

# **Quarterly Compliance Report**

# January – March 2008

June 2008



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# Glossary

AC	Alternate Current
AER	Australian Energy Regulator (see <u>www.aer.gov.au</u> )
AEST	Australian Eastern Standard Time
associated Regulations	The <u>National Electricity (South Australia) Regulations (South Australia)</u> made under the National Electricity Act
DC	Direct Current
DNSP	Distribution Network Service Provider
DSO	Distribution Service Operator
Market	The Australian electricity wholesale exchange operated and administered by NEMMCO, and the national electricity system, which covers the following regions as at May 2008: New South Wales, Queensland, Snowy Mountains, South Australia, Victoria and Tasmania
MW	Megawatt
MWh	Megawatt hour
National Electricity Act	National Electricity (South Australia) Act 1996 (South Australia)
NCAS	Network Control Ancillary Services
NMAS	Non-Market Ancillary Services
NEL	National Electricity Law (a Schedule to the National Electricity Act)
NEM	National Electricity Market (see "Market")
NEMMCO	National Electricity Market Management Company
NER	National Electricity Rules, made under Part 7 of the NEL
NSP	Network Service Provider (see "DNSP" and/or "TNSP")
QCR	Quarterly Compliance Report
Registered participants	Entities operating within the NEM, the majority of which are registered by NEMMCO under the NEL and the NER (see NEMMCO's <u>Registration and Exemption lists</u> )

SRAS	System Restart Ancillary Services
TNSP	Transmission Network Service Provider
\$5,000/MWh reports	Reports issued by the AER under clause 3.13.7(d) of the NER

# Summary

The purpose of this Quarterly Compliance Report (QCR) is to summarise the results of the compliance monitoring and enforcement activities undertaken by the Australian Energy Regulator (AER) during the quarter from January to March 2008.

Part 2.1 outlines the three investigations undertaken by the AER during the period, which broadly relate to:

- rebidding and dispatch inflexibility in Queensland and South Australia
- the reduction in the transfer limits of the Heywood Interconnector.

Investigations into the reclassification and generator compliance process in Queensland in October 2007 (which were reported in the previous QCR) continued this quarter.

Part 2.1 also summarises 6 reports issued by the AER regarding market events where the spot price exceeded \$5,000/MWh during the period, predominantly in Queensland and South Australia.

Part 2.2 provides an update of the AER's compliance auditing activities during the period. Audits related to technical performance standards and associated compliance programs were conducted by consultants on behalf of the AER and completed this quarter. The AER received the consultants' audits findings in March 2008 and will publish further details in the future.

Part 2.3 contains the outcome of the AER's targeted compliance reviews. Over this quarter the AER targeted 8 provisions under the National Electricity Rules (NER). Issues requiring follow-up action have arisen in relation to 3 of the targeted NER provisions.

Part 2.4 concerns jurisdictional derogation reviews. There were no compliance issues reported by the Smelter Traders, Power Traders and Nominated Generators covered by derogations under Chapter 9 of the NER.

Finally, as reported in part 2.5, over this quarter, there were a total of 36 instances raising questions about the quality of the reasons provided for rebids. The AER has sought further information from the relevant registered participants, where necessary.

The summary table that follows provides further details on the matters covered by this QCR. A comprehensive explanation of the each of those matters can be found in the succeeding sections of this document.

Enforcement / Compliance activity	Matter	Status / Outcome	
Investigations and	Market events of 8, 10 and 29 October and 4 November 2007	Investigations commenced and information being sought from relevant	
\$5,000/MWh reports	Rebidding and dispatch inflexibility	<ul> <li>registered participants for all 3 listed matters</li> </ul>	
	Interconnector transfer limits reduction	-	
	Spot price events exceeding \$5,000/MWh	6 reports issued this Quarter	
Audits	Technical standards	Audits completed. Consultants' findings being assessed for final reports	
Targeted compliance reviews	Acquisition of non-market ancillary services	Framework in this area being developed and implemented by NEMMCO	
reviews	Operational frequency control requirements	Follow-up required for 1 registered participants' response, and future consideration of relevant obligations via technical audits	
	Power to issue directions and clause 4.8.9 instructions	Follow-up required for registered participant's response and ongoing review of this obligation	
	Power system restoration	Local black systems procedures reported to be in place	
	Operating interaction with Distribution Networks	NEMMCO advised no apparent compliance issues in this area	
	Obligations of generators	Follow-up required for 1 registered participant's response	
	Metering installation types and accuracy	No apparent compliance issues in this area	
	Metering security controls	No apparent compliance issues in this area	
Jurisdictional derogations reviews	Derogations relating to Smelter Traders, Power Traders and Exempted Generator Agreements	No compliance issues reported	
Market Monitoring	Rebidding inquiries	26 rebids under consideration, with further information sought from relevant registered participants, where appropriate	

# Summary table

# 1 Introduction

The AER is responsible for compliance monitoring, reporting and enforcement in the National Electricity Market (NEM).

Section 15 of the National Electricity Law (NEL) sets out the function and powers of the AER which include the requirement to:

- (a) monitor compliance by registered participants and other persons with the NEL, the NER and relevant Regulations; and
- (b) investigate breaches or possible breaches of provisions of the NEL, the NER or relevant Regulations that are not offence provisions.

In carrying out its monitoring functions, the AER collects and analyses information from registered participants and NEMMCO. In accordance with clause 8.7.1 of the NER, the AER aims for:

- consistency in monitoring over time
- no unnecessary discrimination between registered participants
- cost effective monitoring for registered participants, NEMMCO and the AER
- transparency, with information published or otherwise made available to the market, subject to any confidentiality requirements.

The AER aims to assist registered participants achieve high levels of compliance with the NEL, NER and associated Regulations.

This QCR provides an overview of the AER's approach to compliance monitoring and a summary of outcomes and status of compliance and enforcement activities undertaken by the AER during the period January to March 2008.

The AER is keen to hear from any registered participant and other interested parties on any matters of compliance, including the specific areas targeted or proposed to be targeted for review outlined in this QCR.

# 2 Compliance monitoring and enforcement strategy

The aim of the AER's compliance monitoring and enforcement strategy is to build a culture of corporate compliance within the energy sector. The importance of this aim is illustrated by the fact that individual registered participants with sound compliance cultures will not only be able to reduce the risk of breaching legislative obligations and the extent of any penalties in the event of a breach, but will also ensure that the NEM and other registered participants will less likely be prejudiced.

The AER issued a "Compliance and Enforcement – Statement of Approach"<sup>1</sup> in August 2007, which aims to provide greater transparency about the AER's compliance monitoring strategy.

In developing the compliance monitoring strategy, the AER undertook a comprehensive compliance risk assessment by reviewing each of the 1500 provisions in the NER.

The AER primarily uses this risk assessment to help determine which monitoring mechanism to use for each provision of the NER, the intensity of monitoring, and the enforcement response where breaches are identified.

The mechanisms available to the AER include:

- audits
- targeted compliance reviews
- market monitoring.

The outcomes of the AER's investigations, reporting and application of the above compliance mechanisms during the March 2008 quarter are set out in this report.

Future targeted areas of compliance for the next quarter are also outlined in this part of the QCR.

## 2.1 Investigations and \$5,000/MWh reports

The AER undertakes investigations in accordance with its function and powers under section 15 of the NEL. Where the AER's monitoring identifies potential breaches of the NEL, NER or associated Regulations, an investigation is conducted to establish the existence, nature and extent of any breach.

Information gathering powers under sections 21 and 28 of the NEL allow the AER to obtain search warrants and to compel the production of information and documents that are relevant to its monitoring and enforcement functions. The AER will usually seek information on a voluntary basis in the first instance.

<sup>&</sup>lt;sup>1</sup> A copy of this Statement is available from the AER's website – see http://www.aer.gov.au/content/index.phtml/itemId/685897/fromItemId/656069.

This part of the QCR provides an update on:

- the outcomes during the quarter arising from past AER investigations
- the market events which occurred during the March 2008 quarter.

This part of the report also provides a summary of the reports issued by the AER under Chapter 3 of the NER relating to events where the spot price exceeded \$5,000/MWh.

Appendix A of this QCR lists the investigations undertaken and reports issued by the AER concerning events where the spot price exceeded \$5,000/MWh during the previous 12 months.

#### 2.1.1 Investigation into the events of 8, 10 and 29 October and 4 November 2007

As outlined in the previous QCR, in accordance with clause 3.8.19(b)(2) of the NER, the AER wrote to two registered participants (Braemar Power Projects and Millmerran Energy Trader) seeking information regarding their rebidding practices on the above dates.

Investigations into this matter are continuing. The AER is currently considering the responses that have already been received and is seeking additional information.

#### 2.1.2 Investigation into rebidding and dispatch inflexibility

The March 2008 quarter was characterised by a number of high price events which resulted in the spot price exceeding \$5,000/MWh in various regions. High prices were prevalent in South Australia, with causes including high demand, generator bidding, transmission constraints and, at times, a combination of these factors. Part 2.1.5 provides further details on these price events.

The rebidding of AGL contributed to the high prices experienced in South Australia on 4 and 10 January, 18 to 19 February, 5 to 7 and 12 to 13 March 2008. High price events also occurred in Queensland on 22 to 23 February 2008. The AER has commenced investigations into the high price events in South Australia and Queensland.

The AER has requested Millmerran Energy Trader and Callide Power Trading to provide further information on certain rebidding and dispatch inflexibility on 21 January 2008.

The AER will report on the outcomes of these investigations in the future.

#### 2.1.3 Investigation into interconnector transfer limits

The high price events experienced in South Australia during the March 2008 quarter were contributed to by the reduction of the Heywood Interconnector's maximum allowable flow by around 100MW or 25%. ElectraNet is the Transmission Network Service Provider (TNSP) responsible for this South Australian interconnector.

A significant proportion of South Australia's electricity requirements are sourced from generators in other regions using the Heywood and Murraylink Interconnectors.

The Heywood is the larger of the two South Australian interconnectors. The above reduction contributed to high prices in South Australia by limiting the supply of low cost electricity from other regions.

The AER is investigating the reduced flow capabilities between the two states, with the prospect of seeking further information from ElectraNet and conducting external audits on interconnector transfer limit practices.

#### 2.1.4 Spot price events exceeding \$5,000/MWh

Clause 3.13.7(d) of the NER requires the AER to publish reports whenever the NEM spot price<sup>2</sup> exceeds \$5,000 per MWh in a trading interval.<sup>3</sup> As well as assisting the AER to identify instances of non-compliance, these reports provide greater transparency regarding the operation of the NEM.

During the March 2008 quarter, the spot price exceeded \$5,000/MWh on 71 separate occasions, predominantly in South Australia and Queensland. Appendix A of this QCR lists the 6 reports that cover high price events over this period. Copies of each report, which detail the causes of, and issues arising from these events, are available from the <u>AER website</u>.

## 2.2 Audits

As outlined in part 2 of this QCR, audits are one of the mechanisms used by the AER to implement its compliance and enforcement strategy. The AER may conduct audits to verify and assess compliance by registered participants with their obligations under the NEL, the associated Regulations and the NER.

There are two main types of audits:

- audits of registered participants' internal systems and processes
- technical audits focusing on compliance with technical standards under the NER.

The following part of the report provides an update on the AER's auditing activities during the quarter.

#### 2.2.1 Technical standards

As outlined in the previous QCR, the AER has engaged consultants to assist with a series of audits on the technical performance standards and associated compliance programs required under the NER. The preliminary findings of these audits were provided to the AER in March 2008. The AER is currently in the process of considering these findings.

<sup>&</sup>lt;sup>2</sup> The price for electricity in a trading interval at a regional reference node or a connection point as determined in accordance with clause 3.9.2 of the NER.

<sup>&</sup>lt;sup>3</sup> A 30 minute period ending on the hour (AEST) or on the half hour and, where identified by a time, means the 30 minute period ending at that time.

The AER reconfirms its intention to publish details of the audit findings in the future and to apply this technical audit program to other registered participants.

## 2.3 Targeted compliance reviews

Targeted compliance reviews are an important element of the AER's broader compliance monitoring activities. The AER targets a minimum of 24 NER provisions each year for detailed compliance reviews.

Each quarter, the AER intends to target, on average, 6 provisions under the NER based on the compliance risk assessment referred to in part 2 of this QCR. Appendix B lists the NER provisions targeted during the previous 12 months.

Criteria for selecting the NER provisions for review include:

- all relevant areas of the NER are considered and provisions with relatively high compliance risk are targeted as a matter of priority
- both systemic issues and the potential for isolated but significant incidents are addressed
- there is no unnecessary discrimination between registered participants, who are generally selected at random.

The primary aims of targeted compliance reviews are to determine:

- registered participants' understanding of their obligations under the NER
- what systems and processes, including compliance programs and plans, registered participants have in place to deal with their obligations.

While the majority of obligations under the NER do not require registered participants to establish specific compliance programs, the AER will take into account a Participant's compliance culture in determining the type of enforcement action to take in responding to breaches of the NEL, the NER and associated Regulations.

In assessing the Participant's compliance, the AER will, amongst other things, consider systems and processes in place, whether they are up-to-date, and whether they are applied appropriately.

In the quarter ending March 2008, the AER targeted a range of NER provisions which focused on: non-market ancillary services and operating interactions with Distribution Network Service Providers (DNSPs) by NEMMCO; power system security and restoration requirements; generators' compliance with directions and other obligations relating to forecasting and testing; distribution network access arrangements; metering installation, accuracy and security.

The specific NER provisions targeted were:

- Acquisition of non-market ancillary services (clause 3.11.3)
- Operational frequency control requirements (clause 4.4.2)
- Power to issue directions and clause 4.8.9 instructions (clause 4.8.9)

- Power system restoration (clause 4.8.14)
- Operating interaction with Distribution Networks (clause 4.10.3(a))
- Obligations of generators (clause 5.2.5)
- Access arrangements relating to distribution networks (clause 5.5(e))
- Metering installation types and accuracy (clause 7.3.4)
- Metering security controls (clause 7.8.2).

#### 2.3.1 Acquisition of non-market ancillary services

NEMMCO requires access to a number of ancillary services to manage power system security and facilitate the orderly operation of the energy market. NEMMCO acquires frequency control ancillary services to ensure the power system frequency is maintained within the frequency standards through a spot market arrangement. Other ancillary services, to assist with managing voltage levels, network loading and services to assist with rebuilding the power system following a partial or system wide blackout are acquired by NEMMCO by contracting directly with third parties.

Clause 3.11.3 of the NER obliges NEMMCO to use reasonable endeavours to acquire non-market ancillary services in one of the following ways:

- by setting minimum technical ancillary service standards for registered participants who have entered into a connection and access agreement (and subject to prescribed publication and amendment processes) or
- in accordance with clause 3.11 or by giving a direction under clause 4.8.9.

Clause 3.11.3 also prescribes other matters, such as the manner in which technical ancillary service standards are published and amended by NEMMCO, and the use of reasonable endeavours by registered participants who are instructed by NEMMCO to provide non-market ancillary services under a connection and access agreement.

As part of this review, the AER requested the following information from NEMMCO:

- an update on the progress of any review relating to, and affecting, the process of acquisition of non-market ancillary services by NEMMCO
- confirmation of NEMMCO's compliance with the NER in setting and amending the minimum technical ancillary service standards
- details of any existing or future systems and procedures that NEMMCO has or will put in place to ensure that any acquisition of non-market ancillary services is undertaken in accordance with the provisions in clause 3.11
- details of any instances where NEMMCO has instructed a registered participant to provide a non-market ancillary service as agreed under a connection agreement, and the registered participant has failed to do so.

#### **Response summary**

In its response, NEMMCO provided an update on its current review of the process for acquiring these services as follows:

- non-market ancillary services (NMAS): NEMMCO released a draft scoping paper on the Network Support & Control Service (NCSC) review in March 2008, and was in the process of finalising this paper by the end of April 2008
- system restart ancillary services (SRAS): NEMMCO completed six NER consultations in 2006/07 prior to commencing a purchasing process for these services. A request for expressions of interest was issued in November 2007. In accordance with relevant SRAS guidelines, NEMMCO issued an invitation to tender in April 2008, closing in May 2008
- network control ancillary services (NCAS): NEMMCO completed three NER consultations in 2007/08 prior to commencing a purchasing process for these services. A request for expressions of interest was issued in March 2008. In accordance with relevant NCAS guidelines, NEMMCO advised of its intention to issue an invitation to tender in May 2008, which closes in June 2008.

NEMMCO also advised that:

- it has elected to continue to acquire NMAS under clause 3.11.3(b)(2) of the NER instead of publishing minimum technical standards under clause 3.11.3(b)(1) of the NER; as part of this, NEMMCO has developed the appropriate documents and has conducted consultations in accordance with the NER and is aiming to finalise the new NMAS agreements by July 2008
- it will finalise minimum technical ancillary service standards in accordance with clause 3.11.3(c), once the current procurement and NSCS consultation processes are finalised.

NEMMCO indicated that various documents, including guidelines, are available from the ancillary services section of its website. NEMMCO also advised that market management and dispatch systems for instructing the delivery of NMAS also exist.

Finally, NEMMCO advised that there have been no instances of registered participants failing to follow instructions to provide NMAS, and that it has never received a notification under clause 5.3.7(g) of the NER, relating to an NSP specifying ancillary service requirements in their connection agreement.

Where a system security issue is identified, NEMMCO would discuss options with the relevant NSP and a contingency plan may be offered by the NSP

#### **Review outcomes**

NEMMCO is in the process of finalising various aspects relating to the acquisition of non-market ancillary services. The AER will seek further information and updates on this matter from NEMMCO, as required.

The AER may conduct future compliance reviews by targeting registered participants once the framework under clause 3.11.3 of the NER is fully implemented.

#### 2.3.2 Operational frequency control requirements

Clause 4.4.2(b) of the NER imposes an obligation on a generator to ensure that all of its generating units have responsive speed governor systems, which comply with requirements of Schedule 5.2 of the NER.

Responsive speed governor systems allow generators to automatically share in changes in power system demand or loss, which result from excursions in power system frequency.

As part of the compliance review on clause 4.4.2(b) of the NER, the AER requested information from Flinders Power and International Power Australia. The request included:

- confirmation from the generators that the responsive speed governor systems of its generating units are operating in accordance with the requirements of Schedule 5.2 of the NER
- details of any procedures put in place by the generators to ensure the above requirements are met, including details of any testing undertaken and the frequency of such testing.

The request for information from Flinders Power and International Power Australia related, respectively, to the Northern and Pelican Point Power Stations in South Australia.

#### **Response summary**

#### Flinders Power

Flinders Power has confirmed that the responsive speed governor systems at the Northern Power Station operate in accordance with the requirements of clause 4.4.2 and Schedule 5.2 of the NER.

Specifically, Flinders Power advised that, by reference to internal procedures:

- governor systems are maintained during technical surveys and testing is carried out at the conclusion of such surveys
- governor systems testing is carried out, with further routine step testing to be implemented in the future.

Flinders Power also outlined steps it takes when changes to controls and protection are contemplated (including consulting with stakeholders), and its use of high speed disturbance recorders and investigations when required.

A key mechanism that Flinders Powers has in place at Northern Power Station, to ensure compliance with the generator performance standards registered with NEMMCO, includes the compliance program required under clause 4.15(b) of the NER.

#### International Power Australia

International Power Australia has confirmed that all of its Pelican Point Power Station generating units have responsive governor systems which operate in accordance with the requirements of clause 4.4.2 and Schedule 5.2 of the NER.

To ensure that the above requirements are met, International Power Australia tests the governor speed systems at periodic intervals in addition to observing the performance of the generating units during system events.

International Power Australia also informed the AER that it is currently undertaking a number of initiatives to ensure full compliance in this area. This includes International Power Australia's performance monitoring program, which encompasses a manual on the detailed technical procedures for the periodic testing and a schedule which specifies the anticipated dates for future testing. International Power Australia advised that this manual and schedule will be ready by May 2008.

#### **Review outcomes**

Both Flinders Power and International Power Australia have confirmed that their responsive governor systems operate in accordance with the requirements of the clause 4.4.2 and Schedule 5.2 of the NER. Regular maintenance and testing, as part of a comprehensive compliance program, are sound initiatives to ensure that these systems are complaint at all times.

The AER will follow-up with International Power Australia on the progress of implementing its compliance initiatives, including International Power Australia's introduction of a uniform compliance program for its generating plants.

The AER reiterates that, technical parameters captured by the compliance programs required under clause 4.15(b) of the NER such as responsive governor systems, will be reviewed under its technical audits program in the future.

#### 2.3.3 Power to issue directions and clause 4.8.9 instructions

Under clause 4.8.9 of the NER, NEMMCO may require a registered participant to act if NEMMCO is satisfied that it is necessary to do so to maintain or re-establish the power system to a secure, satisfactory or reliable operating state. In addition, NEMMCO may authorise a person to do any of the things contemplated by section 116 of the NEL if it is satisfied that it is necessary to do so for reasons of public safety or the security of the electricity system. NEMMCO requires registered participants to take action as contemplated by clause 4.8.9(a) by way of either a direction or a clause 4.8.9 instruction. NEMMCO's directions apply to generators, whereas instructions apply to market participants.

Under clauses 4.8.9(c) and (c1), a registered participant must use reasonable endeavours to comply with a direction or a clause 4.8.9 instruction in accordance with the timeframe specified by NEMMCO, unless to do so would, in the registered participant's reasonable opinion, be a hazard to public safety, or materially risk damaging equipment, or contravene any other law.

Under clauses 4.8.9(d) and (e), a registered participant must immediately notify NEMMCO of its inability to comply or its intention not to comply with a direction or clause 4.8.9 instruction, and within 2 days deliver to NEMMCO and the AER a report detailing the reasons for any non-compliance together with relevant facts.

As part of the compliance review on clause 4.8.9 of the NER, the AER requested the following information from the Tasmanian generators, Bell Bay Power and Hydro Tasmania:

 details of the systems or procedures that are in place to ensure compliance with directions issued under clause 4.8.9  details of any criteria used to determine whether complying with a direction issued by NEMMCO would cause a hazard to public safety, materially risk damaging equipment, or contravene any law.

Hydro Tasmania also responded on behalf of Bell Bay Power since the latter's dispatch has been incorporated into Hydro Tasmania's dispatch process since June 2007.

#### **Response summary**

Since Bell Bay Power is part of Hydro Tasmania's dispatch process, Hydro Tasmania advised that both registered participants are governed by the same set of dispatch processes and procedures. In complying with clause 4.8.9 of the NER, Hydro Tasmania advised that it has implemented a spot trading operations manual, which requires employees to:

- advise NEMMCO immediately if they cannot comply with a direction
- issue a report to the AER and NEMMCO within two business days on why the generator failed to comply with the direction.

Hydro Tasmania has further advised that, it has complied with all directions issued by NEMMCO since it entered the NEM.

In addition to the spot trading operations manual, Hydro Tasmania stated that it has also implemented the following training measures:

- staff of the generators receive training on processes and procedures, which include training on how to comply with NEMMCO directions
- including the above processes and procedures in its post training checklists.

#### **Review outcomes**

The AER notes that Hydro Tasmania has processes and procedures in place related to clause 4.8.9 of the NER and that it claims to have complied with NEMMCO directions since Hydro Tasmania entered the NEM.

The AER will also target other registered participants on their compliance with this NER provision in the next quarter.

#### 2.3.4 Power system restoration

Power system restoration following a total shutdown, or black system event, requires coordination across the power system to ensure restoration can be achieved in the safest and quickest manner. To facilitate this process, local procedures have been developed at each point in the power system. These procedures provide NEMMCO with an understanding of the power system status soon after the event to assist in the restoration process.

Under clause 4.8.14(b) of the NER, if NEMMCO advises a generator or a Network Service Provider (NSP) of a major supply disruption, or if the terms of the relevant local black system procedures require the generator or NSP to take action, then the generator or NSP must comply with the requirements of the local black system procedures established under clause 4.8.12, as quickly as is practicable. Under clause 4.8.14(d), if there is a major supply disruption, a generator or NSP must comply with NEMMCO's directions or clause 4.8.9 instructions regarding the restoration of the power system.

In July 2006, in accordance with clause 4.8.12(e), NEMMCO published guidelines for preparing local black system procedures and requested that generators, NSPs and the operators/owners of direct current (DC) links, review and/or develop their procedures for submission to NEMMCO by 1 August 2006. These guidelines and procedures are designed to facilitate the process of power system restoration.

As part of the compliance review relating to clause 4.8.14 of the NER, the AER requested the following information from Basslink and the State Electricity Commission of Victoria (SECV trading as VicPower Trading):

- confirmation that the targeted market participants have local black system procedures in place to meet their obligations under clauses 4.8.14(b) and (d)
- a summary of the steps that the Participant would take to ensure that it is able to comply with NEMMCO's direction regarding the restoration of the power system.

Basslink maintains and operates the Basslink DC link between Tasmania and the Australian mainland. VicPower Trading operates the Anglesea Power Station and supplies electricity to the Portland and Point Henry aluminium smelters.

#### **Response summary**

#### Basslink

Basslink confirmed to the AER that it has a black system procedure, a copy of which was provided to the AER. The procedure outlines the steps that this Participant would take under a black system situation.

Basslink has also noted that, being a high voltage DC system, it would require an alternate current (AC) system to transmit electricity in either direction. Basslink would only be able to assist NEMMCO with system restoration once there was some generation within the power system.

In terms of compliance with this NER provision, Basslink has confirmed that there have been no instances of non-compliance with a NEMMCO direction, except for an incident in May 2006, at which time a Basslink operator had technical problems in complying with such direction. Basslink addressed this by developing and implementing a specific procedure and training program for its site engineers.

#### VicPower Trading

VicPower Trading confirmed that the Anglesea Power Station has a local black system procedure in place, which was submitted to NEMMCO and stipulates that:

 once in receipt of a NEMMCO direction or instruction, Anglesea Power Station must use its best endeavours to comply with that instruction, unless it is of the reasonable opinion that public safety would be compromised  in the event that Anglesea Power Station is unable to comply or intends not to comply with a direction or instruction, its staff must notify NEMMCO and VicPower Trading immediately.

VicPower Trading has also advised that there have been no instances of noncompliance with the NER provision under review.

#### **Review outcomes**

To date, there have been no black system events within the NEM. Nevertheless, the NEL contains a requirement that generators and NSPs establish local black system procedures in accordance with clause 4.8.12 of the NER.

Both Basslink and VicPower Trading have confirmed their compliance with this requirement and provided details on their respective procedures. The NER require relevant registered participants to also have local black system procedures in place, and the AER would expect these to be reviewed from time to time, as required.

#### 2.3.5 Operating interaction with Distribution Networks

Under clause 4.10.3(a) of the NER, NEMMCO and each Distribution System Operator (DSO) must maintain effective communications concerning the conditions of its distribution network and the transmission network or other distribution networks to which that distribution network is connected and to co-ordinate activities where operations are anticipated to affect other transmission or distribution networks.

As part of the compliance review relating to this clause, the AER requested the following information from NEMMCO:

- details of the arrangements that NEMMCO has put in place to ensure that the obligations contained in clause 4.10.3(a) are met, including the parties involved in these arrangements
- details of any instances of ongoing communication problems (including the parties involved) and details of any remedial measures taken to ensure compliance with the obligations contained in clause 4.10.3(a).

#### **Response summary**

NEMMCO has advised the AER that the obligation to maintain effective communications with the DSOs has been assigned to the relevant TNSPs under clause 4.3.3(a) of the NER. The underlying TNSP operating agreements require that communications between DSOs and NEMMCO be made through the TNSPs in the first instance. In this context, the relevant TNSPs are:

- ETSA Transmission Corporation (South Australia)
- Queensland Electricity Transmission Corporation Limited (Queensland)
- SP AusNet (Victoria)
- TransGrid (New South Wales and Australian Capital Territory)
- Transend Networks Pty Ltd (Tasmania).

NEMMCO stated that the TNSP operating agreements are supported by the power system operating procedures covering transmission network security guidelines and outage assessment, and by the process concerning reclassification of non-credible contingencies under abnormal conditions (recently revised as a consequence of the market events of 16 January 2007).

In addition, NEMMCO's internal compliance monitoring system requires a monthly review of the information transfers from NEMMCO to distribution networks and confirmation that procedures have been followed.

NEMMCO advised that, to date, it has not identified any breaches of clause 4.10.3 of the NER nor communication problems between DSOs, NEMMCO and TNSPs.

#### **Review outcomes**

NEMMCO outlined how its compliance mechanisms ensure that the obligations contained in clause 4.10.3(a) are met. The AER also notes NEMMCO's advice that there have been no identified breaches or communications problems in this area.

#### 2.3.6 Obligations of generators

Under clause 5.2.5(a), a generator must plan and design its facilities and ensure that they are operated in accordance with the applicable performance standards, connection agreement and system standards.

As part of the compliance review relating to clause 5.2.5(a) of the NER, the AER requested information from the following generators – CS Energy Ltd, Energy Developments Limited and Ergon Energy. The request related to:

- details of the systems and procedures that the generator has in place to ensure that it meets the obligations set out in clause 5.2.5(a)
- details of any audits undertaken by the generator, and a summary of findings with respect to any failures to comply with the applicable standards and connection agreements, including remedial action/s taken to ensure ongoing compliance with the obligations contained in clause 4.10.3(a).

The request for information to CS Energy and Ergon Energy related, respectively, to the Kogan Creek and Barcaldine Power Stations in Queensland.

#### **Response summary**

#### CS Energy

CS Energy advised that the design and specifications of Kogan Creek Power Station comply with clause 5.2.5(a) of the NER. This power station was commissioned in the fourth quarter of 2007.

CS Energy has a connection and access agreement with the relevant NSP and has registered a generator performance standard with NEMMCO, both of which are consistent with the plant design and settings. Based on testing at the time of Kogan Creek Power Station's commissioning, CS Energy stated that compliance with the registered performance standards was confirmed. As at April 2008, a compliance plan and test procedures were being developed for implementation in the near future. CS Energy further advised that it commissioned a consultant to conduct an audit on the compliance of Kogan Creek Power Station unit electrical protection systems with Schedule 5.2.5.9. The audit concluded that the power station complies with its performance standards with respect to the primary protection redundancy component under that clause.

CS Energy pointed out that other compliance plan and test procedure activities were performed as part of the recent turnkey contractor's commissioning, with future activities to take place at the time of scheduled overhauls in 2010 and 2012. An 8,000 hour inspection will be performed in October 2008.

#### Energy Developments Limited

Energy Developments Limited provided its response to the AER's questions after the requested date. In its response, it did not address the questions raised. Instead, it merely provided an update regarding the determination process for registering the performance standards for its Appin and Tower Power Stations.

#### Ergon Energy

Ergon Energy acquired ownership of the Barcaldine Power Station in August 2007. Since that time, Ergon Energy has implemented a transitional program to ensure that all operation and regulatory obligations are met and that they are fully incorporated in Ergon Energy's asset maintenance program.

Ergon Energy has referred to a generator performance standard compliance program registered with NEMMCO and connection and access agreements with the relevant NSP. Under the performance standards compliance program, testing is undertaken once every three years, with the next round scheduled for September 2008.

#### **Review outcomes**

The planning, design and operation of facilities that are consistent with applicable performance standards, connection agreements and system standards are essential elements in ensuring a safe and efficient power system.

CS Energy and Ergon Energy have both indicated their power stations are compliant with clause 5.2.5(a) of the NER. Based on this advice and other information provided, there are no apparent compliance issues in this area. The AER will follow up further with Energy Developments Limited and take any other appropriate action to obtain the information requested.

#### 2.3.7 Access arrangements relating to Distribution Networks

Clause 5.5(e) of the NER requires DNSPs to reasonably endeavour to provide distribution network user access arrangements to connection applicants. Access arrangements must be consistent with good electricity industry practice, with respect to:

- the connection assets to be provided by the DNSP or at the connection point
- the potential augmentations or extensions required on all affected transmission or

distribution networks to provide that level of power transfer capability over the period of the connection agreement. This should also take account of the amount of transfer capability provided to other registered participants under network user access arrangements.

As part of the compliance review relating to clause 5.5(e) of the NER, the AER requested the following information from the Tasmanian and South Australian DNSPs, Aurora Energy and ETSA Utilities:

- details of the procedures in place which are used by the DNSP in assessing applications for user access arrangements to the distribution network, including a list of criteria if applicable
- details of how the DNSP ensures that assessments for user access arrangements are consistent with good electricity industry practice.

#### **Response summary**

#### Aurora Energy

With its response, Aurora Energy provided a set of documents, which contain information on the processes undertaken to provide the distribution network user access arrangements to applicants, as required under 5.5(e) of the NER.

According to Aurora Energy, the process of connecting to its network is consistent with the requirements of the NER and covers enquiries and applications for both load and distribution generation connections to the distribution network.

Aurora Energy's procedural steps with respect to this clause are as follows:

- for a preliminary enquiry:
  - applicants submit a "Preliminary Enquiry" form
  - a preliminary system, commercial & technical assessment is conducted
  - a response is provided to applicants
- for an application to connect:
  - connection applicants submit the relevant form
  - system studies and assessment (technical/commercial/compliance) are undertaken
  - an "Offer to Connect" is provided to connection applicants
  - if the above offer is accepted, a connection agreement is entered into
  - design, construction and commissioning follow on the basis of applicable requirements.

Distribution infrastructure options and solutions to provide connection are assessed and implemented using planning, design and construction manuals. Aurora Energy also relies on other documents and forms used to facilitate appropriate technical and commercial assessments and distribution network connection requirements for connections, as well as for managing enquiries and applications for load connections to the distribution network. Aurora Energy stated that its procedures are consistent with good electricity industry practice.

#### ETSA Utilities

ETSA Utilities uses a Quality Management System (QMS) to manage its compliance obligations, including the requirements to comply with clause 5.5(e) of the NER.

As part of its QMS, ETSA officers undertake a number of activities prior to connection or upgrading a customer's connection, including:

- the assessment of customer load requirements and new extension/connection assets, to determine whether new connections will adversely affect the distribution system, existing customers, local TNSPs, or the environment
- advising the customer of applicable technical requirements under the South Australia Electricity Distribution Code
- conducting load flow analysis to determine whether the distribution system requires augmentation prior to the connection of new load
- determining and designing least cost solutions to meet customer load requirements
- negotiating a mutually agreeable connection date with the customer, and preparing a construction program that meets such date
- quoting the customer in accordance with the local jurisdictional requirements, under the South Australia Electricity Distribution Code.

ETSA Utilities stated that it has developed standard connection assets that are similar to those of other DNSPs, which are used by its Network Project Officers to design connections for new customers in accordance with good electricity industry practice.

#### **Review outcomes**

As part of this compliance review, the AER notes that each targeted registered participant is aware of its obligations and has developed relevant procedures which are said to be consistent with good electricity industry practice.

On the basis of the responses received from Aurora Energy and ETSA Utilities, it appears that the procedures in place, if applied as described, would enable these NSPs to comply with requirements of clause 5.5(e) of the NER.

#### 2.3.8 Metering installation types and accuracy

Under clause 7.3.4(a) of the NER, metering installations and accuracy requirements are to be determined in accordance with Schedule 7.2 of the NER.

Under clause 7.3.4(b), check metering installations are not required to have the degree of accuracy required of revenue installations but must have a mathematical correlation with the revenue metering installation, and be consistent with the requirements of Schedule 7.2 of the NER.

Under clause 7.3.4(c), metering installations in use at market commencement must conform to the provisions of Chapter 9 of the NER.

As part of the compliance review relating to clause 7.3.4 of the NER, the AER requested information from EnergyAustralia and Origin Energy, which included:

- details of the metering installation types (1 to 6)<sup>4</sup> used by the Participant for metering installation types 1 to 4
- details of the systems and procedures in place to ensure compliance with the requirements of Schedule 7.2 of the NER or the provisions of Chapter 9 for any metering installation in use at market commencement

#### **Response summary**

#### EnergyAustralia

This Participant is responsible for over 1.5 million network customers with types 1 to 6 metering installations. For types 1 to 4 installations, to ensure compliance with Schedule 7.2 or the provisions of Chapter 9 of the NER, EnergyAustralia relies on various systems and procedures, including:

- a metering equipment maintenance plan, which outlines accuracy and testing requirements based on those in Schedule 7.2 of the NER
- routine maintenance testing, with associated procedures audited by NEMMCO annually
- a metering business system database, which stores all details of current/previous installations
- contracting companies, which provide NER compliant metering equipment that is type tested to the appropriate Australian Standards and which are able to supply accuracy reports.

The steps involved in ensuring compliance with new or upgraded connections, involve:

- customers submitting an application for connection to EnergyAustralia's network, with information such as proposed load and connection details
- applications being processed according to size and type of proposed connection
- customers being notified of the specific metering required, on a case-by-case basis.

EnergyAustralia has stated that compliance with wholesale NEM metering points is based on internal consultations to determine the meter type, location and configuration of the installation based on its network standard requirements.

EnergyAustralia has also stated that it fulfils its obligations under Schedules 7.2 and 7.3 of the NER by testing metering installations on the basis of an asset management strategy that is to be approved by NEMMCO and is supported by relevant metering equipment maintenance and asset management plans.

<sup>&</sup>lt;sup>4</sup> Refer to Table S7.2.3.1 of the NER for the characteristics of each metering installation type.

In its reply, EnergyAustralia confirmed that, to date, it has not identified any breaches with the requirements under consideration.

#### Origin Energy

Origin Energy has confirmed that it is currently the responsible person for around 14,200 type 1 - 4 metering installations only, and that it has a dedicated department for metering compliance and vendor management, which uses a database known as the "Metering Information Tracking System" (MITS) to hold relevant metering installation information.

The MITS database is based on parameters that directly relate to the obligations under Chapter 7 of the NER, and receives information from field metering providers via an electronic transaction. By requiring this transaction for any on-site work, Origin Energy is able to confirm that its field metering providers are compliant with the applicable NER requirements.

Compliance obligations are detailed in service level agreements between Origin Energy and its metering providers and in addition to this, Origin Energy also seeks detailed asset management plans of its service providers to monitor their testing programs and compliance with the NER obligations.

#### **Review outcomes**

Clause 7.3.4 of the NER establishes requirements relating to metering installation types and accuracy. In the context of the present compliance review and the information received, the AER notes that each targeted Participant is aware of the metering requirements that apply to it and has specific systems and procedures in place.

## 2.3.9 Metering security controls

Under clause 7.8.2(a) of the NER, the responsible person must ensure that metering data held in the metering installation is protected from direct local or remote electronic access by suitable password and security controls in accordance with clause 7.8.2(c). These controls are, in turn, performed by a metering provider as defined under the NER.

As part of the compliance review relating to clause 7.8.2(a) of the NER, the AER requested information from the New South Wales NSPs, Country Energy and Integral Energy, which included:

- details of any systems and procedures put in place to meet its maintenance and protection of metering data requirements under the clause
- details of outsourcing or other arrangements in place with respect to any tasks under this clause, and measures to ensure on-going compliance with the above requirements
- details of any instance where the above requirements have not been met, including details of remedial actions taken.

#### **Response summary**

#### Country Energy

Country Energy advised that its metering functions, including those covered by clause 7.8.2 of the NER, are carried out by a wholly owned meter data agency, acting as the metering provider. There are, therefore, no outsourcing arrangements in place at present.

All metering data is stored in a secure metering services database, with restricted access. Country Energy stated that, as part of NEMMCO's accreditation, which involved a review of all parts of the NER and Metrology Procedures relevant to metering providers, Country Energy's security of metering data was deemed to be effective and therefore compliant with the requirements under clause 7.8.2 of the NER. In addition, as part of this accreditation, Country Energy's metering provider is audited annually.

Country Energy has also stated that it has not been in breach of clause 7.8.2 of the NER at any time.

#### Integral Energy

Integral Energy stated that its metering functions are provided by its Metering Information Branch (trading as Infomet), using specific systems for local and remote access to meters.

In its response, Integral Energy referred to procedures on password setting and meter access methodology and other information. Outsourcing arrangements are in place for metering installations at sites outside Integral Energy's network area.

Integral Energy has also stated that it has not been in breach of clause 7.8.2 of the NER at any time. In addition, Integral Energy has pointed out that the requirements of clause 7.8.2 closely match its obligation under its New South Wales distribution licence which are the subject of annual reviews and reports to the state regulator.

#### **Review outcomes**

Country Energy and Integral Energy operate large distribution networks in New South Wales, which are subject to the NER and other obligations under state-based legislation and other instruments, such as licences.

In the context of the information provided by Country Energy and Integral Energy, it appears that the procedures in place would enable these NSPs to meet the metering security controls requirements under clause 7.8.2 of the NER.

#### 2.3.10 Upcoming targeted compliance reviews

In the next quarter, the AER will continue its reviews of:

- power system security by focusing on generator protection requirements and the undertaking of transmission network operations by authorised persons
- aspects relating to the provision of ancillary services

- networks' offer and connection processes
- the process of compliance with directions and clause 4.8.9 directions.

Other areas for review will include the dispatch instructions process managed by NEMMCO and aspects of the process for determining the latest time for intervention by direction or dispatch of reserve contract.

## 2.4 Jurisdictional derogations reviews

Chapter 9 of the NER preserves certain jurisdiction-specific arrangements. These are known as jurisdictional derogations and exempt particular registered participants from compliance with specified provisions in the NER. Each quarter, the AER must prepare an assessment of the effect that any act or omission would have on the efficient operation of the market, arising from the operations of registered participants to whom the derogations apply. This section outlines relevant outcomes as well as any regulatory developments during the quarter.

# 2.4.1 Derogations relating to Smelter Traders, Power Traders and Exempted Generator Agreements

A series of Chapter 9 derogations provide exemptions for Victorian Smelter Traders, New South Wales Power Traders and nominated generators in Queensland (for the purposes of Exempted Generator Agreements) from complying with the NER to the extent that there exists:

- any inconsistency between the NER and a contractual requirement under the relevant agreement
- any other specified exemption in the jurisdictional derogations.

These Participants must give notice to the AER of any act or omission which partly or wholly constitutes non-compliance with the NER, within the terms of clauses 9.4.3 (Smelter Trader – Vicpower Trading), 9.12.3 (Power Traders – Delta Electricity and Macquarie Generation) and 9.34.6 (nominated generators – CS Energy and Stanwell Corporation) of the NER.

The above registered participants have advised the AER that there were no instances of non-compliance which materially affected the efficient operation of the market during the quarter, in so far as clauses 9.4.4, 9.12.3 and 9.34.6 of the NER are concerned.

## 2.5 Market monitoring

The AER monitors the performance of the NEM on an ongoing basis. The purpose of this monitoring as a compliance mechanism, is to screen for indicators of any non-compliance with obligations under the NEL, the NER or associated Regulations using publicly available data and information provided to the AER by registered participants and NEMMCO.

The AER's role and responsibilities extend to the verification and substantiation of market information provided by registered participants and/or available to the AER. Market monitoring is used primarily to identify cases where non-compliance with a

particular obligation is readily apparent from data to which the AER has access, such as rebidding and the obligations to provide information contained in Chapters 3 and 4 of the NER.

#### 2.5.1 Rebidding inquiries

Scheduled generators and market participants submit offers and bids for each of the 48 trading intervals in the trading day. These offers and bids cover prices and volumes in up to 10 price bands. These volumes can be changed right up to the time of dispatch, via rebidding.

Clause 3.8.22A of the NER requires scheduled generators and market participants to make dispatch offers, dispatch bids and rebids in good faith – that is, with the genuine intention of honouring that offer or bid.

Under clause 3.8.22 of the NER, market participants are required to provide to NEMMCO, at the same time as a rebid is made:

• a brief, verifiable and specific reason for the rebid;

and

the time at which the event(s) or other occurrence(s) adduced by the market participant as the reason for the rebid occurred.

Equivalent requirements apply where a market participant advises NEMMCO that a scheduled generating unit, scheduled network service or scheduled load is inflexible, under clause 3.8.19 of the NER.

Compliance with the information requirements in clause 3.8.22 is required to enable the AER to determine whether scheduled generators and market participants operate in good faith.

For the quarter ending 31 March 2008, the AER identified the following issues relating to the quality of the rebid reasons provided under clauses 3.8.19 (inflexibility) and 3.8.22 (rebidding) of the NER.

NER Clause	Compliance issue	No. of Participants under review
3.8.19(b)(1)	The rebid submitted does not provide a brief, verifiable and specific reason why the scheduled generating unit, scheduled network service or scheduled load is inflexible	4
3.8.22(c)(2)(i)	The rebid submitted does not provide a brief, verifiable and specific reason for the rebid	6
3.8.22(c)(2)(ii)	The rebid submitted does not include the time at which the event(s) or other occurrence(s) adduced by the scheduled generator or market participant as the reason for the rebid occurred	16

# Appendix A: AER investigations and reporting summary

This is a summary table of the AER's investigations and \$5,000/MWh Reports during the previous 12 months.

Date of event	Description	Status
12-28 June 2007	\$5,000/MWh Report	Issued
8 October 2007	Investigation following reclassifications (Queensland)	Review underway
10 October 2007	Investigation following reclassifications (Queensland)	Review underway
22 October 2007	\$5,000/MWh Report	Issued
29 October 2007	Investigation following reclassifications (Queensland)	Review underway
4 November 2007	\$5,000/MWh Report	Issued
	Investigation into generator compliance (Queensland)	Review underway
31 December 2007	\$5,000/MWh Report	Issued
4 and 10 January, 18 and 19 February 2008	\$5,000/MWh Report	Issued
	Investigation into rebidding (South Australia)	Review underway
	Investigation into reduced flow capabilities of interconnector (South Australia)	Review underway
21 January 2008	Investigation into rebidding (Queensland)	Review underway
26 January 2008	\$5,000/MWh Report	Issued

Date of event	Description	Status
30 January and 7 February 2008	\$5,000/MWh Report	Issued
22-23 February 2008	\$5,000/MWh Report	Issued
	Investigation into rebidding (Queensland)	Review underway
5-7 and 12-13 March 2008	\$5,000/MWh Report	Issued
	Investigation into rebidding (South Australia)	Review underway
17 March 2008	\$5,000/MWh Report	Issued

## Appendix B: Targeted NER provisions summary

This is a summary table of the targeted NER provisions subject to compliance reviews by the AER during the previous 12 months.

Quarter ending	NER clause	Description	No. of Participants targeted	Status⁵
March 2007	3.8.19	Dispatch inflexibilities	3	Review completed
	3.15.16	Settlements payment by market participants	2	Review completed
	5.7.4	Routine testing of equipment by NSPs	1	Review ongoing
June 2007	3.6.3	Distribution loss factors – calculation and alignment of connection points	1	Review completed
	4.3.5	Market Customer obligations – provision of interruptible load	2	Review completed
	5.7.4	Routine testing of protection equipment	1	Review completed
	7.6.1	Responsibility for testing – metering installations	1	Review completed
	8.2.3	Dispute management systems of registered participants and NEMMCO	6	Review completed
September 2007	4.8.1	Power system security operations – registered participants' advice	2	Review completed
	5.2.1	Obligations of registered participants – network connections	2	Review completed

<sup>&</sup>lt;sup>5</sup> "Review ongoing" refers to a targeted provision's review conducted over more than one quarter and involving different registered participants in each of the quarters.

Quarter ending	NER clause	Description	No. of Participants targeted	Status <sup>5</sup>
	7.2A.4	Local retailers' compliance with B2B Procedures	2	Review completed
	7.5.2	Metering register discrepancy	1	Review completed
	7.9.4	Metering data validation and substitution	1	Review completed
	8.6.1	Confidentiality of information	3	Review completed
December 2007	4.8.2	Protection or control system abnormality	4	Review completed
	4.9.3	Instructions to registered participants	3	Review completed
	4.9.4	Dispatch related limitations on scheduled generators	3	Review completed
	4.9.8	General responsibilities of registered participants	1	Review completed
	4.11.4	Records of power system operational communication	1	Review completed
	5.3.3	Response to connection enquiry	3	Review completed
	5.3.5	Preparation of offer to connect	6	Review completed
	5.7.5	Testing by registered participants of their own plant requiring changes to normal operation	4	Review completed
March 2008	3.11.3	Acquisition of non-market ancillary services	1	Review completed
	4.4.2	Operational frequency control requirements	2	Review completed

Quarter ending	NER clause	Description	No. of Participants targeted	Status <sup>5</sup>
	4.8.9	Power to issue directions and clause 4.8.9 directions	2	Review ongoing
	4.8.14	Power system restoration	2	Review completed
	4.10.3	Operating interaction with Distribution Networks	1	Review completed
	5.2.5	Obligations of generators	3	Review completed
	5.5	Access arrangements relating to Distribution Networks	2	Review completed
	7.3.4	Metering installation types and accuracy	2	Review completed
	7.8.2	Metering security controls	2	Review completed