



STATUS REPORT

1 January 2022 to 31 March 2022

Prepared for the ERA under clause 7.12 of the
WEM Rules

Contents

1.	Introduction	3
2.	Issuance of Dispatch Instructions and Operating Instructions	4
2.1	Dispatch Instructions	4
2.2	Operating Instructions	4
3.	Non-Compliance with Dispatch Instructions and Operating Instructions	6
4.	Issuance of Dispatch Instruction to Balancing Facilities Out of Merit	7
4.1	Instances of Out of Merit dispatch identified by AEMO	7
4.2	Other instances of Out of Merit dispatch	8
5.	Transmission Constraints	8
6.	Operating States, Shortfalls in Ancillary Services and Involuntary Curtailment of Load	12
6.1	High Risk Operating State	12
6.2	Emergency Operating State	13
6.3	Shortfalls in Ancillary Services	14
6.4	Involuntary curtailment of load	15
7.	Selection and use of LFAS Facilities other than in accordance with LFAS Merit Order	15

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:

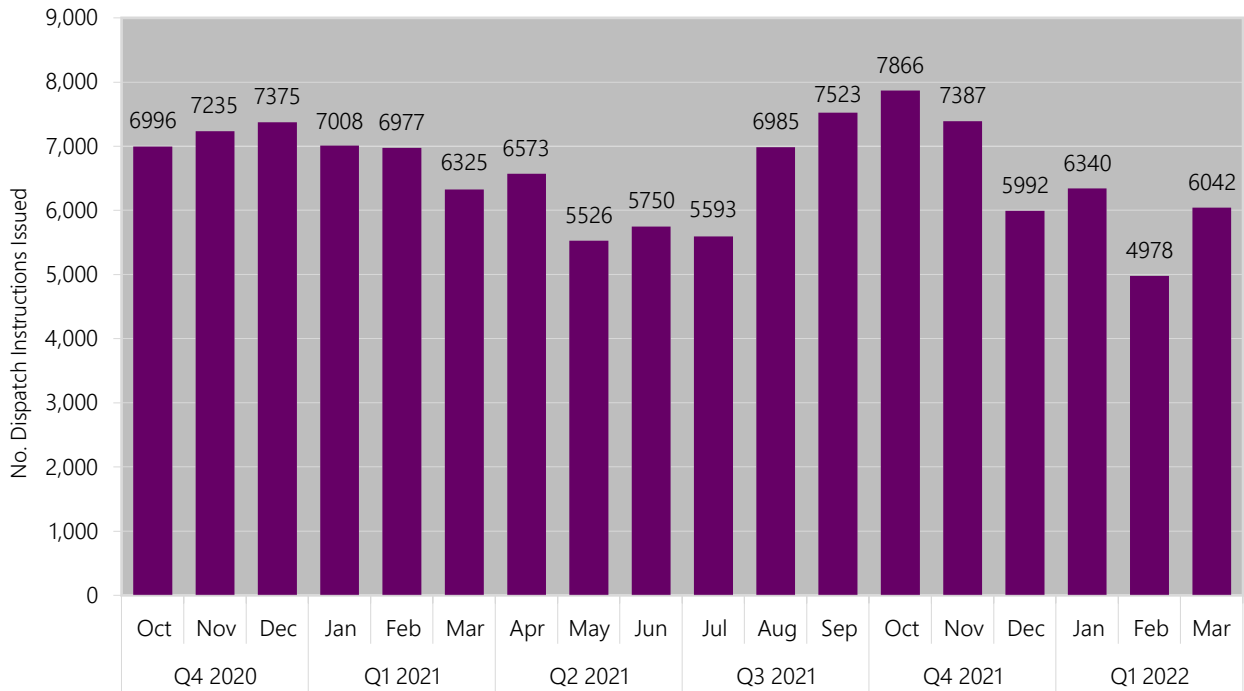
- the reporting period is from 1 January 2022 to 31 March 2022;
- terms that are capitalised but not defined have the meaning given in the WEM Rules; and
- date references are to Trading Days, not calendar days, unless otherwise stated.

2. Issuance of Dispatch Instructions and Operating Instructions

2.1 Dispatch Instructions

AEMO issued 17,360 Dispatch Instructions to Market Participants during the reporting period.

Figure 1: Dispatch Instructions issued during each Trading Month since 1 October 2020.

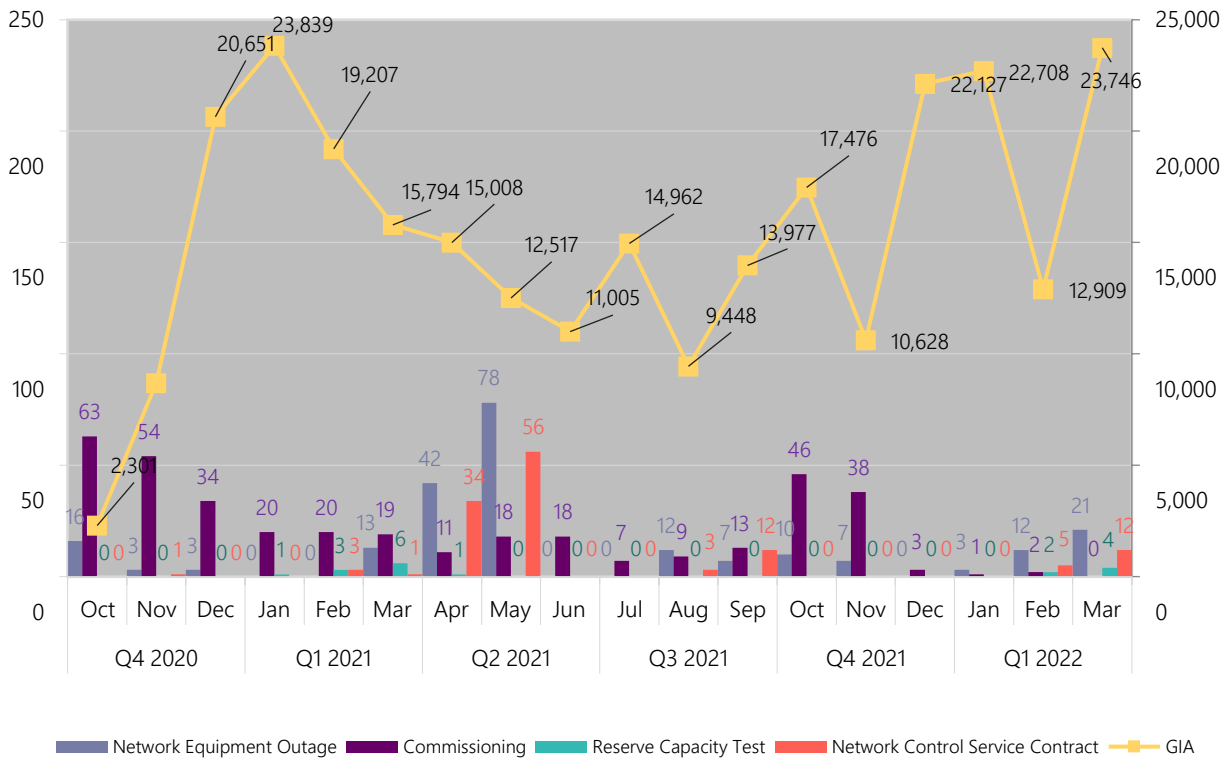


2.2 Operating Instructions

AEMO issued 59,425 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.

Figure 2: Operating Instructions¹ issued during each Trading Month since 1 October 2020.



¹ 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 Instructions²

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:

- 5,705 Dispatch Instruction non-compliance notifications, and
- 163 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:

- 249 instances of non-acknowledgement of Dispatch Instructions, and
- 399 instances of non-acknowledgement of Operating Instructions.

Figure 3: Dispatch Instruction non-compliance notifications since 1 October 2020.

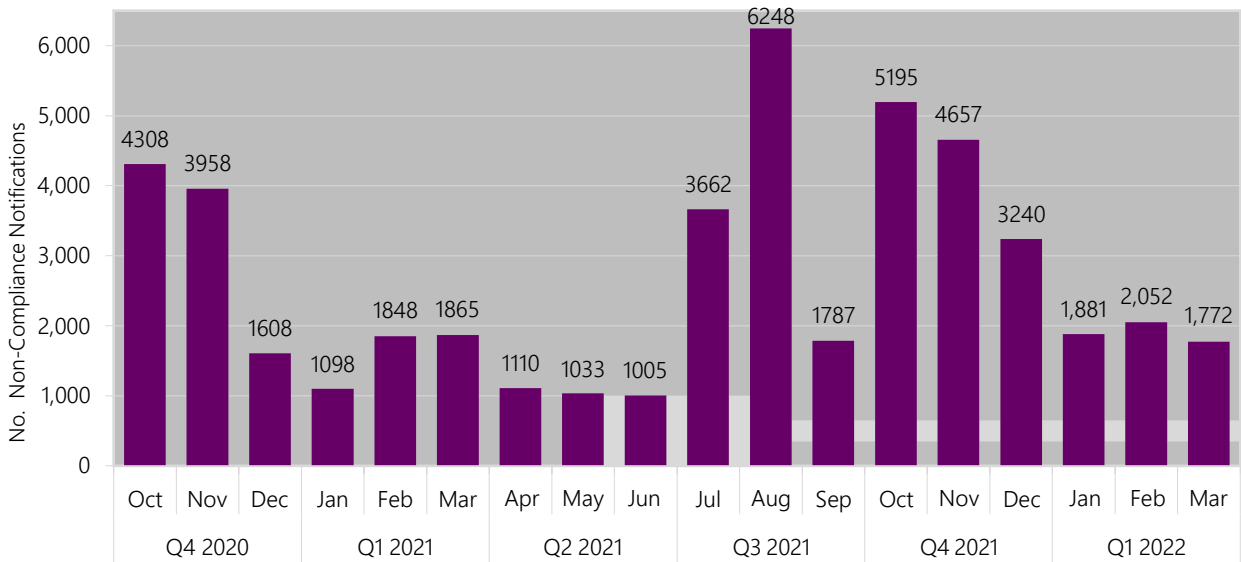
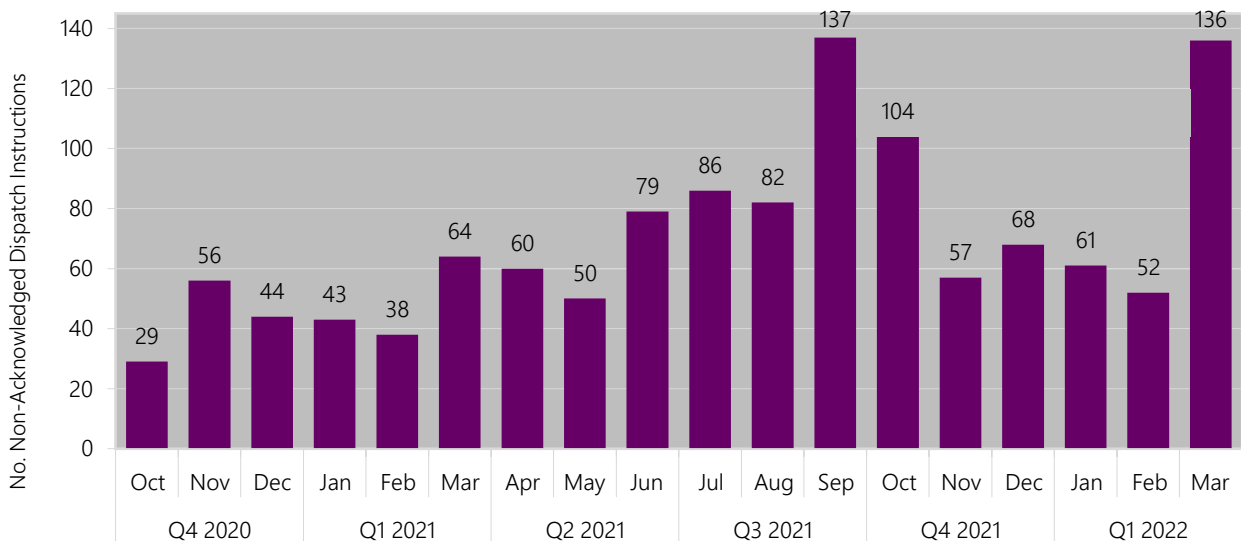


Figure 4: Non-acknowledgement of Dispatch Instructions since 1 October 2020.



² 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.

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, five instances were identified where Dispatch Instructions were issued to Balancing Facilities Out of Merit.

Date/Interval/s	4 Jan 2022 / Trading Interval 18:1 to Trading Interval 19:2
Dispatch Advisory #	208572
Details	High load conditions and to avoid a shortfall in Ancillary Service Requirements resulted in the need to constrain on the ALINTA_PNJ_U2 Facility up to a maximum of 109MW.
AEMO Action	AEMO dispatched Out of Merit to maintain Power System Security and Reliability.
Date/Interval/s	4 Jan 2022 / Trading Interval 18:1 to Trading Interval 19:2
Dispatch Advisory #	208572
Details	High load conditions and to avoid a shortfall in Ancillary Service Requirements resulted in the need to constrain on the NEWGEN_NEERABUP_GT1 Facility up to a maximum of 171MW.
AEMO Action	AEMO dispatched Out of Merit to maintain Power System Security and Reliability.
Date/Interval/s	19 Jan 2022 / Trading Interval 19:1 to Trading Interval 20:1
Dispatch Advisory #	208613
Details	High load conditions and to avoid a shortfall in Ancillary Service Requirements resulted in the need to constrain on the ALINTA_WGP_U2 Facility to a minimum of 70MW.
AEMO Action	AEMO dispatched Out of Merit to maintain Power System Security and Reliability.
Date/Interval/s	19 Jan 2022 / Trading Interval 20:1 to Trading Interval 20:2
Dispatch Advisory #	208614
Details	High load conditions and to avoid a shortfall in Ancillary Service Requirements resulted in the need to constrain on the NEWGEN_NEERABUP_GT1 Facility to a minimum of 250MW.
AEMO Action	AEMO dispatched Out of Merit to maintain Power System Security and Reliability.
Date/Interval/s	3 Feb 2022 / Trading Interval 18:1 to Trading Interval 19:2
Dispatch Advisory #	208673
Details	High load conditions and to avoid a shortfall in Ancillary Service Requirements resulted in the need to constrain on the PERTHENERGY_KWINANA_GT1 Facility to a minimum of 109MW.
AEMO Action	AEMO dispatched Out of Merit to maintain Power System Security and Reliability.

4.2 Other instances of Out of Merit dispatch³

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.

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	18 Jan 2022 / Trading Interval 8:1 to Trading Interval 9:2
Dispatch Advisory #	208591
Details	A planned Western Power Network outage on the GTN-CPN81 line resulted in the need to constrain the GREENOUGH_RIVER_PV1 Facility.
Date/Interval/s	18 Jan 2022 / Trading Interval 9:2 to Trading Interval 10:2
Dispatch Advisory #	208612
Details	A planned Western Power Network outage on the GTN-CPN81 line resulted in the need to constrain the GREENOUGH_RIVER_PV1 Facility.
Date/Interval/s	30 Jan 2022 / Trading Interval 4:1 to Trading Interval 12:1
Dispatch Advisory #	208652
Details	A forced Western Power Network outage on the MGA-GTN81 line resulted in the need to constrain the ALINTA_WWF Facility.
Date/Interval/s	Trading Interval 2:1 on 6 Feb 2022 to Trading Interval 0:1 on 7 Feb 2022
Dispatch Advisory #	208675, 208678
Details	A forced Western Power Network outage on the MGA-GTN81 line resulted in the need to constrain the ALINTA_WWF Facility.
Date/Interval/s	6 Feb 2022 / Trading Interval 10:2 to Trading Interval 20:1
Dispatch Advisory #	208677
Details	A trip on the MU-NGSX1 line resulted in the need to constrain the PRK_AG Facility.
Date/Interval/s	6 Feb 2022 / Trading Interval 10:2 to Trading Interval 20:1
Dispatch Advisory #	208677
Details	A trip on the MU-NGSX1 line resulted in the need to constrain the STHRNCRS_EG Facility.

³ 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.

STATUS REPORT

Date/Interval/s	6 Feb 2022 / Trading Interval 10:2 to Trading Interval 20:1
Dispatch Advisory #	208677
Details	A trip on the MU-NGSX1 line resulted in the need to constrain the INVESTEC_COLLGAR_WF1 Facility.
Date/Interval/s	6 Feb 2022 / Trading Interval 11:1 to Trading Interval 20:1
Dispatch Advisory #	208677
Details	A trip on the MU-NGSX1 line resulted in the need to constrain the MERSOLAR_PV1 Facility.
Date/Interval/s	6 Feb 2022 / Trading Interval 11:1 to Trading Interval 20:1
Dispatch Advisory #	208677
Details	A trip on the MU-NGSX1 line resulted in the need to constrain the NAMKKN_MERR_SG1 Facility.
Date/Interval/s	7 Feb 2022 / Trading Interval 17:2 to Trading Interval 18:1
Dispatch Advisory #	208681
Details	A forced Western Power Network outage on the MBA-TS81 line resulted in the need to constrain the ALINTA_WWF Facility.
Date/Interval/s	7 Feb 2022 / Trading Interval 17:2 to Trading Interval 18:1
Dispatch Advisory #	208681
Details	A forced Western Power Network outage on the MBA-TS81 line resulted in the need to constrain the MWF_MUMBIDA_WF1 Facility.
Date/Interval/s	8 Feb 2022 / Trading Interval 11:1 to Trading Interval 16:2
Dispatch Advisory #	208683
Details	A forced Western Power Network outage on the KW943.0 line resulted in the need to constrain the NEWGEN_KWINANA_CCG1 Facility.
Date/Interval/s	9 Feb 2022 / From Trading Interval 13:2 to Trading Interval 17:1
Dispatch Advisory #	208684
Details	An unplanned Western Power Network outage on the WWF-GTN81 line resulted in the need to constrain the GREENOUGH_RIVER_PV1 Facility.
Date/Interval/s	11 Feb 2022 / Trading Interval 3:1 to Trading Interval 9:1
Dispatch Advisory #	208685
Details	A forced Western Power Network outage on the MGA-GTN81 line resulted in the need to constrain the ALINTA_WWF Facility.
Date/Interval/s	1 Mar 2022 / Trading Interval 9:2 to Trading Interval 10:2
Dispatch Advisory #	208711
Details	A planned Western Power Network outage on the ALB RTU line resulted in the need to constrain half of the ALBANY_WF1 Facility.

STATUS REPORT

Date/Interval/s	2 Mar 2022 / Trading Interval 10:1 to Trading Interval 11:2
Dispatch Advisory #	208712
Details	A planned Western Power Network outage on the ALB RTU line resulted in the need to constrain half of the ALBANY_WF1 Facility.
Date/Interval/s	3 Mar 2022 / Trading Interval 9:1
Dispatch Advisory #	208713
Details	A planned Western Power Network outage on the ALB T2 line resulted in the need to constrain the DCWL_DENMARK_WF1 Facility.
Date/Interval/s	9 Mar 2022 / Trading Interval 9:1 to Trading Interval 10:2
Dispatch Advisory #	208731
Details	A planned Western Power Network outage on the ALB RTU line resulted in the need to constrain the GRASMERE_WF1 Facility.
Date/Interval/s	9 Mar 2022 / Trading Interval 9:1 to Trading Interval 10:2
Dispatch Advisory #	208731
Details	A planned Western Power Network outage on the ALB RTU line resulted in the need to constrain the ALBANY_WF1 Facility.
Date/Interval/s	10 Mar 2022 / Trading Interval 8:2 to Trading Interval 10:1
Dispatch Advisory #	208732
Details	A planned Western Power Network outage on the ALB RTU line resulted in the need to constrain the GRASMERE_WF1 Facility.
Date/Interval/s	10 Mar 2022 / Trading Interval 8:2 to Trading Interval 10:1
Dispatch Advisory #	208732
Details	A planned Western Power Network outage on the ALB RTU line resulted in the need to constrain the ALBANY_WF1 Facility.
Date/Interval/s	From Trading Interval 23:2 on 11 Mar 2022 to Trading Interval 0:1 on 12 Mar 2022
Dispatch Advisory #	208734
Details	A forced Western Power Network outage on the MGA-GTN81 line resulted in the need to constrain the ALINTA_WWF Facility.
Date/Interval/s	12 Mar 2022 / Trading Interval 2:1 to Trading Interval 2:2
Dispatch Advisory #	208735
Details	A forced Western Power Network outage on the MGA-GTN81 line resulted in the need to constrain the ALINTA_WWF Facility.
Date/Interval/s	From Trading Interval 14:1 on 28 Mar 2022 to Trading Interval 15:1 on 7 April 2022
Dispatch Advisory #	208778, 208781, 208783, 208784
Details	A Western Power Network outage on the TS-MBA81 and TS-MGA81 lines resulted in the need to constrain the ALINTA_WWF Facility.

STATUS REPORT

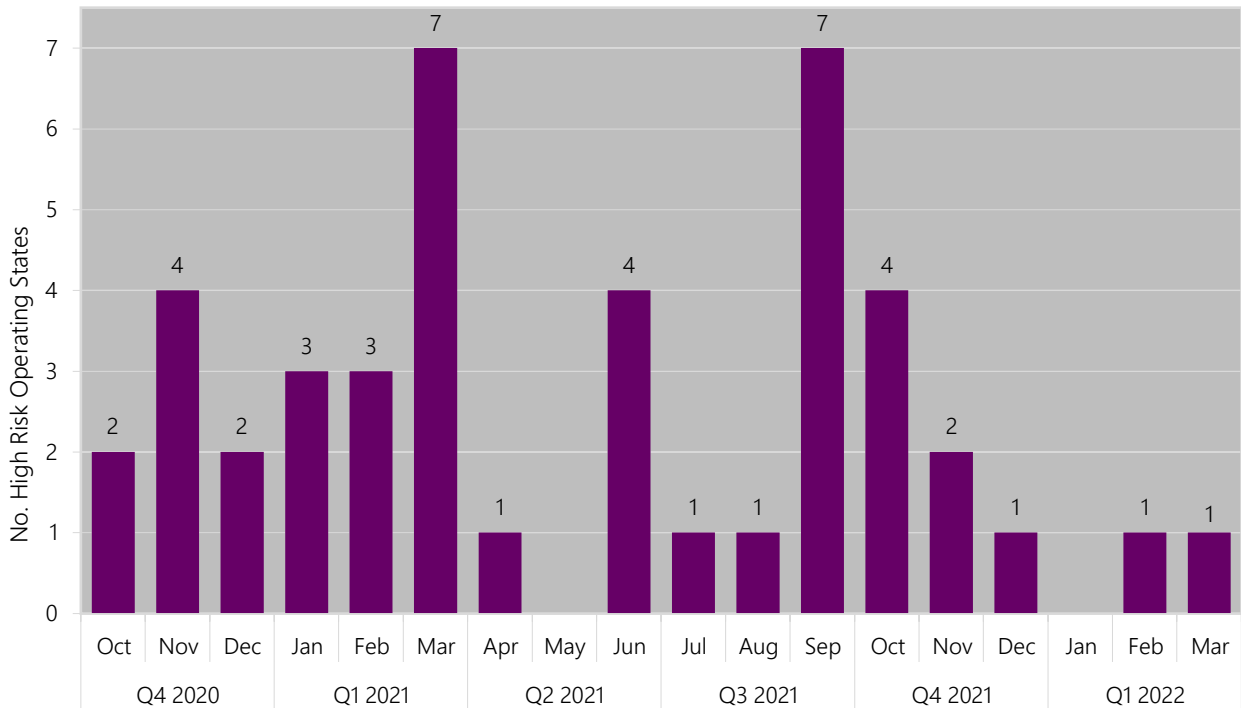
Date/Interval/s	From Trading Interval 15:2 on 28 Mar 2022 to Trading Interval 15:1 on 7 April 2022
Dispatch Advisory #	208779, 208781, 208783, 208784
Details	A Western Power Network outage on the TS-MBA81 and TS-MGA81 lines resulted in the need to constrain the MWF_MUMBIDA_WF1 Facility.
Date/Interval/s	From Trading Interval 7:1 on 29 Mar 2022 to Trading Interval 15:1 on 31 Mar 2022
Dispatch Advisory #	208781, 208783
Details	A Western Power Network outage on the TS-MBA81 and TS-MGA81 lines resulted in the need to constrain the GREENOUGH_RIVER_PV1 Facility.

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

6.1 High Risk Operating State

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

Figure 5: High Risk Operating States that have occurred since 1 October 2020.



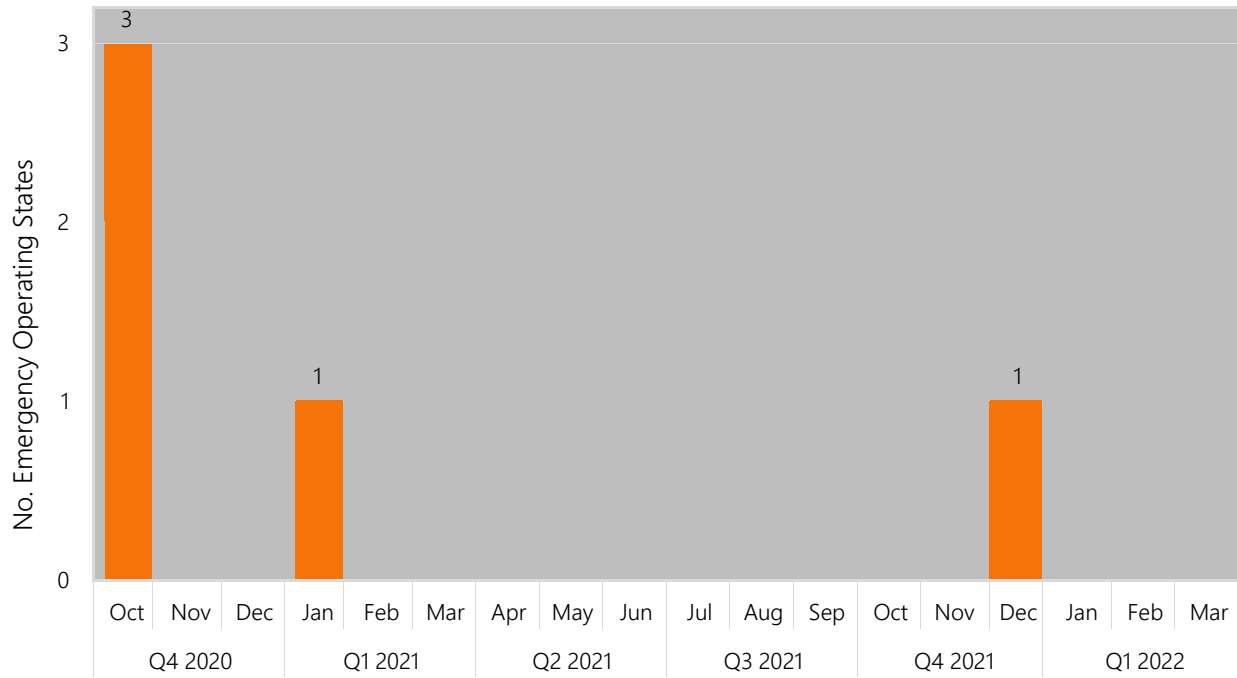
Date/Interval/s	2 Feb 2022 / Trading Interval 13:2 to Trading Interval 19:2
Dispatch Advisory #	208671
Details	Due to bushfire activity in the Southern Region, forced outages of the LWT-ST91 and KW-KEM-OLY91 lines occurred. AEMO also considered the risk of an additional SHO-ST/OLY91 forced outage as credible.
AEMO Action	AEMO reclassified the continued threat to this easement as credible and dispatched according to the latest BMO received to maintain Power System Security and Power System Reliability.

Date/Interval/s	22 Mar 2022 / Trading Interval 10:2 to Trading Interval 12:1
Dispatch Advisory #	208772
Details	AEMO experienced IT issues affecting the operation of the Real Time Dispatch Engine.
AEMO Action	AEMO dispatched according to the latest BMO received to maintain Power System Security and Power System Reliability.

6.2 Emergency Operating State

There were no instances of an Emergency Operating State during the reporting period.

Figure 6: Emergency Operating States that have occurred since 1 October 2020.



6.3 Shortfalls in Ancillary Services

During the reporting period there were 58 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 2.2.1 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, 41 instances related to shortfalls of LRRS ⁴. 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.

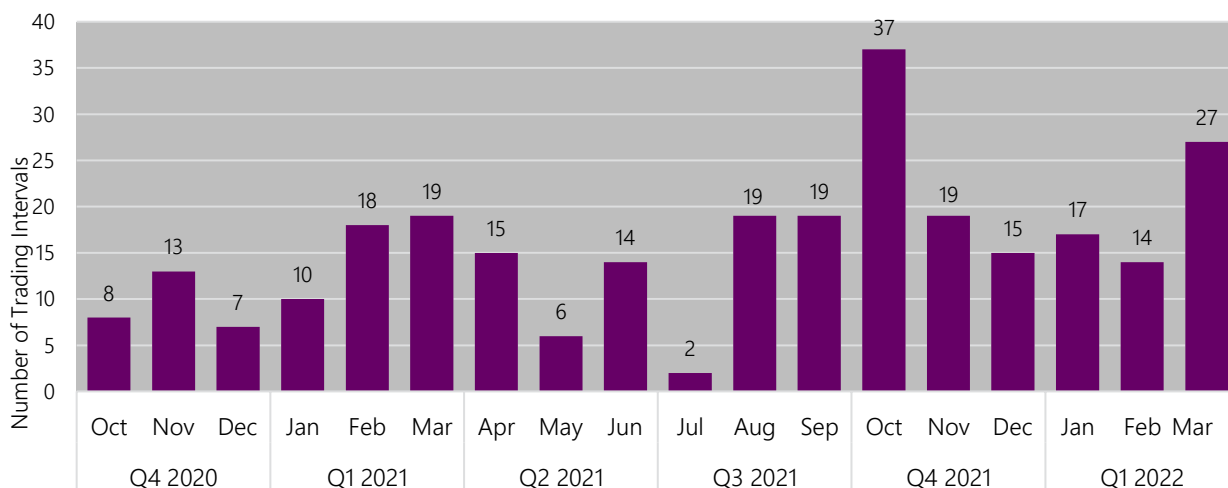
Load Following Ancillary Services (LFAS)

For every Trading Interval, System Management must activate each LFAS Facility for its full upward and downward LFAS Enablement to satisfy the LFAS Enablement Schedule. During the reporting period, 17 instances of LFAS Enablement shortfall (greater than 1 interval) were reported.

Spinning Reserve Ancillary Services (SRAS)

Spinning Reserve Service 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.

Figure 7: Shortfalls in Ancillary Services that have occurred since 1 October 2020⁵.



AEMO does not consider that any of the shortfalls placed the SWIS in a High Risk Operating State or an Emergency Operating state as defined under WEM Rule 3.4.1.

⁴ As outlined in [AEMO’s Ancillary Services Report for the WEM 2021](#), AEMO has successfully conducted a Load Rejection Reserve (LRR) trial and has adopted a dynamic LRR for 2020-21 that incorporates physical aspects of the power system, including setting the upper limit of the LRR requirement 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.

⁵ Q4 2021 values have been amended following further review of Load Rejection Reserve instances since October 2021. An additional adjustment was made to reflect 4 fewer LFAS Enablement shortfalls for October 2021.

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 seven instances where AEMO was required to use Load Following Ancillary Services (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/Intervals	25 Jan 2022 / Trading Interval 5:2 to Trading Interval 8:1
Dispatch Advisory #	208632
Details	AEMO required backup LFAS due to the ALINTA_PNJ_U1 Facility being unable to provide LFAS as per the LFAS Merit Order following a forced outage of the Facility.
AEMO Action	AEMO was required to activate LFAS from the Backup LFAS Provider to maintain Power System Security and Power System Reliability.

Date/Intervals	8 Feb 2022 / Trading Interval 11:2 to Trading Interval 17:1
Dispatch Advisory #	208683
Details	AEMO required backup LFAS due to the NEWGEN_KWINANA_CCG1 Facility being unable to provide LFAS as per the LFAS Merit Order following a forced Western Power Network outage on the KW943.0 line.
AEMO Action	AEMO was required to activate LFAS from the Backup LFAS Provider to maintain Power System Security and Power System Reliability.

Date/Intervals	5 Mar 2022 / Trading Interval 14:1 to 6 Mar 2022 / Trading Interval 0:1
Dispatch Advisory #	208714
Details	AEMO required backup LFAS due to the NEWGEN_KWINANA_CCG1 Facility being unable to provide LFAS as per the LFAS Merit Order following a forced outage of the Facility.
AEMO Action	AEMO was required to activate LFAS from the Backup LFAS Provider to maintain Power System Security and Power System Reliability.

Date/Intervals	11 Mar 2022 / Trading Interval 12:1 to Trading Interval 15:1
Dispatch Advisory #	208733
Details	AEMO required backup LFAS due to large fluctuations in PV and wind generation.
AEMO Action	AEMO was required to activate LFAS from the Backup LFAS Provider to maintain Power System Security and Power System Reliability.

STATUS REPORT

Date/Intervals	16 Mar 2022 / Trading Interval 5:2 to Trading Interval 12:1
Dispatch Advisory #	208751
Details	AEMO required backup LFAS due to the ALINTA_PNJ_U1 Facility being unable to provide LFAS as per the LFAS Merit Order due to a SCADA issue at a Western Power site.
AEMO Action	AEMO was required to activate LFAS from the Backup LFAS Provider to maintain Power System Security and Power System Reliability.

Date/Intervals	22 Mar 2022 / Trading Interval 13:2 to Trading Interval 20:1
Dispatch Advisory #	208773
Details	AEMO required backup LFAS due to the ALINTA_PNJ_U1 Facility being unable to provide LFAS as per the LFAS Merit Order due to a SCADA issue at a Western Power site.
AEMO Action	AEMO was required to activate LFAS from the Backup LFAS Provider to maintain Power System Security and Power System Reliability.

Date/Intervals	26 Mar 2022 / Trading Interval 6:2
Dispatch Advisory #	208776
Details	AEMO required backup LFAS due to the NEWGEN_KWINANA_CCG1 Facility being unable to provide LFAS as per the LFAS Merit Order following the unit tripping.
AEMO Action	AEMO was required to activate LFAS from the Backup LFAS Provider to maintain Power System Security and Power System Reliability.