AUSTRALIAN ENERGY REGULATOR

Investigation Report

Compliance with dispatch instructions by Braemar Power Project and the impacts of network congestion in Queensland on 4 November 2007

January 2009

Contents

Glossary

AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
APR	Annual Planning Report
Braemar	Braemar Power Project Pty Limited
CSM	Coal Seam Methane
NEL	National Electricity Law (a Schedule to the under the *National Electricity (South Australia) Act 1996* (South Australia))
NEM	The National Electricity Market being the electricity wholesale exchange operated and administered by NEMMCO, and the national electricity system, which comprises the following regions: New South Wales, Queensland, South Australia, Victoria and Tasmania
NEMMCO	National Electricity Market Management Company
NER	National Electricity Rules
QNI	Queensland/New South Wales Interconnector
Regulations	The *National Electricity (South Australia) Regulations* made under the *National Electricity (South Australia) Act 1996* (South Australia)

Executive Summary

This report completes the Australian Energy Regulator's (**AER**) investigation into the events in Queensland on 4 November 2007, in particular the conduct of Braemar Power Project Pty Ltd (**Braemar**). The AER considers that Braemar, a generator in Queensland, failed to follow dispatch instructions issued by National Electricity Market Management Company (**NEMMCO**) and failed to ensure it could satisfy its dispatch offer.

The NER require NEMMCO to ensure that the National Electricity Market (**NEM**) operates in a safe and secure manner at all times. To achieve this, NEMMCO relies on participants submitting offers that accurately reflect each generating unit's capability and relies on each unit following dispatch instructions issued by NEMMCO.

It is critically important that market participants fulfil their responsibility to provide accurate information to NEMMCO and follow dispatch instructions, particularly at times when the transmission network is constrained. Failure to do so can compromise system security.

Braemar offers energy into the NEM from its 500MW gas-fired power station, 200km west of Brisbane. The Braemar power station is comprised of three units, each of which is registered separately with NEMMCO.

On 4 November 2007, while one of the Braemar units was running at near full capacity, a planned transmission network outage reduced the transfer capability of the network in south-west Queensland. As a result, NEMMCO issued dispatch instructions to Braemar (along with other generators in the vicinity) to reduce output, but Braemar failed to do so. A second Braemar unit (after having received an instruction to start) was later also instructed to reduce output, but similarly failed to do so. As a result, the AER alleged that Braemar did not follow dispatch instructions and did not provide NEMMCO with the units' accurate capabilities as required by the National Electricity Rules (**NER**). The AER concluded that this conduct amounted to a breach by Braemar of both clauses 4.9.8(a) and 4.9.8(b) of the NER.

On 5 November 2008, the AER issued three infringement notices with penalties totalling $60 000. Braemar elected to pay the penalties in December 2008. Under the National Electricity Law (**NEL**)[1], payment of the penalty does not indicate an admission by Braemar that it breached the NER.

[1] Section 82 of the NEL.

1 Introduction

Section 15 of the NEL sets out the functions and powers of the AER. These functions include:

- monitoring compliance by registered participants and other persons with the NEL, the Regulations and the NER; and
- investigating breaches or possible breaches of provisions of the NEL, the Regulations or the NER that are not offence provisions.

To fulfil its role, the AER monitors the operation and performance of the NEM and conducts special investigations in response to market outcomes and/or specific events.

This report sets out the results of the AER's investigation into whether Braemar failed to follow dispatch instructions during the market events in Queensland on 4 November 2007. The report also examines whether the conduct of other relevant generators affected by those events was in accordance with the NER.

In this report:

- Part 2 provides a description of the matter under investigation;
- Part 3 details the issues and relevant NER provisions considered with respect to Braemar
- Part 4 details further issues considered with respect to other generators affected by the events of that day; and
- Part 5 details the outcomes of the investigation.

The infringement notices issued to Braemar, which set out the AER's allegations, are available separately on the AER website (www.aer.gov.au).

2 Description of the matter

2.1 Background regarding generation in south west Queensland

Braemar power station is located in the Darling Downs, around 200km west of Brisbane. Commissioned in 2006, the 504 MW power station comprises three 168 MW open cycle gas turbines. Braemar sources its fuel from nearby coal seam methane (**CSM**) gas fields and the Roma to Brisbane gas pipeline. During times of network congestion, Braemar competes for access to transmission capacity with neighbouring power stations at Millmerran (852 MW), Oakey (282 MW) and the recently commissioned, single largest unit in the NEM, Kogan Creek (750 MW).[2]

During October and November 2007, a combination of factors significantly affected the output of the generators located in south-west Queensland. These factors

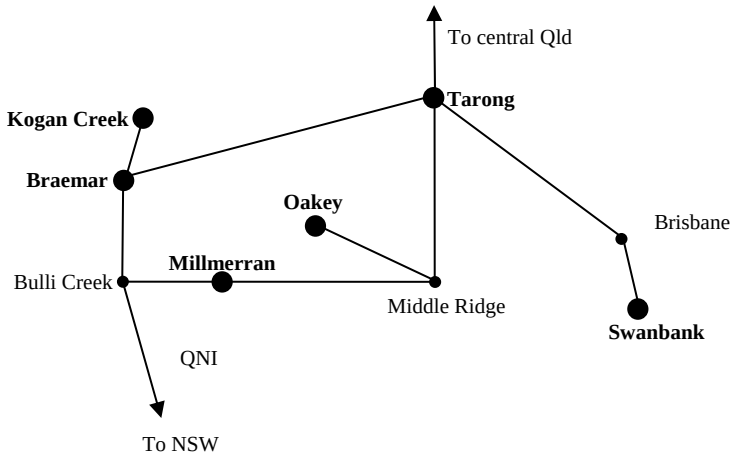
[2] The registered participants for the Millmerran, Oakey and Kogan Creek power stations are Millmerran Energy Trader Pty Ltd (**Millmerran**), AGL Hydro Partnership and CS Energy Limited respectively.

included:

- planned network outages;
- reduction of network capability due to lightning; and
- the commissioning program of the new Kogan Creek power station.

Figure 1 provides a simplified diagram of the generation and network in the south-west and southeast of Queensland during November 2007.

Figure 1: Network configuration in south-west Queensland during November 2007



2.2 New generation in south west Queensland in 2007

Kogan Creek power station began commissioning around May 2007. By October and throughout most of November of that year, the 750 MW generator was dispatched at its full capacity most of the time. In order to satisfy its testing program, the owners, CS Energy, declared the generator inflexible[3] throughout this period, making its output effectively fixed. The additional 750 MW of new capacity in this area of the network resulted in the output of neighbouring generators, in particular Braemar, being reduced whenever the network was constrained.

By December 2007, the commissioning tests were effectively complete and CS Energy offered Kogan Creek into the NEM on commercial terms.

2.3 Network developments

In its 2005 Annual Planning Report (**APR**), the Queensland Transmission Network Service Provider, Powerlink, identified a need to increase the network capability between south-west and south-east Queensland to meet the growing south-east load. By 2006, Powerlink had committed to the construction of a new transmission line between Middle Ridge near Toowoomba and Greenbank just south of Brisbane. Powerlink also flagged the need for a new double circuit between Breamar and Tarong and other subsequent augmentations in the area. Powerlink stated that these

[3] In accordance with clause 3.8.19 of the NER

augmentations would assist the flow of generation output from the Darling Downs region of Queensland and beyond to the load centres between Brisbane and the Gold Coast.

Throughout October and November 2007, a series of planned network outages were required to facilitate these augmentations. On a number of occasions, the network outages restricted the amount of output from the generators in the vicinity.

2.3.1 Network outages and their effect on 4 November

At around 5.30am on 4 November 2007, a planned network outage between Braemar and Tarong reduced transmission capability in south-west Queensland. Powerlink first provided notice of the planned outage to NEMMCO on 24 October 2007. The outage reduced the capability for flows into the Brisbane load centre from generation in the south-west (a total of around 2380 MW of available capacity) and from New South Wales across the Queensland to New South Wales Interconnector (**QNI**).

With Kogan Creek declared inflexible and Oakey shutdown, the impact of the network outage fell primarily on the remaining two generators in the area, Millmerran (operated by Millmerran Energy Trader Pty Ltd) and Braemar.

At 5.40am, Braemar received a dispatch instruction from NEMMCO to lower the output of its only running unit, Braemar unit 3. Braemar failed to follow these instructions. As a result, NEMMCO removed unit 3 from the dispatch process and declared it non-conforming for the period between 7am and 8.05am.[4]

Just after 7am, NEMMCO issued dispatch instructions to Braemar unit 1, which required the unit to start. Shortly after unit 1 had started, NEMMCO issued several dispatch instructions requiring unit 1 to reduce its output to zero. These dispatch instructions were unexpected by the Braemar operator and Braemar did not follow them. As a result, NEMMCO also declared unit 1 as non-conforming at 7.55am.

At 8.05am, NEMMCO removed its declaration of non-conformance on the basis that Braemar would follow dispatch instructions. Between 8.10am and 8.35am, NEMMCO issued further dispatch instructions requiring Braemar unit 3 to reduce output. Braemar did not comply with these instructions. NEMMCO declared unit 3 non-conforming for a second time for the period between 8.40am and 10.45am.

By 10.30 am, Braemar declared both units 1 and 3 inflexible and operated both units at a relatively constant output of around 90MW until the network outage was restored late in the day.

From 5.30am, Millmerran also received dispatch instructions to reduce output, although at a much slower rate than Braemar, reflecting the low ramp rate offered. By 11.30am, the output of the station had reduced by around 40 per cent to 500MW. At

[4] If NEMMCO determines that a scheduled generator is failing to respond to dispatch instructions, it may classify the generator as non-conforming pursuant to clause 3.8.23 of the NER. If NEMMCO believes that the generating unit will not respond to future dispatch instructions, this clause also provides for NEMMCO to determine the generator's output. Ordinarily, this results in the generator's removal from the economic dispatch process with the output being determined based on the current level of generation and not the dispatch process.

that time, Millmerran declared both units inflexible, as the generators had reached their minimum stable operating levels.

3 Compliance with dispatch instructions

3.1 Braemar's conduct on 4 November 2007

The AER's investigation into the events of 4 November 2007 were primarily focused on the general responsibilities of clause 4.9.8 of the NER that require participants to comply with dispatch instructions given to it by NEMMCO and to ensure that each of its generators is all times able to comply with its latest dispatch offer.

The AER noted a significant rise throughout October and November 2007 in the amount of time generators were flagged as non-conforming by NEMMCO, with the generators often being significantly off their dispatch targets. NEMMCO flagged Braemar as non-conforming during 137 5-minute dispatch intervals throughout this period compared to 25 dispatch intervals during the preceding 2 months. For Millmerran, non-conformance increased from 30 to 40 dispatch intervals and for Oakey, non-conformance increased from zero to five dispatch intervals.

3.1.1 Relevant provisions of the NER

Under the NER, NEMMCO is responsible for the operation and administration of the wholesale electricity market. NEMMCO coordinates a central dispatch process to manage the spot market, which involves matching generator supply offers to demand in real time. Every five minutes, NEMMCO issues dispatch instructions, based on participants' bids and offers, to produce the quantity of electricity that will meet demand at the lowest available cost, while maintaining the technical security of the power system.

The provisions of the NER that are most relevant to the AER investigation are those that relate to complying with dispatch instructions:

- clause 4.9.8(a) requires a registered participant to comply with a dispatch instruction unless, in the registered participant's reasonable opinion, to do so would be a hazard to public safety or would materially risk damaging equipment; and
- clause 4.9.8(b) requires a scheduled generator to ensure that each unit is at all times able to comply with the latest generation dispatch offer submitted in respect of that unit.

Both obligations are civil penalty provisions, a breach of which enables the AER to issue infringement notices or institute legal proceedings.

These clauses impose distinct obligations on registered participants and scheduled generators respectively. Clause 4.9.8(a) requires registered participants, including scheduled generators, to comply with dispatch instructions, subject to the qualification relating to public safety and damage to equipment.

Clause 4.9.8(b) relates to dispatch offers, and requires that the parties are able to comply with the latest offers they make. There is no qualification in relation to clause 4.9.8(b). Participants must ensure that their offers reflect the capability of their generation plant. Given that the NEM operates on a 5-minute basis, a participant

must monitor and vary its offer as required to ensure it always complies with its capability as conditions change.

The dispatch inflexibility provisions of clause 3.8.19 of the NER are also relevant to the AER investigation. This clause enables a generator that can start within 30 minutes (like the Braemar units), to submit a dispatch inflexibility profile as part of its offer data[5]. The purpose of the dispatch inflexibility profile is to allow participants to reflect the start-up and minimum run time characteristics of its plant into the dispatch process and therefore avoid short and repeated cycling of the plant, which increases wear and maintenance costs.

NEMMCO's dispatch engine issues instructions to units in accordance with each generator's offer, including, where applicable, the dispatch inflexibility profile. If a generator submits a dispatch inflexibility profile that it cannot physically comply with it risks a breach of clause 4.9.8(b).

3.1.2 Compliance assessment

The AER examined the events of late 2007, including 4 November, when the spot price exceeded $5 000/MWh in Queensland, as part of its compliance monitoring activities. It published a report into the high price in December 2007.[6] The report highlighted a number of concerns with the performance of generators, particularly Braemar.

The AER subsequently sought information concerning the events of 4 November on a voluntary basis from Millmerran, NEMMCO and Braemar. The AER also sought information from Braemar by way of a formal Notice under section 28 of the NEL.

The AER identified three distinct periods on 4 November 2007 where compliance was under review. Details of these three time periods and the specific Braemar unit involved are presented in figure 2.

Figure 2: Periods covered by the investigation of Braemar on 4 November 2007

Period	Time	Unit
1	5.40 am – 6.50 am	unit 3
2	7.10 am – 7.45 am	unit 1
3	8.10 am – 8.35 am	unit 3

3.1.3 Information provided by Braemar

In information provided to the AER by Braemar between December 2007 and May 2008, Braemar suggested that it was unable to comply with dispatch instructions on

[5] Clause 3.8.19(d) of the NER

[6] Spot prices greater than $5000/MWh Report – Queensland 4 November 2007 available on the AER website (http://www.aer.gov.au/content/index.phtml/itemId/714860).

4 November 2007 due to a material risk that its associated gas pipeline would be damaged from gas pressure limits being exceeded. Braemar claimed that the circumstances of 4 November 2007 did not allow for the curtailment of gas delivery and, as a result, gas pressure limits were only manageable with at least two units running at minimum load.

On 4 November 2007, Braemar had an expectation that both Braemar units would be running at 150MW for the entire day. The impact of the planned network outage between Tarong and Braemar in southern Queensland combined with the impact of Kogan Creek running at full capacity was not forecast.

Braemar expressed concern to NEMMCO on the day that it was required to disproportionately reduce its output as a result of reduced network capability in the region. Braemar claimed that other generators in the vicinity of the constraints, namely Kogan Creek (which was performing commission tests at its full output of 750MW) and Millmerran (which, by virtue of its low ramp rate, had its output slowly reduced to almost half as a result of the network constraint before declaring itself inflexible due to stability problems) were not instructed to reduce output to the extent or as quickly as Braemar.

Braemar advised that, in light of the reduction in network capability, its objective was to ensure two units remained above 90MW to manage gas pressures.

In its response to the AER's section 28 Notice, Braemar stated that Braemar unit 3 did not follow several dispatch instructions during 'Period 1' shortly after the commencement of the network outage on 4 November 2007. The reasons given for this non-compliance during 'Period 1' were that the unit was not configured to follow dispatch instructions automatically at the time and that the employee controlling the unit's output failed to manually adjust the output to comply with dispatch instructions.

The reasons given by Braemar for the non-compliance of unit 1 with dispatch instructions during 'Period 2' were partially attributed to an initial delay by Braemar staff in commencing the start-up process for the unit. However, Braemar claimed that the non-compliance of unit 1 was substantially attributed to the existence of an anomaly in the algorithm driving the dispatch instructions issued by NEMMCO's dispatch engine. Braemar believed that since NEMMCO's dispatch engine recognised that unit 1 had not commenced the start-up process as instructed, it re-issued a second set of start-up dispatch instructions after a short delay without recognising that the unit had commenced the start-up sequence late and was in the process of responding to the first set of start-up dispatch instructions.

The reason given by Braemar for the non-compliance of unit 3 during 'Period 3' was that it could not comply with dispatch instructions since by doing so it would materially risk damage to equipment. The material risks of damage to equipment claimed by Braemar were two-fold.

Firstly, Braemar stated that all three units have a greater risk of tripping when operated at an output below a pre-determined minimum load, being approximately 60 per cent of the maximum output of each unit. As such, each unit has a protection mechanism whereby the unit will automatically cease following dispatch instructions if it receives a target below its minimum load and instead maintain output at that

minimum load. This protection mechanism is in place to avoid the risk of the unit being placed under stress as a result of a trip. The unit must then be manually reconfigured to once again automatically follow dispatch instructions. Braemar claimed that since every dispatch instruction received in respect of unit 3 during 'Period 3' was below the unit's minimum load there was a material risk that the unit may be damaged as a result of a trip had those dispatch instructions been followed, requiring instead that the unit maintain output at minimum load.

The second material risk of damage to equipment claimed by Braemar in respect of unit 3 during 'Period 3' was that the plant or gas pipeline may be damaged due to gas pressure limits being exceeded. Braemar maintained that these gas pressure limits were only manageable with at least two units running at minimum load.

3.1.4 AER's view of Braemar's compliance

After considering all the information provided by the relevant participants and NEMMCO, the AER alleged that Braemar breached the NER on three occasions on 4 November 2007. The AER considers that:

- Braemar breached clause 4.9.8(a) with respect to unit 3 during 'Period 1';
- Braemar breached clause 4.9.8(b) with respect to unit 1 during 'Period 2'; and
- Braemar breached clause 4.9.8(b) with respect of unit 3 during 'Period 3'.

These specific breaches, however, were considered in the broader context of the entire period between 5.40am and 10.40am during which Braemar units 1 and/or 3 were not complying with dispatch instructions or, in NEMMCO's view, were unlikely to be able to do so.

Unit 3 – Period 1 – 4.9.8(a)

Braemar failed to follow dispatch instructions issued by NEMMCO at 5.40 am and 5.50 am. Between 6.20am and 6.40am, Braemar again failed to follow dispatch instructions issued by NEMMCO. During both periods, the AER concluded that the safety concerns identified by Braemar relating to operation below minimum loading levels did not apply.

Braemar acknowledged that it did not follow dispatch instructions during this period. The AER concluded that Braemar had no valid reason in this instance for not complying with a dispatch instruction given to it by NEMMCO in accordance with clause 4.9.8(a).

Unit 1 – Period 2 – 4.9.8(b)

The NER provide a mechanism for a generator that can start within 30 minutes, like Braemar, to provide, as part of its offer data, a dispatch inflexibility profile. The purpose of the dispatch inflexibility profile is to allow participants to reflect the start-up and minimum run time characteristics of its plant into the dispatch process and therefore avoid short and repeated cycling of the plant, which increases wear and maintenance costs. Clause 3.8.19 states that the dispatch inflexibility profile must contain the following parameters to indicate a generator's MW capacity and time related inflexibilities:

- the time, T1, in minutes, following the issue of a dispatch instruction by NEMMCO to increase its loading from 0 MW, which is required for the plant to begin to vary its dispatch level from 0 MW in accordance with the instruction;
- the time, T2, in minutes, that the plant requires after T1 to reach a specified minimum MW loading level;
- the time, T3, in minutes, that the plant requires to be operated at or above its minimum loading level before it can be reduced below that level; and
- the time, T4, in minutes, following the issue of a dispatch instruction by NEMMCO to reduce loading from the minimum loading level to zero, that the plant requires to completely comply with that instruction.

The NER also states that T1, T2, T3 and T4 must all be equal to or greater than zero, the sum (T1 + T2) must be less than or equal to 30 minutes and the sum (T1 + T2 + T3 + T4) must be less than 60 minutes.

The same provisions then require NEMMCO to use reasonable endeavours not to issue a dispatch instruction which is inconsistent with a scheduled generator's dispatch inflexibility profile.

The dispatch inflexibility profile submitted by Braemar for each of its generating units on 4 November 2007 is presented in figure 3.

Figure 3 - Dispatch inflexibility profile for each Braemar generator

Dispatch inflexibility profile	Minutes
T1	5
T2	0
T3	0
T4	5
Minimum loading level	6MW

Based on the dispatch inflexibility profile offered, each Braemar unit can start in one dispatch interval and can then be shutdown in the next dispatch interval. The information provided by Braemar in its response to the AER is inconsistent with the dispatch inflexibility profile offer provided to NEMMCO in that:

- T1 plus T2 did not provide a time period that accurately reflected the time required by the unit to reach its so-called minimum loading level (if the units typically ramp up at 6-8 MW/min as stated by Braemar, it should take at least three dispatch intervals to reach a minimum loading level of 92MW, not 5 mins as provided within T1 plus T2 of the profile);
- T3 of zero minutes, T3 being the time that the plant is required to be operated at or above its minimum loading level before it can be reduced below that level, hence, the dispatch process considered that the unit could be shut down in the 5 minute dispatch interval immediately following its start signal. (this differs from the claim made by Braemar); and

- the minimum loading level in its dispatch inflexibility profile was not consistent with that claimed in its response to the AER (ie 92 MW in its response as opposed to 6 MW in its profile).

NEMMCO's dispatch engine issues instructions to units in accordance with the generator offer, including where applicable, the dispatch inflexibility profile submitted as part of the unit's latest generation dispatch offer in accordance with clause 3.8.19 of the NER. The dispatch algorithm assumes perfect conformance by the generator during the periods T1 and T2.

Had Braemar submitted a dispatch inflexibility profile that reflected the technical limitations of the unit, the claimed anomaly in NEMMCO's dispatch engine identified by Braemar would not have been an issue. The unit would not have been declared non-conforming and the unit would have been issued dispatch instructions consistent with its offer that reflected its technical capability.

The AER concluded that Braemar should have ensured that it submitted a dispatch inflexibility profile as part of its latest generation dispatch offer that reflected the technical limitations of the unit in accordance with clause 4.9.8(b).

Unit 3: breach of 4.9.8(b) 8.10am – 8.35am

Braemar claimed that each of the three Braemar units has a minimum loading level of around 90MW or 60 per cent of full output. This loading level was not included as part of Braemar's offer and therefore was not recognised within the NEMMCO dispatch algorithm. In the event that a participant considers that one of its units will be unable to follow dispatch instructions it must take steps to modify its offer to ensure that it is at all times able to comply.

Braemar unit 3 had been declared non-conforming by NEMMCO from 6.55 am. Records of the operation communication for 4 November 2007 show that Braemar discussed with NEMMCO the lifting of the non-conformance constraint at 8.10 am effective immediately. As a result, Braemar had the opportunity to rebid its offer to reflect this technical limitation within its latest dispatch offer. This could have been achieved by either rebidding the unit's ramp rate[7] to zero in the downward direction only or alternatively declaring the unit inflexible, if abnormal plant or operating requirements were evident. Details of the inflexibility provisions are discussed in more detail in part 4.1 of this report.

Braemar failed to satisfy the requirements of clause 4.9.8(b) by failing to vary its generation dispatch offer in respect of unit 3 before or during period 3 to reflect the fact that it would be unable to comply with a dispatch instruction that reduced the output of the unit below its so-called minimum load of 92 MW.

Both Braemar units 1 and 3 were rebid as inflexible at 10.28 am some 5 hours after the initial network constraint impacted on their dispatch. The units remained inflexible until 4.55 pm.

[7] On 15 January 2009, the Australian Energy Market Commission (AEMC) promulgated a rule change proposal submitted by the AER in April 2008 that will see generators obliged to offer ramp rates greater than 3MW/min unless there was a physical reason related to the plant why this was not possible. This rule change will come into effect on 31 March 2009.

4 Other relevant generator conduct

4.1 Inflexibility rebidding by Millmerran

The AER wrote to Millmerran Energy Trader on 21 December 2007 in accordance with clause 3.8.19(b)(2) to seek additional information to substantiate and verify its declaration of inflexibility on 4 November 2007 from 11.31 am with respect to Millmerran unit two and from 1.22 pm with respect to unit one. This followed a period where the output of both units had been reduced from a total of almost 850 MW at 5.30am to around 550 MW at 11.30am.

Millmerran justified to the AER the decision to declare the units inflexible on the basis that:

- unit 2 was still in the process of stabilising after returning to service the previous day following a 10 day outage;
- both units 1 and 2 were showing signs of boiler flame instability at reduced output, increasing the prospects that the units fuel mills would trip which would lead to the generators themselves tripping; and
- auxiliary fuel supplies used to support the units during start up and low output were at abnormally low levels.

The AER concluded that Millmerran satisfied the requirements of the dispatch inflexibility provisions of the NER on 4 November 2007.

The AER rule change proposal

Under clause 3.8.19(a) of the NER, a generator must declare itself "inflexible" if, at any time, it is unable to operate in accordance with NEMMCO's dispatch instructions "due to abnormal plant conditions or other abnormal operating requirements". In accordance with clause 3.8.19(b)(1), a brief, verifiable and specific reason must be given to justify a declaration of inflexibility.

In essence, clause 3.8.19 requires participants to advise NEMMCO of inflexibility once it reasonably expects that the grounds to do so exist. However, the NER do not explicitly prohibit a participant from advising NEMMCO of inflexibility in the absence of those grounds. Nor do the NER explicitly require a participant to advise NEMMCO once those grounds cease to exist. Accordingly, a participant could theoretically have inflexibility status by notifying NEMMCO under clause 3.8.19 even if abnormal conditions do not exist or if such conditions have ceased to exist.

Since the NEM commenced in 1998, there have been a number of instances of conduct by participants which was not in accordance with the object underlying clause 3.8.19 of the NER.

On 15 January 2009, the AEMC promulgated a further rule change proposal put forward by the AER in April 2008 related to the inflexibility provisions that will make the improper use of the inflexibility provisions explicitly prohibited. This rule change will come into effect on 31 March 2009.

4.2 Commissioning of Kogan Creek

The commissioning of a large thermal power station such as the single 750MW generator at Kogan Creek is a complex task. Chapter 5 of the NER set out a series of obligations that registered participants must satisfy when commissioning or replacing such equipment. These obligations ensure that the equipment complies with relevant standards, the NER and connection agreements with network service providers.

A registered participant seeking to connect to the network must cooperate with the relevant network service provider(s) and NEMMCO to develop procedures to ensure that the commissioning and testing of the new connected facility is performed in a manner that minimises the impact on power system security or quality of supply.

NEMMCO has advised that CS Energy, the proponent for Kogan Creek, established the necessary commissioning program and operational arrangements in conjunction with NEMMCO and Powerlink to satisfy these obligations.

5 Outcomes of the investigation

The AER formed the view that Braemar contravened clause 4.9.8(a) of the NER in respect of unit 3 during the dispatch intervals ending 5.40 am, 5.50 am and 6.20 am through to 6.40 am on 4 November 2007. This conclusion was reached on the basis that Braemar's compliance with the relevant dispatch instructions for these dispatch intervals would not give rise to a hazard to public safety or materially risk damaging equipment.

Braemar also contravened clause 4.9.8(b) of the NER because it did not ensure that units 1 and 3 were at all times able to comply with the latest generation dispatch offer submitted in respect of those units on 4 November 2007. Braemar should have submitted a dispatch inflexibility offer as part of its initial offer that ensured it was at all times able to comply with dispatch instructions issued by NEMMCO. In addition, when appropriate, Braemar should have rebid to alter its offer to reflect the limitations of the unit.

The AER concluded that Millmerran satisfied the requirements of the dispatch inflexibility provisions of the NER on 4 November 2007. It was also satisfied that Kogan Creek, established the necessary commissioning program and operational arrangements in conjunction with NEMMCO and Powerlink to satisfy the NER.

5.1 Enforcement options

There are various enforcement options available to the AER when dealing with breaches of the NER, ranging from seeking voluntary commitments from the relevant participant to instituting court proceedings under section 61 of the NEL. The AER considers a number of factors when deciding whether to take enforcement action and which enforcement option to adopt. In general, the AER aims for a proportionate enforcement response taking into account the impact of the breach, the circumstances surrounding the breach and the participant's compliance programs and compliance culture.

In December 2006, the AER published a compliance bulletin that describes how the AER enforces compliance with the NER relating to compliance with dispatch instructions[8]. Among other things, the compliance bulletin confirms AER's close monitoring of registered participants' general responsibilities to comply with dispatch instructions issued by NEMMCO. The compliance bulletin also states that where a participant fails to follow dispatch instructions, the AER will investigate and consider all options at its disposal to enforce this provision including, where appropriate, infringement notices and legal proceedings.

5.2 Decision with respect to Braemar

The AER is of the view that despite the many, often complex factors faced by participants in the NEM, including contractual obligations related to gas supply, a participant's statutory obligations under the NER are not relieved. NEMMCO must be assured that at all times generating units will follow dispatch instructions and that offers submitted by participants accurately reflect a unit's capability. This enables NEMMCO to assess its security management options based on accurate information, including where necessary, issuing directions to participants to maintain power system security.

To facilitate this, the AER would recommend participants ensure some intra-day flexibility in fuel supply arrangements exist, to assist in managing the output of generators during periods of network congestion. This is particularly significant given the increased dependence on CSM gas as a fuel source across the NEM in the future.

It is important that market participants fulfil their responsibility to provide accurate information to NEMMCO and to follow dispatch instructions, particularly at times when the network is constrained. Failure to do so can compromise system security. As indicated in the December 2006 compliance bulletin, the AER rigorously enforces compliance in this area.

In this instance, the AER opted to issue infringement notices under section 74 of the NEL rather than instituting court proceedings to seek higher penalties. This decision recognises that Braemar cooperated with the AER's inquiries in this investigation.

The AER issued three infringement notices, seeking penalty payments totalling $60,000.[9] Braemar elected to pay this amount within the required 28 days. Consequently, the AER's enforcement action in relation to this matter is closed.

The AER notes that the breach of a civil penalty provision is not an offence[10]; and the payment of an infringement notice by a participant is not an admission of a breach or liability.

[8].AER, Compliance Bulletin – Complying with dispatch instructions, No. 1 December 2006 (http://www.aer.gov.au/content/index.phtml/itemId/692887).

[9] The infringement notices have been published separately on the AER website.

[10] Section 65 of the NEL.