

---

# STATUS REPORT

---

**1 April 2020 to 30 June 2020**

Prepared under clause 7.12 of the WEM Rules

---

# Contents

<b>1.</b>	<b>Introduction</b>	<b>3</b>
<b>2.</b>	<b>Issuance of Dispatch Instructions and Operating Instructions</b>	<b>4</b>
<b>3.</b>	<b>Non-Compliance with Dispatch Instructions and Operating Instructions</b>	<b>5</b>
<b>4.</b>	<b>Issuance of Dispatch Instruction to Balancing Facilities Out of Merit</b>	<b>7</b>
4.1	Instances of Out of Merit dispatch identified by AEMO	7
4.2	Other instances of Out of Merit dispatch	7
<b>5.</b>	<b>Transmission Constraints</b>	<b>7</b>
<b>6.</b>	<b>Operating States, Shortfalls in Ancillary Services and Involuntary Curtailment of Load</b>	<b>9</b>
6.1	High Risk Operating State	9
6.2	Emergency Operating State	11
6.3	Shortfalls in Ancillary Services	12
6.4	Involuntary curtailment of load	13
<b>7.</b>	<b>Selection and use of LFAS Facilities other than in accordance with LFAS Merit Order</b>	<b>13</b>

# 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 2020 to 30 June 2020;
- 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

AEMO issued 13,086 Dispatch Instructions to Market Participants during the reporting period.

Figure 1 shows the number of Dispatch Instructions issued during each Trading Month since 1 January 2019.

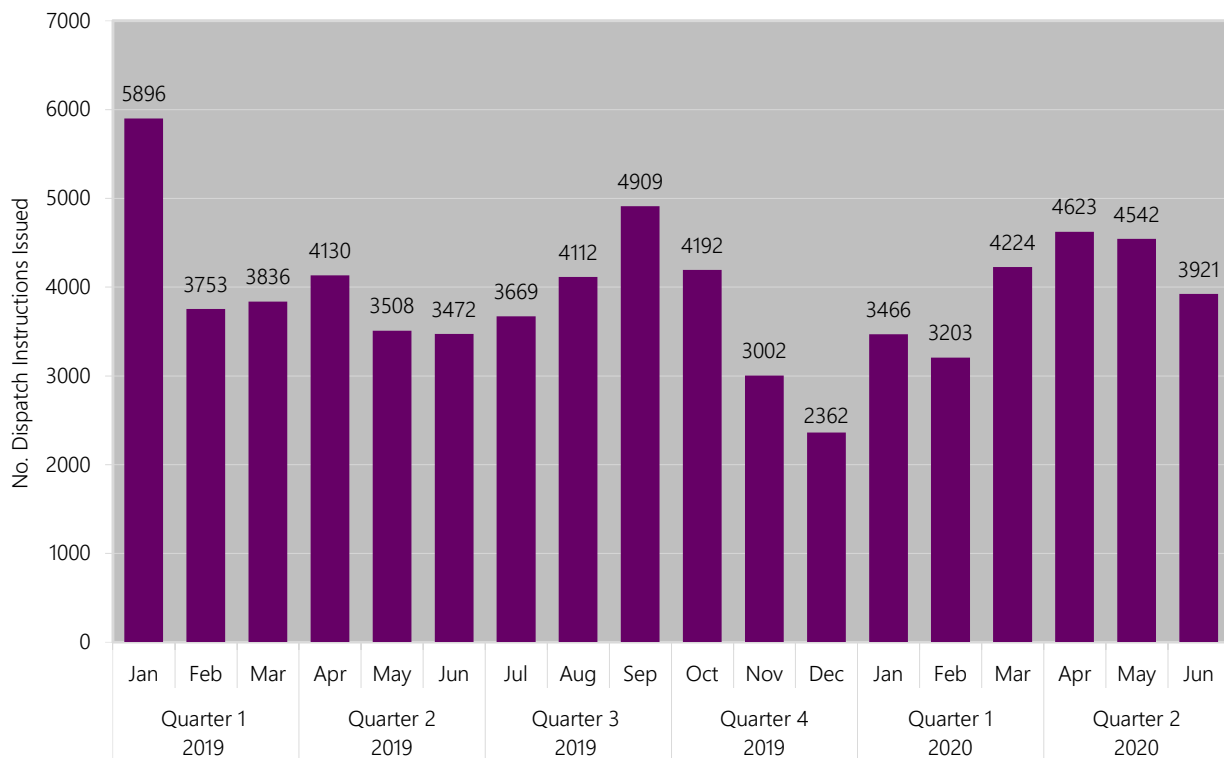


Figure 1: Dispatch Instructions per Trading Month

AEMO issued 5,425 Operating Instructions during the reporting period.

Four situations where AEMO may issue Operating Instructions under the WEM Rules are for Commissioning Tests, Reserve Capacity Tests, provision of services under the Network Control Service Contracts and issuance of retrospective Operating Instructions pursuant to clause 7.7.11.

Figure 2 below shows the number of Operating Instructions issued during each Trading Month since 1 January 2019.

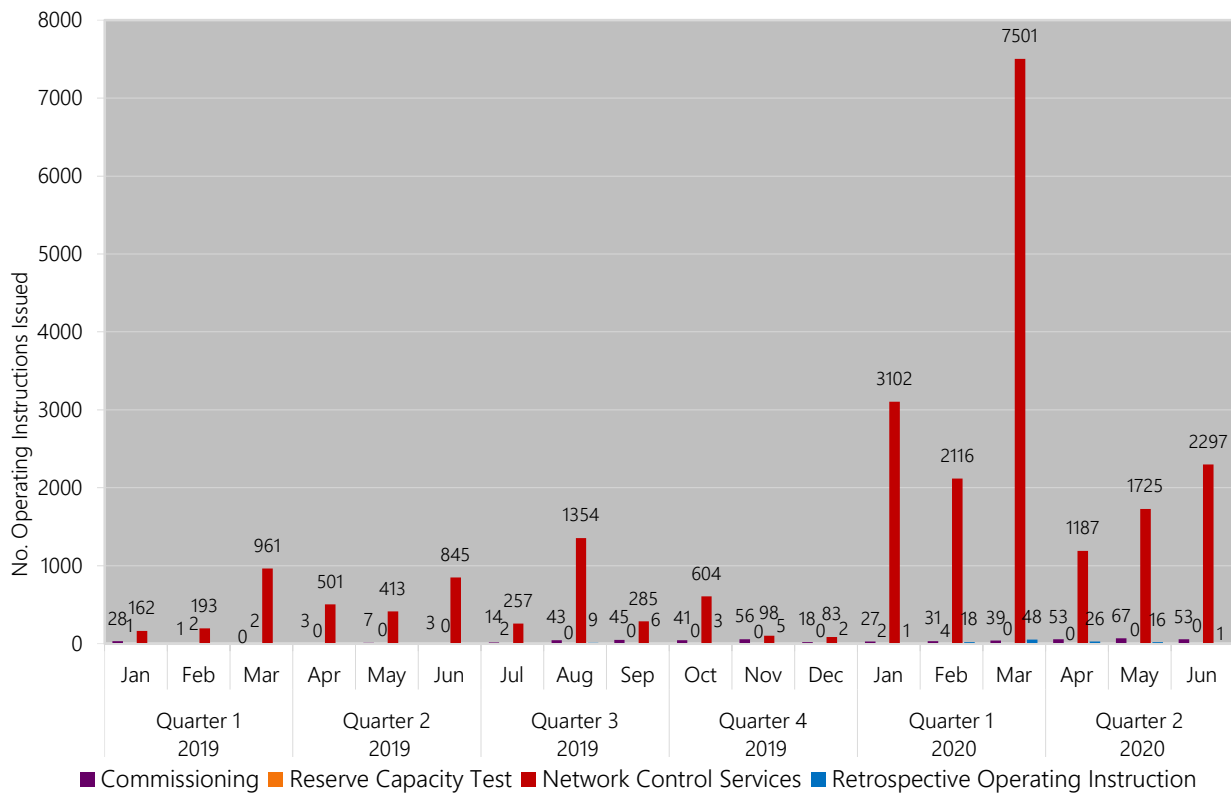


Figure 2: Operating Instructions per Trading Month

### 3. Non-Compliance with Dispatch Instructions and Operating Instructions<sup>1</sup>

During the reporting period, AEMO issued 6,067 one-minute non-compliance notifications to Market Participants for non-compliance with Dispatch Instructions, taking into account the Tolerance Range, and any Facility Tolerance Ranges, where applicable.

During the reporting period, AEMO issued 59 one-minute non-compliance notifications to Market Participants for non-compliance with Operating Instructions, taking into account the Tolerance Range, and any Facility Tolerance Ranges, where applicable.

During the reporting period, there were 100 instances where a Market Participant did not confirm receipt of a Dispatch Instruction when required to do so under the WEM Rules and the Dispatch Power System Operation Procedure.

During the reporting period, there were 471 instances where a Market Participant did not confirm receipt of an Operating Instruction when required to do so under the WEM Rules and the Dispatch Power System Operation Procedure.

Figure 3 below provides historical non-compliance data since 1 January 2019.

<sup>1</sup> 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.

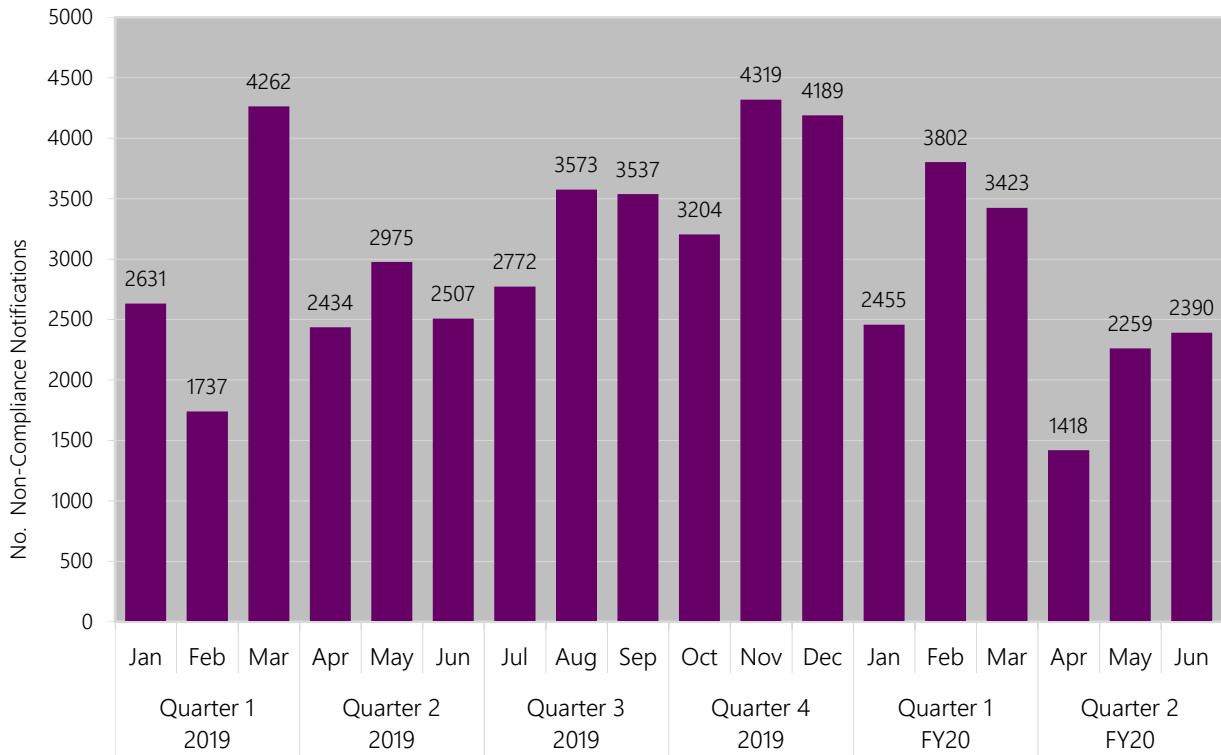


Figure 3: Dispatch Instruction non-compliance notifications

Figure 4 provides historical data for non-acknowledgement of Dispatch Instructions since 1 January 2019.

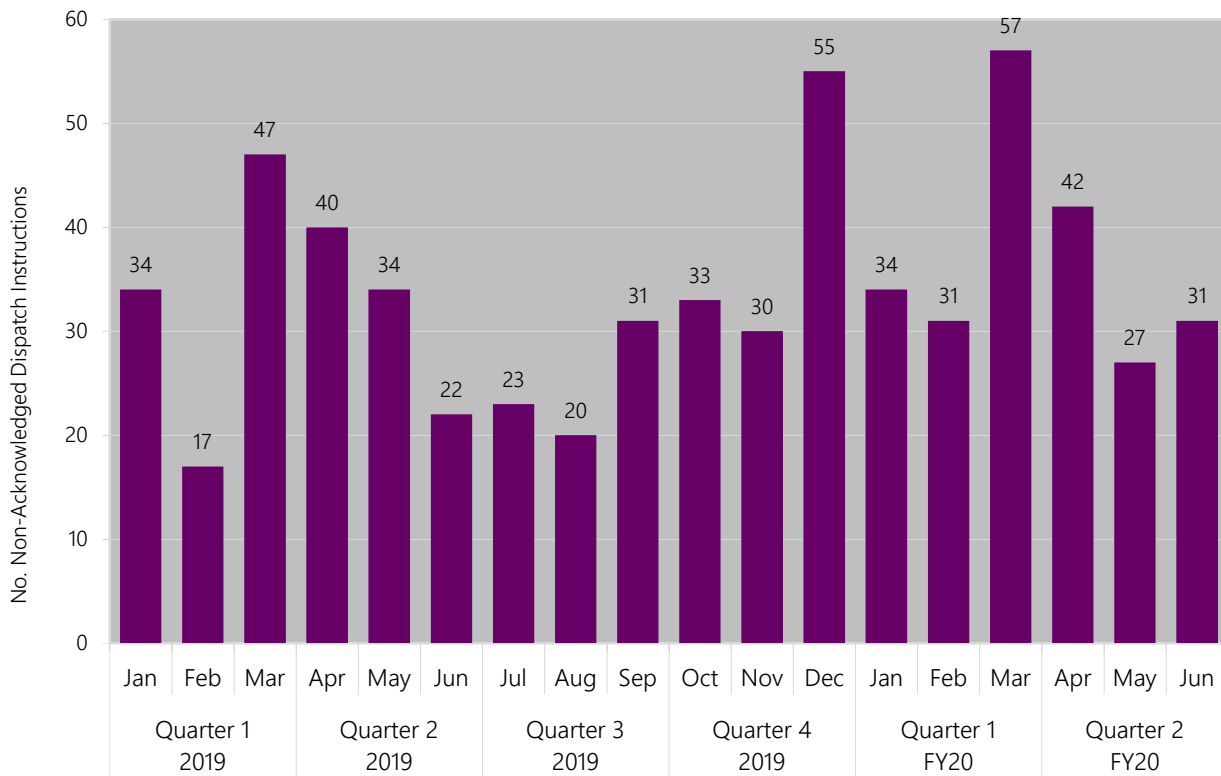


Figure 4: Non-acknowledged Dispatch Instructions

## 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, no instances were identified where Dispatch Instructions were issued to Balancing Facilities Out of Merit<sup>2</sup>.

### 4.2 Other instances of Out of Merit dispatch

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. 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:

- From Trading Interval 7:1 to Trading Interval 16:2 on 01 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the ALINTA\_WWF Facility (Dispatch Advisory 206845).
- From Trading Interval 7:1 to Trading Interval 16:2 on 01 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the MWF\_MUMBIDA\_WF1 Facility (Dispatch Advisory 206845).
- From Trading Interval 7:1 to Trading Interval 16:2 on 01 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the GREENOUGH\_RIVER\_PV1 (Dispatch Advisory 206845).
- From Trading Interval 7:1 to Trading Interval 16:2 on 02 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the ALINTA\_WWF Facility (Dispatch Advisory 206845).
- From Trading Interval 7:1 to Trading Interval 16:2 on 02 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the MWF\_MUMBIDA\_WF1 Facility (Dispatch Advisory 206845).
- From Trading Interval 6:2 to Trading Interval 7:1 on 03 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the ALINTA\_WWF Facility (Dispatch Advisory 206845).

---

<sup>2</sup> 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

- From Trading Interval 6:2 to Trading Interval 7:1 on 03 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the MWF\_MUMBIDA\_WF1 Facility (Dispatch Advisory 206845).
- From Trading Interval 6:2 to Trading Interval 17:1 on 03 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the GREENOUGH\_RIVER\_PV1 (Dispatch Advisory 206845).
- From Trading Interval 7:2 to Trading Interval 17:1 on 03 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the ALINTA\_WWF Facility (Dispatch Advisory 206845).
- From Trading Interval 7:2 to Trading Interval 17:1 on 03 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the MWF\_MUMBIDA\_WF1 Facility (Dispatch Advisory 206845).
- From Trading Interval 11:2 to Trading Interval 14:2 on 03 April 2020, a planned network outage on the NBT-PJR81 transmission line resulted in the need to constrain the BADGINGARRA\_WF1 (No Dispatch Advisory issued).
- From Trading Interval 13:2 to Trading Interval 14:2 on 03 April 2020, a planned network outage on the NBT-PJR81 transmission line resulted in the need to constrain the BLAIRFOX\_BEROSRD\_WF1 (No Dispatch Advisory issued).
- From Trading Interval 7:1 to Trading Interval 16:1 on 04 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the ALINTA\_WWF Facility (Dispatch Advisory 206845).
- From Trading Interval 7:1 to Trading Interval 16:2 on 04 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the MWF\_MUMBIDA\_WF1 Facility (Dispatch Advisory 206845).
- From Trading Interval 7:1 to Trading Interval 16:2 on 05 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the ALINTA\_WWF Facility (Dispatch Advisory 206845).
- From Trading Interval 7:1 to Trading Interval 16:2 on 05 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the MWF\_MUMBIDA\_WF1 Facility (Dispatch Advisory 206845).
- From Trading Interval 6:2 to Trading Interval 12:1 on 06 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the ALINTA\_WWF Facility (Dispatch Advisory 206845).
- From Trading Interval 6:2 to Trading Interval 12:1 on 06 April 2020, a planned network outage on the TS-MBA81 transmission line resulted in the need to constrain the MWF\_MUMBIDA\_WF1 Facility (Dispatch Advisory 206845).
- From Trading Interval 6:1 to Trading Interval 12:2 on 07 April 2020, a Forced Outage on the SHO-BLW91 transmission line resulted in the need to constrain the BW1\_BLUEWATERS\_G2 Facility (Dispatch Advisory 206880 and 206881).
- From Trading Interval 6:1 to Trading Interval 12:2 on 07 April 2020, a Forced Outage on the SHO-BLW91 transmission line resulted in the need to constrain the BW1\_BLUEWATERS\_G1 Facility (Dispatch Advisory 206880 and 206881).
- From Trading Interval 8:2 to Trading Interval 16:1 on 10 April 2020, a Forced Outage on the SNR-WGP-APJ81 transmission line resulted in the need to constrain the ALCOA\_WGP Facility (Dispatch Advisory 206883).



- From Trading Interval 3:2 on 06 May 2020 to Trading Interval 7:2 on 08 May 2020, multiple planned network outages resulted in the need for AEMO to constrain the INVESTEC\_COLLGAR\_WF1 Facility as directed by Western Power, to operate Network Control Services (Dispatch Advisory 206963).
- From Trading Interval 3:2 on 06 May 2020 to Trading Interval 19:1 on 08 May 2020, multiple planned network outages resulted in the need for AEMO to constrain the PRK\_AG Facility to various levels as directed by Western Power, to operate Network Control Services (Dispatch Advisory 206963).
- From Trading Interval 3:2 on 06 May 2020 to Trading Interval 19:1 on 08 May 2020, multiple planned network outages resulted in the need for AEMO to constrain the STHRNCRS\_EG Facility to various levels as directed by Western Power, to operate Network Control Services (Dispatch Advisory 206963).
- From Trading Interval 14:1 to Trading Interval 19:1 on 08 May 2020, multiple planned network outages resulted in the need for AEMO to constrain the INVESTEC\_COLLGAR\_WF1 Facility as directed by Western Power, to operate Network Control Services (Dispatch Advisory 206963).
- From Trading Interval 12:2 to Trading Interval 15:2 on 11 May 2020, a Forced Outage on the KW941.3 isolator resulted in the need to constrain the NEWGEN\_KWINANA\_CCG1 Facility (Dispatch Advisory 206982 and 206983).
- From Trading Interval 9:2 on 24 May 2020 to Trading Interval 17:1 on 27 May 2020, a Forced Outage on the TS-MBA81 transmission line resulted in the need to constrain the ALINTA\_WWF Facility (Dispatch Advisory 207004).
- From Trading Interval 9:2 on 24 May 2020 to Trading Interval 17:1 on 27 May 2020, a Forced Outage on the TS-MBA81 transmission line resulted in the need to constrain the MWF\_MUMBIDA\_WF1 Facility (Dispatch Advisory 207004).
- From Trading Interval 9:2 on 24 May 2020 to Trading Interval 17:1 on 27 May 2020, a Forced Outage on the TS-MBA81 transmission line resulted in the need to constrain the GREENOUGH\_RIVER\_PV1 Facility (Dispatch Advisory 207004).
- From Trading Interval 9:2 to Trading Interval 11:2 on 26 June 2020, a Forced Outage on the GTN803.0 circuit breaker resulted in the need to constrain the ALINTA\_WWF Facility (Dispatch Advisory 207082).

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

### 6.1 High Risk Operating State

There were 4 instances of a High Risk Operating State during the reporting period.

*Figure 5* provides historical data for High Risk Operating States that have occurred since 1 January 2019.

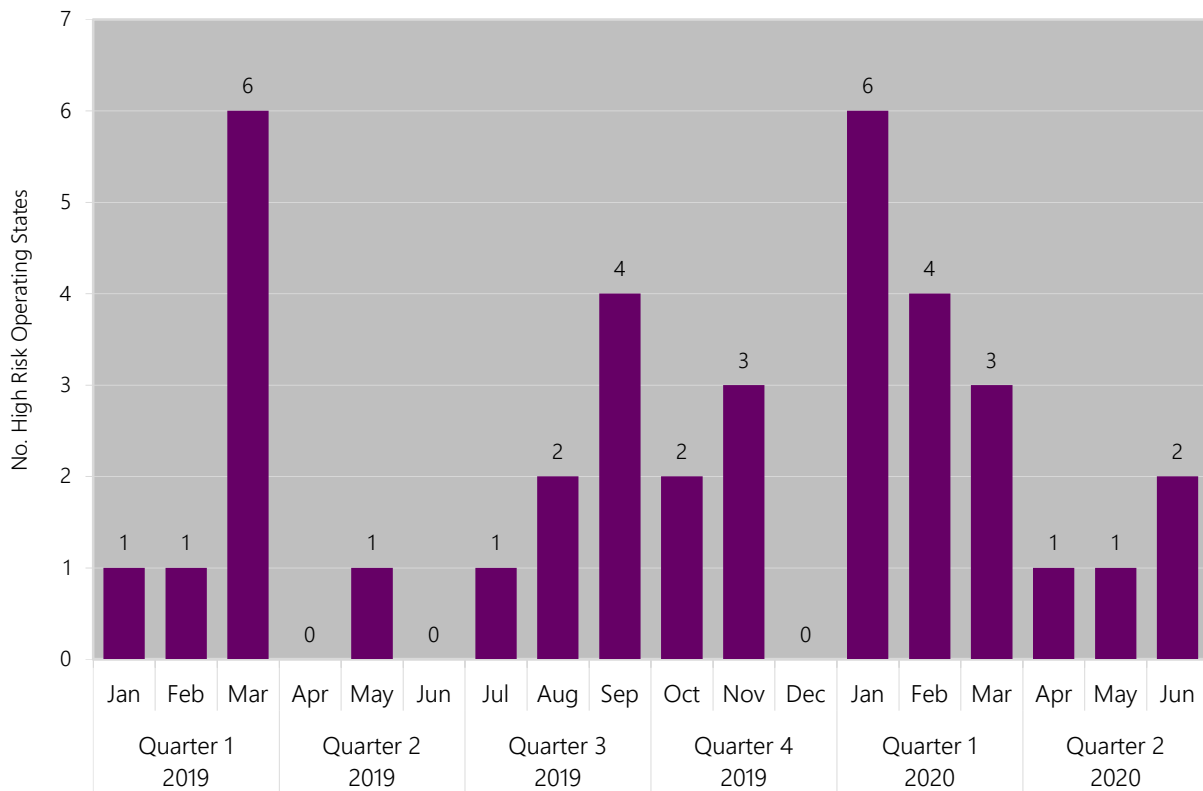


Figure 5: High Risk Operating States

Date/Interval/s	07 April 2020 / Trading Interval 16:2 to Trading Interval 17:2
Dispatch Advisory Number	206882
Details	AEMO experienced IT issues affecting Process Information (PI), SCADA data and SCADA XA/21 contingency analysis software.
AEMO action	AEMO was required to dispatch according to the latest available Balancing Merit Order to maintain Power System Security and Power System Reliability. There was no Out of Merit generation required.

Date/Interval/s	29 May 2020 / Trading Interval 15:2
Dispatch Advisory Number	207023
Details	At 15:52, the ALINTA_PNJ_U1 Facility tripped, resulting in a loss of approximately 138MW and a frequency deviation to 49.68Hz. Frequency returned to a normal operating level within 40 seconds of the Facility tripping.
AEMO action	AEMO was required to dispatch according to the latest Balancing Merit Order to maintain Power System Security and Power System Reliability. There was no Out of Merit generation required.

Date/Interval/s	14 June 2020 / Trading Interval 15:2
-----------------	--------------------------------------

Dispatch Advisory Number	207063
Details	At 15:54, the COLLIE_G1 Facility tripped, resulting in a loss of approximately 224MW and a frequency deviation to 49.65Hz. Frequency returned to a normal operating level within two minutes of the Facility tripping.
AEMO action	AEMO was required to dispatch according to the latest Balancing Merit Order to maintain Power System Security and Power System Reliability. There was no Out of Merit generation required.

Date/Interval/s	23 June 2020 / Trading Interval 11:2
Dispatch Advisory Number	207081
Details	Between 11:30 and 11:35, AEMO’s control room experienced an unplanned outage of IT infrastructure, resulting in a loss of visibility of IT systems.
AEMO action	AEMO was required to dispatch according to the latest available Balancing Merit Order to maintain Power System Security and Power System Reliability. There was no Out of Merit generation required.

## 6.2 Emergency Operating State

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

Figure 6 provides historical data for Emergency Operating States that have occurred since 1 January 2019.

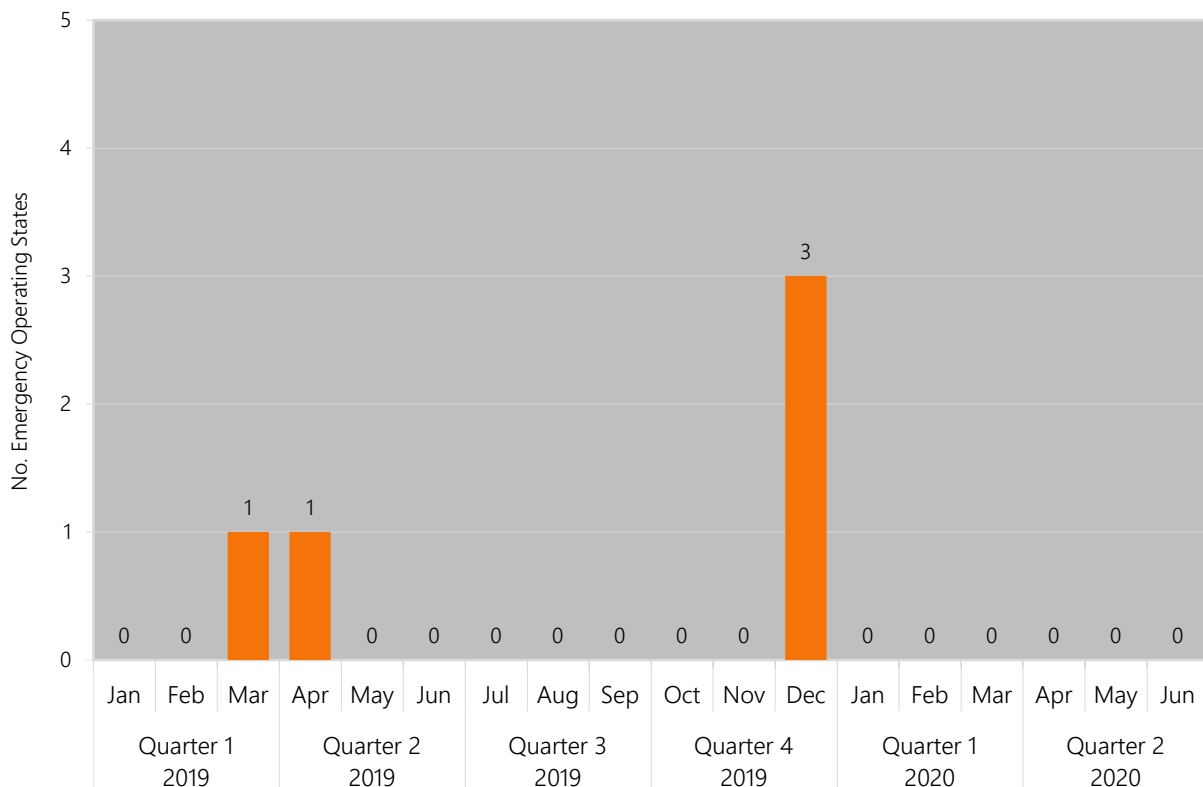


Figure 6: Emergency Operating States

### 6.3 Shortfalls in Ancillary Services

During the reporting period there were 116 instances of a shortfall in Ancillary Services. A shortfall occurs when the Ancillary Service Requirements are not met within a Trading Interval.

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 Load Rejection Reserve Service is (relevantly) 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.

103 instances during the reporting period related to shortfalls of Load Rejection Reserve Service<sup>3</sup>. 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 Wholesale Electricity Market often means no action is the best response.

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 13 instances of LFAS Enablement shortfall were reported.

AEMO does not consider that any of the shortfalls threatened Power System Security or Power System Reliability or were significant enough to place the SWIS in a High Risk Operating State or an Emergency Operating State.

Figure 7 below provides data for shortfalls in Ancillary Services that have occurred since 1 January 2019<sup>4</sup>.

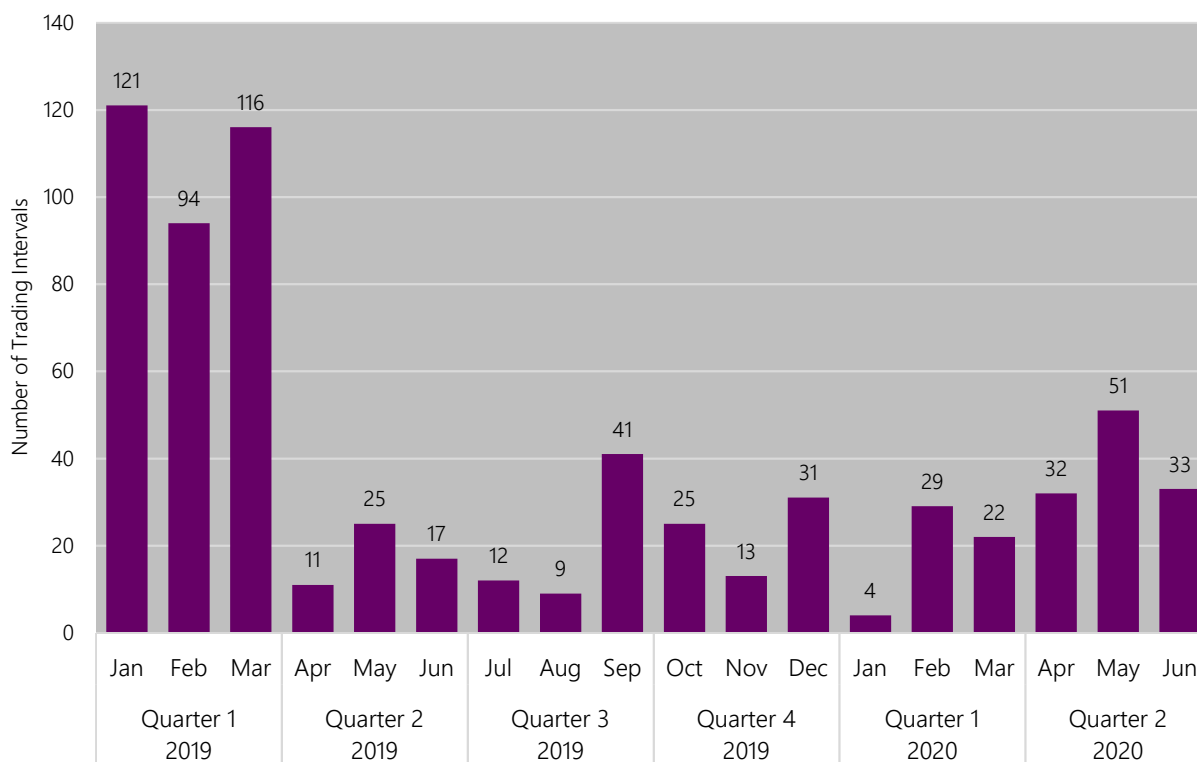


Figure 7: Number of Shortfalls in Ancillary Services

<sup>3</sup> Data is based on the number of Trading Intervals where Load Rejection Reserve of less than 90MW occurred, calculated using five-minute averages.

<sup>4</sup> AEMO has recently conducted a review of instances of LFAS enablement shortfall. Data has been amended where inconsistent with this review.

## 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 two 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	17 April 2020 / Trading Interval 14:1 to Trading Interval 16:2
Dispatch Advisory Number	206904
Details	AEMO required additional Load Following Ancillary Services due to system volatility.
AEMO action	AEMO was required to activate Load Following Ancillary Services from the Backup LFAS Provider to maintain Power System Security and Power System Reliability.

Date/Interval/s	11 May 2020 / Trading Interval 16:2 to Trading Interval 20:2
Dispatch Advisory Number	206983
Details	AEMO required additional Load Following Ancillary Services due to the NEWGEN_KWINANA_CCG1 Facility being unable to provide LFAS as per the LFAS Merit Order.
AEMO action	AEMO was required to activate Load Following Ancillary Services from the Backup LFAS Provider to maintain Power System Security and Power System Reliability.