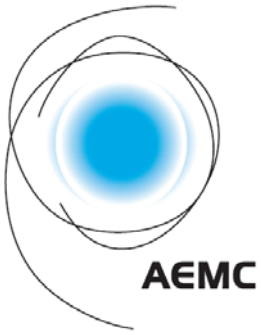

Australian Energy Market Commission

Transmission Reliability Standards Review

Final Report to MCE

30 September 2008

Commissioners
Tamblyn
Ryan
Woodward

Inquiries

The Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

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

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About the AEMC

The Council of Australian Governments, through its Ministerial Council on Energy, 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 policy advice covering the National Electricity Market. It is a statutory authority. 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.

Contents

Abbreviations

AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
Commission	see AEMC
ERIG	Energy Reform Implementation Group
MCE	Ministerial Council on Energy
NEL	National Electricity Law
NEM	National Electricity Market
NEMMCO	National Electricity Market Management Company
NEO	National Electricity Objective
NTNDP	National Transmission Network Development Plan
NTP	National Transmission Planner
RIT-T	Regulatory Investment Test for Transmission
Rules	National Electricity Rules
TNSP	Transmission Network Service Provider

Executive Summary

Background

On 3 July 2007, the Ministerial Council on Energy (MCE) directed the Australian Energy Market Commission (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.

The Commission has delivered on part 1 of the direction, providing the MCE with its Final 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 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 current 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 1 September 2008, which included recommendations for a nationally consistent framework for transmission reliability standards. The Panel's Final Report is attached to this report. The Commission has considered the Panel's advice and has endorsed the major recommendations from the Panel as well as making a number of enhancements to the Panel's recommendations in the broader policy reform context including the NTP and RIT-T.

In this report, the Commission recommends a framework for nationally consistent transmission reliability standards (the national framework), and makes recommendations in relation to the implementation of that framework.

The package of recommendations to create a nationally consistent framework for transmission reliability standards will represent a major series of reforms with the potential to improve planning effectiveness and transparency for infrastructure development in the national electricity market.

Features of the national framework recommended by the Commission

Key features of the national framework recommended by the Commission include:

- Transmission reliability standards that are economically derived using a customer value of reliability or similar measure, and capable of being expressed in a deterministic manner (Hybrid form of standard).
- Applied on a jurisdictional basis, by a jurisdictional authority that is separate from the TNSP. Each jurisdiction would also have the option of appointing the Reliability Panel 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 setting the transmission reliability standards for a jurisdiction.
- Each jurisdiction would have pre-set standards. In addition, a jurisdiction may apply a flexible application, where the jurisdictional standard setting body could, at its option, allow a TNSP to defer or advance an investment that would otherwise be needed to meet that standard if the TNSP could demonstrate that, under the prevailing circumstances, it would be economic to do so.
- A national reference standard would be determined by the Reliability Panel to be used as a basis for comparison of the transmission reliability standards applying to broad types of connection points in each jurisdiction. Jurisdictional standard setting bodies would be required to justify any divergence from the national reference standard.
- The NTP would establish an information base of reliability standards applying in the National Electricity Market (NEM) including reasons provided for any divergence from the national reference standard.

Implementation

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

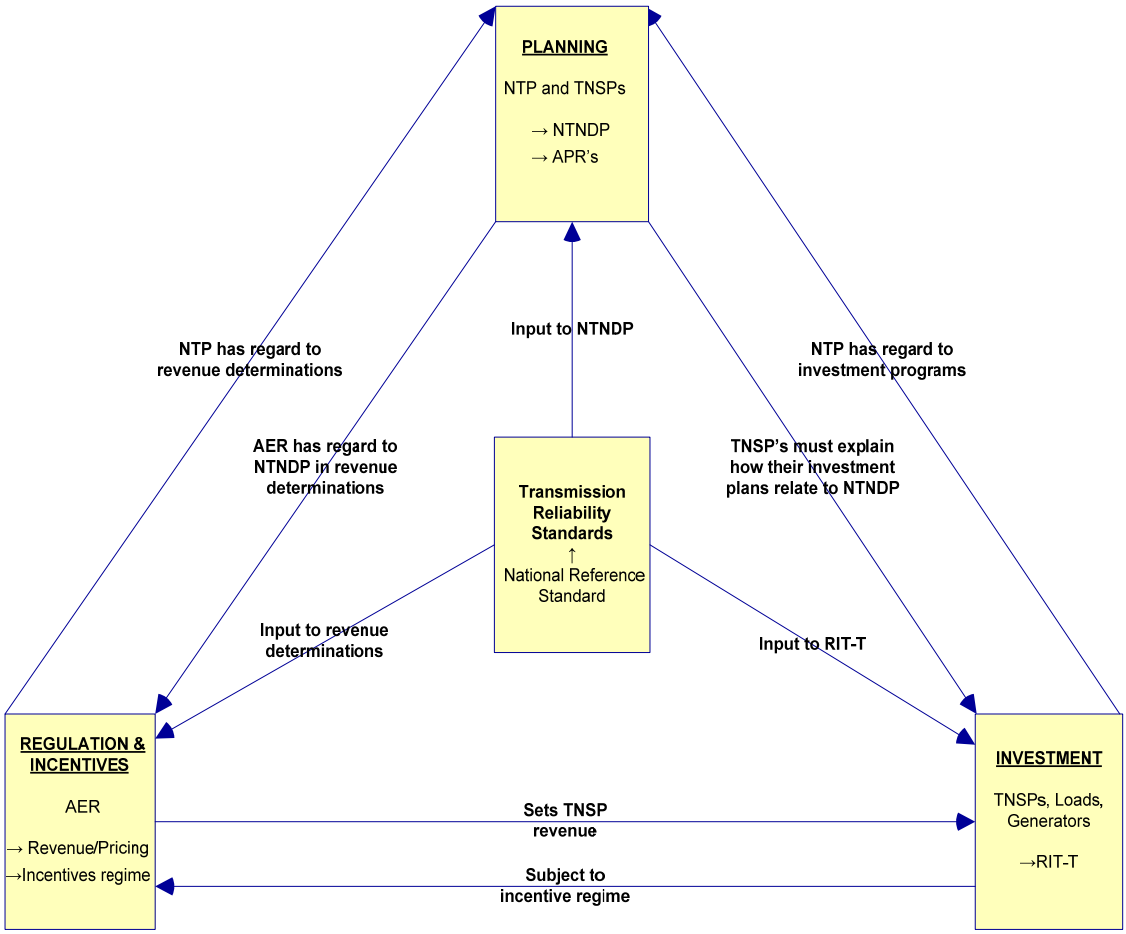
Implementation of the national framework would require changes to the Rules, state based legislation and other state based legal instruments, and possibly the National Electricity Law (NEL). This would be a sizeable job, thus the Commission considers appropriate transitionary arrangements and stakeholder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

The Commission recommends that the MCE divide implementation of the national framework into two parts. Firstly, the MCE should develop and manage changes to the NEL and jurisdictional instruments. MCE members are responsible for these instruments, and the MCE is best placed to establish an implementation timetable and hold its members accountable to achieving that timetable. Secondly, the MCE should task the Commission with developing the detailed Rule changes required to specify the national framework. The Commission has recently developed Rule changes for the NTP and RIT-T and is thus well placed to develop Rules that maintain consistency in the implementation of these three related reforms.

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. With this report, in addition to the NTP Final Report, the Commission has delivered a set of recommendations that support the development of an efficient national grid consistent with best regulatory practice. The Commission considers that the combined set of recommendations would complement each other 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 proposed transmission planning regime would interact.



A key concern raised by ERIG was the lack of transparency in information provided to the market. The Commission's proposed reforms 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 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 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. Government policy initiatives in response to climate change – including emissions trading and the expanded mandatory renewable energy target – will create new challenges for planning efficient transmission development. This complete set of recommendations developed by the Commission, to achieve COAG objectives for a national transmission market, would enhance the ability of the market to respond to those challenges

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 (Commission), under section 41 of the National Electricity Law (NEL), to conduct a review into electricity transmission network reliability standards, 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.
- 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.

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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)

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

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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

1.2.1 National Transmission Planner

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 proposed new 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 current Regulatory Test and c) reforming the economic regulation for transmission network service providers to reflect the new arrangements.

1.2.1.1 NTP

The proposed NTP is a priority COAG initiative to facilitate the efficient future development of the national transmission network. 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 Commission has recommended that the NTNDP specify a development strategy for each current and potential National Transmission Flow Path. Each development strategy must be consistent with the applicable reliability standards, as well as the co-optimisation of network and non-network investment and the maximisation of net economic benefits.[7]

1.2.1.2 RIT-T

The Commission's recommended new process of consultation and assessment for transmission investment, termed the RIT-T, would provide a single framework to apply to all transmission investment. It removes the current distinction between reliability driven projects and projects motivated by the delivery of market benefits, and would require further consultation and consideration of the range of options and associated market benefits for any given transmission issue.

The purpose of the new RIT-T is to identify the transmission investment option that maximises the net economic benefits, and where applicable, meets transmission reliability standards.

Another aspect of the proposed RIT-T is that any additional reliability benefits above those delivered to meet a transmission planning standard is valued as a market benefit. To support this, the Commission recommended that a consistent methodology for valuing reliability across the National Electricity Market (NEM) is developed by the Australian Energy Regulator (AER).

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6 Available at: http://www.aemc.gov.au/electricity.php?r=20070710.172341

7 Proposed NTP Rule clause 5.6A3 (b). See Appendix C(ii) of the NTP Final Report.

1.2.2 Transmission Reliability Standards

ERIG recommended that the 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 transmission reliability standards and provide advice to the Commission.[8] The Panel provided its Final Report on a nationally consistent framework for transmission reliability standards (the Panel's Final Report) to the Commission on 1 September 2008[9].

The Commission has considered the recommendations made in the Panel's Final Report in a broader policy context, including the recently completed reports on the NTP and RIT-T, and makes recommendations for a nationally consistent framework for transmission reliability standards in Section 6 of this report.

1.3 Policy Context

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

In developing its recommendations, the Commission has 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 Consultation

The Commission acknowledges the extensive consultation undertaken by the Panel in developing its recommendations. The Panel published three reports including an Issues Paper, a Draft Report, an Interim Report and also submitted a Final Report to the Commission. The Panel consulted on the first three of these reports. There were no substantial changes made between the Interim Report and Final Report. In addition, the Panel held a public forum on the Draft Report, and together with the

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

9 The Panels Final Report can be found at Appendix A.

10 ERIG 2007, p.181

Commission, held a stakeholder workshop on the Interim Report. The Commission notes the general support for the Panel's recommendations at the stakeholder workshop.

The Commission also consulted extensively throughout the National Transmission Planning Arrangements review.

The Commission has had regard to submissions made to both of the above consultation processes in developing the recommendations in this report.

1.5 Decision Making Criteria for the Review

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

> *Promote efficient investment in, and efficient use of, electricity services in the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity and 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 has 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 Panel.

1.6 Structure of this Report

The remainder of this report is structured as follows:

Section 2 discusses the recommendations made by the Panel in its Final Report to the Commission;

Section 3 provides detailed discussion of individual policy positions and the supporting reasoning.

Section 4 outlines how the Commission considers the national framework would promote the NEO and meet the Commission's decisions making criteria.

Section 5 discusses how the national framework is consistent with and complements the Commission's NTP and RIT-T recommendations.

Section 6 outlines the Commissions recommendations to the MCE for a nationally consistent framework for transmission reliability standards.

2 Summary of Reliability Panel's Recommendations

The Panel made four key recommendations to the Commission in its Final Report. These are summarised below, and considered in more detail by the Commission in Section 3. The Panel's Final Report is attached to this report at Appendix A and provides a complete explanation of these recommendations.

2.1 Principles for a Nationally Consistent Framework for Transmission Reliability Standards

The Panel recommended the following set of principles for developing and assessing the range of competing frameworks for nationally consistent transmission reliability standards. The reasoning behind the Panel's selection of principles is discussed in Section 3.8 of the Panel's Final Report.

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 when the Commission considers Rule changes.

The standards should be published and consistently applied by transmission operators.

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.

3 **Economic efficiency** - The framework should result in standards being derived from economic considerations that strike a reasonable balance between transmission system cost and customer reliability.

4 **Specificity of standards** - Transmission reliability standards should be clearly specified on a connection point basis or on some other readily understandable basis (e.g. by geographic area, such as CBD, metro, rural).

The standards should be clearly specified on a readily-understandable basis 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 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 an open consultation process.

7 **Accountability -** TNSPs should be accountable to the appropriate authority for meeting the transmission standards, as well as to the AER for meeting the resultant service standards, as this is an integral part of the regulatory incentive regime. If standards were set by a jurisdictional authority, it would most likely follow that the TNSPs would be accountable to that jurisdictional authority.

8 **Technology Neutral** - Standards should be technologically neutral, and not be biased towards network solutions where other 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—which are beyond the scope of the Panel's mandate—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 Framework for Nationally Consistent Transmission Reliability Standards

The Panel developed a number of options for a nationally consistent framework for transmission reliability standards. The performance of each of these options was assessed against the principles outlined above in Section 2.1. The option that

performed best against these principles was recommended by the Panel to the Commission as the framework for nationally consistent transmission reliability standards. Features of this framework include:

1 The **form of the standard** would be a hybrid that is economically derived using a Customer Value of Reliability (CVR) or similar measure, and capable of being expressed in a deterministic manner.

2 The **scope and level of standard** would be applied on a jurisdictional basis and would make allowance for connection point reliability standards to differ between CBD, metro and rural areas of a jurisdiction, depending on criticality of load or an explicit CVR.

3 **National mechanisms –** Introduction of a national 'reference standard' on a 'for information basis', against which high level standards for broad types of connection points (e.g. CBD, metro, rural) can be compared. The amendments would operate in conjunction with the new Regulatory Test for Transmission (RIT-T).

4 The **standards would be specified** in jurisdictional instruments, and the **framework expressed** in the Rules.

5 The **process for setting standards** would be clear, transparent, and include consultation.

6 The **level of the standards would be determined by** a jurisdictional authority separate from the TNSP. Each jurisdiction would have the option of appointing an independent national body to set the jurisdiction's reliability standards. The NTP would **establish an information base** of standards in the NEM.

7 **Each jurisdiction would have pre-set standards**, where the standard setting body would use economic analysis to set standards, which are capable of being expressed in a deterministic form. **In addition, a jurisdiction may apply a flexible application**, where the jurisdictional standard setting body could, at its option, allow a TNSP to defer or advance an investment that would otherwise be needed to meet that standard if the TNSP could demonstrate that, under the prevailing circumstances, it would be economic to do so.

8 The body that sets the levels of jurisdictional standards would be **accountable** to the jurisdictional government. The body that sets the national reference standards would be accountable through the Rules to a body yet to be considered by the Commission.

9 TNSPs would be **accountable** to the jurisdictional authority and to the AER.

10 **Retains capability for consistency between transmission and sub-transmission standards –** Consistency could be maintained because all jurisdictions would have hybrid standards that are capable of being

expressed in a deterministic equivalent manner. Each jurisdiction could then apply these hybrid standards to the joint planning of transmission and sub-transmission networks, regardless of whether a deterministic or probabilistic planning methodology is applied when applying the new RIT-T.

11 **Implementation of this framework** would require significant changes, including to the Rules, the NEL, State legislation, regulations and licences.

The Panel listed five main reasons for preferring this framework for nationally consistent transmission reliability standards. Specifically:

1 It is genuinely national, and although the hybrid form of standards are derived economically they would be capable of deterministic expression and comparison;

2 It appears to provide the greatest degree of transparency and accountability of all the options considered;

3 It promotes economic efficiency;

4 Its implementation would allow a range of specific jurisdictional needs to be accommodated such as:

   (a) the capability to achieve joint transmission/distribution planning;

   (b) the capability for Victoria to continue to use its probabilistic planning methods on a case-by-case basis whilst providing a forward looking view of overall reliability standards; and

   (c) the application and use of existing processes in jurisdictions that currently provide either hybrid standards or independent setting of those standards; and

5 It allows all jurisdictions the option of using flexible standards and probabilistic planning methods on a case-by-case basis if they wish as an adjunct to the pre-set standards. [11]

Details of the alternate options considered by the Panel, and the Panel's reasoning for selecting its preferred framework is contained in Sections 6 and 7 of the Panel's Final Report.

2.3 NEM Institutions

The Panel recommended that there should be national bodies to:

i. determine the national "information" reference standard;

ii. set the level of the standards if the standard setting is referred to the national level by a jurisdiction; and

iii. be the institution to which national reference standard setting body is accountable to,

[11] Section 7. 2 of the Panel's Final report

The Panel recommended that the Commission consider the appropriate institutions to undertake these roles taking into consideration consistency with the governance arrangements applying to the various NEM institutions.

2.4 Implementation

The Panel recommended that the Commission develop a comprehensive implementation and transition plan for the nationally consistent framework.

Given the existing arrangements in the NEM, the implementation of any framework for nationally consistent transmission standards would require significant changes to jurisdictional and national laws, regulations, and codes. Such changes would need to be transitioned, in a co-ordinated manner across the NEM.

The Panel recommended the establishment of a new work-stream to develop an implementation plan following MCE endorsement of a framework design.

2.5 Other recommendations

Embedded in its report, the Panel also recommended that the Commission reconsider the principles of *effectiveness* and *maintenance of past performance* (note the panel decided not to adopt this principle), in the broader policy context including the NTP and RIT-T.

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3 The Commission's Recommendations and Reasoning

The Panel made four recommendations to the Commission in its Final Report. This chapter discusses the Commission's response to each of those recommendations.

3.1 Principles for a Nationally Consistent Framework for Transmission Reliability Standards

In its Final Report, the Panel recommended a set of principles for developing and assessing the range of competing frameworks for nationally consistent transmission reliability standards. The Commission supports this set of principles for the following reasons. The principles:

1. are supported by robust analysis in the Panel's Final Report;[12]
2. were developed through a process of extensive consultation;[13] and
3. are consistent with the principles independently developed by KEMA following their international review of transmission reliability standards.[14]

The Panel recommended that the Commission reconsider the principles of *Effectiveness* and *Maintenance of Past Performance*, in a broader policy context including the NTP and RIT-T.

The Commission supports the principle *of Effectiveness,* and believes this principle is even more relevant when the national framework is considered in the context of the NTP and RIT-T. ERIG recognised the importance of having a nationally consistent framework for transmission reliability standards in supporting a reformed regulatory test for transmission investment. 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 are not clarified and made more specific".[15] As discussed in Section 5, the Commission believes the national framework is compatible with the NTP and RIT-T, and the NTP, the RIT-T and the national framework together would form an integrated, efficient and effective transmission planning regime.

The Commission supports the Panel's position not including the principle of *Maintenance of past Performance.* The Commission believes the Panel's reasoning for not including this principle is consistent with the Commission's recommendations on 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

[12] Section 3 of the Panel's Final Report.

[13] See Section 1.4.

[14] Table 2, p.34 of the Panel's Final Report.

[15] ERIG 2007, p.186

past. The Commission's recommendations for the NTP and RIT-T do not propose maintaining past network performance, and thus the Panel's position not to include this principle is consistent the Commission's NTP Final Report.

The Panel states that the principles were established for the purpose of "developing and assessing the range of competing frameworks for nationally consistent transmission reliability standards"[16]. 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 form of the national reference standard.

In developing any amendment to the Rules, the NEO must be the primary guiding principle. But in addition to the NEO, the Commission believes the group assigned to implement the national framework (including the reference standard) should have regard to the principles developed by the Panel.

3.2 National Framework

In its Final Report, the Panel recommended a high level framework for nationally consistent transmission reliability standards. Subject to a number of improvements outlined below, the Commission supports the framework for the following reasons. The national framework:

1. is supported by robust analysis in the Panel's Final Report;[17]

2. was developed through a process of extensive consultation[18];

3. is supported by comparisons with international experiences with developing transmission reliability standards;[19]

4. is consistent with the Commission's recommendations in relation to the NTP and RIT-T; [20] and

5. satisfies the NEO and the Commission's decision making criteria[21].

The Panel's description of the framework is set at a high level. The Commission believes that in some areas the description of the framework would benefit from further specification. The Commission has also addressed a question of inconsistency raised during consultation. These areas are discussed below.

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

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

18 See Section 1.4.

19 Section 8.14 of the Panel's Final Report.

20 See Section 5.1

21 See Section 4.1

3.2.1 National Reference Standard

The Panel explained that the national reference standard would be developed to be a point of information, clarification and contrast. The Panel's adoption of this mechanism clearly envisaged it being in the same form and scope as the requirements in the framework for jurisdictional standards.

The Commission believes that the national reference standard forms an important part of the national framework. The Panel has recommended that jurisdictions set the level of transmission reliability standards applying to networks within their own region. The national reference standard would thus play an important role in identifying when the level of standards within any jurisdiction diverges from a "best practice" level.

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

The Commission believes that the national reference standard should be developed under the national framework and therefore should take the same form as the jurisdictionally set transmission reliability standards, and should be based on equivalent economic modelling assumptions and methodology. This is essential to ensure the reference standard is recognised as a robust and credible benchmark against which the jurisdictional transmission reliability standards can be compared. The process of setting the national reference standard should be transparent and consultative.

The task of developing a national reference standard would be more complex than developing transmission reliability standards for a particular jurisdictional region. This is because the national reference standard setting body would be required to take account of differences between the networks of each jurisdiction in the NEM. Many inputs to the economic model would only be available on a jurisdictional basis, and thus a methodology would be required for aggregating this data. The Commission believes this methodology should be developed by the national reference standards setting body, in a transparent and consultative manner. This methodology should specify how the national reference standard would be determined consistent with the Rules, and how the inputs to the process would be determined.

The Commission believes there should be an objective in the Rules for the national reference standard. This objective would guide the national reference standard setting body in applying any discretion this body may have in developing the methodology for setting the national reference standard. The Commission believes the objective should be reflective of the degree of specification in the Rules for the national reference standard, and should be developed in consultation with

stakeholders. As such the Commission believes the implementation group would be best placed to draft the detail of the objective. Development of the objective should be guided primarily by the NEO, with subsequent guidance from the principles developed by the Panel.

Recommendations

- **The national reference standard should take the same form as and be based on the same economic modelling assumptions and methodology as the jurisdictional transmission reliability standards.**

- **The setting of the national reference standard should be transparent and consultative.**

- **The national reference standard setting body should be required to develop a methodology specifying how the national reference standard would be determined consistent with the Rules, and how the inputs to the process would be determined.**

- **The implementation group should draft an objective to guide the national reference standard setting body in developing the methodology.**

- **A jurisdictional transmission reliability standard setting body should be required to justify any divergence between the jurisdictional transmission reliability standards and the national reference standard.**

3.2.2 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) any 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 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.

Recommendations

The nationally consistent framework for transmission reliability standards should apply to transmission network owned by TNSPs only.

The national framework incorporates flexibility to allow consistency to be maintained between transmission and sub-transmission reliability standards. Ideally, the Commission believes that reliability standards should be consistent across all network voltages. An end user would not fully value a highly reliable transmission network if supply disruptions occur because the distribution network has been planned to a lower level of reliability. However the Commission accepts that this is not the purpose of the review. This is why the Commission decided to recommend that application of the national framework be mandatory for that transmission network owned by TNSP's only. This would not prevent the jurisdictional reliability standard setting bodies for distribution choosing to apply the national framework to sub-transmission or distribution. The Commission believes that over time there will be opportunities for the reliability standards for distribution to become consistent with the national framework for transmission to achieve national consistency across all network voltages.

3.2.3 Consistency between transmission and distribution planning regimes

In its NTP Final Report, the Commission recommended a new regulatory test for transmission investment that is quite different to the regulatory test for distribution investment. The Commission concluded that consistency between the distribution regulatory test and the transmission regulatory test is, while desirable, not necessary to allow joint planning of the distribution and transmission networks.

The Panel's Final Report recommended a framework for nationally consistent transmission standards that maintains the ability to achieve consistency between the form of the standards and planning methodologies at the distribution and sub-transmission levels. The Panel took the view that this principle was important to facilitate least cost planning of networks.

The Commission notes that some submissions to the Panel's consultation process stated that the Panel's position on consistency between transmission and distribution planning regimes differs from the Commission's position on this matter in its NTP Final Report. Specifically, the Panel recommended an approach that allowed consistency between distribution and transmission planning regimes to be maintained, whereas the Commission did not.

The Commission, in developing the RIT-T, was limited by the MCE's Term of Reference which restricted the scope of that review to reform of the regulatory test for transmission only. To achieve the improvements to the regulatory test desired by the MCE, it would not have been possible to maintain consistency with the distribution regulatory test. The Commission sought comment from stakeholders on the workability of applying a different regulatory test for transmission and distribution, and based on the response from stakeholders the Commission concluded that the application of different regulatory tests for transmission and distribution was workable. However the Commission did not necessarily believe this outcome was ideal in the long term.

The Panel was also restricted to reform of the reliability standards for transmission only. However in the case of the transmission reliability standards review, the panel was able to recommend significant reforms to the transmission reliability standards regime whilst maintaining the ability to achieve consistency with the distribution reliability standards regime, from a least cost planning perspective.

The Commission does not believe the desire to achieve consistency has impacted the final design of the national framework. As such, in the case of reliability standards, the Commission supports the framework proposed by the Panel that allows for the capability for consistency to be maintained.

The Commission maintains its view that whilst different regulatory tests for distribution and transmission are workable, in the long-term it would be desirable for the design of these two tests to converge. The Commission understands the MCE is currently considering the future design of the distribution regulatory test.

3.2.4 Methodology for Economic Modelling

The Panel's Final Report touches 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. The Panel's description of the national framework is however silent on this matter.

The Commission believes that the economic modelling underpinning the reliability standards should form part of the nationally consistent 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 transmission reliability standards. This role of developing these guidelines should be assigned to the AER, consistent with the AER's role in developing guidelines for application of the RIT-T.

Recommendations

The AER should be tasked with developing guidelines that stipulate the assumptions and methodology that must be applied when setting the transmission reliability standards for a jurisdiction.

3.3 Institutions to undertake Roles under the national framework.

The Panel recommended that the Commission consider the appropriate institutions to undertake the roles of:

1. determining the national reference standard;

2. setting the levels of the transmission reliability standards if the standard setting is referred to the national level by a jurisdiction; and

3. holding the standard setting body accountable.

The Panel also recommended that the NTP establish an information base of standards in the NEM[22].

3.3.1 Institution to set Jurisdictional Reliability Standards when referred to it

The Commission believes the Panel is the most appropriate body to undertake the role of setting jurisdictional transmission reliability standards when this role is referred to the national level by a jurisdictional government for the following reasons:

1. Fits appropriately with the Panel's other roles, such as its role to review the performance of the market in terms of reliability[23], and its role to review and determine the power system security and reliability standards[24];

2. Does not conflict with any planning roles as would be the case with the NTP which would be responsible for developing the National Transmission Network Development Plan, and the AEMO which will be responsible for transmission planning in Victoria;

[22] Under Item 6 of the Panel's description of the national framework.

[23] Rules clause 8.8.1(a)(1)

[24] Rules clause 8.8.1(a)(2)

3. The Panel has relevant expertise in technical matters such as reliability standards, and consists of members representing a broad cross section of the electricity industry and users from all NEM regions; and

4. As an existing body, the costs of undertaking this function would be small compared to establishing a new body.

The Panel in its role of setting jurisdictional reliability standards would be accountable to the Australian Energy Market Commission (AEMC).

Recommendations

The Reliability Panel should be the body to set reliability standards for a jurisdiction when that jurisdiction refers this function to the national level.

3.3.2 Institution to set the National Reference Standard

The Commission believes the Panel is the most appropriate body to set the national reference standard, for the same reasons as outlined above in Section 3.3.1.

The Commission recognises the potential for perceptions of a conflict of interest in that the body that sets the national reference standard can also be the body setting transmission reliability standards for jurisdictions that refer this function. However the Commission does not consider this potential conflict to be material due to the governance arrangements of the Panel. The Panel consists of representatives from a broad cross-section of NEM sectors and regions, and is chaired by an AEMC Commissioner. This diversity in membership is designed to ensure decisions by the Panel reflect the NEM as a whole and do not inappropriately advantage or disadvantage particular groups. In addition, the Panel will be bound to undertake its functions with transparent consultation.

The Commission also notes commentary from stakeholders in the consultations of this review which suggest the Panel as the appropriate body.

Recommendation

The Reliability Panel should be the body to set the national reference standard.

3.3.3 Accountability of National Reference Standard Setting Body

The Panel in its role of setting the national reference standard would be accountable to the AEMC.

3.3.4 Information Source

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

The Commission agrees that the NTP is the appropriate body to collate and publish the transmission reliability standards from each of the jurisdictions. Information

provision would be the primary function of the NTP so it is logical that this new role be assigned to it. In addition, under the Commission's NTP recommendations, the NTP would be required to consider transmission reliability standards as an input to the NTNDP. Thus the NTP would need to collect this information anyway.

As this role only includes the publishing of information developed by other organisations, there would be no conflicts of interest with the NTP's other functions or the wider functions of the AEMO.

In Section 3.2.1, 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. 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.

Recommendation

The NTP should establish an information base of transmission reliability standards in the NEM including reasons provided when jurisdictional transmission reliability standards diverge from the national reference standard.

3.4 Implementation

The MCE's Terms of Reference for the Transmission Reliability Standards Review did not require the Commission to develop an implementation plan. However throughout the conduct of this review considerable consideration has been given to implementation issues. Many submissions to the Panel's consultation process also raised implementation issues. The Commission points the MCE to Sections 9.2 and 9.3 of the Panel's Final Report for a summary of implementation issues raised by stakeholders.

The Commission believes that following broad policy agreement by the MCE, there would be two broad components to an implementation plan for the nationally consistent framework for transmission reliability standards:

1. Amendments to the NEL and state based legal instruments to give effect to the national framework; and

2. The development of detailed amendments to the Rules to specify the national framework.

3.4.1 Amendments to the NEL and state based legal instruments

The Commission believes the MCE is best placed to develop and implement the changes required to the NEL and state based legislation to give effect to the national framework. MCE members are responsible for the legal instruments requiring amendment, and the processes for making those changes. Also importantly, the

MCE is well placed to establish an implementation timetable and hold jurisdictions accountable to that timetable.

The Panel in its Final Report identified the following current jurisdictional sources of transmission reliability standards that would require amendment to implement a nationally consistent framework for transmission reliability standards.

Jurisdiction	Jurisdictional source of standard
New South Wales	Contained in a Network Management Plan which TransGrid is obliged to produce by legislation for acceptance by the Department of Water and Energy.
Queensland	Transmission Authority (licence) issued to Powerlink by the Queensland Government and S.34 of the Queensland *Electricity Act 1994*.
South Australia	The Essential Services Commission of South Australia determines the reliability standards for South Australia through the South Australia Electricity Transmission Code which is published on the ESCOSA website.
Tasmania	Regulations issued by the Tasmanian Government. Supplied by Tasmanian Reliability and Network Planning Panel. Brought in formally on 3 December 2007.
Victoria	Victorian Electricity System Code.

3.4.2 Amendments to the Rules

The Commission believes that it is well placed to develop the detailed Rule amendments to specify the national framework. Implementation of the framework would require substantial amendments to the Rules, and as raised in submissions to the Panel's consultation process, the detail in the Rules is of critical importance to effectiveness of this reform. As the Commission has recently developed the Rule amendments required to implement the NTP and RIT-T, the Commission is suitably placed to ensure consistency between the implementation of the NTP and RIT-T, and the national framework. In addition, as the Panel is chaired by an AEMC Commissioner and the Reliability Panel secretariat is located within the AEMC, the Commission is well place to also draw on the experience of the Reliability Panel in developing the Rule amendments.

Development of the Rule amendments would require extensive stakeholder consultation. The Commission would also have to work closely with the MCE on issues such as timing, process and the detail of amendments, to ensure the Rule amendments are consistent with those made by the MCE and its members.

In developing any amendment to the Rules, the NEO must be the primary guiding principle. In addition to the NEO, the principles developed by the Panel should guide the development of Rules to implement the national framework.

The Commission is unable to develop and implement its own Rule changes. As such, any Rule amendments developed by the Commission would need to be submitted to the Commission by the MCE as a formal Rule change proposal. 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 change reflects the MCE's agreed policy before the Rule change process commences.

A potential alternative and more timely route to developing the rule package would be available if there was a concern that the normal approach would take too long[25]. Under the alternative route, if the MCE agreed to the recommended policy approach, it could direct the AEMC to request the Reliability Panel, in consultation with the Commission, to develop Rules to meet the MCE's policy objectives and submit a Rule change to proposal to the AEMC for processing and decision. The Commission notes in this regard that the Reliability Panel is empowered to lodge Rule change proposals in matters relating to reliability.

3.4.3 Implementation linkages with the NTP and RIT-T

In its NTP Final Report, the Commission stated that the proposed NTP arrangements should be implemented as part of the general package of reforms necessary to implement AEMO, which is scheduled to commence operations on 1 July 2009. The Commission also recommended that the MCE consider the merits of facilitating suitable arrangements to have the first NTNDP published in December 2009. With regard to the RIT-T, the Commission recommended that the new test be implemented through an expedited Rule change process.

The proposed arrangements for the national framework would take significantly longer to implement than the NTP and RIT-T arrangements. However the Commission does not see any reason for delaying these arrangements in order to implement the complete package of reforms in parallel. There are significant benefits from establishing the NTP and RIT-T as soon as practicable, irrespective of whether the national framework has been established. Therefore the Commission maintains its advice to the MCE regarding the implementing of the NTP and RIT-T.

[25] The normal approach would involve the MCE providing a terms of reference to the AEMC, the AMEC developing and recommending Rule amendments to the MCE, the MCE considering the recommended Rule amendments and submitting a Rule change proposal to the AEMC, and the AEMC processing the Rule change proposal under its normal Rule change process – this final stage of processing the MCE's Rule change proposal could potentially be fast-tracked.

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4 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 decisions making criteria.

4.1 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 ensure the transmission reliability standards in each jurisdiction take a similar form, are economically derived, and are established using a consistent economic modelling methodology including common assumptions. Thus the national framework, which would be applied in a transparent manner, would 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 is 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"[26].

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 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.

[26] COAG 2007, p. 4

4.2 The Commission's decision making criteria

Section 1.5 outlined the decision making criteria adopted by the Commission for the NTP review. The Commission believes the national framework meets that 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 genuinely applies national 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 Commission's advice to the MCE on the NTP and RIT-T, and COAG's response to ERIG's Final Report.[27]

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 5.1, 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 believe 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 following a nationally consistent methodology. This would enable stakeholder 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 of the transmission reliability standards applying in jurisdiction by the NTP, the establishment of a national reference standard, and the requirement for the transmission reliability standard setting bodies to provide justification for any divergence from the national reference standard.

[27] See Section 5.2

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. [28] In addition, the framework nominates clear accountabilities for these bodies.

The membership structure of the Panel provides effective governance for undertaking the role of setting the national reference standard. The Panel membership consists of representatives from a broad range of interests in the energy industry, and generally represents all regions of the NEM. This broad cross section of membership is a requirement under the Rules.[29] The Panel would be accountable to the AEMC for this function.

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

There would be implementation costs as jurisdictions and TNSP's 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.

[28] ERIG 2007, p.181

[29] Rules clause 8.8.2

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5 Overall Transmission Planning Regime Reform Package

5.1 National framework linkages with the NTP and RIT-T

This section of the report describes how the proposed nationally consistent framework for transmission reliability standards is consistent with and complements the Commission's NTP and RIT-T recommendations.

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

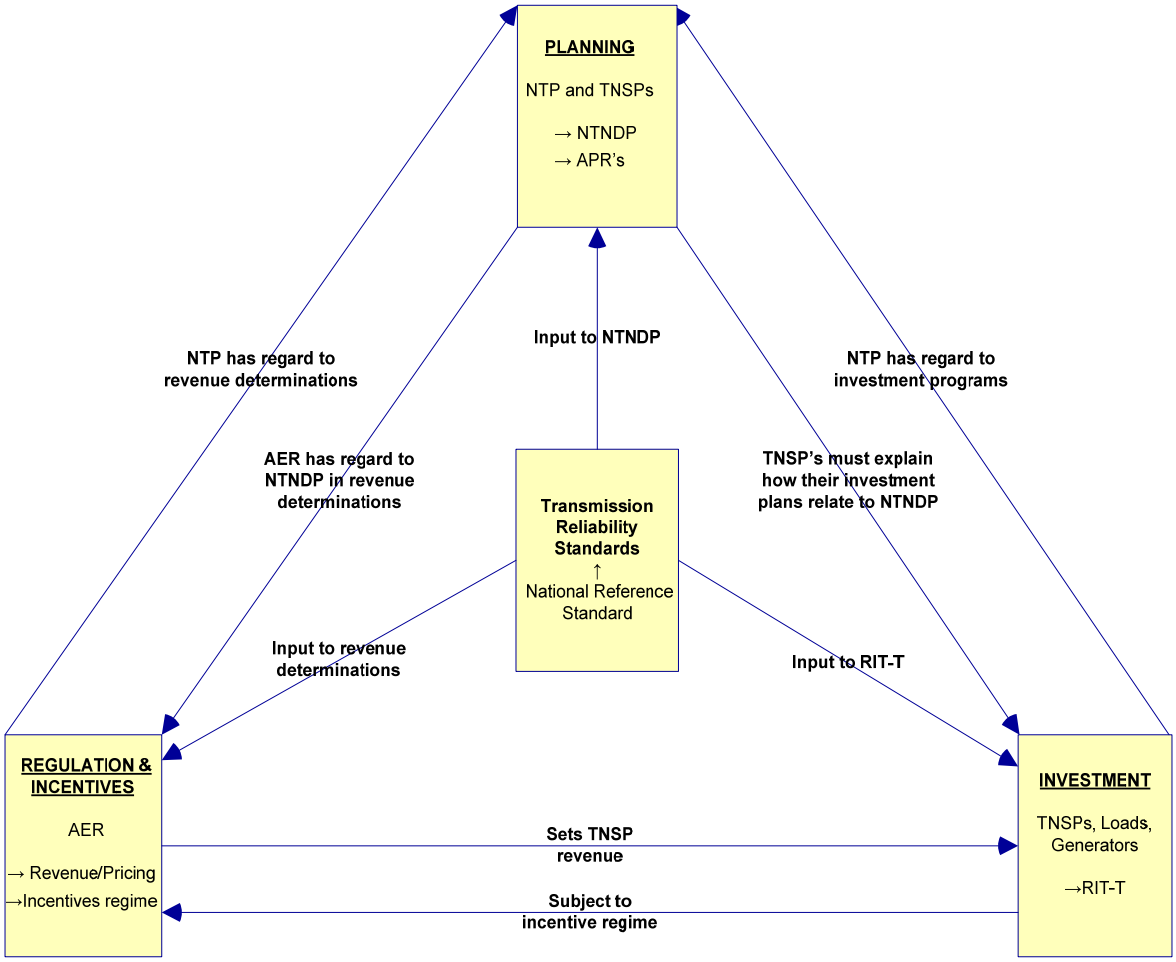
ERIG recognised the importance of having a nationally consistent framework for transmission reliability standards in supporting the proposed changes to the regulatory test. It stated in its Final Report, that "the potential benefits from developing a new project assessment and consultation process could 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".[30] 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 risks because it could lead to increased

[30] ERIG 2007, p.186

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.



5.2 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 consistent with best regulatory practice. The Commission considers that the combined set of recommendations would 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. [31]

All aspects of the proposed reforms would contribute more transparent and specific information to the market, and would increase the depth of that information. The proposed NTNDP would be a significant improvement on the current ANTS. The annual plan would identify the optimal development strategies for the national flow paths based upon its own planning and provide a deeper and longer term scenario based assessment of power system development to the market. Under the proposed RIT-T, the TNSPs would be 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 jurisdiction standards. Therefore under the set of proposed arrangements 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 recommended would also help overcome the current regional basis in transmission planning through establishing a national perspective in the transmission planning. The national framework would provide a common national basis for regional reliability standards. The NTNDP would help identify the optimal development of the grid from a national perspective and under the RIT-T the TNSP would be required to assess the national impacts of their proposed investments. The Commission has also identified the need to reform the economic regulation of transmission network service providers in respect of transmission charging across regional boundaries, in order to support efficient and co-ordinated transmission planning across regions.

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. Government policy initiatives in response to climate change – including emissions trading and the expanded mandatory renewable energy target – will create new challenges for planning efficient transmission development. This complete set of recommendations developed by Commission, to achieve COAG objectives for a national transmission market, would enhance the ability of the market to respond to those challenges.

[31] ERIG 2007, p.177

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6 Recommendations

The Commission makes the following recommendations for the MCE's consideration:

Recommendation 1

The following framework is recommended for nationally consistent transmission reliability standards. This framework is based on the framework development by the Panel in its Final Report, and incorporates the improvements identified by the Commission in Section 3 of this report.

1. Form	1.1 The transmission reliability standards would be of the hybrid form. That is economically derived using a Customer Value of Reliability (CVR) or similar measure, and capable of being expressed in a deterministic manner. 1.2 The national framework would make allowance for connection point reliability standards to differ between CBD, metro and rural areas of a jurisdiction, depending on criticality of load or an explicit CVR.
2. Coverage	2.1 Transmission reliability standards developed under national framework would apply to all transmission network owned by TNSPs.
3. Application	3.1 The national framework would be applied on a jurisdictional basis, by a jurisdictional authority that is separate from the TNSP. 3.2 Each jurisdiction would have the option of appointing the Reliability Panel to set that jurisdiction's reliability standards. 3.3 Each jurisdiction would have pre-set standards. In addition, a jurisdiction may apply a flexible application, where the jurisdictional standard setting body could, at its option, allow for a TNSP to defer or advance an investment that would otherwise be needed to meet that standard if the TNSP could demonstrate that, under the prevailing circumstances, it would be economic to do so. 3.3 The national framework would be applied in a clear and transparent manner, and would include full stakeholder consultation. 3.4 The AER would be tasked with developing guidelines that stipulate the assumptions and methodology that must be applied when setting the

	transmission reliability standards for a jurisdiction. The assumptions and methodology must be consistent with the RIT-T.
4. National Reference Standard	4.1 A national reference standard would be determined by the Reliability Panel to be used as a basis for comparison of the transmission reliability standards applying to broad types of connection points in each jurisdiction. 4.2 The national reference standard would be developed under the national framework and would thus take the same form as and be based on the same economic modelling assumptions and methodology as the jurisdictional transmission reliability standards. 4.3 The national reference standard would be determined in full consultation with stakeholders. 4.4 The implementation group should consider establishing an objective to guide the Reliability Panel in determining the national reference standard. This objective should be subsequent to the NEO. 4.5 A jurisdictional transmission reliability standard setting body would be required to justify any divergence between the jurisdictional transmission reliability standards and the national reference standard.
5. Publication of Information	5.1 The transmission reliability standards and justification for any divergence from the national reference standard would be published by the jurisdictional transmission reliability standard setting bodies. 5.2 The transmission reliability standards would also be available in TNSP annual reports and TNSP revenue determinations. 5.3 The NTP would establish an information base of reliability standards applying in the NEM including reasons provided for any divergence from the national reference standard.
6. Specification	6.1 The national framework would be specified in the Rules, with the transmission reliability standards specified in jurisdictional instruments.
7. Accountability	7.1 The jurisdictional transmission reliability standards setting bodies would be accountable to the jurisdictional government and the AER.

	7.2 TNSPs would be accountable to the jurisdictional transmission reliability standards setting bodies, and the AER. 7.3 The Reliability Panel is undertaking its roles under the National Framework would be accountable to the AEMC.

Recommendation 2.

The Commission recommends that the MCE divide implementation of the national framework into two parts.

Firstly, the MCE should develop and manage changes to the NEL and jurisdictional instruments. MCE members are responsible for these instruments, and the MCE is best placed to establish an implementation timetable and hold its members accountable to achieving that timetable.

Secondly, the MCE should task the Commission with developing the detailed Rule changes required to specify the national framework. The Commission has recently 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.

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A The Panel's Final Report