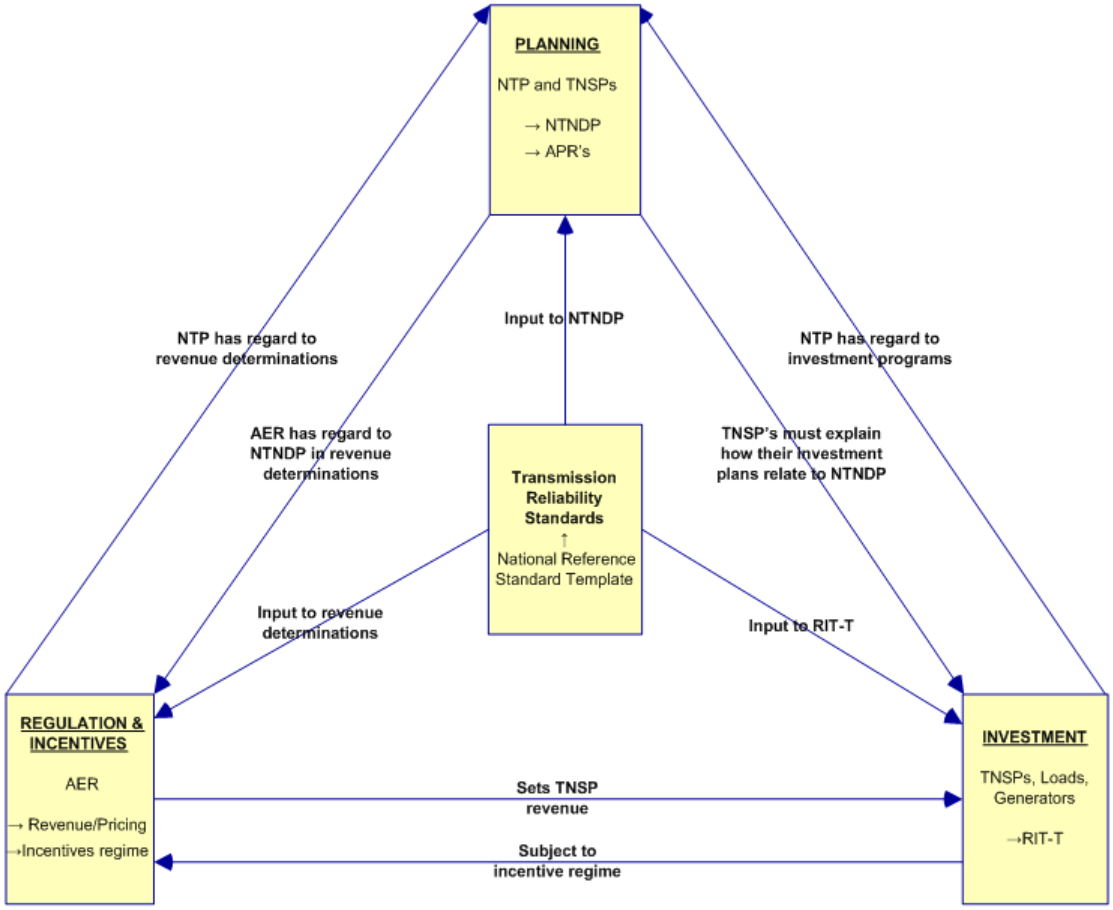
ERIG recognised the importance of having a national framework for transmission reliability standards in supporting the proposed changes to the regulatory test. It stated in its Final Report, that "the potential benefits from developing a new project assessment and consultation process could be eroded, if a national framework for expressing reliability standards is not implemented and that the standards and the way they are to be applied is not clarified and made more specific".[31] ERIG also raised a concern that integrating the two limbs of the regulatory test without harmonising and increasing the specificity of reliability and planning criteria would introduce additional

31 ERIG 2007, p.186

risks because it could lead to increased subjectivity and uncertainty in how the amalgamated test selects the preferred option.

The Commission considers that the package of reforms adequately addresses those concerns raised by ERIG. The RIT-T would be applied on a consistent national basis with the national framework providing improved transparency and specificity on the reliability standards.

The national framework has been developed to be consistent with, and to complement and enhance the NTP and RIT-T. The following diagram illustrates how the roles and institutions under the Commission's proposed transmission planning regime would interact and complement each other.



6.2 How the reform package delivers on ERIG's recommendations

The transmission grid plays a crucial role in facilitating competition and efficient resource use in Australia's wholesale and retail electricity markets. With this report, in addition to the NTP Final Report, the Commission has delivered a set of recommendations that supports the development of an efficient national grid. The Commission considers that the combined set of measures complement each other and would achieve the objectives for a national market agreed to by COAG in its response to ERIG's Final Report.

A key concern raised by ERIG was the lack of transparency in information to the market. ERIG considered that transparency in information is one of the corner stones for driving competitive and efficient investment outcomes. They stated that the current mechanisms have deficiencies and are unlikely to deliver the depth and quality of co-ordination needed to support efficient NEM wide transmission, generation and customer investments.[32]

All aspects of the reforms, including the proposed national framework for transmission reliability standards, would contribute more transparent and specific information to the market, and would increase the depth of that information.

The NTNDP will represent a significant improvement on the previous Annual National Transmission Statement (ANTS). The annual plan will identify the optimal development strategies for the national flow paths based upon the NTP's own planning, and provide a deeper and longer term scenario based assessment of power system development to the market. Under the RIT-T, TNSPs are required to release more information through their project specification consultation and assessment reports. The national framework would lead to increased specification and transparency in the jurisdictional standards. Therefore, under the complete set of reforms there would be a significant increase in the depth and quality of information provided. This would help to guide private and public investors to optimise investment in the power system.

The package of reforms also aims to help overcome the historical regional basis of transmission planning through establishing a national perspective. The NTNDP will help identify the optimal development of the grid from a national perspective, and under the RIT-T TNSPs are required to assess the national impacts of their proposed investments. The national framework would provide a common national basis for regional reliability standards.

The arrangements governing investment in, and operation of, the national electricity transmission grid and its contribution to the efficient performance of the NEM have recently undergone significant reform. However, the NEM is currently undergoing a significant period of change. Large scale investment in generation and transmission is required to maintain secure and reliable electricity supplies. Government policy initiatives in response to climate change are likely to drive much of this new investment.

These factors will create new challenges for planning efficient transmission development. The introduction of the proposed national framework for transmission reliability standards, in combination with the other recent reforms to the transmission planning arrangements, would enhance the ability of the market to respond to those developments.

32 ERIG 2007, p.177

Abbreviations

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ANTS	Annual National Transmission Statement
COAG	Council of Australian Governments
Commission	See AEMC
CVR	Customer Value of Reliability
DNSP	Distribution Network Service Provider
ERIG	Energy Reform Implementation Group
ESCOSA	Essential Services Commission of South Australia
MCE	Ministerial Council on Energy
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
NTNDP	National Transmission Network Development Plan
NTP	National Transmission Planner
RIT-T	Regulatory Investment Test for Transmission
Rules	See NER
TNSP	Transmission Network Service Provider