AUSTRALIAN ENERGY MARKET COMMISSION

Review of enforcement and compliance with technical standards

DRAFT REPORT

May 2006

Contents

1 Summary

Compliance with technical standards is crucial to ensuring power system security in the National Electricity Market (NEM). Ensuring high levels of compliance with effective standards is fundamental to the safe and reliable operation of the power system within its technical envelope. If this were not the case, the risk of a major power system incident would materially increase.

The Ministerial Council on Energy (MCE) has asked the Australian Energy Market Commission (Commission or AEMC) to review the enforcement and compliance regime for the technical standards contained in the National Electricity Rules (Rules). This Report contains the Commission's review of the relevant issues and its draft recommendations in response to the MCE reference.

The important matters raised by this review itself have increased industry and market focus on some fundamental aspects of the technical and performance standards system. In addition, a number of activities related to technical and performance standards have been initiated including:

- the Australian Energy Regulator (AER) commencing its new technical standards enforcement role;
- the National Electricity Market Management Company (NEMMCO) proposing a Rule change regarding technical standards for wind generation; and
- the AEMC Reliability Panel preparing to undertake a review of the content of the standards themselves.

As this review (including the submissions made to it) and the other related activities progressed, it has become clear that some generating systems do not have registered performance standards and many generating systems have incomplete registered performance standards (due to the failure of the process for agreeing or deeming registered performance standards for existing generating systems established in the then National Electricity Code).

In light of the above, the Commission has included a comprehensive program in its recommendations to bring together a satisfactory program covering the technical and performance standards, their enforcement and compliance.

It is the Commission's view that clear, defined, enforceable standards are fundamental to the effectiveness of any enforcement and compliance regime. To this end, the Commission has proposed a process to holistically address all the issues related to technical standards (see section 1.2). The Commission has also proposed that a joint AEMC-AER working group be established to assist with co-ordinating the overall work program and that the Commission will report regularly to the MCE on progress.

This Report addresses three dimensions of technical and performance standards, enforcement and compliance:

- ensuring that there are clear and appropriate technical standards, that there are performance standards put in place for all existing generators as well as clear processes for establishing performance standards for new generators (Section 5);
- ensuring that there are appropriate and effective processes and procedures for monitoring compliance with those performance standards and that breaches are rectified in a timely way (Section 6); and
- ensuring that there is a responsive and robust enforcement and penalties regime to incentivise high levels of compliance (Section 7).

Overall, the Commission considers that a framework for enforcement and compliance with the technical standards must firmly be driven by outcomes, the most fundamental of which are the ongoing security and reliability of the power system. Market participants and customers must be under no misapprehension that the security of the power system is paramount and that the strongest possible enforcement actions are available to ensure that those outcomes can be achieved.

It is also the Commission's view that those outcomes can best be achieved through a combination of approaches. Strong penalties should be balanced with clearly expressed Rules with which parties are able to comply. Robust enforcement should be balanced with a co-operative approach that recognises that a secure power system and reliable supply are in the interest of all parties in the NEM. High levels of compliance can be expected where required processes and procedures are streamlined and do not create an unnecessary compliance burden or uncertainty.

The Commission considers that there are material deficiencies in the establishment of performance standards that were intended to be deemed for existing plant under the process set out in the Rules. Those deficiencies must be resolved as an urgent priority in order to provide a sound basis for compliance and enforcement. The Commission notes that NEMMCO and the industry are currently working to do so. The Commission has recommended that a Rule change be proposed by NEMMCO or the electricity supply industry to ensure that those outcomes are delivered in a timely way and are enforceable. It also recommends that the AER be specifically consulted in the development of that Rule change proposal.

The Commission also considers it appropriate to conduct a thorough program of work to review the future development, scope and content of the technical standards and how they should interact with the performance standards. That review should be conducted after the Commission has completed its current assessment of NEMMCO's technical standards for wind generation Rule change

proposal. The Reliability Panel should be involved in the review of the content of the technical standards.

The Commission is of the view that a number of improvements can be made to the processes and procedures for compliance monitoring, notification and rectification. The Commission recommends that the MCE consider initiating Rule change proposals to give effect to those recommendations. This should enable potential breaches to be identified more effectively and for those breaches to be rectified as quickly as possible. Doing so will assist in minimising risks to the power system from breaches of the technical standards. The Commission intends to prepare drafts of the suggested Rule change proposals as part of its final report.

The Commission is of the view that it would be inappropriate to make detailed recommendations on enforcement and penalties until the issues concerning the deemed performance standards for existing generators are resolved. As such, this report contains the Commission's preliminary views on issues of enforcement and penalties. The Commission has recommended that a review of technical standards enforcement and penalties be undertaken following a resolution of the process for determining the content of the deemed performance standards for existing generators. That review will serve to further develop the Commission's views, including the potential introduction of a specific technical standards penalty similar to the rebidding penalty.

The Commission welcomes comments on the recommendations contained in this draft report and the issues raised by the report. ***Interested stakeholders are invited to make comment on the issues outlined in this Paper.*** Submissions should be received by 5 pm on 25 July 2006. Submissions can be sent electronically to submissions@aemc.gov.au or by mail to:

Australian Energy Market Commission
PO Box H166
AUSTRALIA SQUARE NSW 1215
Fax (02) 8296 7899

1.1 Summary of Recommendations

1. That NEMMCO and/or the electricity supply industry request a Rule change that proposes to:

    - put in place a process to settle the content of deemed performance standards for existing generator plant and specifically documents the performance standards for each generator;
    - impose a 30 June 2007 deadline for completion of that process;
    - require that generators provide NEMMCO with a confidential copy of the relevant connection agreement;
    - provide for binding and enforceable arbitration to resolve particular issues where the parties disagree and gives the arbitrator the powers to perform this role including the power to compel the production of relevant documents; and
    - the development of which has specifically involved consultation with the AER.

2. That the AEMC will undertake a review of the following matters by 30 June 2008:

    - the process for revising the technical standards;
    - whether and how performance standards should be reviewed following changes to those standards;
    - whether NSPs should be required to submit to NEMMCO, and conform with, performance standards and what the content of those performance standards should be; and
    - whether there are any changes that should be made to the technical and performance standards regime to improve its effectiveness with respect to market customers and MNSPs.

3. That, in parallel with the AEMC's own review, the AEMC will direct the AEMC Reliability Panel to undertake a review of technical standards (which is consistent with the Reliability Panel's forward work program).

4. That the MCE request a Rule change that proposes to establish a requirement that NEMMCO issue guidelines setting out specific requirements for generator and NSP compliance programs. These guidelines should be subject to the Rules consultation procedures.

5. That the MCE request a Rule change that proposes to replace the current framework for determining generator and NSP compliance programs with the following:

   - requiring generators, market customers, MNSPs and NSPs to submit a compliance program to NEMMCO and the AER that is consistent with the compliance program principles in the Rules and NEMMCO compliance program guidelines;
   - giving the AER and NEMMCO specific powers to reject a compliance program if it either contains inadequate information or does not comply with the requirements of the Rules and NEMMCO guidelines; and
   - requiring the AER and NEMMCO to each notify the generator, market customers, MNSPs or NSP of their decision in writing and give reasons.

6. That the MCE request a Rule change that proposes to add a clause that states that the timely notification to NEMMCO of a breach of a performance standard under clause 4.15(f) must be taken into consideration in any proceeding against a Registered Participant for a breach of clause 4.14(a).

7. That the MCE request a Rule change that amends Clause 4.15(j) to ensure that that NEMMCO is required to take the cost to the market of a continued breach into consideration in determining an appropriate rectification timeframe.

8. That the MCE request a Rule change that proposes to allow the AER to determine a timeframe for rectification if a Registered Participant disagrees with NEMMCO's determination of a rectification timeframe under clause 4.15(i).

9. That the MCE request a Rule change that proposes to clarify the wording in clause 4.15(i) to make clear that the Registered Participant has an obligation to rectify a performance standard breach within the time specified by NEMMCO so that a failure to rectify will be considered a breach of the Rules by the Registered Participant.

10. That the MCE consider prescribing clause 4.15(i) as a civil penalty provision in Schedule 1 to the *National Electricity (South Australia) Regulations.*

11. That the MCE request a Rule change that proposes to require NEMMCO to provide all relevant information on performance standard non-compliances or potential non-compliances to the AER.

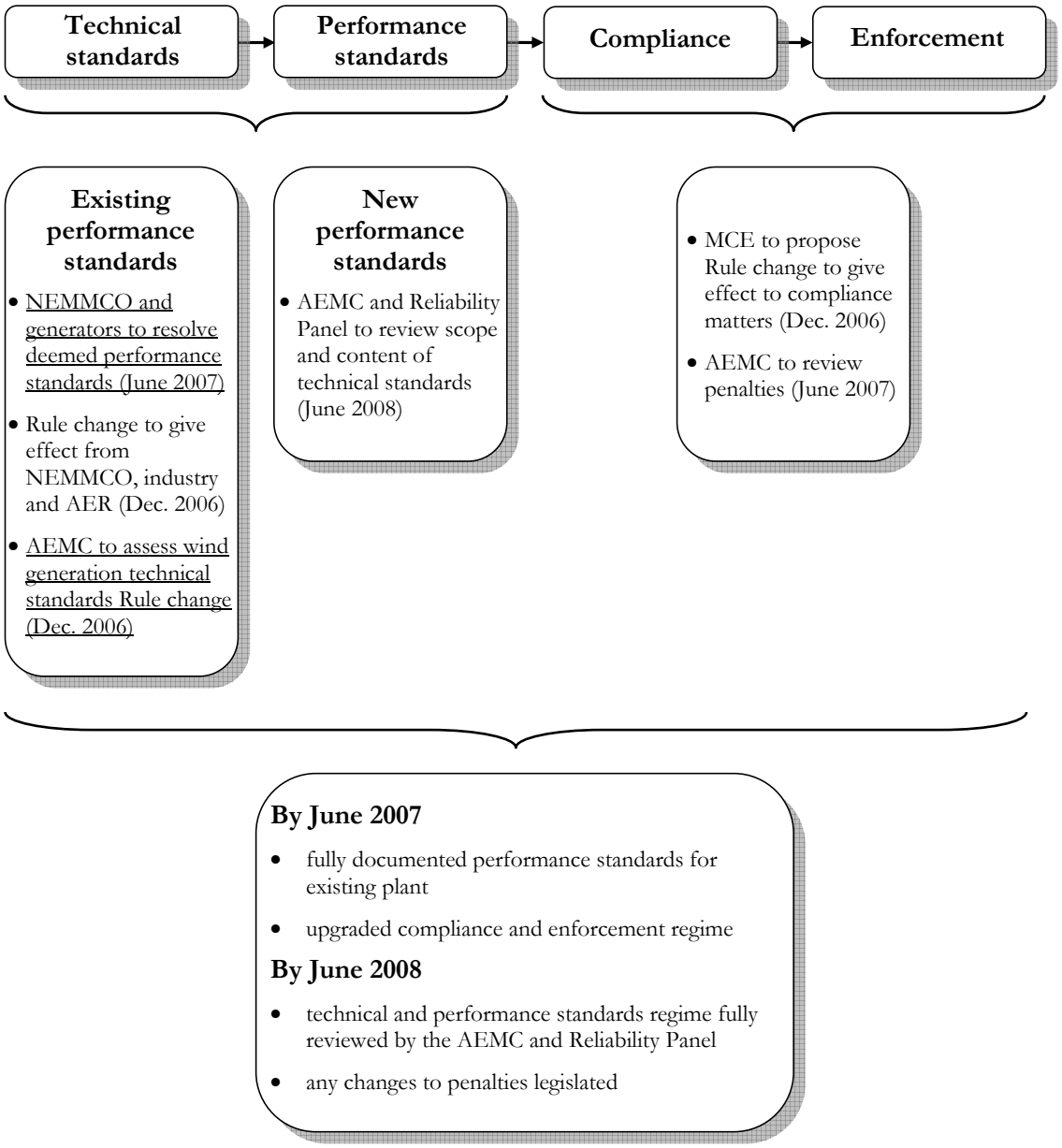
12. That the MCE directs the AEMC to conduct a further review into the appropriate penalties for breaches of technical standards to be completed before June 2007, once the process of determining deemed performance standards for existing plant is completed. The further review should consider and further develop the Commission's preliminary views that:

    - breaches of technical standards should move from strict liability to fault-based liability;
    - any benefits accruing to the Participant that breached technical standards be considered in determining an appropriate penalty;
    - if recommendations for fault-based liability and removal of benefits resulting from technical breaches are adopted, a higher level of penalty, similar to the rebidding penalty is likely to be appropriate; and
    - the Rules should include additional factors that should be considered in determining a penalty for a breach of a performance standard.

13. That the MCE notes:

    - the comprehensive approach to managing the identified issues in the technical and performance standards, and their compliance and enforcement;
    - the existing AEMC workstream relating to technical standards for wind generation;
    - the intention to establish the AEMC-AER working group to oversee the ongoing program of work relating to technical standards, which will report regularly to the MCE on progress; and
    - that the specific Rule drafting of recommendations 4 – 10 could be undertaken by the AEMC as part of its final report.

1.2 Summary of work program



Note: Underlined text indicates action already underway

2 Background

On 25 November 2005 the Commission received a direction from the MCE under s.41 of the National Electricity Law (NEL) to conduct a review of the enforcement of, and compliance with, the technical standards set out in the Rules.

The Commission published an issues paper on 24 January 2006, seeking views from interested parties on the adequacy of the current technical standards enforcement and compliance regime and how that regime could be improved.

This Draft Report contains the Commission's draft views on these issues, informed by the submissions made by stakeholders and the Commission's own research and analysis.

2.1 Terms of Reference

The terms of reference for this review require the Commission to review three areas concerning the technical standards. These are the investigative provisions, rectification provisions and penalty provisions under the Rules. These three areas are to be considered in the context of maintaining power system security and reliability. The terms of reference identify four specific issues for consideration:

- whether the current processes and timing for ensuring prompt rectification of non-compliance with the technical standards are adequate;
- whether there is a case for strengthening NEM institutional roles for monitoring, investigating and directing compliance with technical standards. This should include a consideration of the adequacy of clauses 4.15 and 5.7.3;
- whether the courses of action available to manage network security provide appropriate incentives to rectify faults; and
- whether the level of penalties currently prescribed for breaching the technical standards are adequate.

The Commission is also required to give consideration to three power system events that occurred recently in the NEM – the 8 March 2004, the 13 August 2004 and the 14 March 2005 events. All three events resulted in a significant amount of load shedding. Investigations of these incidents have been conducted by NEMMCO and in one case National Electricity Code Administrator (NECA) and the National Electricity Tribunal.

As noted in the Issues Paper, the Commission does not intend to re-investigate these particular incidents, but to consider the broader policy and compliance issues raised by them which could be addressed through changes to the Rules or the National Electricity Law (NEL). Under the terms of

reference, the Commission may also have regard to any other factors or consider any other event that the Commission considers relevant.

2.2 What are technical standards?

"Technical standards" is not a defined term in the Rules. The Issues Paper characterised those standards as:

- the performance standards for generators, market customers (customers) and market network service providers (MNSPs) specified under clauses 4.13, 4.14 and 5.3.4A(g) that are required to be registered with NEMMCO;
- the automatic access standards, minimum access standards and performance criteria required for connection of network service providers (NSPs), generators, customers and MNSPs set out in Schedules 5.1, 5.2, 5.3 and 5.3a respectively, which in the case of the generators, customers and MNSPs, form the basis for specific performance standards required to be registered with NEMMCO; and
- the obligations of NSPs, generators and customers under clauses 5.2.3, 5.2.4 and 5.2.5.

A number of stakeholders commented on this issue in their submissions. Electranet considered that the technical standards identified in the Issues Paper formed the appropriate scope for the review. The National Generators Forum (NGF) and Origin Energy submitted that the Commission should consider as part of the review whether performance standards should be imposed for TNSPs. NEMMCO noted that the scope of the review should consider all those standards involved in connection to the grid and the process of enforcing and complying with those standards. It submitted that specific performance standards that do not specifically relate to the compliance and enforcement process lie outside the scope of this review.

AusWind suggested that the system standards contained in Schedule 5.1a should be considered since they affect the technical standards for generators under Schedule 5.2.

The Commission considers that the technical standards identified in the issues paper form an appropriate scope for this review. As noted by NEMMCO, the focus of this Review is the enforcement of and compliance with technical standards, as opposed to the adequacy of the standards themselves. The Commission also notes that the Rules specify that the system standards in Schedule 5.1a are not intended to be relied on under all circumstances[1]. Therefore, the Commission will consider only those elements of the system standards in Schedule 5.1a to the extent that they affect the compliance and enforcement of technical standards.

---

1 Schedule 5.1a.1.

The Commission has noted the issues raised regarding performance standards for TNSPs. These issues are considered in section 5 of this Report.

2.3 Review process and legal requirements

The terms of reference specified that the Commission must publish an issues paper within 60 days of receipt of the terms of reference and seek comments from interested parties before preparing a draft Report.

The MCE specified that the draft Report was to be released to the MCE no later than 60 days following the close of submissions. However, the Terms of Reference did not specify whether the draft Report was to be released publicly or whether the Commission should seek submissions on its draft Report. The Commission notes however, that the MCE terms of reference specified that the Commission's review process should "consist of at least" the requirements specified in the terms of reference.

The Commission has noted strong interest of many participants in the conduct of this review. The outcomes of this review are likely to affect the business interests of a large number of participants and consumers, reflected in the large number of submissions in response to the Issues Paper.

Therefore, the Commission is of the view that it is appropriate that this draft Report be released publicly, 14 days after it has been submitted to the MCE, as required under the terms of reference. The Commission also considers that it is appropriate to accept submissions on the draft Report. The Commission has proposed the following timetable for completion of the review process:

- draft report to MCE 26 May 2006
- draft report released publicly 13 June 2006
- submissions on draft report due 25 July 2006
- final report to MCE 1 September 2006

A number of matters that have come to the Commission's attention are urgent. Progress in relation to initiatives designed to address those issues should be progressed in advance of the final report. In particular, a Rule change by NEMMCO and/or the electricity supply industry, with the input of the AER, to give legal force to an agreed view of the deemed performance standards for existing generation should be proposed as a priority.

It is relevant to note the requirements set out in the NEL that apply to the Commission in undertaking a review of this type. The Commission must comply with the direction of the MCE in conducting the review, including any terms of reference provided (NEL s.41(2)). The Commission is also required to have regard to any relevant MCE statement of policy principles. The Commission notes that there are currently no MCE statements of policy principles.

The Commission is required to have regard to the NEM objective (NEL s.32) which states:

> *The national electricity market objective is to promote efficient investment in, and efficient use of, electricity services for 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.*

Other than these requirements, the Commission may conduct the review as it considers appropriate, which may include holding public hearings as appropriate.

2.4 Consultation

The Commission received 18 submissions in response to the Issues Paper. Submissions were received from:

- The Hon. Patrick Conlon MP, Minister For Energy, South Australia;
- the NGF;
- the AER;
- Alinta;
- NEMMCO;
- Renewable Energy Generators Australia Limited (REGA);
- CitiPower and Powercor;
- The Australian Wind Energy Association (AusWind);
- Major Energy Users Inc (MEU);
- ElectraNet;
- Powerlink;
- Public Interest Advocacy Centre (PIAC);
- Origin Energy;
- VENCorp;
- Transend Networks;
- TransGrid
- Stanwell Corporation; and
- Electricity Transmission Network Owners Forum (ETNOF).

3 Current requirements and relevant incidents

3.1 The current NEM technical standards regime

In the NEM, the Rules prescribe detailed requirements regarding the applicable technical standards. The Rules establish a hierarchy of overall system standards, access standards and performance standards for individual Generators, Customers and MNSPs. This section describes the current framework of technical standards in the NEM and the current process for enforcement and compliance with those standards.

System standards and access standards

The system standards are contained in Schedule 5.1a of the Rules and set out the targets for the performance of the power system. The purpose of Schedule 5.1a is to establish system standards that

> *(a) are necessary or desirable for the safe and reliable operation of the facilities of Registered Participants;*
>
> *(b) are necessary or desirable for the safe and reliable operation of equipment;*
>
> *(c) could be reasonably considered good electricity industry practice; and*
>
> *(d) seek to avoid the imposition of undue costs on the industry or Registered Participants.*[2]

Schedule 5.1 establishes the planning, design and operating criteria that must be applied by NSPs. Schedules 5.2, 5.3 and 5.3a establish the required conditions for connection of Generators, Customers and MNSPs respectively. These are generally specified in terms of "automatic access standards" and "minimum access standards".

Automatic access standards are defined as a standard of performance for a plant such that if the plant meets the standard, it would not be denied access to the network because of that technical requirement. Minimum access standards are defined as a standard of performance for a plant such that if the plant fails to meet that standard it would be denied access because of that technical requirement[3].

Where the capability of a plant falls between the automatic and minimum access standard, a negotiated access standard can be established between the applicant and the NSP, in consultation with NEMMCO on particular issues.[4]

---

2 Rules, S5.1a.1

3 Rules, Chapter 10.

4 Rules, 5.3.4A

Performance standards for existing plant

Performance standards are intended to specify an enforceable expected level of performance for individual Generators, Customers and MNSPs. For existing plant in the NEM at the commencement of the performance standards regime, a process was established with an intention to ensure that all plant had a registered performance standard, set at a level consistent with their current performance. Those arrangements are discussed in more detail in Section 5.

Performance standards for new plant

New plant built after the commencement of the performance standards regime are required to have a registered performance standard. These performance standards are set through the process of establishing a connection agreement and are registered at the level of the automatic access standards or negotiated access standards that form part of the connection agreement between a Generator, Customer or MNSP and the relevant NSP.[5]

This process may involve NEMMCO under clause 5.3.4A(b) if matters are allocated to it under clause 5.3.3(b1)(4), but generally this process is undertaken between the proponent and the NSP. Prior to registration a due diligence review is completed by NEMMCO to verify that the proposed connection satisfies the technical requirements of the Rules.

Monitoring and compliance

Under clause 4.15 of the Rules, it is the responsibility of the Registered Participant to ensure that its plant meets or exceeds its registered performance standard. Under clause 5.2.5, a generator is obliged to ensure that its facilities are operated to comply with its connection agreement, applicable performance standards and the system standards. Under clause 5.2.4, customers are under the same obligations. NSPs are obliged to comply with the standards specified in schedule 5.1 and those specified in any connection agreement with a Registered Participant (clause 5.2.3(b)).

Under the NEL, the Australian Energy Regulator (AER) has powers to monitor, investigate and enforce compliance with the Rules. Under clause 4.15(d), the AER may also monitor compliance with the compliance program and performance standards.

Compliance programs

Registered Participants subject to performance standards are required to institute compliance programs under clause 4.15(c) to ensure on-going compliance with their performance standards. The

5 Rules, 5.3.4A(g)

Registered Participant must institute a compliance program within 6 months of a connection agreement or the commencement of operation of the plant, whichever later occurs[6].

Under clause 5.7.3(a), prior to implementing a compliance program a Generator must provide evidence to NEMMCO and the relevant NSP that its generating units comply with the technical requirements of Schedule 5.2.5, the relevant connection agreement and performance standards. Generators are also required under clause 5.7.3(b) to negotiate in good faith to agree with NEMMCO and the relevant NSP on the compliance program.

Under clause 5.7.4(a1), NSPs are also required to implement compliance programs to ensure the performance of protection systems and various control systems in accordance with the requirements of Schedule 5.1.

Notification and rectification

If a Registered Participant becomes aware of a breach of its performance standards, the participant must immediately notify NEMMCO. Once notified of a breach of a performance standard, or if NEMMCO reasonably believes that plant is in breach of a performance standard, NEMMCO is required to determine the period of time in which the breach must be rectified.

In determining the time that participant has to rectify a breach, NEMMCO is required to take into account:

> *(1) the time necessary, in NEMMCO's reasonable opinion, to provide the Registered Participant with the opportunity to remedy the breach; and*
>
> *(2) the need to act to remedy the breach given the nature of the breach.*[7]

If the participant fails to rectify the breach in the time determined by NEMMCO, NEMMCO is then required to notify the AER to take action[8].

Enforcement

In the case of a breach of a performance standard, like any other breach of the Rules or the NEL, the AER may institute proceedings against a participant for breaches (or possible breaches) of the Rules. Under s.59 of the NEL, the AER has sole responsibility for initiating proceedings in relation to an alleged breach of the National Electricity Law, National Electricity Regulations (Regulations) or Rules.

---

6 Clause 4.15(b)

7 Rules, 4.15(j)

8 Clause 4.15(k)

The Court may make a range of orders where a participant is found to be in breach of the Rules. These may include[9]:

- payment of a civil penalty;
- an order that the relevant participant cease the act that constituted the breach;
- an order that the participant take action to remedy the breach or prevent recurrence of the breach of the Rules; and/or
- an order that the participant implement a specified program of compliance.

Penalties

The NEL sets out the matters to be considered in determining the amount of the civil penalty and specifies the level of civil penalties for breaches of the provisions of the NEL, the Regulations or the Rules. The Regulations (and in some cases the NEL) specify clauses of the Rules that are subject to civil penalties ("civil penalty provisions"). The NEL sets out a statutory maximum penalty for civil penalty provisions, with the exception of rebidding civil penalties. The available civil penalties are:

- in the case of a company, a maximum of $100,000 and a maximum of $10,000 for each day the breach continues; and
- in the case of a natural person, a maximum of $20,000 and a maximum of $2,000 for each day the breach continues.

While the NEL specifies the penalties for a breach of civil penalty provisions, it also specifies a much higher level of penalty for a breach of rebidding civil penalty provisions. The rebidding civil penalty provision applies in cases where scheduled generators or market participants breach clause 3.8.22A of the Rules, by not making dispatch offers, bids or rebids in good faith. A person who breaches a rebidding civil penalty provision may be fined up to $1 million and up to $50,000 for each day that the breach continues.

3.2 Evidence of non-compliance or significant breaches of technical standards

The commencement date for the current performance standards regime was 16 November 2003. Clause 4.13 of the National Electricity Code (Code) allowed one month after that date for existing Registered Participants to submit standards to NEMMCO and a further 11 months to negotiate and agree those standards. Registered Participants were required to put in place compliance programs within six months of registration of those standards with NEMMCO.

---

9 See Part 6 of the NEL.

In the Terms of Reference for this review, the Commission is required to consider three specific power system incidents:

- 8 March 2004 which resulted in approximately 650 megawatts (MW) of load shedding in South Australia;
- 13 August 2004 which resulted in approximately 1,500 MW of load shedding across Queensland, New South Wales, Victoria and South Australia; and
- 14 March 2005 which resulted in approximately 700 MW of load shedding in South Australia.

A brief summary of these incidents can be found in Appendix 2. It should be noted that the 8 March 2004 and 13 August 2004 events occurred prior to the registration of performance standards with NEMMCO while the 14 March 2005 event occurred before compliance monitoring programs were required to be established.

4 Theoretical approaches to compliance

Laws (and rules) are enacted with a purpose in mind. By defining what is permissible and what is not permissible, these laws and rules seek to require or limit actions with the aim of achieving a defined goal or purpose. Compliance by the relevant entities and enforcement by the regulator with those laws ensures the achievement of the goal or purpose. The approach taken to compliance and enforcement is therefore crucial to how effectively the laws achieve their desired goal or purpose.

This review is principally concerned with the mechanisms for enforcement and compliance, rather than what is to be complied with. That is, the aim of this review is not to find ways of minimising the number of incidents on the power system, but to achieve high levels of compliance with a defined set of standards.

The purpose of this section of the draft report is to look at the theoretical approaches to compliance and enforcement that must accompany any defined set of standards. Effective regulation involves a sound regulatory framework that guides regulatory practice in order to achieve compliance with those standards and maintained through appropriate enforcement mechanisms. The regulatory framework, and approach taken by the regulator, will vary with the industry or environment.

4.1 Factors influencing compliance and enforcement

Dr Nielsen and Dr Parker in their ongoing study of the Australian Competition and Consumer Commission's (ACCC's) enforcement and compliance framework note that the following have been identified by regulatory theorists as factors that influence compliance:

> *Regulatory style: Regulators' enforcement styles differ according to their degree of formalism (i.e. flexibility vs rigidity in application of rules) and degree of coerciveness (i.e. willingness to issue threats) so regulators may be accommodative, flexible or legalistic.*
>
> *Motivational postures: Business attitudes towards compliance and cooperation with regulatory authorities differ according to motivational postures of deference (capitulation or commitment) or defiance (disengagement, game playing, or resistance) validated in factor analyses of different regulatory domains.*
>
> *Compliance behaviour: Businesses differ according to whether they show committed compliance (comply voluntarily), capitulative compliance (comply unwillingly), non-compliance, creative compliance (complying with the spirit but not the letter of the law) or beyond compliance (complying with the spirit beyond what the law requires).*[10]

---

[10] Dr Vibeke Lehmann Nielsen and Dr Christine Parker, *The ACCC enforcement and compliance survey: report of preliminary findings*, Centre for Competition and Consumer Policy, ANU, 2005.

Taking account of these factors is important in designing and developing a regulatory framework to complement a set of standards.

Approaches to Regulation

Reiss has broadly identified two different models of regulation and these models are reasonably representative of the two streams of thought amongst regulatory theorists as to how to approach regulation[11]. These two different models are:

- the *deterrence* model based on the premise that compliance with the law is only achieved when persons and organisations are confronted with tough sanctions; and
- the *compliance* model which is based on the belief that gentle persuasion works in securing compliance with the law.

The deterrence model involves a coercive strategy by the regulator to ensure compliance with the law whereas the compliance model involves a persuasive strategy where the regulated entities administer self regulation to achieve compliance outcomes. The compliance approach to regulation relies on good corporate citizenship of individuals and organisations. This contrasts with the deterrence approach which assumes no trust in the goodwill of individuals and organisations to adhere to compliance objectives. In discussing the two different models, Bardach and Kagan found the deterrence model to be typically so punitive in nature that it fosters an organized business of resistance to regulation[12]. They also found the compliance model wanting since it typifies regulated as good and compliant but fails to recognize that there are some who are not good and will take advantage of being presumed to be so compliant. Bardach and Kagan's critique makes clear that these two models are at opposite ends of regulatory approaches.

Finding the right mix of regulatory strategies and styles in a regulatory design

There is a consensus amongst regulatory theorists (which Parker and Nielsen confirmed through their ACCC study), that effective enforcement and compliance uses a mix of regulatory styles and strategies. It involves finding a balance between the deterrence and compliance approaches identified by Reiss when designing a regulatory system. It requires the designer to consider when it is necessary to use punitive strategies or persuasive strategies to achieve the designed regulatory outcome.

---

11 Reiss, AJ (1980) "The policing of organizational life," Paper to International Seminar on "Management and the Control of Police Organizations" Nijenrode, Netherlands

12 Kagan E & Bardach RA Going by the book: The problem with regulatory unreasonableness, Temple University Press, Philadelphia, 1982

One mix of strategies is a version of the "tit for tat" (TFT) enforcement strategy translated to the regulatory sphere by Scholz[13]. TFT is a simple strategy discussed extensively in literature regarding game theory[14] and involves rewarding cooperation and punishing non-cooperation. Scholz's TFT approach to regulation involves a level of cooperation between the regulator and the regulated entity. The regulator does not apply a deterrent response as long as there is cooperation by the regulated. Once cooperation fails, the regulator shifts to a deterrent response using coercion to achieve compliance. Scholz's approach which requires the regulator to try cooperation first is not premised on a simple commitment to cooperate by both sides, but is based in the belief that it is in the interests of both sides to cooperate where the motivation of the regulated is to minimise regulatory costs and the motivation of the regulator is to maximise compliance outcomes[15].

Scholz's TFT enforcement strategy triggers a change in the actions of the regulator when the regulated person or organisation changes its conduct in relation to compliance. The trigger is the lack of cooperation with the regulator by the regulated entity. The invoking of the deterrence approach is in response to uncooperativeness by the regulated. Scholz's theory of changing regulatory approaches reflects a common theme in regulatory theory which asserts that the best way to regulate behaviour is by being responsive to the conduct of those who display that behaviour. This is commonly referred to as "responsive regulation".

The theory of responsive regulation as a method to explain and prescribe a regulatory approach to attain a high level of compliance has been promulgated largely by Ayres and Braithwaite. This theory has been conceptualized by Ayres and Braithwaite in a responsive regulatory pyramid of enforcement. The Organisation of Economic Cooperation (OECD) has described this approach in the following terms:

> *"The central principle here is that a regulator should have available a range of enforcement mechanisms in order to be responsive to the particular type of non-compliance it faces in any individual situation. A regulator can start with persuasive or restorative strategies and then move to more punitive strategies if voluntary compliance fails. If the application of punitive sanctions succeeds in bringing about compliance then the regulator can respond by reverting to a trusting demeanour, rather than building resistance by being overly punitive. If the initial round of punitive sanctions does not bring about compliance, then the regulator can respond by invoking harsher sanctions. The wider the range of strategies (from restorative*

---

13 Scholz J (1984) "Voluntary compliance and regulatory policy" 6 *Law and Policy* 385-404

14 Axelrod, R. (1984). *The Evolution of Cooperation* . New York: Routledge.

15 ibid.

to punitive) available to the regulator, the more successful this type of responsive, "tit for tat" enforcement is likely to be".[16]

In practice, the escalation of enforcement strategies in a Braithwaite and Ayres pyramid would involve:

Self regulation

↓

Enforced regulation

↓

Command regulation with discretionary punishment

↓

Command regulation with non-discretionary punishment[17]

"Self regulation" at the bottom of the pyramid is the ideal situation for both the regulated and the regulator as it places the least burden on both. The success of the pyramid as a reflection of good regulatory practice involves the regulator responding to changes in the regulatory conduct of the regulated with appropriate strategies. To Ayres and Braithwaite, the success is underpinned by the regulator being a "benign big gun".[18] This means that the regulator possesses a level of enforcement that is severe and invincible (which would effectively be the top end of the above pyramid using "command regulation with non-discretionary punishment). The threat of this benign big gun must be real but sits in the background of lesser sanctions which make up the bulk of the pyramid.

Braithwaite and Ayres assert that the TFT strategy of enforcement is a good tool for ensuring compliance but that it also requires the existence of an enforcement pyramid appropriate to the particular regulatory domain and the potency of the upper limits of sanctioning within that pyramid.[19] This responsive regulatory approach takes into account how well people self regulate, how they respond when detected for breaches and how effective a punitive response is when trustworthiness is found wanting. It involves no strict formula for determining the regulatory mix and has the flexibility to address the different factors that will determine compliance (for example, the factors identified by Neilson and Parker as noted above) in different environments. What forms

16 "Reducing the risk of policy failure: challenges for regulatory compliance" OECD, 2000.

17 Ayres I and Braithwaite J (1992) *Responsive Regulation: Transcending the Deregulation Debate*, New York, Oxford University Press.

18 ibid at 19.

19 ibid.

of coercive and persuasive strategies that will make up the pyramid of enforcement will depend on the particular regulatory context.

The opposite to responsive regulation is an approach generally referred to as "regulatory formalism" which requires defining in advance which problems require which response and writing rules to mandate those responses. It is a rigid approach to enforcement that aims to maximise consistency

What approach ensures good regulatory design and practice?

In designing a framework for enforcement and compliance the key question espoused by regulatory theorists is: what is the right mix of compliance and enforcement strategies in a good regulatory design? The answer to this question requires an assessment of each regulatory regime and is likely to combine Reiss's two models of compliance and deterrence approaches to regulation. Alternatively other approaches could involve solely the deterrence or compliance models. Clearly, Braithwaite and Ayres argue for a synergy in strategies which is best achieved through a pyramid of enforcement strategies giving the regulator and the regulated sufficient flexibility in ensuring compliance.

The success of a regulatory approach will be determined by good regulatory practice exercised by the regulator. As Ayres and Braithwaite make clear through their pyramid, what responses should make up a regulatory pyramid or regulatory mix in terms of persuasive self regulation strategies or more coercive regulator-involved strategies will be determined by the set of defined standards which require compliance and enforcement, and the goals and purposes of these standards. Good regulatory practice will involve measuring the level of non-compliance and the impact of the non-compliance in the regulatory environment. Taking these measurements and making decisions as to the appropriate response will ultimately rest with the regulator.

The next section of this report considers the effectiveness of the current enforcement and compliance process when compared to these theoretical approaches and whether there are opportunities to improve compliance by taking these ideas into account in designing the NEM enforcement and compliance approaches.

5 The adequacy of current technical standards

The effectiveness of the enforcement and compliance regime depends on the quality of the standards to be enforced. This section addresses issues that have been raised in submissions regarding the adequacy of the technical standards and performance standards and the processes by which they are determined. Most urgently, these issues concern the registration of performance standards for existing generating plant. However, they also concern performance standards for future generation connections.

There is a question whether these matters lie directly within the scope of the MCE's terms of reference. Irrespective, the Commission sees resolution of the issues raised as fundamental in underpinning the effectiveness of the recommendations in Chapters 6 and 7 of this Draft Report concerning enforcement and compliance. They are also important more broadly in ensuring the continued effectiveness of the planning and operational processes of the NEM. In summary, to ensure that these matters are addressed in a timely fashion, the Commission recommends that:

- all existing generators are to have performance standards in place by 30 June 2007;
- the process for resolving outstanding issues associated with deemed performance standards for existing generators, including specifying the timeframe and a mechanism for resolving any differences between the relevant parties, should be provided for in a Rule change proposal; and
- the question of the future development, scope and content of the technical and performance standards should be addressed in a review to be conducted by the Commission and its Reliability Panel and to be completed by 30 June 2008 — the review would take into account any changes arising from the Commission's assessment of NEMMCO's technical standards for wind generation Rule change proposal currently under consideration.

5.1 Performance standards for existing plant

The process put in place in respect of existing plant was intended to ensure that those generators, customers and MNSPs would be able to treat their current performance as their registered performance standard. As set out in the Issues Paper:

> *Under clause 4.13 of the (then) Code, Generators, Customers and MNSPs were required to submit proposed performance standards to NEMMCO by 16 December 2003.*
>
> *Clause 4.14 of the Code defined the criteria that NEMMCO was required to use to evaluate a proposed set of performance standards. To resolve inconsistencies between the different criteria the following hierarchy was specified:*

- *a performance standard determined in accordance with a derogation;*
- *a performance standard determined in accordance with a connection agreement;*
- *a performance standard determined in accordance with the design performance of the plant; and*
- *a performance standard determined in accordance with schedules 5.1, 5.2, 5.3 and 5.3a.*

Where a standard was unable to be agreed by 16 November 2004, the performance standard was deemed to be:

(1) the technical characteristics set out in the relevant *connection agreement*;

(2) if a *derogation* is in place, the *connection agreement* subject to the technical characteristics set out in the relevant *derogation* in force on 16 November 2003; or

(3) the *connection* requirements of the *connection point* determined in accordance with clause 5.3.3 in force on 15 November 2003.

A number of submissions raised concerns about the potential accuracy of registered performance standards that the above process aimed to deliver:

- NEMMCO noted that, of the 143 facilities (42,837 MW) required to have performance standards, only 46 facilities (11,903 MW) have had their performance standards accepted;
- NEMMCO found the process difficult to apply, with some issues unable to be resolved. This included issues where generators sought to set performance standards at a level below the minimum access standard in the technical standards but where no derogation or connection agreement was available to support this;
- Powerlink said that it had no ability to accept a standard at less than the minimum access standard, unless a derogation existed;
- Origin Energy said that derogations in some cases may not reflect accurate representations of the physical capability of plant. It suggested that derogations which imposed an obligation lower than a plant could comply with should be reviewed; and
- the NGF submitted that the process had failed and that there were many cases where technical standards were beyond the current design performance of the plant or remained undefined.

NEMMCO also noted that the process had given rise to cases where performance standards were being sought at a level below that which NEMMCO had assumed in setting the technical envelope for the operation of the power system.

It appears that there are significant issues with the process that has been set out in the Rules for deeming performance standards for existing plant. The Commission considers that putting effective performance standards and compliance programs in place for all existing plant is the highest priority since their absence:

- means that the AER cannot monitor compliance or undertake enforcement action;
- may impact on power system security, supply reliability and power quality as NEMMCO and the NSPs will be forced to rely on their own assumptions of plant performance when planning and operating the power system.

The Commission notes that NEMMCO has initiated a process based on the current deeming mechanism to agree what the deemed performance standards are for as many items of plant as possible. However, that process may not deliver enforceable performance standards for all plant because:

- it is not clear what legal standing those agreements that relate to the deemed standards will have; and
- if agreement cannot be reached in relation to a particular performance standard, a mechanism will be required to decide the performance standard — this could be by way of appointing an arbitrator to resolve particular issues. The arbitrator should also have the power to compel the production of relevant documents in order to carry out that role effectively.

For these reasons, a Rule change proposal will be required to support the completion of the performance standards for existing plant. That Rule change proposal should come from NEMMCO and/or the electricity supply industry. Given that the enforceability of the outcome will be essential, it is suggested that AER input to the proposal would be an important element. Given that the connection agreements between the generators and NSPs will be key documents for settling the content of the deemed performance standards, the Commission considers that each generator should be required to confidentially provide a copy of that agreement to NEMMCO to assist in the process.

Recommendation

1. That NEMMCO and/or the electricity supply industry request a Rule change that proposes to:

    - pus in place a process to settle the content of deemed performance standards for existing generator plant and specifically documents the performance standards for each generator;

    - impose a 30 June 2007 deadline for completion of that process;

    - require that generators provide NEMMCO with a confidential copy of the relevant connection agreement;

    - provide for binding and enforceable arbitration to resolve particular issues where the parties disagree and gives the arbitrator the powers to perform this role including the power to compel the production of relevant documents; and

    - the development of which has specifically involved consultation with the AER.

5.2 Performance standards for new plant

The Issues Paper raised questions regarding the process for setting performance standards for new generator connections. As indicated in Chapter 3, currently when a generator applies to connect with a network:

- the NSP and the generator negotiate the connection agreement;
- as part of that process, the NSPs must take NEMMCO's advice as to the technical requirements relevant to NEMMCO's responsibilities; and
- any negotiated access requirements that result from the connection agreement negotiation process are provided by the generator and NSP to NEMMCO as performance standards that NEMMCO must accept.

The issues raised in submissions included that there was:

- a lack of transparency as to whether NEMMCO or the NSP is responsible for determining the technical requirements relevant to the connection; and
- an imbalance of negotiating power between NSPs and connection applicants which has allowed the NSPs to require higher performance standards from generators as technical standards change and/or plant is upgraded.

This issue interacts closely with NEMMCO's Rule change proposal relating to technical standards for wind generation lodged with the Commission in February 2006. That proposal seeks to modify

the process for setting performance standards for new plant in several ways including giving NEMMCO the explicit right to approve proposed performance standards. The intent of the proposal appears to be to provide an incentive for ensuring that a complete, appropriate and enforceable set of performance standards are put in place prior to the generator investing in the plant.

The Commission invited submissions on the proposal on 4 May 2006. Those submissions are due by 23 June 2006. Although the timing will depend on the issues raised in those submissions, it is the Commission's current intention to release a final determination in respect of the Rule change proposal by December 2006.

5.3 Adequacy of current technical standards

The Commission sought comment from stakeholders as to whether there were issues with any specific technical standards.

The NGF stated: *we believe that this review should not proceed until the standards against which compliance is to be measured are in a more robust form. Otherwise, the compliance regime will be flawed and based on foundations that are faulty or missing.*

A number of parties raised concerns with the wording or effect of specific technical standards including how they interact with each other. The most significant concern was with the cascade failure and ride through requirements (Schedule 5.2.5.3). For example, the NGF stated: *The relevant technical standard does not, directly or indirectly, refer to causation. The result is that virtually any failure of a generating unit, regardless of the presence or absence of a prior disturbance, is technically a breach of the Rules. Given that the occasional failure of a generating unit is a risk that cannot be avoided, no generator can assure compliance with this badly-drafted requirement.*

As noted above, the Commission is currently in the process of evaluating NEMMCO's Rule change proposal on technical standards for wind generation. The proposal seeks changes to a number of the technical standards, including providing automatic and minimum standards where previously only mandatory standards had been specified. The Commission considers that a full review of the content of the technical standards should be undertaken following the completion of that process. The review should include the appropriateness of the individual technical standards as well as the effectiveness of the interaction between the system, access and plant-specific standards as a whole. The Commission also considers that, consistent with its responsibilities under the NEL and Rules, the Reliability Panel should conduct the review.

5.4 Relationship between the technical and performance standards

There is a question as to how changes to the technical standards in the future may impact on both existing and new performance standards.

A number of submissions were made with respect to this issue including:

- whether reviews of the technical standards should be driven by specific events, the emergence of new technologies or broader system-wide considerations, what body should conduct the review and on what basis changes to the technical standards should be made; and
- whether and how alternative solutions for addressing changes to the technical standards should be considered, whether the performance standards should be amended to reflect changes to the technical standards, what process should be followed to do so and how the costs of achieving the revised performance standards should be met.

As previously noted, the enforcement and compliance framework is based on individual plant meeting registered performance standards that are set either as the automatic access standards or at another level in accordance with the process specified in the Rules. For plant that existed at the commencement of the performance standards regime, this could include performance standards being set at a level contained in a derogation, the relevant connection agreement or the plant's design performance. The Commission understands that the basis for that process was that it would be uneconomic to require such plant to be upgraded to meet the minimum access standards.

The Commission also understands that the technical standards in their current form are largely designed around existing plant technologies. Where a new technology type is not specifically catered for in the technical standards, a Registered Participant, NEMMCO or interested party is able to ask the Reliability Panel to determine an appropriate plant standard for the relevant class of plant[20].

The Commission notes that NEMMCO's Rule change proposal aims to address specific issues around wind generation and necessarily goes to matters concerning how technologies are reflected in the technical standards, transition and grandfathering. Following completion of its assessment of that proposal, the Commission considers that a broad review of the process for technical standards revision and plant upgrade should be carried out by the AEMC.

---

[20] Rules 5.3.3.(b2)

5.5 Performance standards for NSPs

The NGF and a number of generators raised issues with the lack of enforceable technical standards for TNSPs.

The NGF submitted:

> *The National Electricity Rules reveal a remarkable omission. There are no performance standards for Transmission Network Service Providers (TNSPs)...*
>
> *Clearly the TNSPs are not disinterested parties in relation to generator performance standards. This raises two major concerns.*
>
> *Firstly, given the apparent bias in favour of TNSPs that is apparent in the setting of performance standards; we can have no confidence that a proper balance has been achieved between requirements on generators to withstand network events and requirements on TNSPs to limit the disturbances that their network events cause.*
>
> *Secondly, the market rules grant the TNSPs a quasi-regulatory role in relation to the setting of performance standards for generators. This may allow them to shift costs from themselves to generators without any economic analysis and without any regulatory oversight. This ability is damaging to generators, given the monopoly position that each TNSP holds in its area…*
>
> *[W]e believe that the performance standards should be extended to cover TNSPs and all existing performance standards should be reviewed specifically to remove any possible bias. Further, the setting of any performance standard that may affect a TNSP and another connected party should be made independent of the TNSP.*

The Electricity Transmission Network Owners Forum (ETNOF) submitted that TNSPs are required to meet comprehensive performance standards under the Rules and are required to have compliance programs in place in respect of those obligations which are backed by a range of enforceable sanctions.

While the NGF's submission concerned TNSP performance standards, the Commission considers that, in principle, the same issues apply in respect of all NSPs, including distributors. The Commission notes that NSPs are required to comply with the system-wide technical standards set out in Schedules 5.1a and the NSP access standards set out in Schedule 5.1. They are also required to maintain compliance programs and are subject to the oversight of the AER if they breach those standards. However, unlike generators, they are not required to lodge performance standards with NEMMCO for approval.

A key issue is the level of transparency that is needed from NSPs to ensure that generators are able to design and operate their plant in a way that allows them to meet their performance obligations. A

related issue is the rationale for imposing specific performance obligations on NSPs given the functions they perform. NSP performance is vital to power system security. They also have prime responsibility for network development and the management of power quality. Arguably, given the range of considerations associated with those responsibilities, it is appropriate that NSPs have some flexibility in meeting the technical standards to which they must comply.

The Commission consider that a review should be conducted in respect of these issues. That review would include addressing related compliance and enforcement matters such as whether NSPs should be required to submit performance standards to NEMMCO and what enforcement role the AER should have in respect of those performance standards.

The Commission also notes that the issues discussed in this section have been raised mainly in the context of ensuring an appropriate technical and performance standards regime for generators. Market customers and MNSPs are also subject to that regime. The Commission therefore considers that, as a matter of principle, the review should consider whether there are any changes or improvements that could be made to the regime to improve its effectiveness with respect to those customers and MNSPs.

Recommendations

2. That the AEMC will undertake a review of the following matters by 30 June 2008:
    - the process for revising the technical standards; and
    - whether and how performance standards should be reviewed following changes to those standards; and
    - whether NSPs should be required to submit to NEMMCO, and conform with, performance standards and what the content of those performance standards should be; and
    - whether there are any changes or improvements that should be made to the technical and performance standards regime to improve its effectiveness with respect to market customers and MNSPs.
3. That, in parallel with the AEMC's own review, the AEMC will direct the AEMC Reliability Panel to undertake a review of technical standards (which is consistent with the Reliability Panel's forward work program).

6 Compliance programs, monitoring, notification and rectification

This section of the paper considers the processes and procedures specified in the Rules for ensuring ongoing compliance. This includes consideration of the appropriate requirements for monitoring, including self-monitoring through compliance programs, notification of identified breaches of technical standards and the most appropriate procedures and processes for rectifying an identified breach of the standards.

6.1 Compliance programs

In the Issues Paper, the Commission asked whether the current framework for compliance programs is effective in establishing and maintaining compliance with performance standards.

Compliance programs are required under clause 4.15(b) of the Rules for Registered Participants who are subject to performance standards. Generators are also required under clause 5.7.3(b) to negotiate in good faith to agree with NEMMCO and the relevant NSP on the compliance program.

Under clause 5.7.4(a1), NSPs are also required to implement compliance programs to ensure the performance of protection systems and various control systems in accordance with the requirements of schedule 5.1.

A number of submissions raised concerns with the current compliance program framework:

- NEMMCO stated that of the 143 facilities required to have performance standards, 43 had proposed compliance programs and only 2 facilities have had their compliance programs approved by NEMMCO. Some of the 43 facilities that have proposed compliance programs do not have agreed performance standards;
- Powerlink said that the compliance program framework should intuitively work in principle, however in practice the roll out of compliance programs has anecdotally been unsuccessful;
- Origin Energy said that the compliance program framework lacked definition and clarity, and that the substance of compliance programs appears to be largely determined by NEMMCO and TNSPs, with little room for negotiation by market participants; and
- VENCorp considered the compliance programs to be ineffective and too vague to yield consistency and adequacy of compliance programs across the NEM

The Commission is concerned about the low level of approval of generator compliance programs. Clearly, some of the delay putting the programs in place can be attributed to the issues regarding the establishment of performance standards noted in section 5.

However the process of establishing compliance programs for generators is flawed. Under clause 5.7.4(b):

> *Each Generator must negotiate in good faith with the relevant Network Service Provider and NEMMCO to agree on a compliance monitoring program, including an agreed method, for each of its generating units to confirm ongoing compliance with the applicable technical requirements of clause S5.2.5 of schedule 5.2 and the relevant connection agreement and the performance standards for that generating unit.*

The Rules are silent on how a compliance agreement should be established if a generator cannot agree with the relevant NSP and NEMMCO on the requirements for a compliance program. The Rules also provide little guidance on the factors that should be taken into account in agreeing to a compliance program.

Currently, the relevant NSP is required to negotiate with generators and NEMMCO on the contents of a compliance program for generators. However, there are questions as to whether this role is consistent with the role of the NSP in the NEM. Equally, the AER has no role in the establishment of the compliance program, despite having a monitoring and enforcement role.

Regarding NSP compliance programs, under the current Rules, a compliance program for NSPs does not require approval by any party, the NSP is simply required to "institute and maintain" a compliance program for the following types of facilities:

(1) protection systems;

(2) control systems for maintaining or enhancing power system stability;

(3) control systems for controlling voltage or reactive power; and

(4) control systems for load shedding[21].

The Commission considers that there are flaws in the current negotiate-agree model for compliance programs under the current Rules for generators and the lack of an approval/agreement process for NSPs. A better approach would be to provide the AER and NEMMCO with specific roles in relation to rejecting proposed compliance programs, under specific circumstances.

Under this approach, the generator or NSP would be required to submit a compliance program to NEMMCO and the AER that complies with both the compliance program principles in the Rules, and with the detailed guidelines to be developed by NEMMCO. NEMMCO and the AER would then be able to reject all or part a proposed compliance program if it either contained inadequate information or did not comply with requirements in the Rules and guidelines.

---

[21] Clause 5.7.4(a1)

Rejection of a compliance program would need to be in writing, giving reasons and the submitting party would be obliged to address these matters and resubmit within a defined time period. However, the discretion of the AER or NEMMCO to reject a compliance program would be limited to situations where a compliance program failed to meet the minimum criteria noted above.

The Commission has noted that there may be concerns that there should not be two decision makers, and that perhaps NEMMCO may be in a better position to make the assessment on the adequacy of the compliance program. The Commission considers that both NEMMCO, being responsible for system security, and the AER, being responsible for enforcement and compliance, have strong interests in the adequacy of a compliance program, and as such both should have a right of veto, in limited circumstances.

It may also be relevant to note the different requirements in the Rules for generator, customer and MNSP compliance programs and NSP compliance programs.

Under clause 4.15(c), a generator, customer or MNSP compliance program must:

(1) monitor the performance of the plant in accordance with the provisions of the compliance program;

(2) ensure that the plant complies with the relevant performance standards;

(3) be in accordance with good electricity industry practice; and

(4) provide reasonable assurance of ongoing compliance with each applicable *performance standard.*

Clause 5.7.4(a2) states that an NSP compliance program must:

(1) include monitoring of the performance of the facilities;

(2) to the extent reasonably necessary, include provision for periodic testing of the performance of those facilities upon which power system security depends;

(3) provide reasonable assurance of ongoing compliance of the facilities with the relevant performance requirements of schedule 5.1; and

(4) be in accordance with good electricity industry practice[22].

The Commission considers that these minimum principles for compliance programs in the Rules would benefit from additional guidelines to be issued by NEMMCO regarding detailed requirements for all parties required to institute compliance programs. These guidelines would allow greater clarity on the form that a compliance program might take, and what is required to demonstrate compliance.

[22] Clause 5.7.4(a2)

The establishment of those guidelines should be subject to the Rules consultation procedures in Chapter 8 of the Rules. .

Recommendations

4. That the MCE request a Rule change that proposes to establish a requirement that NEMMCO issue guidelines setting out specific requirements for generator and NSP compliance programs. These guidelines should be subject to the Rules consultation procedures.

5. That the MCE request a Rule change that proposes to replace the current framework for determining generator and NSP compliance programs with the following:

   - requiring generators, market customers, MNSPs and NSPs to submit a compliance program to NEMMCO and the AER that is consistent with the compliance program principles in the Rules and NEMMCO compliance program guidelines;
   - giving the AER and NEMMCO specific powers to reject a compliance program if it either contains inadequate information or does not comply with the requirements of the Rules and NEMMCO guidelines; and
   - requiring the AER and NEMMCO to each notify the generator, market customers, MNSPs or NSP of their decision in writing and give reasons.

6.2 Monitoring

Under the NEL, the AER is charged with the function of monitoring compliance by registered participants and other parties with the NEL and the Rules[23]. Under clause 4.15(d) and (e) the AER is empowered to require a Registered Participant to produce compliance program records for the past seven years.

The issues paper asked whether the AER is the appropriate body to monitor compliance and whether the AER's current approach to its monitoring role is appropriate. Submissions generally had few concerns regarding the AER's monitoring role. However, Electranet submitted that whether the AER was the most appropriate body depended on whether it was appropriately technically resourced and that, in the absence of such resources, it may be more appropriate that NEMMCO have a substantial role in compliance monitoring.

NEMMCO has a role in monitoring the operation of the power system. This may involve obtaining information relevant to determining whether a particular participant complies with the technical

[23] NEL, clause 15(a)

standards or not. However, this role is substantially different to that of being responsible for monitoring whether participants are complying with the technical standards.

Effective monitoring forms an essential component of a compliance framework. Appropriate monitoring processes provide a strong incentive for compliance, by increasing the likelihood of non-compliance being identified. An appropriate balance must be reached between the benefits to be obtained from doing so and the cost of the compliance monitoring regime.

There is also a strong relationship between monitoring and enforcement. Information gained through monitoring may be relevant in considering enforcement action. Monitoring will also play an essential part of a compliance framework, providing incentives for self regulation and therefore avoiding the need to progress to more punitive enforcement actions.

These synergies are best achieved where a single body is responsible for both the monitoring and enforcement of compliance with the technical standards, as they are at the moment. In the view of the Commission, the AER is the appropriate body for this role. While NEMMCO does have, and should continue to have a role in monitoring the operation of the market, in the view of the Commission, it should not be the role of NEMMCO to monitor whether a participant is compliant with technical standards.

Under the Part IIIAA of the *Trade Practices Act 1974*, there is no specific requirement for the AER to report on the outcomes of its monitoring of technical standards compliance, save for a requirement for the AER to produce an annual report under (s44AAJ). However, the Commission notes that the AER has recently published its first quarterly compliance monitoring report, which looks at compliance with all the provisions of the NEL, the Regulations and Rules. The Report included a section concerning compliance with technical standards. The Commission considers that the combination of the AER's responsibility for enforcement coupled with reporting quarterly on compliance monitoring contributes to both transparency and incentives for voluntary compliance by participants.

The Commission is of the view that there should be a high level of information sharing between the AER and NEMMCO. This approach may best allow the AER to fulfil its monitoring role.

Public reporting

The issue of publicly reporting the results of the AER's monitoring of compliance was raised in the Issues Paper. In response, the AER submitted as follows:

> *The AER strongly supports transparency in its operations and supports the public reporting of instances of non-compliance and on actions taken to remedy those non-compliances. Were the AEMC to consider recommendations in this area it would be desirable for the AER and the AEMC to discuss the scope*

and nature of any changes before finalising any recommendations so as to properly account for the resource implications of changes in this area. We note that:

- *NECA had a reporting obligation – this was removed on the advice of the Australian Government Solicitor when the Code was converted to Rules to ensure the AER reporting arrangements were consistent with those of other Federal bodies; and*
- *the AER has broad reporting obligations under the TPA that will, in any event, lead to public reporting on these matters.*

A number of other parties made submissions on this issue as follows:

- the NGF stated that the AER already reports on participant compliance quarterly, and that a clear case would need to be made before an increase in reporting obligations was considered;
- Alinta stated that the possibility of public disclosure provided a strong incentive for compliance, but that breaches should only be reported if they have a material impact on power system security;
- Citipower/Powercor noted that great care should be taken in reporting non-compliance, particularly where that disclosure provides market intelligence that could be exploited by other participants;
- Electranet and Transend said that it was important that the monitoring role is visible and publicly accountable. They stated that this may include a requirement to periodically publish information on the conduct of investigations and material non-compliance issues;
- Origin Energy considered reporting desirable, as it would act as an incentive and allow participants to learn from the breaches of others; and
- MEU and VENCorp also agreed that public reporting of monitoring activities would be desirable.

In the view of the Commission, a high level of transparency is desirable as it provides an additional incentive for parties to have effective compliance regimes and high levels of compliance. Any process for transparent reporting should be carefully designed to ensure that:

- parties are not explicitly identified in reports until the AER completes it investigation or enforcement action; and
- the results of that stage of the investigation are reported.

The Commission considers that the AER's quarterly compliance reporting initiative is an important step in ensuring transparency in the monitoring of technical standards compliance, and is another way of providing incentives for parties to comply with technical standards.

The Commission endorses the AER's current approach to this issue.

6.3 Notification and rectification

This section considers the processes and procedures under the Rules for dealing with a breach of a performance standard, once a breach has occurred. This necessarily involves two steps – notification to NEMMCO that equipment is, or is likely to be, in breach of technical standards and then rectification of the breach.

Notification

Under clause 4.15(f) of the Rules, a Registered Participant is responsible for notifying NEMMCO if its plant is, or is likely to, breach a performance standard. In the Issues Paper, the Commission asked whether there were sufficient incentives to ensure that all breaches of performance standards are reported to NEMMCO. A number of stakeholders made submissions in respect of this issue:

- the NGF submitted that a participant reporting non-compliance detected during routine monitoring should attract no liability for breach, in order to encourage active reporting and ensure there are no perverse incentives;
- NEMMCO submitted that the critical issue was to "avoid surprises" rather than ensuring that plant strictly complies with the Rules requirements. It submitted that preventative measures to avoid an incident would be preferable to solely relying on punitive measures after the event. NEMMCO stated that, because problems are inevitable with complex plant, penalising a generator for reporting a problem would be equivalent to "shooting the messenger";
- Origin stated that even in the current environment, there was little incentive to report such breaches, due to current penalty levels (VENCorp agreed with Origin's views); and
- the AER said that the failure to report a breach of performance standards is a serious matter that should attract an appropriate penalty.

In the view of the Commission, prompt notification of breaches of performance standards is vital in ensuring that the power system can be operated securely and reliably. If NEMMCO is not notified that particular equipment is not compliant with the relevant performance standards, it can do nothing to compensate for the breach in terms of how it operates the power system.

The Commission therefore considers that there should be strong incentives for prompt notification of NEMMCO where a participant becomes aware that its plant is non-compliant. Equally, there

should be strong punishment for participants that knowingly fail to report a breach of a performance standard.

In the view of the Commission, timely notification of a breach of a performance standard should be taken into consideration in a proceeding against a participant for a breach of a performance standard. Therefore the Commission is of the view that a clause should be added to the Rules, providing that this issue should be considered in proceedings.

An appropriate way to provide an incentive for prompt notification would be to add a clause to the Rules similar in operation to the current clause 4.15(l), which provides that the effectiveness of a compliance regime must be taken into consideration in any proceeding against a Registered Participant for a breach of a performance standard. Such a clause would not undermine the ability of the AER to aggressively pursue serious non-compliances, and this mitigating factor may be counteracted by the particular circumstances in a particular case. However, it does provide some assurance to participants that prompt notification will be considered in any proceedings.

The factors that should be taken into account in proceedings is discussed further in Section 7.

Rectification

In the Issues paper, the Commission asked questions regarding the institutional arrangements for rectification of non-compliance. Currently NEMMCO is required to establish a timeframe for rectifying a breach of a performance standard and notify the AER if rectification is not completed within that timeframe. Submissions on this issue were as follows:

- the South Australian Minister for Energy considered that there is an urgent need to develop a more robust process for ensuring that rectification occurs promptly, instead of relying on determining whether there has been a breach of the Rules;
- the AER believes that it should remain NEMMCO's responsibility to set reasonable period for the fault to be rectified. It submitted that the Rules should be amended to provide that, whenever it has come to the attention of NEMMCO that a registered participant may be in breach of its technical requirements, the AER should, in accordance with a protocol to be developed between the AER and NEMMCO, also be notified of the breach;
- NEMMCO said it does not consider it to be its role, or has the ability, to determine whether a breach of a performance standard or a compliance monitoring program has occurred. Further NEMMCO stated that it is not in a position to resolve disputes or appeals regarding its determination of a timeframe for rectification or to enforce the rectification period. It submitted that the Commission should consider clarifying the enforcement and dispute processes for rectification of a breach of compliance; and

- Origin Energy considered that NEMMCO's role was appropriate. However, the appropriate length of a rectification period and what constitutes reasonable endeavours should be more clearly defined in the Rules. It argued that the AER should only be informed once participants have had a reasonable chance to rectify the breach.

It is clear that there are concerns with the provisions in the Rules regarding rectification. The Commission is of the view that it should remain NEMMCO's role to determine the time period for rectification of a technical standards breach. NEMMCO is in the best position to weigh up and make an assessment of the issues surrounding appropriate rectification time frames.

The Commission agrees with NEMMCO that it should not be NEMMCO's role to make an assessment of the guilt or innocence of a party regarding the breach of the performance standard. Its role in determining the appropriate timeframe is, and should remain an operational role, rather than a judicial or enforcement role.

The Rules specify that the following factors should be taken into account when NEMMCO determines an appropriate rectification timeframe:

> *(1) the time necessary, in NEMMCO's reasonable opinion, to provide the Registered Participant with the opportunity to remedy the breach; and*
>
> *(2) the need to act to remedy the breach given the nature of the breach*[24].

The Commission notes that the criteria noted above are reasonably broad, and provide limited guidance to NEMMCO in making its assessment of an appropriate rectification timeframe. It is also relevant to note that once NEMMCO has been notified of a breach of a performance standard, it should usually be able to modify the operation of the power system to account for the breach and maintain system security. However, the breach and associated management of the power system to account for the breach may have economic consequences to the market, for example as a result of the imposition of a particular constraint.

In the view of the Commission, the Rules should require NEMMCO to take into account these potential costs to the market in making its assessment of the timeframe for rectification.

The Commission also considers that the AER should have an appeals role, allowing it to determine an appropriate timeframe for rectification, if a participant believes that NEMMCO's determination does not comply with the principles for determining an appropriate rectification timeframe outlined above. Given that it is likely to be in the interests of the market that the rectification be completed quickly, the Commission considers that the dispute resolution process in Chapter 8 of the Rules may

---

24 Clause 4.15(j)

not provide a sufficiently rapid outcome to a dispute. The Commission also considers that in this case this dispute resolution role is complementary with the AER's responsibility for enforcing a breach of the Rules.

The Commission notes that clause 4.15(i) requiring a participant to rectify a performance standards breach within the time specified by NEMMCO could be worded more clearly to specify that a Registered Participant must comply with an order from NEMMCO to rectify a breach. The Commission also notes that clause 4.15(i) is not a civil penalty provision under the National Electricity Regulations. The current Rules suggest that if such a situation occurs, NEMMCO is simply required to refer the matter to the AER[25].

Thus, there is only a limited incentive to rectify a performance standard breach promptly. In the view of the Commission, the Rules should specify that a participant is required to rectify a breach within the timeframe set by NEMMCO, and that failure to rectify within the time period should be a civil penalty provision.

These measures should provide all interested parties with confidence in the rectification process.

There is a strong interaction between the AER's role in monitoring and enforcement of compliance on one hand, and with NEMMCO's responsibility for maintaining power system security on the other. Clearly NEMMCO needs to be advised on all occasions of non-compliance of technical standards, as this will affect the ability to run the power system securely. However, the determination as to whether those instances of non-compliance constitute a breach of the Rules is more appropriately a role for the AER.

Although various views were expressed in submissions, the Commission considers that the AER should have access to all information on non-compliance, so that it can monitor and target specific trends. In the view of the Commission, the AER should be given all information on non-compliances or potential non-compliances by NEMMCO, and be responsible for assessing whether the participant complies with the rectification timeframe and any assessment on whether the Rules have been breached.

---

25 Clause 4.15(k)

Recommendations

6. That the MCE request a Rule change that proposes to add a clause that states that the timely notification to NEMMCO of a breach of a performance standard under clause 4.15(f) must be taken into consideration in any proceeding against a Registered Participant for a breach of clause 4.14(a).

7. That the MCE request a Rule change that amends Clause 4.15(j) to ensure that that NEMMCO is required to take the cost to the market of a continued breach into consideration in determining an appropriate rectification timeframe.

8. That the MCE request a Rule change that proposes to allow the AER to determine a timeframe for rectification if a Registered Participant disagrees with NEMMCO's determination of a rectification timeframe under clause 4.15(i).

9. That the MCE request a Rule change that proposes to clarify the wording in clause 4.15(i) to make clear that the Registered Participant has an obligation to rectify a performance standard breach within the time specified by NEMMCO so that a failure to rectify will be considered a breach of the Rules by the Registered Participant.

10. That the MCE consider prescribing clause 4.15(i) as a civil penalty provision in Schedule 1 to the *National Electricity (South Australia) Regulations*.

11. That the MCE request a Rule change that proposes to require NEMMCO to provide all relevant information on performance standard non-compliances or potential non-compliances to the AER

7 Enforcement and penalties

This section of the paper considers issues of enforcement and penalties. As noted in chapter 4, a range of compliance strategies used in combination are likely to be the most effective way of ensuring a high level of compliance.

However, an effective enforcement and compliance will rely on the clarity of the Rules that participants are expected to comply with. Chapter 5 considered the clarity of the technical standards themselves. This Chapter considers the degree of compliance required to achieve the outcome of a reliable and secure power system. It also considers the role of the energy market in providing incentives or disincentives to comply with technical standards, and the appropriate level of penalties.

An effective compliance strategy will ensure the incentives and penalties available to encourage compliance are tailored to the outcomes that the system of compliance is designed to achieve, and fit together as a cohesive whole. For example, high penalty levels may be appropriate where a technical requirement is well defined, the breach has a large impact on participants and clear negligence has been shown on the part of a participant.

In conducting this Review, the Commission has become aware that definition of the specific technical standards and performance standards upon which the compliance regime is based is not well defined or sufficiently clear. As such it would be inappropriate to make recommendations which impose additional compliance obligations on participants while the definition of what is to be complied with is not clear.

As such, this section does not recommend immediate action. The Commission considers that the appropriate design of improved enforcement tools must be tailored to the specific requirements of an improved set of performance standards for existing plant and a suitably improved process for establishing and maintaining performance standards. In the view of the Commission, there should be a further review that specifically considers penalties and related issues, taking into account the conclusions noted below.

7.1 Standard of compliance required

Under clause 4.15(a)(1), a generator, customer or MNSP must ensure that its plant meets or exceeds the applicable performance standard. This clause arguably imposes a strict requirement on registered participants to make certain that their plant will comply with the registered performance standard under all circumstances and at all times. The Issues Paper asked whether strict compliance is appropriate. Submissions on this issue were as follows:

- the NGF stated it was virtually impossible for a Generator to be available and meet its performance standards 100 per cent of the time and therefore clause 4.15(a)(1)26 ought to be deleted (REGA and AusWind supported this view);
- the AER supported clarifying that compliance programs are not designed to reflect an absolute compliance with registered performance standards;
- MEU submitted that participants, by their very decision to become participants, had accepted the requirement to meet the standards in the Rules, including the fact that that requirement is an absolute one. It submitted that the absolute nature of the requirement is essential if a power system failure is to be avoided;
- Powerlink encouraged the Commission to review clause 4.15(a)(1) and consider whether a participant should only need to reasonably ensure that its plant meets or exceeds the performance standard;
- PIAC claimed that technical standards may need to be written to take account of the inherent problem of delivering continuous compliance in relation to some equipment, based on an assessment of the relative costs and benefits; and
- Origin submitted that an absolute standard of compliance was appropriate, provided some leeway was given in enforcement.

The relevant question to be considered is whether fault on the part of a participant needs to be considered in determining whether a breach of the technical standards provisions of the Rules has occurred. Is it more appropriate that the Rules specify a breach as:

- the failure of plant to meet the technical requirements of a performance standard; or

---

[26] Clause 4.15(a)(1) states:

(a) A *Registered Participant* must:

(1) ensure that its *plant* meets or exceeds the *performance standard* applicable to its *plant*;

- the action or inaction of a participant, through neglect or other means, which resulted in the plant not meeting the technical requirements of the performance standard.

As identified by the NGF and others, the first of these definitions does not take into account the fact that technical equipment will, on occasion, fail even if a participant undertakes the most rigorous maintenance and compliance monitoring program. It also does not take into account the actions of a participant to avoid the breach. However, such an approach does have the advantage of being readily observable and enforceable, as fault does not have to be proven.

It should also be noted that a strict liability-type regime may provide weak incentives for participants to disclose breaches, where those breaches are not readily observable by other parties, such as the AER or NEMMCO.

In this regard, the Senate Standing Committee on the Scrutiny of Bills noted in its "Report on the Application of Absolute and Strict Liability Offences in Commonwealth Legislation" that:

> *The most important merit of strict liability in the view of the Commonwealth agencies appeared to be greater efficacy in the supervision of regulatory schemes.*
>
> *The APRA submitted that an effective enforcement regime is crucial for a prudential regulator, otherwise the entire supervisory framework will be undermined, with only one highly publicised incident necessary to erode confidence in the financial system. The APRA has therefore moved some offences from being fault based to being ones of strict liability or to being both depending upon the circumstances. This was done on the basis that it is essential that enforcement provisions deter. Strict liability means that prosecutions are more easily commenced and convictions more easily obtained. The APRA explained that as a regulator it aimed for negotiated "rectification of contraventions". It was therefore necessary that enforcement provisions provide an adequate incentive for this and to ensure that any agreed rectification will actually occur.*

The Committee's conclusions included that:

- fault liability was one of the most fundamental protections of criminal law and that to exclude this protection is a serious matter;
- strict liability should be introduced only after careful consideration on a case-by-case basis of all available options. It would not be proper to base strict liability on mere administrative convenience or on a rigid formula;
- strict liability may be appropriate where it has proved difficult to prosecute fault provisions, particularly those involving intent; as with other criteria. However, all the circumstances of each case should be taken into account; and

- strict liability should not be implemented for legislative or administrative schemes which are so complex and detailed that breaches are virtually guaranteed regardless of the skill, care and diligence of those affected; any such scheme would be deficient from the viewpoint of sound public administration.

The question of the appropriate standard of liability is inextricably linked with the question of an appropriate penalty. For example where there is a strict liability offence, a lower level of penalty may provide a sufficient deterrent to non-compliance. Where the issue of fault is considered, higher levels of penalties may be appropriate to provide an appropriate deterrent.

The Commission considers that these issues are best addressed at the same time as a consideration of an appropriate penalty, as discussed below.

7.2 Formulating constraints to address technical standards breaches

In his submission on the issues paper, the South Australian Minister for Energy stated that:

> *Following the 14 March 2005 incident, the National Electricity Market Management Company (NEMMCO) implemented new constraint equations that trade-off the output from Northern Power Station, with imports from Victoria across Heywood, thereby reducing capacity and increasing prices in the South Australian pool. While these new constraints were necessary to manage system security, they had the potential to reward a participant for the instability it created in the system as well as providing perverse incentives towards rectification of the system.*

This section considers what the appropriate role of constraint selection is in best dealing with a breach of technical standards. It also considers whether particular constraints can operate in such a manner as to provide participants in breach of a technical standard with a commercial benefit and potentially a perverse incentive to reward a participant for actions that are not in the best interests of the market, such as failing to rectify the technical standards breach in a timely manner.

The issues paper asked whether NEMMCO should be required to consider the commercial incentives or opportunities provided by its actions in managing the impact on power system security of a breach of performance standards and what alternatives could be considered to address the issue of a participant gaining financially from a breach of its performance standards.

One way of addressing the concerns raised regarding perverse incentives resulting from particular constraints would be for NEMMCO to consider the likely commercial impact of a constraint that it imposes, and whether the participant that breached technical standards would be likely to benefit.

This could potentially be achieved through the current clause 5.7.3(e). Under the current Rules, clause 5.7.3(e) allows NEMMCO to restrict the output of a generator if NEMMCO:

> *(1) is satisfied that a generating unit does not comply with one or more technical requirements of clause S5.2.5 of schedule 5.2 and the relevant connection agreement;*
>
> *(2) does not have evidence demonstrating that a generating unit complies with the technical requirements set out in clause S5.2.5 of schedule 5.2; and*
>
> *(3) holds the reasonable opinion that there is or could be a threat to the power system security because of the performance of the generating unit,*

Regarding the 14 March 2005 incident, the NGF submitted the following observations:

- the outcome regarding power flows and pricing in the relevant period was determined by action taken by NEMMCO, not the generator;
- base-load power stations such as Northern Power Station are generally highly hedged. To the extent of such hedging the generator does not benefit from one-off events raising market price; and
- retailers purchasing from the NEM are generally highly hedged. To the extent of such hedging they are not disadvantaged by one-off events raising market price

The NGF also argued that NEMMCO should not act to stop participants benefiting from breaches of technical standards:

> *as with all other matters of market operation, NEMMCO manages system security and not market price outcomes. NEMMCO's role is to dispatch plant in the most economically efficient manner possible whilst meeting system security standards. If NEMMCO was required to operate the market so as to achieve an outcome that also considered a participants' commercial outcome then this would put NEMMCO in an invidious position and would represent a dangerous departure from its independent role.*

NEMMCO submitted that:

> *it is impracticable to determine the commercial position of a plant operator in the dispatch process as the commercial position of a plant operator relies on extrinsic information to the physical wholesale market. Further NEMMCO's role is to economically and securely dispatch of the market, not determine and enforce non-compliance.*

The Commission considers that there are a number of problems with an approach to constraint management that turns on whether or not a generator is in breach of a performance standard. Firstly, it would be difficult for it to work effectively in practice. Determining whether a participant

has or has not breached a technical or performance standard is likely to be a matter of debate and potentially contestable. The full facts regarding the incident may not be known until some period after the event occurred. The determination of guilt or innocence of a participant is a quasi-judicial role, which NEMMCO is unlikely to have the skills to undertake effectively, particularly considering the tight timeframes that would be required to implement a constraint.

Secondly, such an approach mixes the roles of rectification and enforcement. Currently, NEMMCO is responsible for rectification and the AER is responsible for enforcement. The Commission views this institutional division of responsibilities as appropriate. The decision about whether a participant responsible for a breach should have the ability to benefit from that breach is essentially an enforcement, rather than a rectification role. As such it should be the responsibility of the AER, rather than NEMMCO to deal with any benefits received, through penalties or other means.

Thirdly, this approach would leave NEMMCO with conflicted objectives. Clause 4.3.1 of the Rules specify (in part) that NEMMCO's power system security responsibilities are to maintain power system security and to ensure that the power system is operated within the limits of the technical envelope. In the view of the Commission, this role is paramount and vital to the operation of the NEM. It would be inappropriate to put NEMMCO into a position of having additional objectives that conflict with its responsibility to maintain and restore power system security. This would include considering the commercial impact of its actions on particular participants.

The Commission considers that a better approach to the situation where participants benefit from breaches of standards is not through distorting the normal constraint selection process but rather through the enforcement and compliance regime. That may include consideration of any benefits gained by the participant in breach when determining an appropriate penalty for the offence. These issues should be considered in the context of the broader consideration of penalties discussed below.

7.3 Determining an appropriate penalty level

This section considers whether the current penalties available for breaches of technical standards are appropriate and, if not, how a more appropriate penalty level may be determined. As noted earlier in this paper, the Commission is of the view that it is a fundamental principle that what is to be enforced should be properly defined before any increase in penalties should be considered. Once the review and determination of performance standards have been completed, an appropriate consideration can be made of penalties.

Submissions

The NGF, Alinta, REGA, and Origin submitted that there was no justification for an increase in penalties. Reasons submitted included that:

- market and plant risks are very strong drivers on generators to ensure reliable operation. The current penalty regime is not the problem (NGF);
- doing so would impose additional costs without any commensurate gain in terms of system performance (Alinta);
- the Rules should be written around incentives and co-operation rather than penalties (REGA); and
- penalties that are out of proportion to participants' level of control over a breach will deter competition and participation in the NEM (Origin).

Citipower/Powercor said that current penalties were already very substantial and that any increase should be limited to where a breach has been used to gain direct commercial advantage through distortion of the wholesale market. PIAC suggested an additional penalty for parties that are non-compliant but fail to report it.

Electranet noted that in the end increased risk and compliance costs will be ultimately borne by consumers.

The AER and MEU submitted that penalties should be higher. Reasons provided included that:

- penalties must be in keeping with the adverse impact on consumers (MEU);
- the current penalty regime does not reflect the level of harm that may be imposed upon others when a technical failure occurs (AER);
- some State and Territory penalty regimes include stronger penalties than those which currently apply in the NEM.(AER); and
- in order to be an effective general deterrent, the potential cost of non-compliance must outweigh the cost of complying with the law (AER).

It was argued that the level of penalty should be at least as high as the current rebidding penalty, namely $1,000,000 and up to $50,000 a day.

In the view of the Commission, penalties form an essential part of any compliance regime. Strong sanctions provide powerful incentives for compliance. Yet as noted in section 4, penalties should form part of a comprehensive strategy for ensuring compliance.

The Australian Law Reform Commission (ALRC) noted in its review of Commonwealth laws and arrangements relating to the imposition of administrative and civil penalties[27]:

> *Penalties seek to punish undesirable behaviour and thereby to promote desired behaviour. The form and level of penalty applied will depend on its purpose as well as on the area of activity, the type of wrongdoer and the nature of the wrongdoing. Several purposes, not all of which may be consistent, can often be discerned in any one penalty but the deterrence of wrongdoing is ultimately an aim of all penalty regimes.*

The ALRC also noted that:

> *If the fundamental aim of regulation is understood to be reversing one or more of these sources of market failure, the tools used by regulators should be aimed not primarily at imposing retribution on offenders since the purpose of the rules is not to prohibit actions but to maximise benefit or convenience to society.*

And:

> *the principal purpose of financial penalties for non-criminal regulatory contraventions is deterrence and where significant gains can be made, the penalty, particularly a monetary penalty, needs to be set to reflect this. There are two aspects to deterrence: specific and general. Specific deterrence seeks to deter the offender from re-offending by pricing and punishing the breach. General deterrence seeks to signal to others the price of a breach.*

The AER noted some of the factors that are relevant in considering an appropriate penalty level. It submitted that:

> *The principal purpose of non-criminal breaches of regulatory laws is deterrence. In the case of performance standards, pecuniary penalties must be designed to achieve both specific and general deterrence, ie. the potential penalty must be high enough to deter a contravener from re-offending by pricing and punishing the behaviour (specific deterrence) and to deter all code participants from contravening the Rules (general deterrence).*
>
> *In order to be an effective general deterrent, the potential cost to the regulated entity of non-compliance must outweigh the cost of complying with the law. In determining the appropriate level of penalty, the probability of being detected and successfully prosecuted for the breach must be taken into account, as must the costs of compliance.*

The relevant question that the Commission must consider is whether the current level of penalties provide sufficient deterrence to avoid breaching technical standards. However, as the AER noted, the determination of the appropriate level of penalty is intertwined with the definition of the Rule to

---

27 Australian Law Reform Commission, *Principled Regulation: Federal Civil and Administrative Penalties in Australia*

be enforced, the probability of detection and the costs of compliance. Each of these factors will have an effect on the level of deterrence of the enforcement and compliance mechanism.

For example, where a breach can be easily identified a lower level of fine may provide a sufficient deterrent. Equally, where compliance costs are low, penalties may also be low and still provide a sufficient deterrent.

With the definition of performance standards currently ambiguous in many cases, it is impossible to determine whether the deterrent effect of current penalties would be adequate once performance standards are better defined. It would be inappropriate to make that assessment in the absence of a detailed assessment of the enforceability (including probability of detection, costs of enforcement and definition of breaches to be enforced) and the compliance costs for ensuring that plant meets relevant performance standards.

In the view of the Commission, this assessment of the adequacy of current penalties and the need for increased penalties to provide a greater level of deterrence is best undertaken once the issues surrounding the performance standards themselves are resolved. At that point, proper consideration can be made of all the factors that should be considered in determining a recommendation for an optimal penalty for a breach of a technical standard.

7.4 Factors to be considered in determining a penalty

In its issues paper, the Commission noted that Clause 4.15(l) of the Rules provides that the effectiveness of a compliance regime should be taken into account in any proceeding for a breach of a participant's responsibility to ensure that its plant meets or exceeds its registered performance standards. The issues paper asked whether there were other matters that should be taken into account in proceedings.

VENCorp suggested a two-tiered approach, with significantly higher penalties for parties that do not divulge a breach.

NEMMCO suggested that the following matters be taken into account in proceedings for a breach of technical standards:

- whether the plant operator itself notified NEMMCO of the breach;
- whether the plant operator attempted to conceal or deny any evidence;
- the level of co-operation by the plant operator after having been notified of the breach;
- the social and economic impact of the breach;
- whether the plant operator has reasonably complied with the compliance program including appropriate testing, reviews and measurements;

- whether reasonable maintenance of the facilities was carried out to ensure that the facility was performing to the registered standard;
- whether the plant operator had followed the Rules procedures in registering and updating control settings; and
- whether the plant operator had been prompt in attempting rectification.

The Australian Law Reform Commission has noted the so-called ' French factors', detailed by French J in *TPC v CSR Ltd*. These factors are:

1. the nature and extent of the contravening conduct;
2. the amount of loss or damage caused;
3. the circumstances in which the conduct took place;
4. the size of the contravening company;
5. the degree of market power it has, as evidenced by its market share and ease of entry into the market;
6. the deliberateness of the conduct and the period over which it extended;
7. whether the contravention arose out of conduct of senior management or at a lower level;
8. whether the company has a corporate culture conducive to compliance with the Act, as evidenced by educational programs and disciplinary or other corrective measures in response to an acknowledged contravention; and
9. whether the company has shown a disposition to cooperate with the authorities responsible for the enforcement of the Act in relation to the contravention.28

A consideration of the degree of market power, as suggested by factor 5 is not appropriate to the circumstances of technical standards breaches because it is not a relevant consideration when assessing a breach of a performance standard. However, these factors may be useful in considering an appropriate structure of penalties that encourages compliance. It may be useful for the Rules to include a more comprehensive level of guidance regarding the factors that should be taken into account in proceedings for breaches of technical standards. These factors should be neither exhaustive or prescriptive, but provide a level of guidance in assessing an appropriate penalty

This more comprehensive guidance would serve two purposes. First, it would assist courts in interpreting and understanding the seriousness of the offence. Secondly it would allow those

---

28 *Trade Practices Commission v CSR Ltd* (1991) 13 ATPR ¶41–076, 52,152–3.

expected to comply with the provisions a better understanding of how penalties are determined, making the process more transparent and assisting with compliance.

In the view of the Commission, however, these issues have a strong connections with the determination of an appropriate maximum penalty level. As noted above, the Commission considers that these issues are best considered in the context of a settled set of performance standards.

Recommendations

12. That the MCE directs the AEMC to conduct a further review into the appropriate penalties for breaches of technical standards to be completed before June 2007, once the process of determining deemed performance standards for existing plant is completed. The further review should consider and further develop the Commission's preliminary views that:

    - breaches of technical standards should move from strict liability to fault-based liability;
    - any benefits accruing to the Participant that breached technical standards be considered in determining an appropriate penalty;
    - if recommendations for fault-based liability and removal of benefits resulting from technical breaches are adopted, that a higher level of penalty, similar to the rebidding penalty is likely to be appropriate; and
    - the Rules should include additional factors that should be considered in determining a penalty for a breach of a performance standard.

8 Conclusions and next steps

The Commission considers that any system of enforcement and compliance requires solid foundations. In the context of the current review, it has become apparent that the content of the deemed performance standards for existing plant is seriously flawed and requires urgent rectification. The content of the technical standards themselves, as well as their future development, are also in need of a broad review.

This Report recommends a comprehensive work program to address the issues associated with the technical and performance standards, monitoring and rectifying compliance and enforcement and penalties. The Commission also recommends that a joint AEMC-AER working group be established to assist with co-ordinating the work program and that the Commission report regularly to the MCE on progress.

In conducting this review, the Commission has had regard to the NEM Objective. In the view of the Commission, the conclusions and recommendations contained in this report are consistent with the NEM objective and should advance the long term interests of consumers, by clarifying standards and promoting greater compliance with those standards.

The Commission seeks the views of the MCE on these issues and the Commission's proposals for resolving them. Additionally, as these issues concern a range of stakeholders and Registered Participants, the Commission considers that it is appropriate to seek the views of stakeholders on this report and the Commission's draft recommendations.

After considering the views of the MCE and stakeholders, the Commission intends to submit a Final Report to the MCE by 1 September 2006. It is the Commission's intention that the Final Report will include a draft Rule changes to implement the Commission's final recommendations.

However, some matters that have come to the Commission's attention during this review are more urgent. The Commission considers that a Rule proposal to give legal force to an agreed view of the deemed performance standards for existing generators falls into this category. A NEMMCO and/or industry proposal, with the input of the AER, to resolve this issue should not be delayed until the publication of the Commission's Final Report.

Recommendations

13. That the MCE notes:

- the comprehensive approach to managing the identified issues in the technical and performance standards, and their compliance and enforcement;
- the existing AEMC workstream relating to technical standards for wind generation;
- the intention to establish the AEMC-AER working group to oversee the ongoing program of work relating to technical standards, which will report regularly to the MCE on progress; and
- that the specific Rule drafting of recommendations 4 – 10 could be undertaken by the AEMC as part of its final report.

Attachment 1 – Terms of Reference

MCE

Ministerial Council on Energy

CHAIR
The Hon Ian Macfarlane MP
Minister for Industry, Tourism and Resources
Telephone: (02) 6277 7580 Facsimile: (02) 6273 4104

Dr John Tamblyn
Chairman
Australian Energy Market Commission
PO Box H166
AUSTRALIA SQUARE NSW 1215

RECEIVED
25 NOV 2005

22 NOV 2005

22 NOV 2005

Dear Dr Tamblyn John

As Chair of the Ministerial Council on Energy (MCE), I am writing to request that the Australian Energy Market Commission (AEMC) conduct a review on the enforcement of, and compliance with, the technical standards under the National Electricity Rules.

This request is pursuant to Part 4, Division 4 of the National Electricity Law (NEL), which provides that the MCE may, by written notice, direct the AEMC to conduct a review into:

- any matter relating to the National Electricity Market (NEM); or
- the operation and effectiveness of the National Electricity Rules; or
- any matter relating to the National Electricity Rules.

Terms of Reference for this review have recently been endorsed by the MCE and are included in the enclosed Notice of Reference. This resolution is dated 11 October 2005.

As outlined in the Notice of Reference, the AEMC should determine the extent to which the security of the national power system is maintained under existing arrangements and give consideration to improvements that could be made to the investigative and rectification provisions under the National Electricity Rules. In addition, it should review penalty provisions under the NEL with a view to more closely aligning penalty levels with the social and economic impacts associated with breaches of the National Electricity Rules.

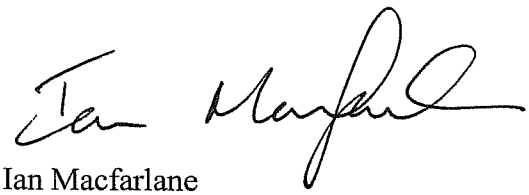
In conducting the review, the AEMC should identify ways of improving the security and reliability of the system that are consistent with improving the overall operation of the NEM. Ultimately, this may lead to the AEMC providing formal recommendations to the MCE that changes be made to aspects of the NEL and/or the National Electricity Rules.

The MCE will consider the results of the review and will announce its response as soon as possible after receiving the AEMC's final review report.

MCE Secretariat
GPO Box 9839 CANBERRA ACT 2601
Telephone: (02) 6213 7789 Facsimile: (02) 6213 6689
E-mail: MCE@industry.gov.au
Web Site: www.mce.gov.au

If you have any queries about this letter, then please contact Mr Vince Duffy from the South Australian Department for Transport, Energy and Infrastructure on (08) 8204 1724.

Yours sincerely



Ian Macfarlane

National Electricity (South Australia) Act 1996

NATIONAL ELECTRICITY LAW

NOTICE OF REFERENCE UNDER PART 4, DIVISION 4

Enforcement of, and compliance with, the technical standards under the National Electricity Rules

1. BACKGROUND

1.1 Whilst system security is a primary responsibility of the National Electricity Market Management Company Limited (**NEMMCO**), the maintenance of a secure power system relies upon all network service providers and each market participant ensuring that they meet their obligations under the National Electricity Rules (**Rules**).

1.2 There has been considerable development of the technical standards framework over the past 5 years in the recognition of the inadequacies of the technical performance arrangements. This framework came into effect in December 2004 with obligations on market participants to establish compliance-monitoring programs by June 2005.

1.3 Where the market operator considers that a participant is not, or may not, be meeting their obligations, immediate action must be taken to ensure security is maintained. That action needs to provide clear:

1.3.1 Direction as to what the perceived problem is and what actions are expected of the participant to remedy the potential breach and confirm that their plant does not represent a security risk; and

1.3.2 Commercial incentives which recognise the importance of compliance with technical standards and which motivate participants to give the highest level of attention to remedying the problem.

1.4 Several events in the market over the last eighteen months raise concerns as to the efficacy of the current arrangements to promptly and efficiently enforce technical standards critical to the security of the power system; including:

1.4.1 An incident on 8 March 2004, which resulted in approximately 650 MW of under-frequency load shedding in the South Australian region. Subsequent investigations by NEMMCO identified some possible actions by NRG Flinders and ElectraNet. None of those actions had been

implemented a year later and further investigations to resolve the issue did not appear to be proceeding with sufficient priority.

1.4.2 On 14 March 2005 the same equipment at the Northern Power Station again triggered an event, resulting in approximately 700MW of load shedding in South Australia. NEMMCO then declared that the event was a credible contingency and applied constraints in the market to ensure system security was maintained. Those constraints actually operated to provide commercial advantage to generators in South Australia and did not provide a formal process to remedy the situation in as short a time as possible. In this case it is recognised that NRG Flinders subsequently resolved the problem, and satisfied NEMMCO it had done so, in early June 2005.

1.4.3 An incident on 13 August 2004, which resulted in approximately 1500MW of under-frequency load shedding across the Queensland, New South Wales, Victorian and South Australian regions. As at early June 2005, rectification of the failure of three of the generating units involved in the incident is still to be undertaken, raising significant questions as to whether the system could withstand a similar technical fault.

1.5 These recent market events have highlighted inadequacies in the National Electricity Market (**NEM**) arrangements, particularly with regard to:

1.5.1 Enforcement of, and compliance with, the technical standards under the Rules;

1.5.2 The ability of those compliance arrangements to deal with any potential breach expeditiously;

1.5.3 The potential for perverse incentives on market participants; and

1.5.4 The level of penalties under the National Electricity Law (**NEL**).

1.6 Pursuant to Part 4, Division 4 of the NEL (a Schedule set out under the *National Electricity (South Australia) Act 1996* (**Act**)), the Ministerial Council on Energy (**MCE**) by written notice, may direct the Australian Energy Market Commission (**Commission**) to conduct a review into:

1.6.1 Any matter relating to the National Electricity Market; or

1.6.2 The operation and effectiveness of the Rules; or

1.6.3 Any matter relating to the Rules.

1.7 Participating jurisdictions under the NEL are:

The Commonwealth;

The State of New South Wales;

The State of Victoria;

The State of Queensland;

The State of South Australia;

The Australian Capital Territory; and

The State of Tasmania,

and have agreed to the reference set out below.

2. REFERENCE

We, the MCE, by resolution dated 11 October 2005, hereby direct the Commission to review the matter described in paragraph 3.1 of the Terms of Reference pursuant to Part 4, Division 4 of the NEL, in accordance with the Terms of Reference specified below.

3. TERMS OF REFERENCE

The following are the Terms of Reference for the review specified pursuant to section 41 of the NEL:

3.1 Given the importance of maintaining system security and reliability in light of recent market events, the Commission is to review the investigative, rectification and penalty provisions under the Rules to ensure an effective enforcement and compliance regime, including:

3.1.1 The current processes and timing, under Chapter 5 of the Rules, for ensuring the prompt rectification of any non-compliance with the technical standards, in addition to the formal Rule enforcement procedures;

3.1.2 Within the existing institutional structure, consider measures to strengthen NEM institutional roles (such as coordination and the allocation of responsibilities) for monitoring, investigating and directing compliance with technical standards under the Rules (including but not limited to the adequacy of Clauses 4.15 and 5.7.3 of the Rules);

3.1.3 Whether the courses of action available to manage network security in the event of non-compliance with the technical standards provide appropriate incentives to rectify faults and thereby minimise any adverse economic effects in the NEM; and

3.1.4 Whether the level of penalties currently prescribed in the NEL for breaches of Chapter 5 of the Rules are adequate, given the economic and social impacts of such breaches.

3.2 On completion of the review, the Commission may recommend Rule and NEL changes to the MCE;

3.3 In undertaking the review, the Commission is to:

3.3.1 Give consideration to the 8 March 2004, 13 August 2004 and 14 March 2005 NEM events and any other relevant events; and

3.3.2 Have regard to any other factors the Commission considers relevant.

4. CONDUCT OF THE REVIEW

4.1. Following the receipt of these terms of reference, the Commission's review process shall consist of at least the following:

4.1.1 The publication of a notice of review, as required pursuant to section 43 of the NEL, no later than 7 days following receipt of these terms of reference;

4.1.2 The release of an Issues Paper within 60 days of receipt of these terms of reference, in whatever form the Commission considers appropriate, setting out the information it requires Registered Participants to provide by a date specified in the Paper, and seeking comment on the key issues to be addressed in its review;

4.1.3 Registered Participants and other interested parties will have 60 days to comment on the Issues Paper and to provide information to the Commission as required;

4.1.4 The release of a draft Report to the MCE no later that 60 days following the close of submissions on the Issues Paper, which will include a Rule change proposal to the MCE, if required, and recommendations on the appropriateness of the penalties under the NEL; and

4.1.5 The submission of a final Report to the MCE.

4.2 The consultation process may consist of a public hearing, seminar or workshop but the Commission may receive and consider any written submissions as it thinks appropriate.

Attachment 2 – Summaries of events

The Reliability Panel summarised each event as follows[1].

8 March 2004

At around 11:30am a bushfire event occurred in the vicinity of the Para substation, close to Adelaide, which led to a series of transmission faults on one circuit of the Victoria to South Australia (Heywood) interconnector. Immediately following this, both units at Northern Power Station (NPS) reduced their output to zero momentarily. This sudden loss of generation significantly increased the import on the Heywood interconnection, beyond its safe limit, shutting down the interconnector. Loss of the interconnection resulted in the frequency in South Australia falling to 47.6 Hz and around 650 MW (or 40 per cent of South Australia demand) of under frequency load shedding (UFLS). The interconnector was restored at 12:11pm and the load was fully restored by 1:45pm.

13 August 2004

At 9:41pm, a current transformer at Bayswater power station in NSW developed an internal fault which later caused it to explode. This failure caused a rapid succession of power system disturbances and triggered the loss of five large generating units (Bayswater units 1, 2 and 3; Eraring unit 2; and Vales Point unit 6) and one medium capacity generating unit (Redbank). The simultaneous loss of six generating units reduced supply by about 3,100 MW and caused the interconnected power system frequency to fall to 48.9 Hz. This resulted in around 1,500 MW (or eight per cent of market-wide demand) of consumer demand to be shed automatically through the operation of under-frequency load shedding (UFLS) schemes. The load shedding occurred in Queensland, New South Wales, Victoria and South Australia. This automatic load disconnection together with the combined response from the remaining generating units successfully controlled the power system frequency and prevented a major power system collapse.

14 March 2005

At around 6.39am on Monday 14 March, an insulator flashover occurred at Playford substation, which is in close proximity to Northern power station in South Australia. Immediately following this, the generation level at Northern reduced from 527 MW to zero momentarily. This sudden loss of generation significantly increased the import on the Victoria to South Australia (Heywood) interconnector, beyond its safe limit, and caused it to shut down. During the incident, generators at Ladbroke Grove and Pelican Point shut down.

The frequency in South Australia fell to 47.61 Hz. Around 700 MW of load, almost half the regional demand, was shed automatically to prevent further cascading of the event. The frequency remained within the multiple contingency standard during the separation, stabilising within 15 seconds. The interconnection was restored at 7.01am and load was fully restored by 8.25 am.[2]

---

1 Reliability Panel – Annual Electricity Market Performance Review – Reliability and Security 2005

2 Please note that times are quoted in market time, not local time.