
Status Report prepared under
clause 7.12 of the Market Rules by
System Management
1 October 2016 – 31 December 2016

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1 Introduction

1.1 System Management

On 1 July 2016 Australia Energy Market Operator (AEMO) assumed accountability of System Management functions under the Wholesale Electrical Market 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 requires System Management to provide a quarterly report 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 this clause, issuing Dispatch Orders to the Balancing Portfolio in accordance with clause 7.6.2;
- 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;
- the incidence and reasons for the selection and use of LFAS Facilities under clause 7B.3.8.

System Management has prepared this report pursuant to its obligations under clause 7.12 of the Market Rules, for the period 1 October 2016 to 31 December 2016.

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

2 Issuance of Dispatch and Operating Instructions.

System Management issued a total of 11416 Dispatch Instructions to Market Participants during the current reporting period.

Figure 1 below shows the number of Dispatch instructions issued by month since 1 July 2015.

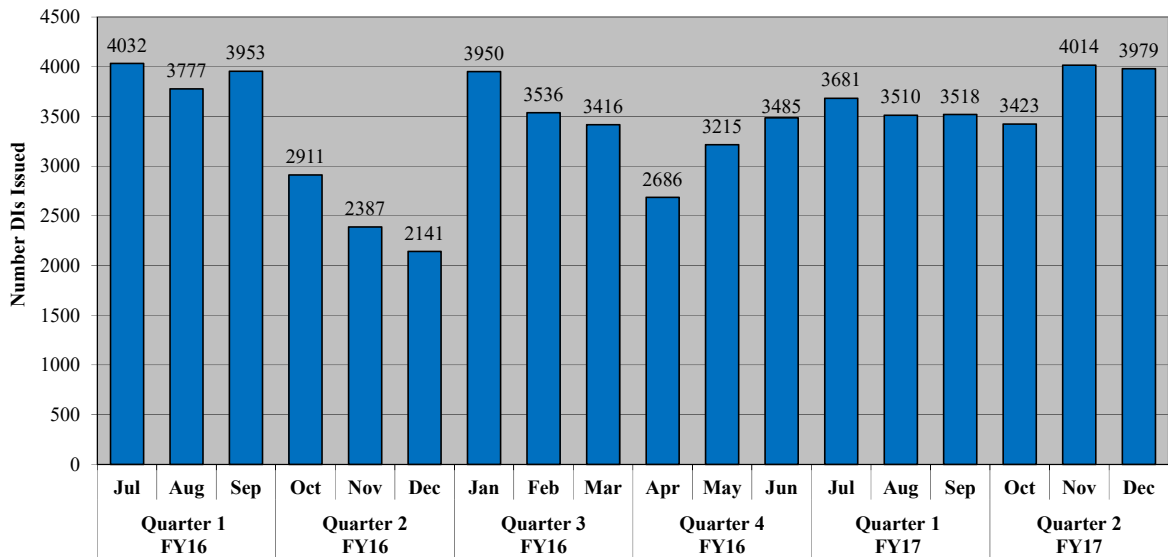


Figure 1: Dispatch Instructions per month

During the current reporting period, System Management issued a total of 43 Operating Instructions.

Under the Market Rules an Operating Instruction is required for Commissioning and Reserve Capacity Testing.

Figure 2 below shows the number of Operating Instructions issued by month since 1 July 2015.

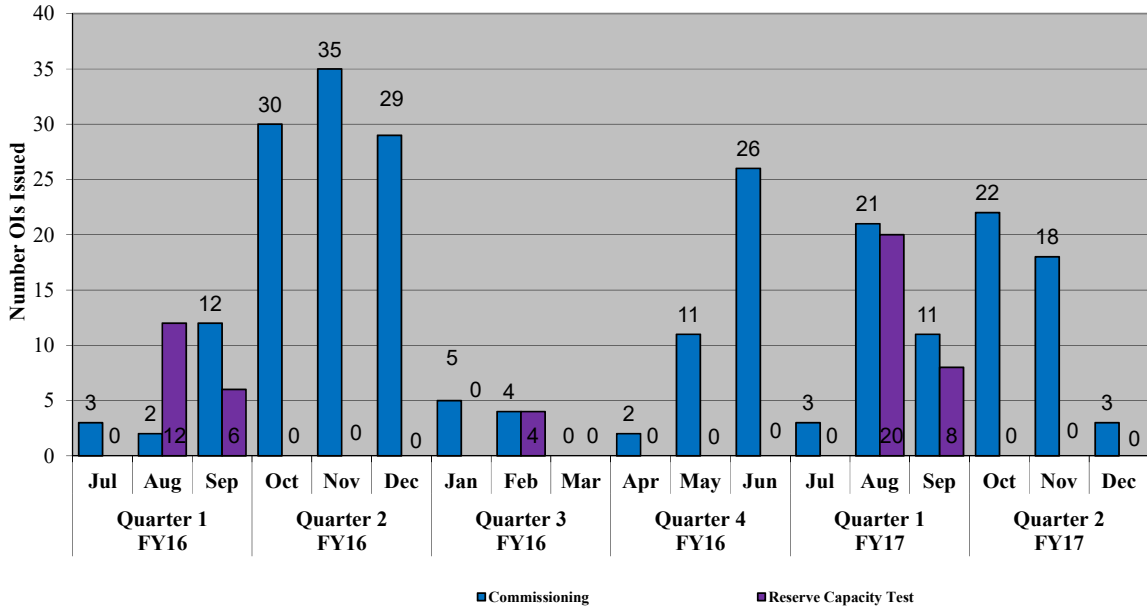


Figure 2: Operating Instructions per month

3 Non-compliance with Dispatch and Operating Instructions

In the current reporting period, System Management reported 260 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 11043 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 131 failures by a Market Participant to acknowledge a Dispatch Instruction through the Market Participant Interface.

There were two failures by a Market Participant to acknowledge an Operating Instruction during the current reporting period.

Figure 3, below provides historical non-compliance data since 1 July 2015.

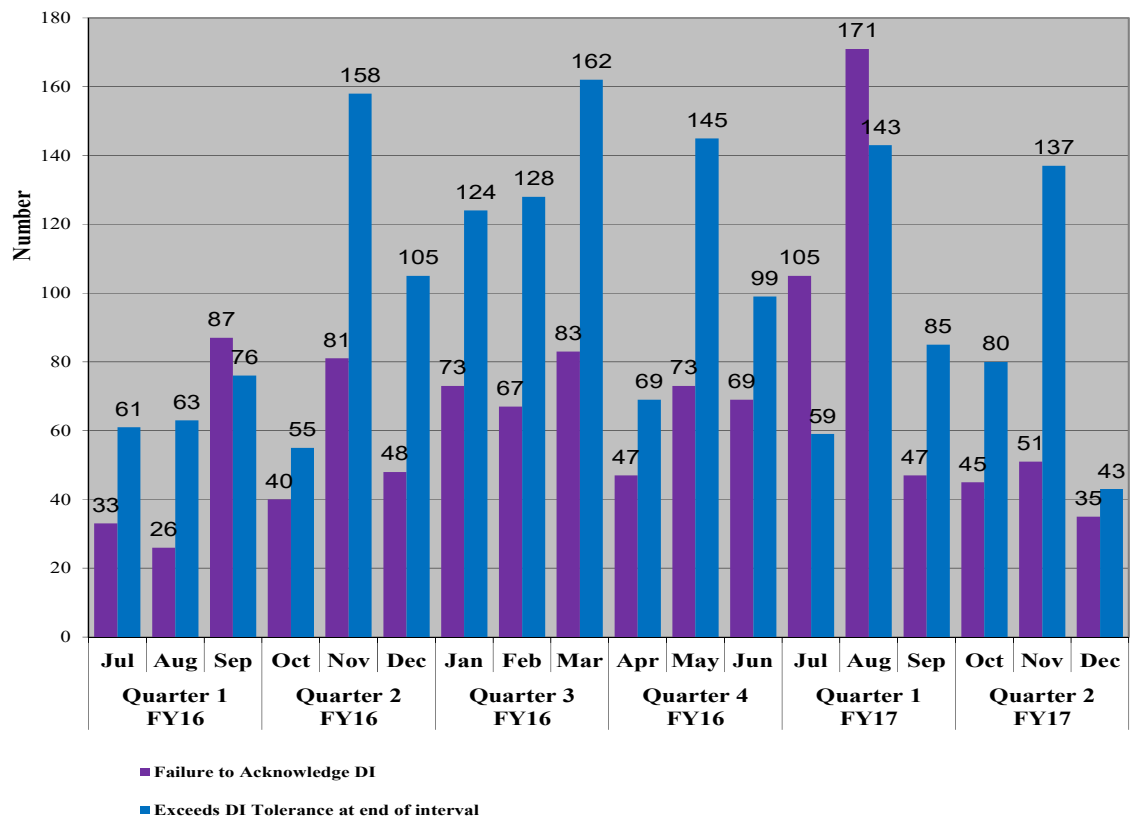


Figure 3: Dispatch Instruction non-compliance notifications (end of interval) and non-acknowledged Dispatch Instructions

4 Issuance of Dispatch Instructions to Balancing Facilities Out of Merit Order.

4.1 Out of Merit instances reported to the AEMO

During the reporting period there were no self-reported occasions of potential Out of Merit dispatch to the AEMO that may have been in breach of the Market Rules¹.

¹ Note clause 7.6.1D of the Market 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.

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 constrain 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.

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 period.

- On 15 October 2016, commencing Interval 8:1 and ending Interval 16:1 a Western Power Networks scheduled outage on the MGA_GTN81 transmission line resulted in Alinta_WWF being curtailed to 0MW (Dispatch Advisory 16797):
 - ALINTA_WWF was constrained to 0MW for 17 Intervals
- On 19 October 2016, commencing Interval 8:1 and ending Interval 17:2 a Western Power Networks scheduled outage on the MGA_MBA81 transmission line resulted in Alinta_WWF being curtailed to 20MW (Dispatch Advisory 16798):
 - ALINTA_WWF was constrained to 20MW for 20 Intervals
- On 20 October 2016, commencing Interval 10:1 and ending Interval 17:2 a Western Power Networks scheduled outage on the MGA_MBA81 transmission line resulted in Alinta_WWF being curtailed to between 10MW and 30MW (Dispatch Advisory 16799):
 - ALINTA_WWF was constrained between 10MW and 30MW for 17 Intervals
- On 21 October 2016, commencing Interval 8:1 and ending Interval 13:2 a Western Power Networks scheduled outage on the MGA_MBA81 transmission line resulted in Alinta_WWF being curtailed 15MW (Dispatch Advisory 16800):
 - ALINTA_WWF was constrained between 10MW and 15MW for 12 Intervals
- On 1 November 2016, commencing Interval 13:1 and ending Interval 15:1 an unplanned extension of a Western Power Networks outage on the MSR-KMI81 resulted in TIWEST_COG1 being islanded.
 - TIWEST_COG1 constrained to 0MW for 5 Intervals

- On 2 November 2016, commencing Interval 12:2 and ending Interval 14:2 an unplanned Western Power Networks fault on the WKT-BLD81 transmission line in the Eastern Goldfields Regions resulted in STHRNCRS_EG and PRK_AG being islanded from the SWIS (Dispatch Advisory 16811):
 - STHRNCRS_EG constrained to 0MW for 5 Intervals
 - PRK_AG constrained to 0MW for 4 Intervals
- On 5 November 2016, commencing Interval 11:2 and ending Interval 18:1 an unplanned issue on the APJ_OLY91 line resulted in the facility Alinta_PNJ_U2 being constrained to 0MW (Dispatch Advisory 16812):
 - Alinta_PNJ_2 constrained to 0MW for 9 Intervals
- On 8 December 2016, commencing Interval 8:2 and ending Interval 15:1 due to a planned Western Power Networks outage on the MGA_MBA_81 line and the MGA835.0 breaker resulted in the facility ALINTA_WWF being constrained to between 0MW and 5MW (Dispatch Advisory 16800):
 - ALINTA_WWF constrained between 0MW and 5MW for 14 Intervals

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

6.1 High Risk Operating State

11 instances of High Risk Operating States occurred during the report period.

Date/Interval/s	1 November 2016 Interval 16:2
DA Number	16805
Details	At 16:40pm the facility ALINTA_PNJ_U2 tripped resulting in a loss of approximately 136MW and the frequency to drop to 49.66Hz.
System Management action	System Management continued to Dispatch as per the latest Balancing Merit Order

Date/Interval/s	2 November 2016 Interval 08:1
DA Number	16809
Details	The simultaneous ramping of Independent Power Producers (IPP's) resulted in the Synergy Portfolio output having to be decreased resulting in insufficient Load Following
System Management action	System Management continued to Dispatch as per the latest Balancing Merit Order. The Synergy Portfolio was reduced to allow for IPP ramping to ensure System Security and Reliability

Date/Interval/s	5 November 2016 Interval 11:1
DA Number	16812
Details	At 11:23am the facility ALINTA_PNJ_U2 tripped causing a loss of approximately 132MW of generation and the frequency reduced to 49.52Hz. The frequency was restored to normal operating levels within 90 seconds.
System Management action	System Management continued to Dispatch as per the latest Balancing Merit Order.

Date/Interval/s	28 November 2016 Interval 21:2 to Interval 23:1
DA Number	16868
Details	A circuit breaker failure at MUJA Terminal at 21:40pm caused the loss of MUJA Busbar A and resulted in the failure of BTT3, BTT2 and the loss of the 220kV supply from MUJA to the Eastern goldfields region. This resulted in the facilities NAMKKN_MERR_SG1, INVESTEC_COLLGAR_WF1, WEST_KALGOORLIE_GT2 and WEST_KALGOORLIE_GT3 were unavailable to export to the SWIS until 23:25 when the affected transformers were re-energised.
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	07 December 2016 Interval 11:2 to Interval 12:1
DA Number	16892
Details	System Management was experiencing IT issues that impacted the Real Time Dispatch Engine (RTDE). Verbal Dispatch Instructions may be required.
System Management action	No verbal Dispatch Instructions were issued and System Management continued to Dispatch as per the latest Balancing Merit Order

Date/Interval/s	07 December 2016 Interval 14:1 to Interval 17:1
DA Number	16893
Details	System Management was experiencing IT issues that impacted the Real Time Dispatch Engine (RTDE). Verbal Dispatch Instructions may be required.
System Management action	No verbal Dispatch Instructions were issued and System Management continued to Dispatch as per the latest Balancing Merit Order.

Date/Interval/s	08 December 2016 Interval 17:1 to Interval 18:2
DA Number	16895
Details	System Management was experiencing IT issues that impacted the Real Time Dispatch Engine (RTDE).
System Management action	No verbal Dispatch Instructions were required and System Management continued to Dispatch as per the latest Balancing Merit Order.

Date/Interval/s	09 December 2016 Interval 14:2 to Interval 16:1
DA Number	16897
Details	A low gas lockout issue with the MUC801.0 Circuit Breaker required the MUC_MOR71 Transmission Line to be taken out of Service for repair to the Circuit Breaker.
System Management action	Western Power Networks sent an operator to site to initiate repair to the Circuit Breaker. System Management dispatch the facility MUNGARRA_GT1 (part of the Synergy portfolio) to provide voltage support and maintain the stability of the Power System if a credible contingency occurred.

Date/Interval/s	20 December 2016 Interval 18:2
DA Number	16901
Details	The facility MUJGA_G6 tripped at 18:45pm resulting in a loss of approximately 167MW of generation and a drop in frequency to 49.52Hz. The Frequency returned to a Normal Operating level within a minute of the facility trip.
System Management action	System Management continued to Dispatch as per the latest Balancing Merit Order.

Date/Interval/s	21 December 2016 Interval 12:1 to Interval 15:1
DA Number	16902
Details	The PJR-CTB 81 and PJR-EMD-ENB 81 transmission lines tripped at 12:13 on 21/12/2016 due to suspected bushfires in the North Country. Emu Downs Windfarm A was unavailable due to the line outages.
System Management action	System Management continued to Dispatch as per the latest Balancing Merit Order.

Date/Interval/s	23 December 2016 Interval 19:2 to Interval 20:1
DA Number	16903
Details	Collie Power Station tripped causing a loss of approximately 320 MW at 19:58hrs causing frequency to drop to 49.31Hz.
System Management action	System Management continued to Dispatch as per the latest Balancing Merit Order.

6.2 Emergency Operating State

During the reporting period, one Emergency Operating States was issued.

Date/Interval/s	12 October 2016 Interval 19:2 to Interval 20:1
DA Number	16791
Details	COLLIE_G1 tripped at 19:56pm with a loss of approximately 315MW of generation and a frequency deviation of approximately 49.04Hz. Frequency returned to a Normal Operating State by 20:04pm.
System Management action	System Management continued to Dispatch as per the latest Balancing Merit Order.

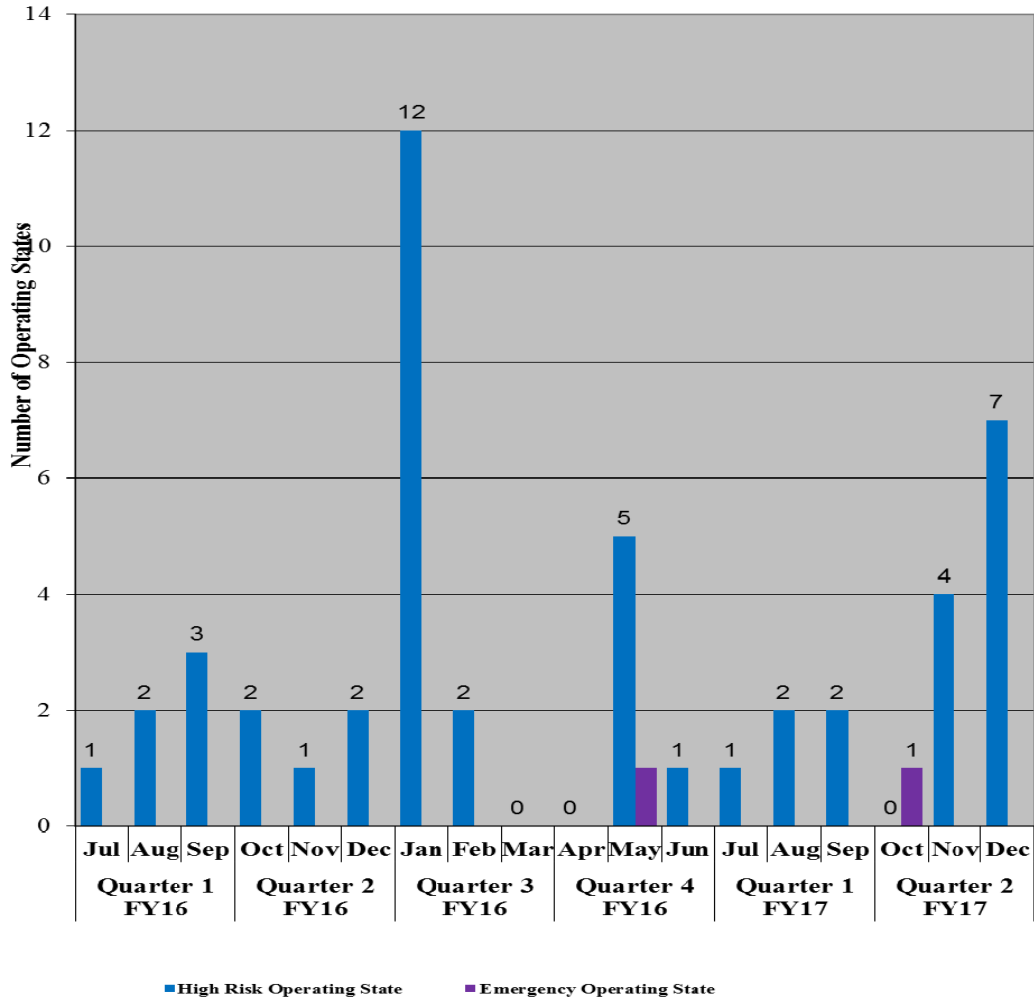


Figure 4: Number of High Risk and Emergency Operating States

6.3 Shortfalls in Ancillary Services

There were no instances of shortfalls in Ancillary Services for the 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 current 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 as per MR7B.3.8.