AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

Status Report

1 April 2023 to 30 June 2023

Prepared for the ERA under clause 7.12 of the WEM Rules

Contents

1 Introduction

The Australian Energy Market Operator (AEMO) has prepared this report under clause 7.12 of the Wholesale Electricity Market Rules (WEM Rules).

Clause 7.12 of the WEM Rules requires AEMO to provide a report to the Economic Regulation Authority (ERA) once every three months on the performance of the market with respect to the dispatch process. The report must include details of:

- the incidence and extent of issuance of Operating Instructions and Dispatch Instructions;
- the incidence and extent of non-compliance with Operating Instructions and Dispatch Instructions;
- the incidence and reasons for the issuance of Dispatch Instructions to Balancing Facilities Out of Merit, including for the purposes of clause 7.12.1 of the WEM Rules, issuing Dispatch Orders to the Balancing Portfolio in accordance with clause 7.6.2 of the WEM Rules;
- the incidence and extent of transmission constraints;
- the incidence and extent of shortfalls in Ancillary Services, involuntary curtailment of load, High Risk Operating States and Emergency Operating States; and
- the incidence and reasons for the selection and use of LFAS Facilities under clause 7B.3.8 of the WEM Rules.

In this report:

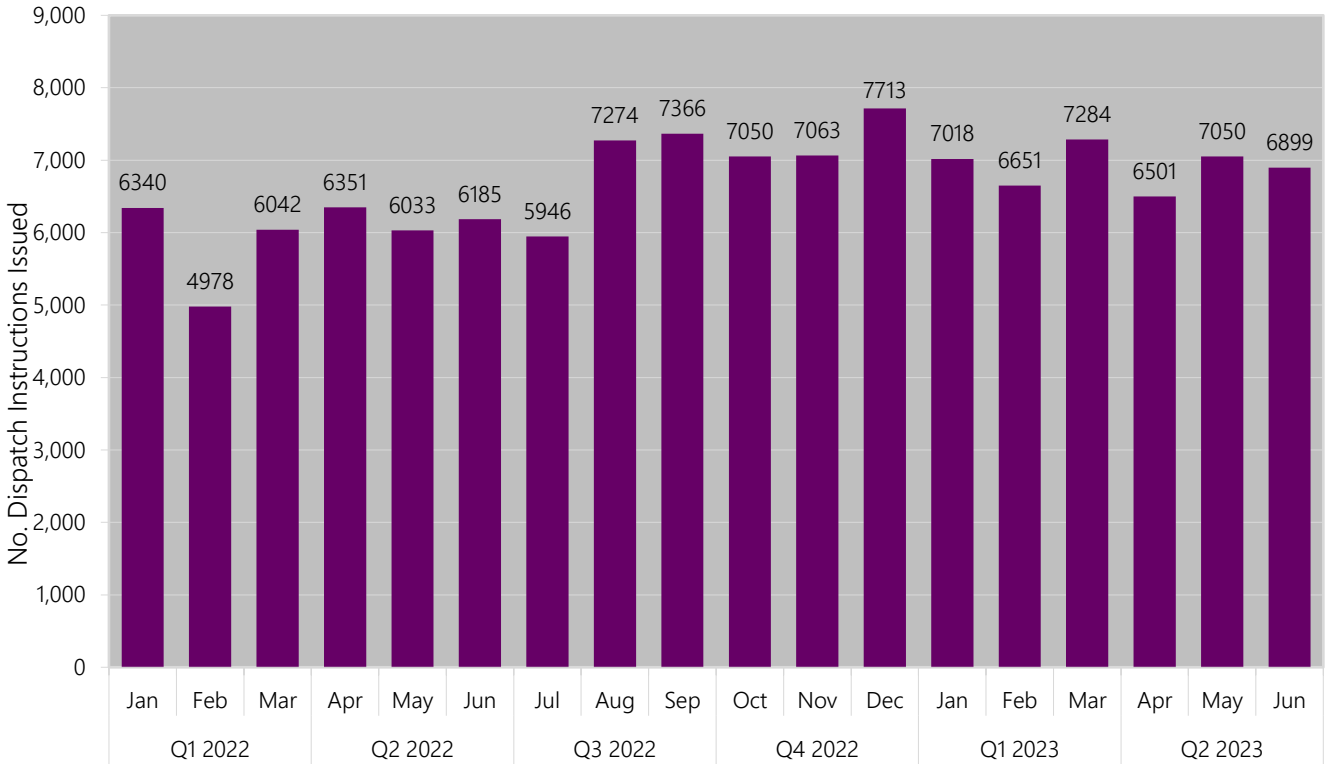
- the reporting period is from 1 April 2023 to 30 June 2023;
- terms that are capitalised but not defined have the meaning given in the WEM Rules; and
- date references are to Trading Days, not calendar days, unless otherwise stated.

2 Issuance of Dispatch Instructions and Operating Instructions

2.1 Dispatch Instructions

AEMO issued 20,450 Dispatch Instructions to Market Participants during the reporting period.

Figure 1 Dispatch Instructions issued during each Trading Month since 1 January 2022.

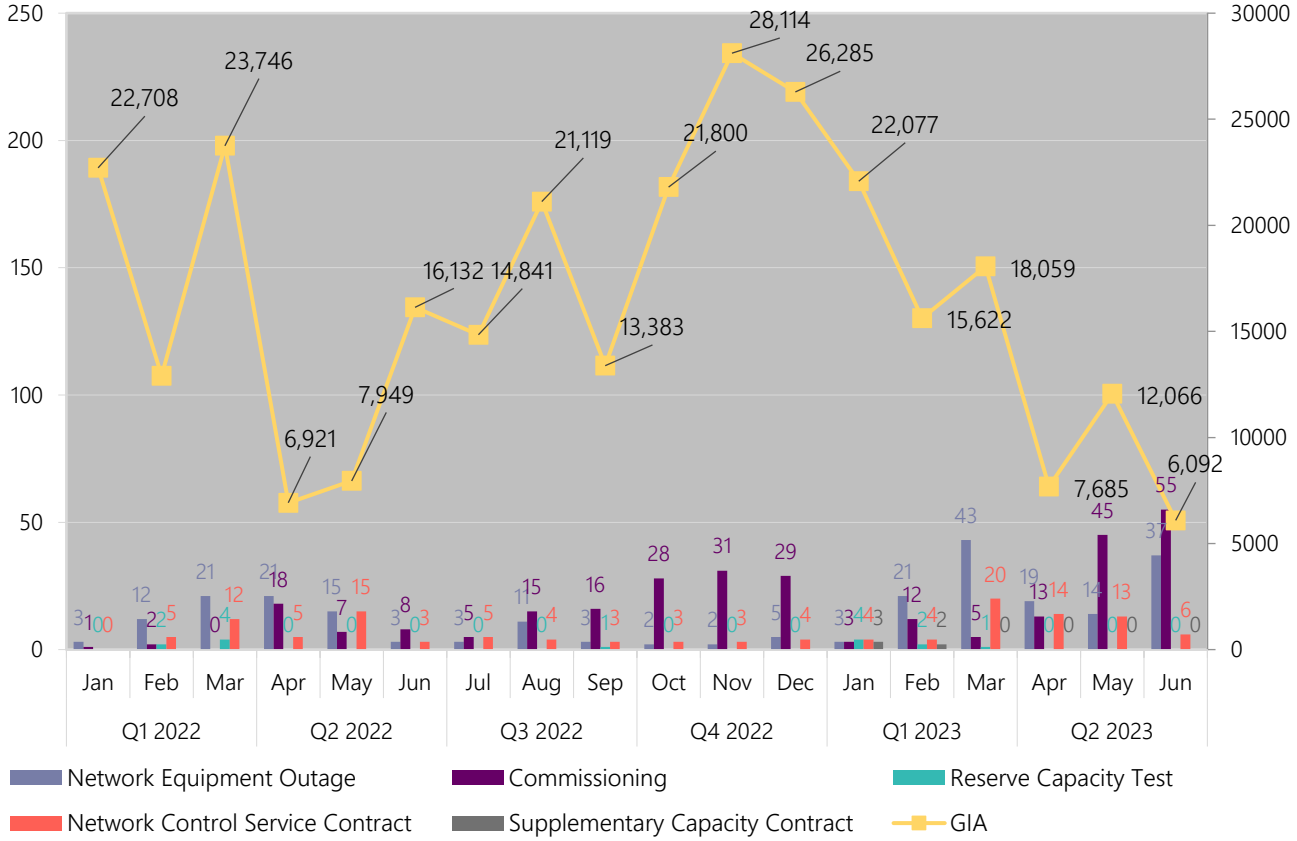


2.2 Operating Instructions

AEMO issued 26,059 Operating Instructions during the reporting period.

Situations where AEMO may issue Operating Instructions under the WEM Rules are for Commissioning Tests, Reserve Capacity Tests, Network Equipment Outages (pursuant to clause 7.7.11.) and provision of services under the Network Control Service Contracts and Generator Interim Access (GIA) Operating Instructions. In Q1 2023, AEMO also issued Operating Instructions for Supplementary Capacity Contracts[1].

Figure 2 Operating Instructions[2] issued during each Trading Month since 1 January 2022.



[1] In 2022 AEMO progressed the SRC process after identifying a potential requirement to secure up to 174 MW between 1 December 2022 to 31 March 2023.

[2] Generator Interim Access (GIA) Operating Instructions are a sub-set of Network Control Service (NCS) Operating Instructions. Figure 2 separates GIA from NCS for clarity.

3 Non-Compliance with Dispatch Instructions and Operating Instructions[3]

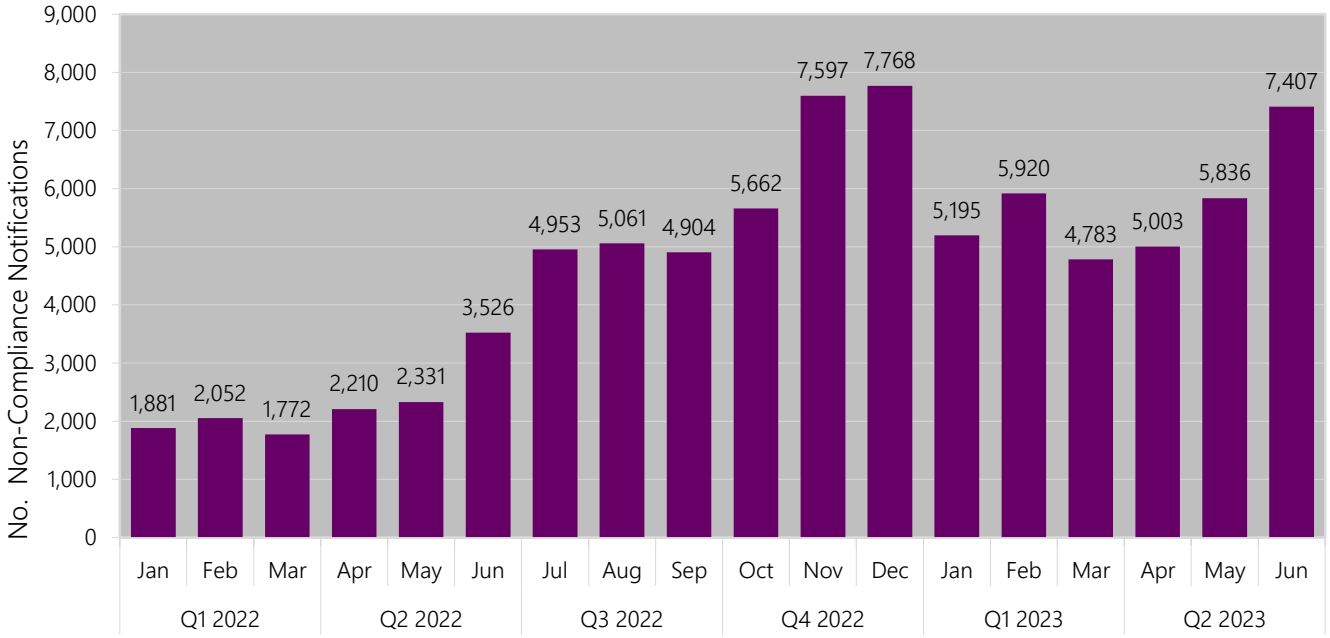
During the reporting period, AEMO issued the following one-minute non-compliance notifications to Market Participants, considering the Tolerance Range and any Facility Tolerance Ranges, where applicable:

- 18,246 Dispatch Instruction non-compliance notifications, and
- 95 Operating Instructions non-compliance notifications.

During the reporting period, the following were instances where a Market Participant did not confirm receipt when required to do so under the WEM Rules:

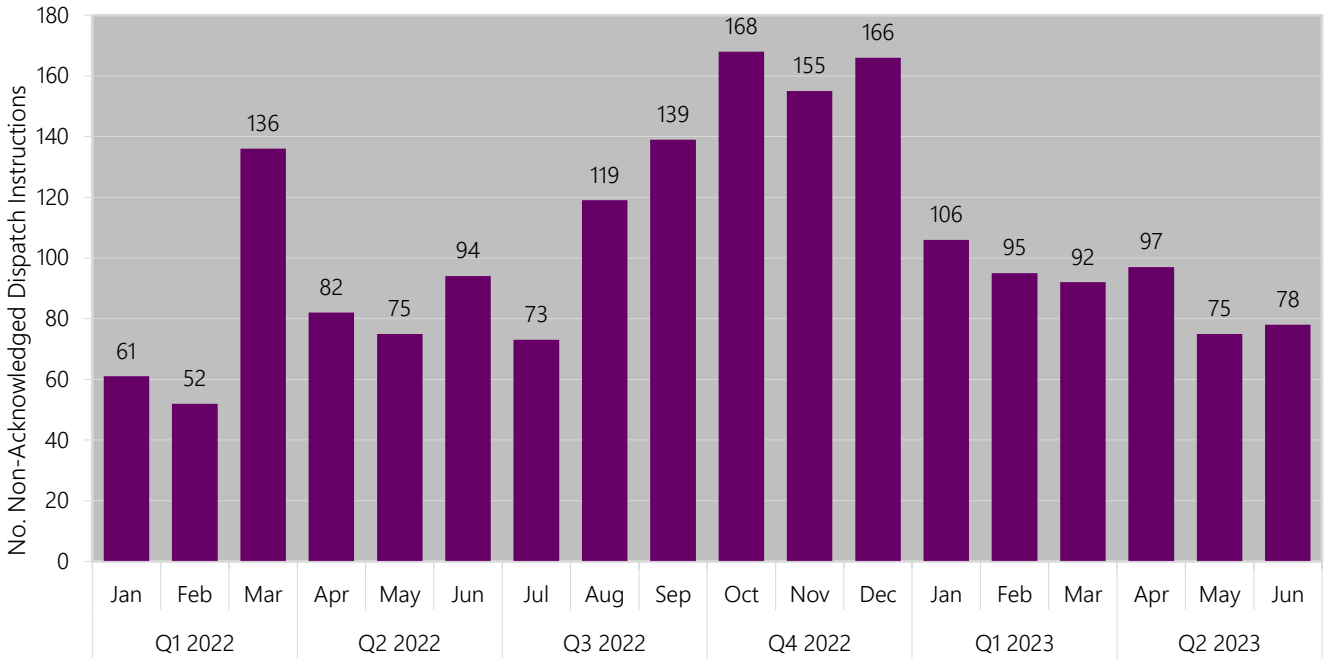
- 250 instances of non-acknowledgement of Dispatch Instructions, and
- 369 instances of non-acknowledgement of Operating Instructions.

Figure 3 Dispatch Instruction non-compliance notifications since 1 January 2022.



[3] Instances of non-compliance are calculated using information AEMO has at hand at the time of creation of the 7.12 report. Actual instances may differ once reviewed and determined by the ERA.

Figure 4 Non-acknowledgement of Dispatch Instructions since 1 January 2022.



4 Issuance of Dispatch Instruction to Balancing Facilities Out of Merit

4.1 Instances of Out of Merit dispatch identified by AEMO

During the reporting period, one instance was identified where Dispatch Instructions were issued to Balancing Facilities Out of Merit.

Date/Interval/s	Trading interval 5:1 on 2 May 2023 to Trading Interval 12:2 on 6 May 2023
Dispatch Advisory #	209699
Details	Due to a planned Western Power Network outage the Eastern Goldfields region was islanded from the SWIS. AEMO constrained on the PRK_AG and STHRNCRS_EG Facilities.
AEMO Action	AEMO dispatched Out of Merit to maintain Power System Security and Reliability in the Eastern Goldfields region.

4.2 Other instances of Out of Merit dispatch[4]

Section 5 of this report includes information regarding instances of Out of Merit dispatch due to transmission network constraints. AEMO issues Dispatch Advisories when these situations occur.

Section 6 of this report describes occasions of High Risk and Emergency Operating States that occurred during the reporting period. Note that during elevated Operating States, there may be a need to dispatch Facilities Out of Merit to enable the SWIS to be returned to a Normal Operating State.

[4] 7.6.1D of the WEM Rules provides for Out of Merit dispatch to avoid a High Risk Operating State or an Emergency Operating State or, if the SWIS is in a High Risk Operating State or an Emergency Operating State, to enable the SWIS to be returned to a Normal Operating State.

5 Transmission Constraints

A “transmission constraint” refers to the configuration of the transmission network that has an effect or potential effect of constraining or otherwise varying the output of a generation Facility. As a result of the transmission constraint, the generation Facility is required to increase or decrease output, depending on the relevant circumstances.

AEMO has identified the following transmission constraints during the reporting period:

Date/Interval/s	1 Apr 2023 / Trading Interval 7:1 to Trading Interval 16:1
Dispatch Advisory #	209643
Details	A planned Western Power Network outage on the MGA-TS81 transmission line resulted in the need to constrain the ALINTA_WWF Facility.

Date/Interval/s	2 Apr 2023 / Trading Interval 7:1 to Trading Interval 17:2
Dispatch Advisory #	209644
Details	A planned Western Power Network outage on the MGA-TS81 transmission line resulted in the need to constrain the ALINTA_WWF Facility.

Date/Interval/s	3 Apr 2023 / Trading Interval 7:1 to Trading Interval 17:1
Dispatch Advisory #	209645
Details	A planned Western Power Network outage on the MGA-TS81 transmission line resulted in the need to constrain the ALINTA_WWF Facility.

Date/Interval/s	4 Apr 2023 / Trading Interval 7:1 to Trading Interval 17:1
Dispatch Advisory #	209647
Details	A planned Western Power Network outage on the MGA-TS81 transmission line resulted in the need to constrain the ALINTA_WWF Facility.

Date/Interval/s	5 Apr 2023 / Trading Interval 7:1 to Trading Interval 16:1
Dispatch Advisory #	209649
Details	A planned Western Power Network outage on the MGA-TS81 transmission line resulted in the need to constrain the ALINTA_WWF Facility.

Date/Interval/s	6 Apr 2023 / Trading Interval 5:2 to Trading Interval 14:2
Dispatch Advisory #	209650
Details	A planned Western Power Network outage on the MSR 132kV A2 Bus Bar resulted in the need to constrain the PERTHENERGY_KWINANA_GT1 Facility.

Date/Interval/s	8 Apr 2023 / Trading Interval 10:2 to Trading Interval 12:1
Dispatch Advisory #	209652
Details	A Forced Western Power Network outage on the MGA 881.0 circuit breaker resulted in the need to constrain the GREENOUGH_RIVER_PV1 Facility.

Date/Interval/s	Trading Interval 7:1 on 12 Apr 2023 to Trading Interval 15:1 on 14 Apr 2023
Dispatch Advisory #	209660
Details	A planned Western Power Network outage on the MGA-TS81 transmission line resulted in the need to constrain the ALINTA_WWF Facility.

Date/Interval/s	22 Apr 2023 / Trading Interval 12:2 to Trading Interval 14:2
Dispatch Advisory #	209681
Details	A forced Western Power Network outage on the MGA-MBA81 and TS-MBA81 transmission lines resulted in the need to constrain the ALINTA_WWF Facility.

Date/Interval/s	22 Apr 2023 / Trading Interval 12:2 to Trading Interval 14:2
Dispatch Advisory #	209681
Details	A forced Western Power Network outage on the MGA-MBA81 and TS-MBA81 transmission lines resulted in the need to constrain the GREENOUGH_RIVER_PV1 Facility.

Date/Interval/s	24 Apr 2023 / Trading Interval 15:2 to Trading Interval 21:2
Dispatch Advisory #	209683, 209684
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	30 Apr 2023 / Trading Interval 17:2 to Trading Interval 19:2
Dispatch Advisory #	209694
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	1 May 2023 / Trading Interval 15:2 to Trading Interval 20:1
Dispatch Advisory #	209698
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	Trading Interval 5:2 on 2 May 2023 to Trading Interval 12:2 on 6 May 2023
Dispatch Advisory #	209699
Details	A planned Western Power Network outage islanded the Eastern Goldfields region from the SWIS, resulting in the need to constrain the PRK_AG Facility.

Date/Interval/s	Trading Interval 5:2 on 2 May 2023 to Trading Interval 12:2 on 6 May 2023
Dispatch Advisory #	209699
Details	A planned Western Power Network outage islanded the Eastern Goldfields region from the SWIS, resulting in the need to constrain the STHRNCRS_EG Facility.

Date/Interval/s	Trading Interval 5:2 on 2 May 2023 to Trading Interval 12:2 on 6 May 2023
Dispatch Advisory #	209699
Details	A planned Western Power Network outage islanded the Eastern Goldfields region from the SWIS, resulting in the need to constrain the NAMKKN_MERR_SG1 Facility.

Date/Interval/s	2 May 2023 / Trading Interval 5:2 to Trading Interval 6:2
Dispatch Advisory #	209699
Details	A planned Western Power Network outage islanded the Eastern Goldfields region from the SWIS, resulting in the need to constrain the INVESTEC_COLLGAR_WF1 Facility.

Date/Interval/s	Trading Interval 5:2 on 3 May 2023 to Trading Interval 12:2 on 6 May 2023
Dispatch Advisory #	209699
Details	A planned Western Power Network outage islanded the Eastern Goldfields region from the SWIS, resulting in the need to constrain the INVESTEC_COLLGAR_WF1 Facility.

Date/Interval/s	11 May 2023 / Trading Interval 4:2 to Trading Interval 8:1
Dispatch Advisory #	209715
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	11 May 2023 / Trading Interval 16:2 to Trading Interval 19:1
Dispatch Advisory #	209717
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	21 May 2023 / Trading Interval 16:2 to Trading Interval 19:1
Dispatch Advisory #	209733
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	22 May 2023 / Trading Interval 15:1 to Trading Interval 19:1
Dispatch Advisory #	209735
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	25 May 2023 / Trading Interval 16:2 to Trading Interval 18:2
Dispatch Advisory #	Not issued
Details	Network configuration issues in the North Metro region resulted in the need to constrain a Facility.

Date/Interval/s	25 May 2023 / Trading Interval 19:2 to Trading Interval 20:1
Dispatch Advisory #	209740
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	26 May 2023 / Trading Interval 15:2 to Trading Interval 21:2
Dispatch Advisory #	209742
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	27 May 2023 / Trading Interval 15:2 to Trading Interval 20:1
Dispatch Advisory #	209744, 209745
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	27 May 2023 / Trading Interval 16:2 to Trading Interval 20:1
Dispatch Advisory #	209746
Details	A gas pipeline pressure issue resulted in the need to constrain the ALINTA_WGP_U2 Facility.

Date/Interval/s	29 May 2023 / Trading Interval 14:2 to Trading Interval 20:2
Dispatch Advisory #	209751
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	30 May 2023 / Trading Interval 14:2 to Trading Interval 21:1
Dispatch Advisory #	209754
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	31 May 2023 / Trading Interval 5:1 to Trading Interval 23:1
Dispatch Advisory #	209758
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	1 Jun 2023 / Trading Interval 5:1 to Trading Interval 20:1
Dispatch Advisory #	209761
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	Trading Interval 16:1 on 3 Jun 2023 to Trading Interval 8:2 on 4 Jun 2023
Dispatch Advisory #	209765
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	Trading Interval 15:1 on 5 Jun 2023 to Trading Interval 18:2 on 6 Jun 2023
Dispatch Advisory #	209771, 209773
Details	A Forced Western Power Network outage on the TS-MBA81 line resulted in the need to constrain the ALINTA_WWF Facility.

Date/Interval/s	Trading Interval 15:2 on 5 June 2023 to Trading Interval 18:1 on 6 Jun 2023
Dispatch Advisory #	209772
Details	A Forced Western Power Network outage on the TS-MBA81 line resulted in the need to constrain the MWF_MUMBIDA_WF1 Facility.

Date/Interval/s	Trading Interval 16:1 on 5 June 2023 to Trading Interval 18:1 on 6 Jun 2023
Dispatch Advisory #	209772
Details	A Forced Western Power Network outage on the TS-MBA81 line resulted in the need to constrain the GREENOUGH_RIVER_PV1 Facility.

Date/Interval/s	Trading Interval 14:1 on 6 June 2023 to Trading Interval 4:2 on 10 Jun 2023
Dispatch Advisory #	209780, 209784, 209788, 209785, 209800, 209804
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	12 Jun 2023 / Trading Interval 15:1 to Trading Interval 22:1
Dispatch Advisory #	209809
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	12 Jun 2023 / Trading Interval 16:1 to Trading Interval 20:2
Dispatch Advisory #	209810
Details	A Forced Western Power Network outage on the MGA 881.0 circuit breaker resulted in the need to constrain the GREENOUGH_RIVER_PV Facility.

Date/Interval/s	Trading Interval 6:2 on 13 Jun 2023 to Trading Interval 8:2 on 14 Jun 2023
Dispatch Advisory #	209812, 209813
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	Trading Interval 15:1 on 14 Jun 2023 to Trading Interval 8:2 on 15 Jun 2023
Dispatch Advisory #	209817
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	17 Jun 2023 / Trading Interval 16:2 to Trading Interval 19:1
Dispatch Advisory #	209838
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	Trading Interval 7:2 on 19 Jun 2023 to Trading Interval 22:2 on 20 Jun 2023
Dispatch Advisory #	209843, 209846, 209849, 209852, 209853
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	21 Jun 2023 / Trading Interval 14:1 to Trading Interval 14:2
Dispatch Advisory #	Not issued
Details	A failure of Western Power control systems and to avoid overloading of network equipment resulted in the need to constrain a Facility.

Date/Interval/s	21 Jun 2023 / Trading Interval 15:2 to Trading Interval 22:1
Dispatch Advisory #	209859
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	22 Jun 2023 / Trading Interval 5:1 to Trading Interval 8:1
Dispatch Advisory #	209862
Details	Network configuration issues in the North Metro region resulted in the need to constrain the NEWGEN_NEERABUP_GT1 Facility.

Date/Interval/s	23 Jun 2023 / Trading Interval 12:1 to Trading Interval 16:1
Dispatch Advisory #	209865
Details	A planned Western Power Network outage on the MGA-MBA81 line resulted in the need to constrain the ALINTA_WWF Facility.

Date/Interval/s	24 Jun 2023 / Trading Interval 7:1 to Trading Interval 14:2
Dispatch Advisory #	209868
Details	A forced Western Power Outage on the SNR-WGP-APJ81 line resulted in the need to constrain the ALCOA_WGP Facility.

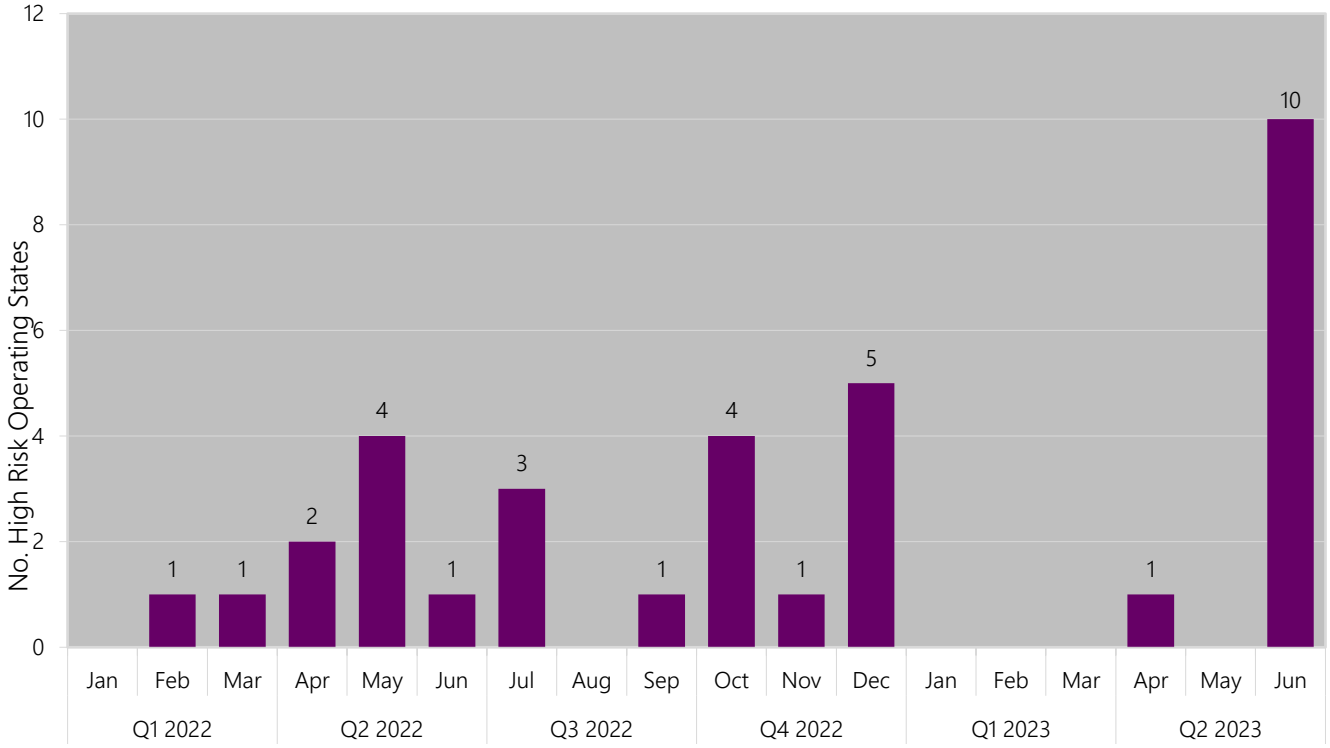
Date/Interval/s	30 Jun 2023 / Trading Interval 6:2 to Trading Interval 11:2
Dispatch Advisory #	209884
Details	A planned Western Power Network outage on the MGA-GTN 81 line resulted in the need to constrain the ALINTA_WWF Facility.

6 Operating States, Shortfalls in Ancillary Services and Involuntary Curtailment of Load

6.1 High Risk Operating State

There were 11 instances of a High Risk Operating State during the reporting period.

Figure 5 High Risk Operating States that have occurred since 1 January 2022.



Date/Interval/s	10 April 2023 / Trading Interval 14:2
Dispatch Advisory #	209656
Details	Due to prevailing weather conditions and rapid system load pickup of approximately 700MW in 30 minutes, the Frequency dipped below 49.68Hz momentarily. Some Out of Merit dispatch may have occurred.
AEMO Action	AEMO continued to dispatch to maintain Power System Security and Reliability.

Date/Interval/s	6 June 2023 / Trading Interval 11:1 to Trading Interval 20:2
Dispatch Advisory #	209782
Details	Operating State update due to forecast Lack of Reserve (LOR) 2 conditions. Due to high demand conditions during the evening peak period AEMO is forecasting LOR2 conditions. Market Participants are advised that during the specified period: 1. All generation in the Balancing Merit Order may become In Merit and receive a Dispatch Instruction. 2. Demand Side Programmes have been dispatched. 3. AEMO may take further actions to manage power system security and reliability as required.
AEMO Action	AEMO dispatched according to the WEM Rules and Power System requirements to maintain Power System Security and Reliability. During this period some Out of Merit dispatch may be required to maintain Ancillary Services and reserves.

Date/Interval/s	7 June 2023 / Trading Interval 13:1 to Trading Interval 22:1
Dispatch Advisory #	209787
Details	Operating State update due to forecast Lack of Reserve (LOR) 2 conditions. Due to high demand conditions during the evening peak period today AEMO is forecasting LOR2 conditions. Market Participants are advised that during the specified period: 1. All generation in the Balancing Merit Order may become In Merit and receive a Dispatch Instruction. 2. Demand Side Programmes have been dispatched. 3. AEMO may take further actions to manage power system security and reliability as required.
AEMO Action	AEMO dispatched according to the WEM Rules and Power System requirements to maintain Power System Security and Reliability. During this period some Out of Merit dispatch may be required to maintain Ancillary Services and reserves.

Date/Interval/s	8 June 2023 / Trading Interval 14:1 to Trading Interval 21:2
Dispatch Advisory #	209797
Details	Operating State update due to forecast Lack of Reserve (LOR) 2 conditions. Due to high demand conditions during the evening peak period today AEMO is forecasting LOR2 conditions. Market Participants are advised that during the specified period: 1. All generation in the Balancing Merit Order may become In Merit and receive a Dispatch Instruction. 2. Demand Side Programmes have been dispatched. 3. AEMO may take further actions to manage power system security and reliability as required.
AEMO Action	AEMO dispatched according to the WEM Rules and Power System requirements to maintain Power System Security and Reliability. During this period some Out of Merit dispatch may be required to maintain Ancillary Services and reserves.

Date/Interval/s	14 June 2023 / Trading Interval 18:1
Dispatch Advisory #	209816
Details	BW1_BLUEWATERS_G2 tripped at 18:03 resulting in a loss of approximately 230MW. Frequency fell to 49.49Hz recovering within five minutes. Some Out of Merit generation may have occurred.
AEMO Action	AEMO dispatched according to the latest Balancing Merit Order to maintain Power System Security and Reliability.

Date/Interval/s	18 June 2023 / Trading Interval 3:2
Dispatch Advisory #	209839
Details	ALINTA_PNJ tripped at 03:59 on 18/06/2023 resulting in a loss of approximately 139MW and a frequency deviation to 49.60 Hz. Frequency returned to a Normal Operating range within 1 minute of the unit tripping.
AEMO Action	Dispatch according to the latest Balancing Merit Order to maintain Power System Security and Power System Reliability.

Date/Interval/s	19 June 2023 / Trading Interval 13:2 to Trading Interval 21:1
Dispatch Advisory #	209847
Details	Operating State update due to forecast Lack of Reserve (LOR) 2 conditions. Due to high demand conditions during the evening peak period today AEMO is forecasting LOR2 conditions. Market Participants are advised that during the specified period: 1. All generation in the Balancing Merit Order may become In Merit and receive a Dispatch Instruction. 2. Demand Side Programmes will be dispatched. 3. AEMO may take further actions to manage power system security and reliability as required.
AEMO Action	AEMO dispatched according to the WEM Rules and Power System requirements to maintain Power System Security and Reliability. During this period some Out of Merit dispatch may be required to maintain Ancillary Services and reserves.

Date/Interval/s	19 June 2023 / Trading Interval 16:2 to Trading Interval 22:1
Dispatch Advisory #	209849
Details	Due to network configuration issues in the North Metro region, NEWGEN_NEERABUP_GT1 was constrained to a maximum of 170 - 300MW. Some Out of Merit dispatch may occur.[5]
AEMO Action	AEMO constrained NEWGEN_NEERABUP_GT1 to maintain System Security and Reliability. Continue to dispatch according to the latest BMO received.

[5] This was a High Risk Operating State due to the forecast Lack of Reserve (LOR) 2 conditions at the time.

Date/Interval/s	20 June 2023 / Trading Interval 7:1
Dispatch Advisory #	209852
Details	Due to network configuration issues in the North Metro region, NEWGEN_NEERABUP_GT1 was constrained to a maximum of 170 - 300MW. Some Out of Merit dispatch may occur.[6]
AEMO Action	AEMO constrained NEWGEN_NEERABUP_GT1 to maintain System Security and Reliability. Continue to dispatch according to the latest BMO received.

Date/Interval/s	21 June 2023 / Trading Interval 14:2
Dispatch Advisory #	209857
Details	Collie Power Station tripped at 14:30 resulting in a loss of approximately 236MW. Frequency fell to 49.44Hz recovering within five minutes. Some Out of Merit generation may have occurred.
AEMO Action	AEMO dispatched according to the latest Balancing Merit Order to maintain Power System Security and Reliability.

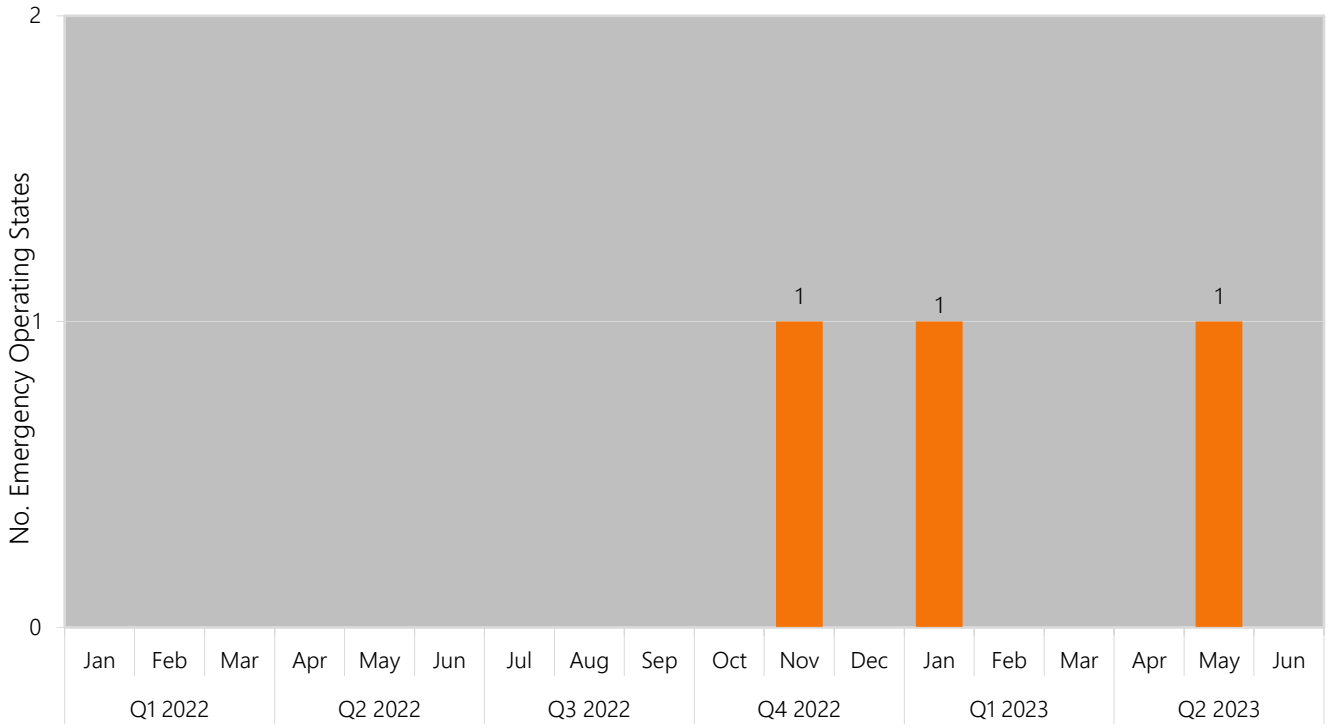
Date/Interval/s	27 June 2023 / Trading Interval 13:2 to Trading Interval 21:2
Dispatch Advisory #	209874
Details	Operating State due to forecast Lack of Reserve (LOR) 2 conditions. Due to high demand conditions during the evening peak period today AEMO is forecasting LOR2 conditions. Market Participants are advised that during the specified period: 1. All generation in the Balancing Merit Order may become In Merit and receive a Dispatch Instruction. 2. Demand Side Programmes will be dispatched. 3. AEMO may take further actions to manage power system security and reliability as required.
AEMO Action	AEMO dispatched according to the WEM Rules and Power System requirements to maintain Power System Security and Reliability. During this period some Out of Merit dispatch may be required to maintain Ancillary Services and reserves.

[6] This was classified as a High Risk Operating State in error.

6.2 Emergency Operating State

There was one instance of an Emergency Operating State during the reporting period.

Figure 6 Emergency Operating States that have occurred since 1 January 2022.



Date/Interval/s	24 May 2023 / Trading Interval 7:1 to Trading Interval 7:2
Dispatch Advisory #	209737
Details	Due to a fire alarm at the AEMO Primary Operational Facility, AEMO commenced relocation to the Backup Facility.
AEMO Action	AEMO was required to hand over Frequency Control.

6.3 Shortfalls in Ancillary Services

During the reporting period there were nine instances of a shortfall in Ancillary Services. A shortfall occurs when the Ancillary Service Requirements are not met within a Trading Interval.

Load Rejection Reserve Service (LRRS)

AEMO's primary function as the system operator in the SWIS is to ensure the SWIS operates in a secure and reliable manner (clause 2.1A.1A of the WEM Rules). The LRRS is the service of holding capacity associated with a Scheduled Generator in reserve so that the Scheduled Generator can reduce output rapidly in response to a sudden decrease in SWIS load.

During the reporting period, there were nine instances related to shortfalls of LRRS[7]. The majority of shortfalls occurred during periods of high volatility of wind and rooftop PV systems. In these situations, maintaining the required level of Load Rejection Reserve is difficult, and maintaining Power System Security and Power System Reliability while minimising costs to the WEM often means no action is the best response. This is because by the time any action is taken to resolve the shortfall, Power System conditions are likely to have changed and the issue no longer exists. Further, the dynamic LRR includes safety factors which limits risks to the Power System for the duration.

Load Following Ancillary Services (LFAS)

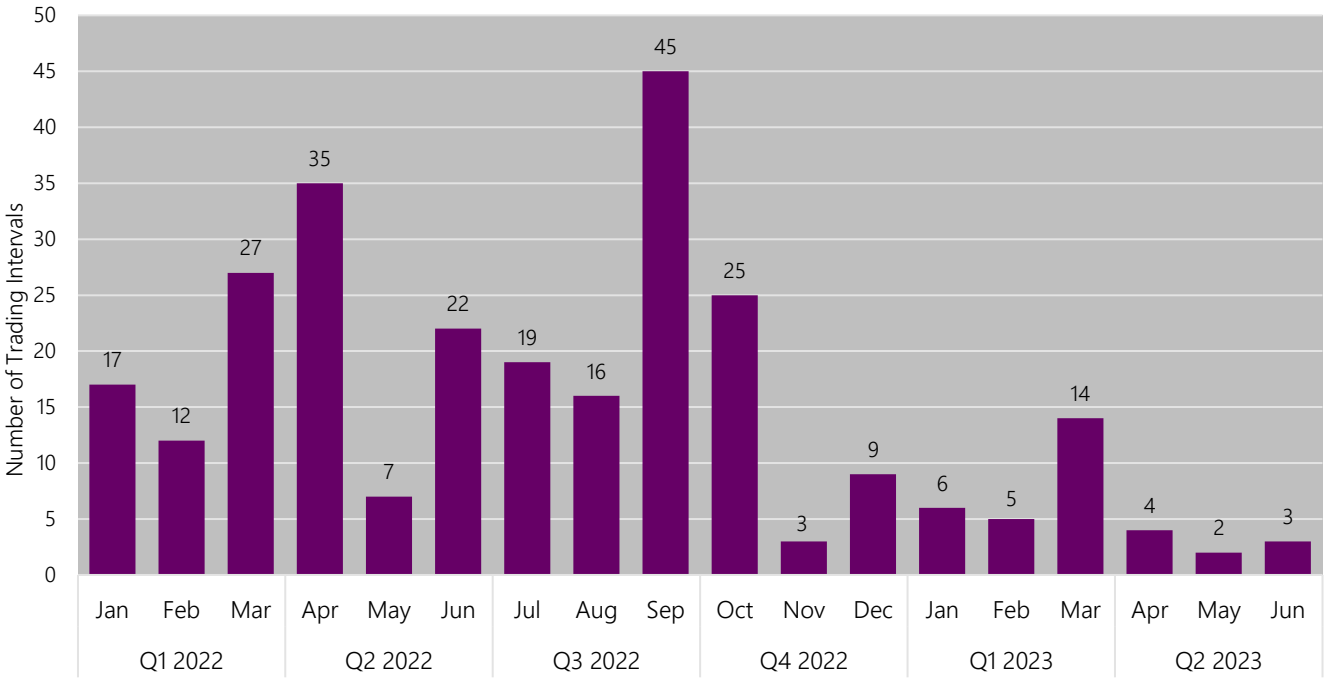
For every Trading Interval, AEMO must activate each LFAS Facility for its full upward and downward LFAS Enablement to satisfy the LFAS Enablement Schedule. During the reporting period, no instances of LFAS Enablement shortfall (greater than 1 interval) were reported.

Spinning Reserve Ancillary Services (SRAS)

SRAS is the service of holding capacity associated with a synchronised Scheduled Generator or Interruptible Load in reserve, so that the relevant Facility is able to respond appropriately in situations outlined in clause 3.9.2 of the WEM Rules. During the reporting period, there were no instances relating to SRAS shortfall.

[7] As outlined in AEMO's Ancillary Services Report for the WEM 2022, AEMO's dynamic LRR, including setting the upper limit of the LRR requirement, is based on the largest credible contingency in real time. Data is based on the number of Trading Intervals where Load Rejection Reserve was less than the dynamic requirement, averaged over a Trading Interval.

Figure 7 Shortfalls in Ancillary Services that have occurred since 1 January 2022.



No shortfalls placed the SWIS in a High Risk Operating State as defined under WEM Rule 3.4.1.

6.4 Involuntary curtailment of load

There were no instances of involuntary curtailment of load during the reporting period.

7 Selection and use of LFAS Facilities other than in accordance with LFAS Merit Order

During the reporting period, there were four instances where AEMO was required to use LFAS Facilities outside of the LFAS Enablement Schedule to operate the SWIS in a reliable and safe manner under clause 7B.3.8 of the WEM Rules.

Date/Interval/s	10 Apr 2023 / Trading Interval 13:2 to Trading Interval 14:2
Dispatch Advisory #	209655
Details	AEMO required backup LFAS due to NEWGEN_KWINANA_CCG1 being unavailable to provide their cleared LFAS quantity as per the LFAS Merit Order due to a Forced Outage.
AEMO Action	AEMO was required to activate LFAS from the Backup LFAS Provider to maintain Power System Security and Power System Reliability.

Date/Interval/s	10 Apr 2023 / Trading Interval 15:1 to Trading Interval 16:1
Dispatch Advisory #	209657
Details	AEMO required backup LFAS due to NEWGEN_KWINANA_CCG1 being unavailable to provide their cleared LFAS quantity as per the LFAS Merit Order due to a Forced Outage.
AEMO Action	AEMO was required to activate LFAS from the Backup LFAS Provider to maintain Power System Security and Power System Reliability.

Date/Interval/s	30 April 2023 / Trading Interval 15:1 to Trading Interval 16:1
Dispatch Advisory #	209692
Details	AEMO required backup LFAS due to NEWGEN_KWINANA_CCG1 being unavailable to provide their cleared LFAS quantity as per the LFAS Merit Order due to a Forced Outage.
AEMO Action	AEMO was required to activate LFAS from the Backup LFAS Provider to maintain Power System Security and Power System Reliability.

Date/Interval/s	30 April 2023 / Trading Interval 20:1 to Trading Interval 21:1
Dispatch Advisory #	209695
Details	AEMO required backup LFAS due to NEWGEN_KWINANA_CCG1 being unavailable to provide their cleared LFAS quantity as per the LFAS Merit Order due to a Forced Outage.
AEMO Action	AEMO was required to activate LFAS from the Backup LFAS Provider to maintain Power System Security and Power System Reliability.