
**Status Report prepared under
clause 7.12 of the WEM Rules by
System Management
1 April 2017 – 30 June 2017**



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1 Introduction

1.1 System Management

On 1 July 2016, Australian Energy Market Operator (**AEMO**) assumed accountability of System Management functions under the Wholesale Electricity Market Rules (**WEM Rules**).

Coinciding with this, the Economic Regulation Authority (**ERA**) has also taken accountability of compliance functions from the Independent Market Operator (**IMO**) as of 1 July 2016.

1.2 Status Report

Clause 7.12 of the WEM Rules requires System Management to provide a report to the ERA once every three months on the performance of the market with respect to the dispatch process (**Report**). 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.

System Management has prepared this Report pursuant to its obligations under clause 7.12 of the Market Rules, for the period 1 April 2017 to 30 June 2017 (**Reporting Period**).

Unless otherwise specified, data contained within this Report refers to trading dates and not calendar dates.

2 Issuance of Dispatch and Operating Instructions

During the Reporting Period, System Management issued a total of 10,489 Dispatch Instructions to Market Participants.

Figure 1 below shows the number of Dispatch instructions issued each month since 1 January 2016.

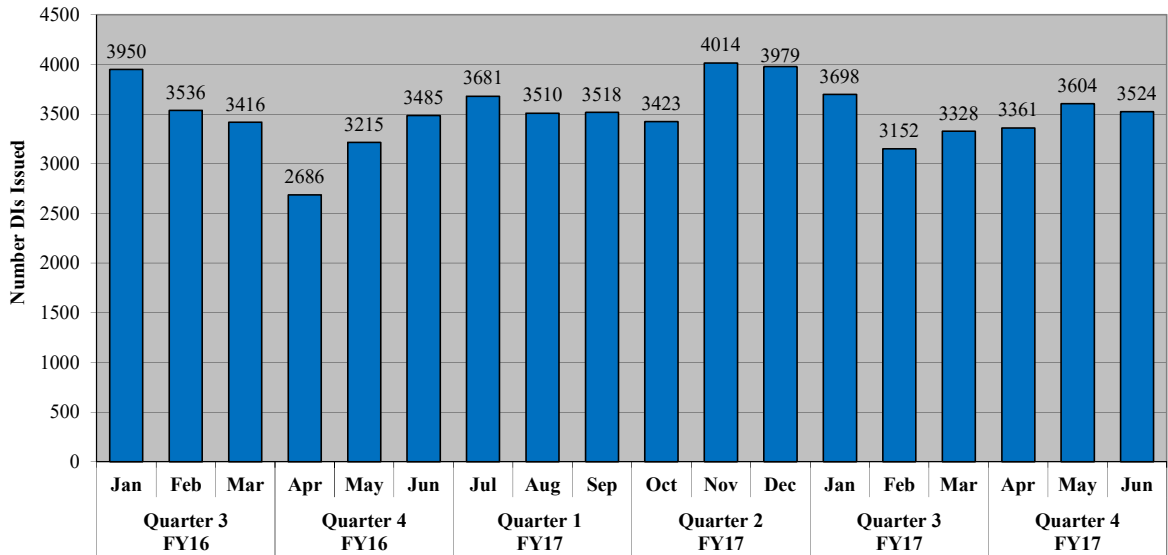


Figure 1: Dispatch Instructions per month

During the Reporting Period, System Management issued a total of 15 Operating Instructions.

Under the WEM Rules, System Management is required to issue an Operating Instruction to the relevant Market Participant for Commissioning and Reserve Capacity Testing.

Figure 2 below shows the number of Operating Instructions issued by System Management to Market Participants each month since 1 January 2016.

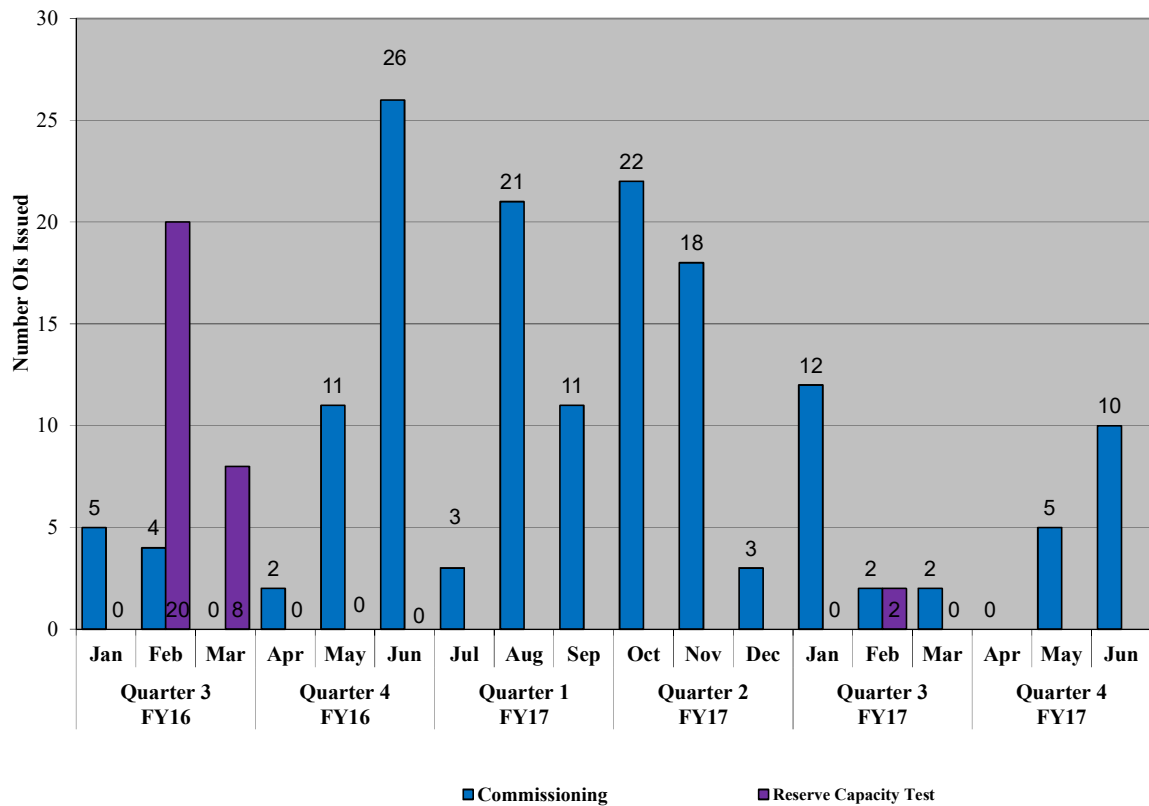


Figure 2: Operating Instructions per month

3 Non-compliance with Dispatch and Operating Instructions

During the Reporting Period, System Management reported 411 instances of non-compliance with Dispatch Instructions by a Market Participant at the end of their scheduled interval taking into account the Tolerance Range where applicable.

System Management issued 15,045 one minute non-compliance notifications to Market Participants for non-compliance with Dispatch Instructions during the Reporting Period taking into account the Tolerance Range where applicable.

There were a total of 160 failures by a Market Participant to acknowledge a Dispatch Instruction through the Market Participant Interface.

There were no failures by a Market Participant to acknowledge an Operating Instruction during the Reporting Period.

Figure 3 below provides historical non-compliance data since 1 January 2016.

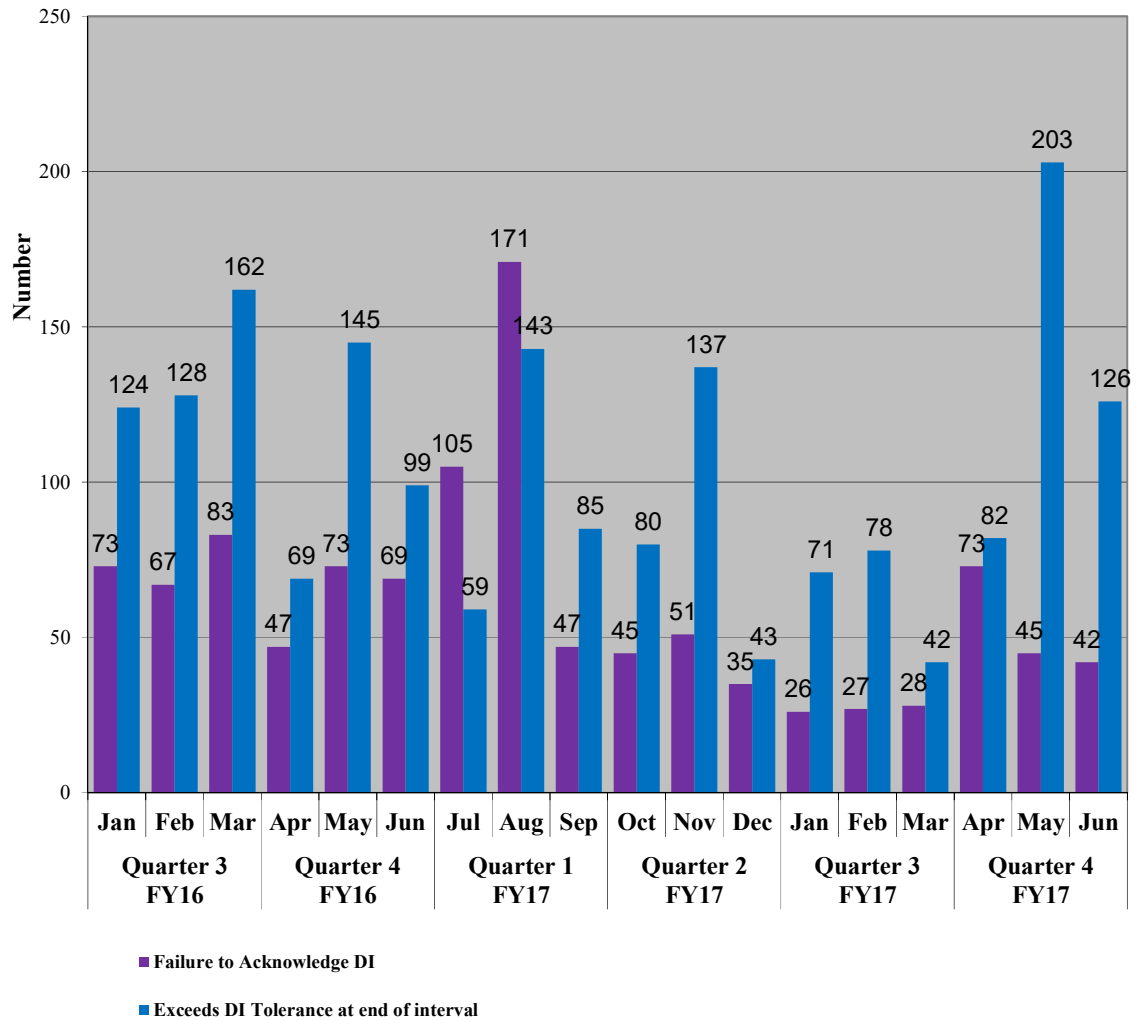


Figure 3: Dispatch Instruction non-compliance notifications (end of interval) and non-acknowledged Dispatch Instructions

4 Issuance of Dispatch Instructions to Balancing Facilities Out of Merit

4.1 Out of Merit instances reported to the ERA

During the Reporting Period, there was one self-reported occasion of potential non-compliant Out of Merit dispatch to the ERA that may have been in breach of the WEM Rules.¹

Date	16 June 2017
Interval	Interval 9:2 to Interval 10:1
Details	<p>On 16 June 2017 following a WEMS Production Emergency Failover (finishing at approximately 8:46am) an issue occurred resulting in the Balancing Merit Order (BMO) files being unable to be read into the ODS database and unable to be used for dispatch. Instead the previous BMO sent at 4:34am was used for dispatch. The BMOs created at 9:04am and 9:34am were not used for dispatch.</p> <p>Preliminary analysis shows the following potential Dispatch Out of Merit:</p> <p>Interval 9-2 Approximately 12.7MW dispatched Out of Merit</p> <p>Interval 10-1 Approximately 8.5MW dispatched Out of Merit</p>
System Management action	System Management dispatched Facilities as per the Balancing Merit Order created at 4:34am.

4.2 Other instances of Out of Merit dispatch

Section 5 of this Report contains information pertaining to Facilities that have been impacted by transmission constraints. Where a transmission constraint reported in section 5 has resulted in a Facility/ies being dispatched to a position that differs from the applicable Balancing Merit Order then these instances will constitute Out of Merit dispatch. Dispatch Advisory notifications are released for these transmission constraint-related instances.

Section 6 of this Report describes occasions of High Risk and Emergency Operating States that have occurred during the Reporting Period. During elevated Operating States there may be a need to dispatch facilities Out of Merit to return the power system to a Normal Operating State where indicated in the information provided in section 6 of this Report.

¹ Clause 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.

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 generator. The resultant situation has a generation Facility either decrease output or increase output as required by the circumstances of the constraint.

System Management has identified the following transmission constraints during the Reporting Period:

- On 5 April 2017, commencing Trading Interval 7:1 and ending Trading Interval 17:1, a planned line outage on the MGA_TS81 transmission line resulted in the MWF_MUMBIDA_WF1 Facility being curtailed (Dispatch Advisory 17040).
 - The MWF_MUMBIDA_WF1 Facility constrained to between 0MW and 20MW for 21 Trading Intervals.
- On 6 April 2017, commencing Trading Interval 7:1 and ending Trading Interval 12:1, a planned line outage on the MGA_TS81 transmission line resulted in the MWF_MUMBIDA_WF1 and ALINTA_WWF Facilities being curtailed (Dispatch Advisory 17041).
 - The MWF_MUMBIDA_WF1 Facility constrained to between 10MW and 15MW for 8 Trading Intervals.
 - The ALINTA_WWF Facility constrained to 0MW for 11 Trading Intervals.
- On 7 April 2017, commencing Trading Interval 7:1 and ending Trading Interval 17:2, a planned line outage on the MGA_TS81 transmission line resulted in the MWF_MUMBIDA_WF1 and ALINTA_WWF Facilities being curtailed (Dispatch Advisory 17042).
 - The MWF_MUMBIDA_WF1 Facility constrained to between 10MW and 20MW for 8 Trading Intervals.
 - The ALINTA_WWF facility constrained to 0MW for 22 Trading Intervals.
- On 8 April 2017, commencing Trading Interval 7:1 and ending Trading Interval 17:1, a planned line outage on the MGA_TS81 transmission line resulted in the MWF_MUMBIDA_WF1, ALINTA_WWF and GREENOUGH_RIVER_PV1 Facilities being curtailed (Dispatch Advisory 17043).
 - The MWF_MUMBIDA_WF1 Facility constrained to between 0MW and 15MW for 21 Trading Intervals.
 - The ALINTA_WWF Facility constrained to 0MW for 20 Trading Intervals.
 - The GREENOUGH_RIVER_PV1 Facility constrained to between 7MW and 9MW for 2 Trading Intervals.
- On 9 April 2017, commencing Trading Interval 8:2 and ending Trading Interval 11:1, a planned line outage on the WWF-GTN81 transmission line resulted in the ALINTA_WWF Facility being curtailed (Dispatch Advisory 17044).

- The ALINTA_WWF Facility constrained to between 60MW and 65MW for 6 Trading Intervals.
- On 7 June 2017, commencing Trading Interval 7:1 and ending Trading Interval 8:1, a stability limitation on the 33-132kV transmission line from Parkeston resulted in the PRK_AG Facility needing to be constrained to a maximum output of 65MW (Dispatch Advisory 17142).
 - The PRK_AG Facility constrained to 65MW for 1 Trading Interval.
- On 8 June 2017, commencing Trading Interval 8:2 and ending Trading Interval 10:2, a stability limitation on the 33-132kV transmission line from Parkeston resulted in the PRK_AG Facility needing to be constrained to a maximum output of 55MW from 9:00am to 9:07am and STHRNCRS_EG constrained to 0MW from 9:07am to 9:50am (Dispatch Advisory 17144).
 - The PRK_AG Facility constrained to 55MW for 1 Trading Interval.
 - The STHRNCRS_EG Facility constrained to 0MW for 2 Trading Intervals.
- On 12 June 2017, commencing Trading Interval 7:1 and ending 13 June 2017 Trading Interval 16:1, a fault on the MGA_GTN transmission line resulted in the ALINTA_WWF Facility being curtailed (Dispatch Advisory 17150).
 - The ALINTA_WWF Facility constrained to 0MW for 67 Trading Intervals.

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

6.1 High Risk Operating State

During the Reporting period, there were six instances of High Risk Operating States.

Date/Interval/s	11 April 2017 Trading Interval 14:2
DA Number	DA 17045
Details	The ALINTA_WGP_U2 Facility tripped at 2.40 pm on 11 April 2017, resulting in approximately a loss of 170MW of generation and a reduction in the SWIS system frequency to 49.52Hz.
System Management action	System Management continued to dispatch as per the latest Balancing Merit Order to maintain Power System Security and Reliability.

Date/Interval/s	27 April 2017 Trading Interval 6:1 to Trading Interval 7:1
DA Number	DA 17063

Details	System Management experienced issues with the Real Time Dispatch Engine (RTDE) that prevented Dispatch Instructions from being issued electronically.
System Management action	System Management issued verbal Dispatch Instructions based on the Balancing Merit Order.

Date/Interval/s	28 April 2017 Trading Interval 11:1 to Trading Interval 17:2
DA Number	DA 17064
Details	A bushfire in the South Metropolitan region caused the KW-NT91 transmission line to trip. This resulted in the NEWGEN_KWINANA_CCG1 Facility tripping, resulting in the loss of 242MW of generation and a reduction in the SWIS system frequency to 49.24Hz. Whilst the frequency was restored within Trading Interval 11:1, the bushfire remained a threat.
System Management action	Monitor the bushfire and dispatched as per the latest Balancing Merit Order to maintain Power System Security and Reliability.

Date/Interval/s	9 May 2017 Trading Interval 0:1 to Trading Interval 3:1
DA Number	DA 17081
Details	System Management experienced issues with the PI Servers causing a loss of visibility of the SOCCUI and some File Transfer failures.
System Management action	Facilities were unable to be dispatched according to the Balancing Merit Order. Facilities that were generating electricity were requested to be placed on manual mode and continue with their current levels of generation unless verbally directed by System Management. All windfarms were constrained to 0MW to maintain Power System Security and Reliability.

Date/Interval/s	29 May 2017 Trading Interval 0:2 to Trading Interval 11:2
DA Number	DA 17123 and DA 7126
Details	The BW1_BLUEWATERS_G2 Facility tripped at 12.36am on 29 May 2017 resulting in a reduction in the SWIS system frequency to 49.48Hz.
System Management action	System Management placed a facility constraint of 0MW on the BW1_Bluewaters_G2 Facility and dispatched based on the Balancing Merit Order.

Date/Interval/s	7 June 2017 Trading interval 1:2 to Trading Interval 7:2
DA Number	DA 17141 and DA 17140
Details	A degradation of System Managements SCADA System resulted in limited visibility of a number of generating facilities and transmission lines, these being but not limited to the COLLIE_G1, TESLA_PICTON and SYNERGY_SIMCOA_IL1 Facilities.
System Management action	System Management remained in telephone contact with the affected Facilities for Dispatch (if required).

6.2 Emergency Operating State

During the Reporting Period, there were no instances of an Emergency Operating States.

Figure 4 below provides historical data for High Risk and Emergency Operating States that have occurred since 1 January 2016.

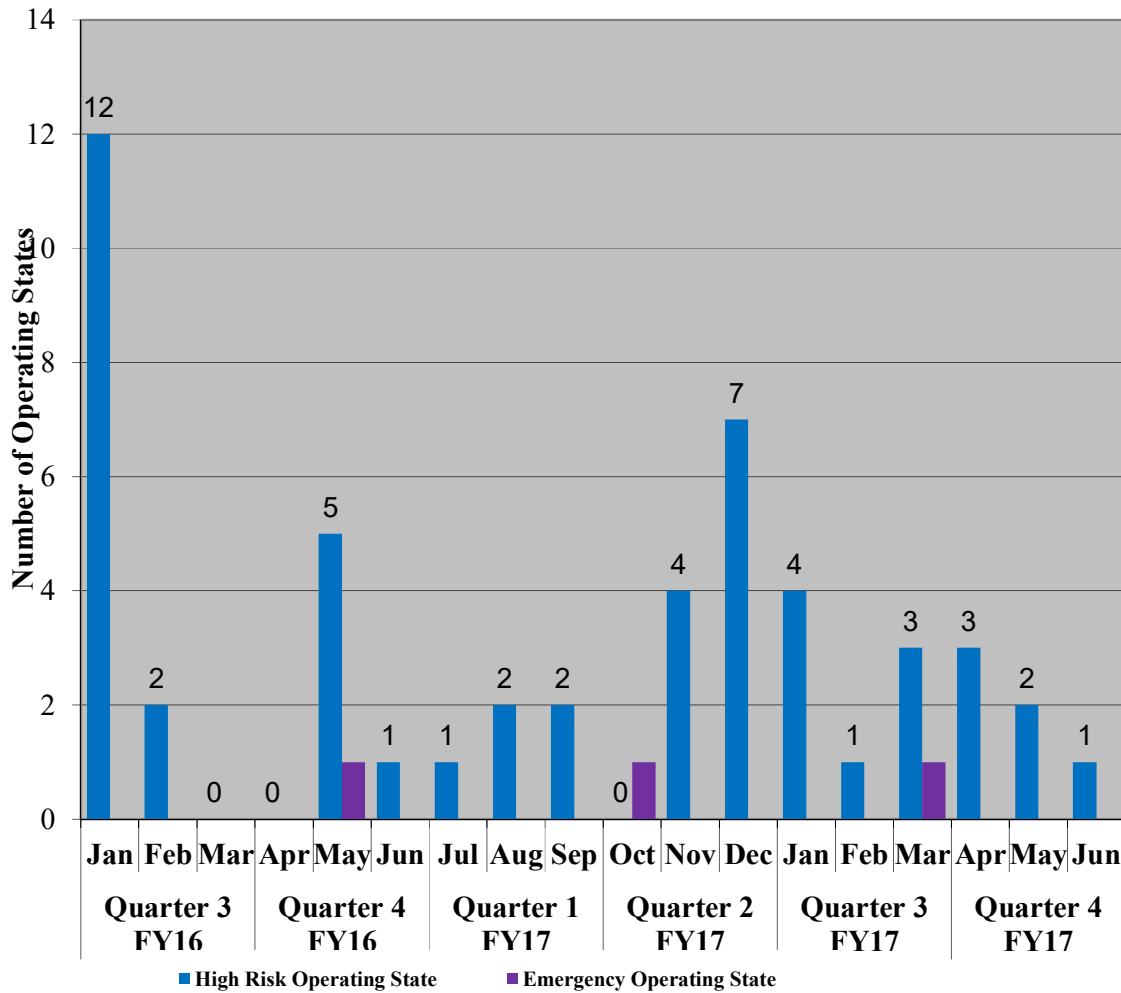


Figure 4: Number of High Risk and Emergency Operating States

6.3 Shortfalls in Ancillary Services

There were no instances of shortfalls in Ancillary Services during the Reporting Period.

6.4 Involuntary curtailment of load

There were no instances of involuntary curtailment of load.

7 LFAS Facilities out of Merit Order

During the Reporting Period, there were no incidents where System Management was required to use LFAS Facilities outside of the LFAS Merit Order to operate the SWIS in a reliable and safe manner under clause 7B.3.8 of the WEM Rules.