



NEM Event – Directions Report 28 October to 5 November 2020

April 2021

Important notice

PURPOSE

Where the Australian Energy Market Operator (AEMO) intervenes in the National Electricity Market (NEM) through the use of directions, AEMO must publish a report in accordance with National Electricity Rules (NER) clauses 4.8.9(f) and 3.13.6A(a). This report satisfies those NER obligations and is based on information available to AEMO at 13 January 2020.

Unless otherwise indicated, terms in this report have the same meanings as those defined in the NER.

All references to time in this report are based on Australian Eastern Standard Time (AEST).

DISCLAIMER

AEMO has made every reasonable effort to ensure the quality of the information in this report but cannot guarantee its accuracy or completeness. Any views expressed in this report are those of AEMO unless otherwise stated and may be based on information given to AEMO by other persons.

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ABBREVIATIONS

Abbreviation	Expanded name
AEMO	Australian Energy Market Operator
DI	Dispatch Interval
GT	Gas Turbine
MN	Market Notice
MWh	Megawatt hours
NEM	National Electricity Market
NER	National Electricity Rules
PS	Power Station
SA	South Australia
ST	Steam Turbine

Contents

1.	Summary	4
2.	Intervention assessment	5
2.1	The need for intervention	5
2.2	Assessment of market response and latest time to intervene	6
3.	Intervention process	6
3.1	Adequacy of responses to AEMO inquiries	6
3.2	Participant ability to comply with the intervention	6
4.	Dispatch and pricing outcomes	7
4.1	Changes to dispatch outcomes due to the directions	7
4.2	Direction costs	7
5.	Conclusions and further actions	7

Tables

Table 1	Summary of the South Australia directions between 28 October and 5 November 2020	4
Table 2	Participant offers	5
Table 3	Summary of latest time to intervene	6

1. Summary

To ensure adequate system strength for secure operation of the South Australian power system, certain combinations of synchronous generating units must be in service at all times¹.

Clause 4.8.9 of the National Electricity Rules (NER) allows AEMO to intervene in the market by issuing directions or clause 4.8.9 instructions, if AEMO is satisfied that it is necessary to maintain or re-establish the power system to a secure, satisfactory, or reliable operating state. Section 116 of the National Electricity Law allows AEMO to issue directions to take certain action if AEMO considers that it is necessary to maintain power system security or for reasons of public safety.

Between 28 October and 5 November 2020, AEMO issued 16 directions across two events to South Australian Market Participants to maintain power system security. These directions are summarised in Table 1.

Table 1 Summary of the South Australia directions between 28 October and 5 November 2020

Direction	Directed Participant	Event No.	Issue time	Direction instruction	Cancellation time
Torrens Island Power Station (PS) B unit 2	AGL SA Generation Pty Ltd	1	1630 hrs, 28 October 2020	Synchronise and follow dispatch targets from 0900 hrs, 29 October 2020	1730 hrs, 29 October 2020
Torrens Island PS B unit 3	AGL SA Generation Pty Ltd	1	1630 hrs, 28 October 2020	Remain synchronised and follow dispatch targets from 0930 hrs, 29 October 2020	1700 hrs, 2 November 2020
Pelican Point one Gas Turbine (GT) and Steam Turbine (ST) 18	Pelican Point Power Limited (ENGIE)	1	1630 hrs, 28 October 2020	Remain synchronised and follow dispatch targets from 1000 hrs, 29 October 2020	1600 hrs, 29 October 2020
Torrens Island PS B unit 2	AGL SA Generation Pty Ltd	1	1530 hrs, 29 October 2020	Synchronise and follow dispatch targets from 0800 hrs, 30 October 2020	1630 hrs, 1 November 2020
Pelican Point one GT and ST 18	Pelican Point Power Limited (ENGIE)	1	1600 hrs, 29 October 2020	Remain synchronised and follow dispatch targets from 0900 hrs, 30 October 2020	1530 hrs, 30 October 2020
Pelican Point one GT and ST 18	Pelican Point Power Limited (ENGIE)	1	1700 hrs, 30 October 2020	Remain synchronised and follow dispatch targets from 0900 hrs, 31 October 2020	1500 hrs, 31 October 2020
Pelican Point one GT and ST 18	Pelican Point Power Limited (ENGIE)	1	1700 hrs, 31 October 2020	Remain synchronised and follow dispatch targets from 0800 hrs, 1 November 2020	1500 hrs, 1 November 2020
Torrens Island PS B unit 2	AGL SA Generation Pty Ltd	1	1600 hrs, 1 November 2020	Synchronise and follow dispatch targets from 0900 hrs, 2 November 2020	1000 hrs, 2 November 2020
Pelican Point one GT and ST 18	Pelican Point Power Limited (ENGIE)	1	0920 hrs, 2 November 2020	Remain synchronised and follow dispatch targets from 0920 hrs, 2 November 2020	1530 hrs, 2 November 2020

¹ AEMO Transfer Limit Advice – System Strength, available at https://aemo.com.au/-/media/files/electricity/nem/security_and_reliability/congestion-information/transfer-limit-advice-system-strength.pdf?la=en.

Direction	Directed Participant	Event No.	Issue time	Direction instruction	Cancellation time
Torrens Island PS B unit 1	AGL SA Generation Pty Ltd	2	1615 hrs, 2 November 2020	Synchronise and follow dispatch targets from 1030 hrs, 3 November 2020	1630 hrs, 5 November 2020
Torrens Island PS B unit 3	AGL SA Generation Pty Ltd	2	1630 hrs, 2 November 2020	Remain synchronised and follow dispatch targets from 2230 hrs, 2 November 2020	1530 hrs, 3 November 2020
Pelican Point GT 12 and ST 18	Pelican Point Power Limited (ENGIE)	2	1645 hrs, 2 November 2020	Remain synchronised and follow dispatch targets from 0200 hrs, 3 November 2020	1500 hrs, 3 November 2020
Pelican Point GT 11 and ST 18	Pelican Point Power Limited (ENGIE)	2	1645 hrs, 2 November 2020	Remain synchronised and follow dispatch targets from 0130 hrs, 3 November 2020	1130 hrs, 3 November 2020
Torrens Island PS B unit 3	AGL SA Generation Pty Ltd	2	1445 hrs, 3 November 2020	Remain synchronised and follow dispatch targets from 1000 hrs, 4 November 2020	0400 hrs, 5 November 2020
Pelican Point GT 12 and ST 18	Pelican Point Power Limited (ENGIE)	2	1445 hrs, 3 November 2020	Remain synchronised and follow dispatch targets from 1030 hrs, 4 November 2020	0400 hrs, 5 November 2020
Pelican Point GT 12 and ST 18	Pelican Point Power Limited (ENGIE)	2	1500 hrs, 4 November 2020	Remain synchronised and follow dispatch targets from 0930 hrs, 5 November 2020	1530 hrs, 5 November 2020

2. Intervention assessment

2.1 The need for intervention

To ensure adequate system strength for secure operation of the South Australian power system, certain combinations of synchronous generating units must be in service at all times. If market conditions lead to market participants seeking to decommit synchronous generation AEMO is required to intervene to maintain the required level of synchronous units. The need for intervention, and options considered, were assessed against the set of viable plant combinations available at the time the directions were issued.

The requirement to intervene for the direction events in this report arose when the bids in Table 2 were submitted.

Table 2 Participant offers

Event No.	Unit	Offer date	Bid
1	Torrens Island PS B unit 2	1312 hrs, 28 October 2020	Rebid to decommit from 0830 hrs, 29 October 2020 ^A
2	Torrens Island PS B unit 3	1255 hrs, 2 November 2020	Rebid to decommit from 2230 hrs, 2 November 2020 ^B

A. Rebid reason: 1231~F~001 PRIMARY RESPONSE TO D+1 PREDISPATCH~

B. Rebid reason: 1231~A~050 CHG IN AEMO PD~51 PD DEMAND INCREASE MAINLAND BY AV7

2.2 Assessment of market response and latest time to intervene

Under NER clause 4.8.5A(a) and (c), AEMO must notify the market of any anticipated power system security or reliability issue, and the latest time for market response before AEMO would need to intervene.

AEMO contacted all participants who operate suitable generating units in South Australia to confirm their availability and the latest time to intervene. Those participants indicated that no market response would be provided but identified units that would be available if directed.

For each of the direction events, AEMO assessed the latest time to intervene taking account of the advised lead times. The latest times to intervene are listed in Table 3.

Table 3 Summary of latest time to intervene

Event No.	Latest time to respond	Market Notice
1	1630 hrs, 28 October 2020	MN 79352
2	1700 hrs, 2 November 2020	MN 79549

3. Intervention process

AEMO considers that it followed all applicable processes under NER clause 4.8 for the management of the directions between 28 October and 5 November 2020².

3.1 Adequacy of responses to AEMO inquiries

NER clause 4.8.5A(d) permits AEMO to request information from Scheduled Network Service Providers, Scheduled Generators, Semi-Scheduled Generators, and Market Customers.

AEMO is satisfied with the timeliness, adequacy, and effectiveness of all responses to its requests for information prior to issuing the directions between 28 October and 5 November 2020.

3.2 Participant ability to comply with the intervention

NER clause 4.8.9(d) requires that a Registered Participant must immediately notify AEMO of its inability to comply, or intention not to comply, with a direction or clause 4.8.9 instruction.

AEMO is satisfied with all participants complying with the directions listed in Table 1.

² AEMO. Power system operating procedure SO_OP 3707, "Procedures For Issue Of Directions And Clause 4.8.9 Instructions", 06 September 2019, available at https://aemo.com.au/-/media/files/electricity/nem/security_and_reliability/power_system_ops/procedures/so_op_3707-procedures-for-issue-of-directions-and-clause-4-8-9-instructions.pdf?la=en.

4. Dispatch and pricing outcomes

4.1 Changes to dispatch outcomes due to the directions

The directions resulted in approximately 23,043 megawatt hours (MWh) of synchronous generation being directed into the market.

Intervention pricing did not apply for these events.

Under clause 3.8.1 of the NER, AEMO must operate a central dispatch process to balance power system supply and demand, using its reasonable endeavours to maintain power system security in accordance with NER Chapter 4 and the power system security standards. AEMO notes that in the absence of directions for system security, the central dispatch process would have produced an outcome which would have resulted in the operation of the power system in an unsecure state and would therefore have been an infeasible dispatch solution.

4.2 Direction costs

The compensation recovery costs for the direction between 28 October and 5 November 2020 were \$1,507,586. Direction compensation recovery data can be found on the AEMO website³.

5. Conclusions and further actions

Between 28 October and 5 November 2020, AEMO issued 16 directions to South Australian Market Participants to maintain power system security, in response to a forecast lack of system strength in the region.

AEMO is satisfied that all applicable procedures and processes were followed in assessing the need for intervention, determining the latest time to intervene, enacting and managing the intervention and seeking market response from all generators capable of meeting the system strength requirements. The market was informed after each direction was issued.

AEMO is also satisfied with the timeliness and adequacy of participant responses and communication throughout.

³ AEMO. Direction Compensation Recovery, available at <https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/data-nem/settlements-data/direction-compensation-recovery>.