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Status Report prepared under  
clause 7.12 of the Market Rules by  
System Management  
1 April 2014 – 30 June 2014

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# 1 Introduction

## 1.1 System Management

Western Power is established under section 4(1)(b) of the *Electricity Corporations Act 2005* and has the functions conferred under section 41 of that act.

Part 9 of the *Electricity Industry Act 2004* makes provision for a wholesale electricity market and provides for the establishment of Market Rules.

Regulation 13 of the *Electricity Industry (Wholesale Electricity Market) Regulations 2004* provides that the Market Rules may confer on an entity the function of operating the SWIS in a secure and reliable manner.

Clause 2.2 of the *Wholesale Electricity Market Amending Rules (September 2006)* (**Market Rules**) confers this responsibility upon the segregated (“ring fenced”) business unit of Western Power known as System Management. Amongst these responsibilities, the functions of System Management are to:

- release information required by the Market Rules;
- monitor rule participants compliance with the Market Rules relating to dispatch and power system security and power system reliability; and
- provide regular reports to the IMO and other market participants.

Included in the requirement to monitor and report is this Status Report, described in clause 7.12 of the Market Rules.

## 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 Verve Energy 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.

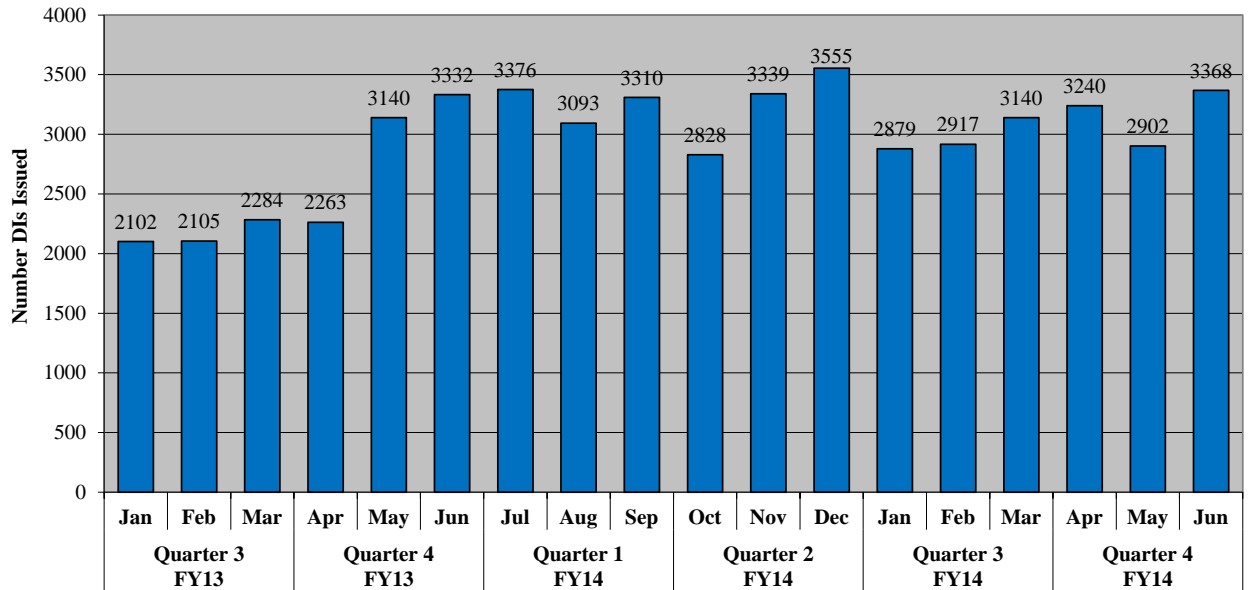
System Management has prepared this report pursuant to its obligations under clause 7.12 of the Market Rules, for the period 1 April 2014 to 30 June 2014.

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 9,510 Dispatch Instructions to Market Participants during the current reporting period.

Figure 1 below shows the number of Dispatch instructions issued by month since 1 January 2013.

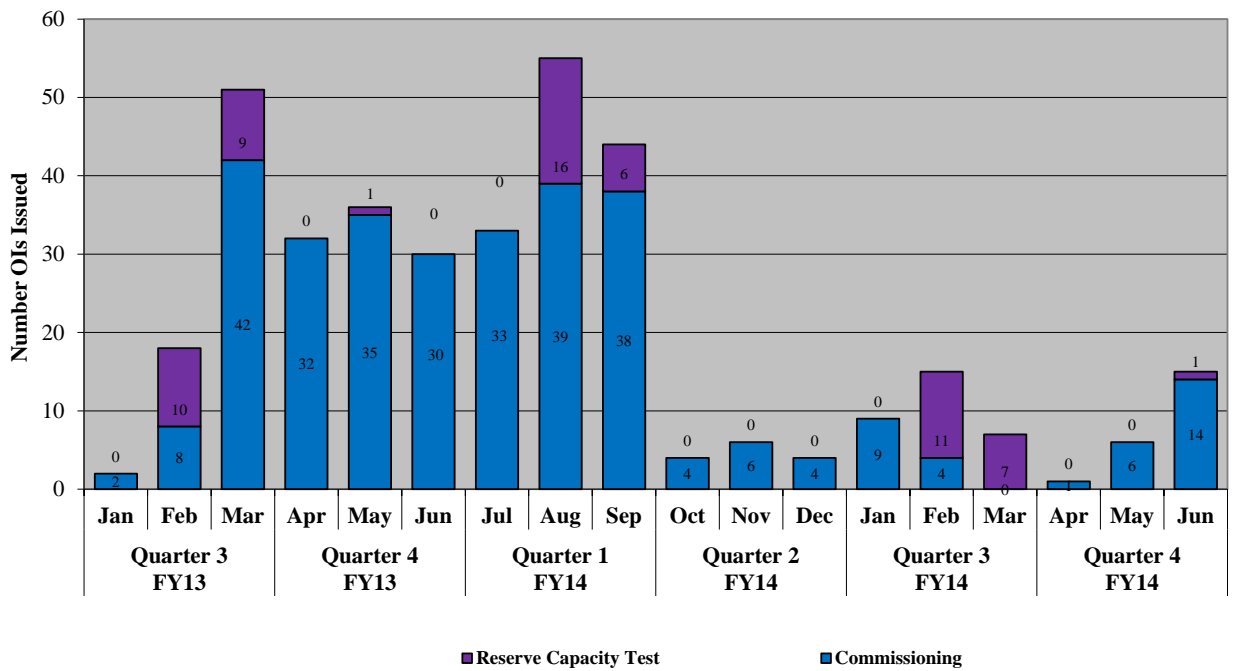


**Figure 1: Dispatch Instructions per month**

During the current reporting period, System Management issued a total of 488 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 January 2013.



**Figure 2: Operating Instructions per month**

### 3 Non-compliance with Dispatch and Operating Instructions

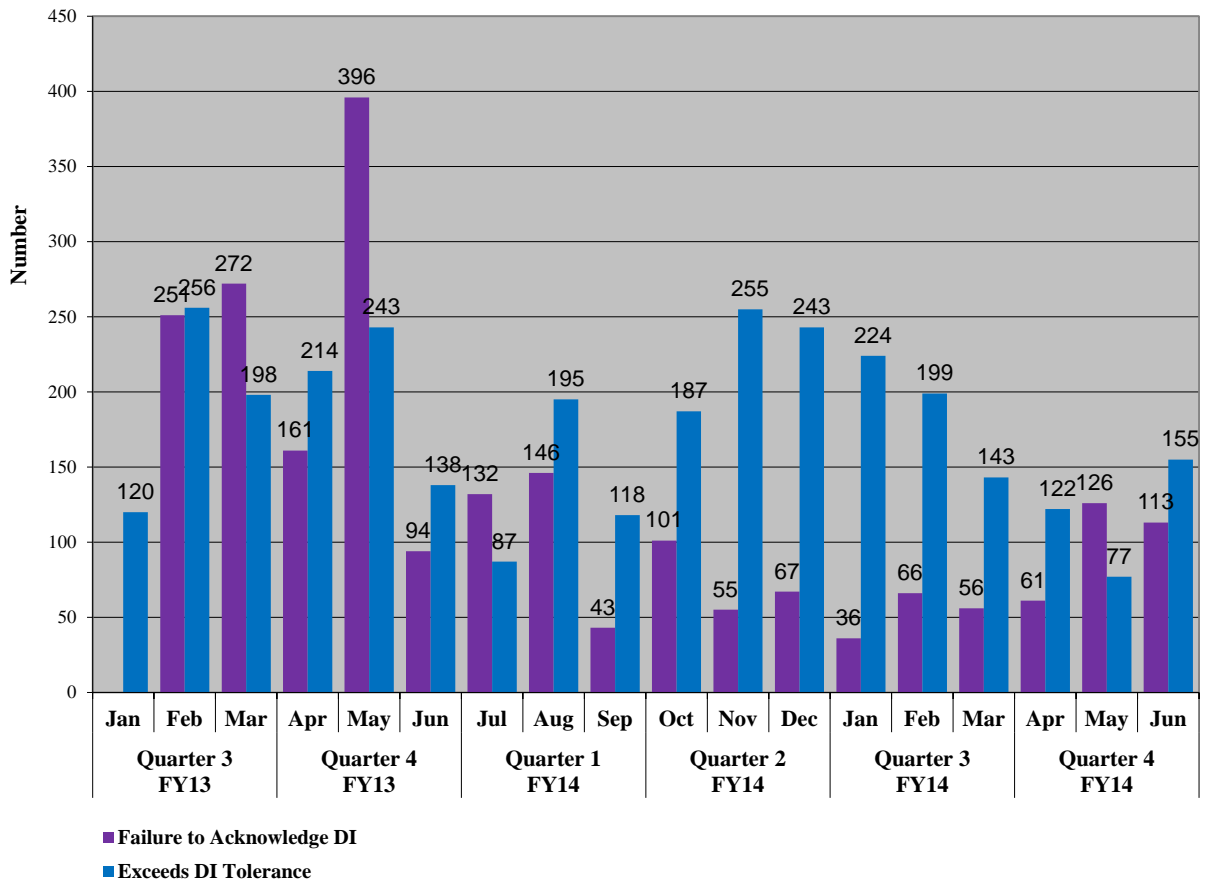
In the current reporting period, System Management reported 354 instances of non-compliance with Dispatch Instructions by a Market Participant at the end of their scheduled interval taking into account the Tolerance Range where applicable.

System Management issued 14,841 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 300 failures by a Market Participant to acknowledge a Dispatch Instruction through the Market Participant Interface.

There were a total of 2 failures by a Market Participant to acknowledge an Operating Instruction.

Figure 3 below provides historical non-compliance data since 1 January 2013.



**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 IMO

During the reporting period there were no self-reported occasions of potential Out of Merit dispatch to the IMO.

##### 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 potentially 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.

## 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.

System Management has identified the following periods involving transmission constraints:

- For the period 7 April to 9 April 2014 and again during the 11 April 2014, System Management constrained the following Facilities due to planned outages on the 220kV network in the Eastern Goldfields region (refer to Dispatch Advisories 4110, 4111, 4113, 4119, 4120, 4121, 4126 and 4127):
  - PRK\_AG required for 80 intervals
  - ALINTA\_WWF constrained for 16 intervals
  - GREENOUGH\_RIVER\_PV constrained for 4 intervals
  - MWF\_MUMBIDA\_WDF1 constrained for 16 intervals
- For the period 19 May to 23 May 2014 System Management constrained the following Facilities due to planned outages on the MGA-TS81 line leaving the North Country on a radial (refer to Dispatch Advisories 4316, 4320, 4322, 4324, 4326, 4330, 4333, 4337, 4338 and 4342):
  - ALINTA\_WWF constrained for 131 intervals
  - MWF\_MUMBIDA\_WDF1 constrained for 129 intervals
  - NEWGEN\_NEERABUP\_GT1 for 217 intervals.
- As stated in last period’s report, commencing 23 February 2014 due to the Muja bus tie transformer two failure (MUBTT2) and loss of voltage control in the Great Southern region, System Management has dispatched Facilities for security reasons. This has involved Muja Units 1 to 4, Tesla Picton, Kemerton and Enernoc DSP’s. This situation remains ongoing (see public presentations at <http://www.imowa.com.au/home/presentations> and Section 6.1 for further details).

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

### 6.1 High Risk Operating State

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

<b>Date</b>	23 February 2014
<b>Interval/s</b>	7:2 – 15:1 (9 May 2014)
<b>DA Number</b>	3986
<b>Details</b>	Muja bus tie transformer 2 (MUBTT2) failed and System Management lost voltage control in the Great Southern region. Out of Merit Dispatch required to maintain Power System Security and Reliability.
<b>System Management action</b>	Two Vinalco Muja units were run to prevent overloads during high South Country load times and over-voltages at night.

<b>Date</b>	2 April 2014
<b>Interval/s</b>	20:1 (2 April 2014) to 6:1 (3 April 2014)
<b>DA Number</b>	4092
<b>Details</b>	MUJA_G3 and MUJA_G4 tripped causing an increased risk to Power System Security in the Great Southern region
<b>System Management action</b>	Continued to dispatch as per the latest BMO

<b>Date</b>	10 May 2014
<b>Interval/s</b>	22:2 (10 May 2014) to 9:2 (15 May 2014)
<b>DA Number</b>	4303 and 4304 (DA 4304 was an amendment notice for DA 4303)
<b>Details</b>	MUJA_G1 tripped at 22:49hrs on 10 May 2014 causing an increased risk to Power System Security in the Great Southern region
<b>System Management action</b>	System Management called on another Vinalco unit to be available on standby should MUJA_G1 be unable to return within time



<b>Date</b>	8 June 2014
<b>Interval/s</b>	8:1 to 9:1
<b>DA Number</b>	4561
<b>Details</b>	NEWGEN_KWINANA_CCG1 tripped resulting in the loss of approximately 240MW of generation and a deviation in frequency to approximately 49.52hz
<b>System Management action</b>	Continued to dispatch as per the latest BMO

<b>Date</b>	10 June 2014
<b>Interval/s</b>	19:1
<b>DA Number</b>	4571
<b>Details</b>	NEWGEN_KWINANA_CCG1 tripped resulting in the loss of approximately 100MW of generation and a deviation in frequency to approximately 49.83hz
<b>System Management action</b>	Continued to dispatch as per the latest BMO

<b>Date</b>	11 June 2014
<b>Interval/s</b>	8:2 to 11:1
<b>DA Number</b>	4572
<b>Details</b>	ALINTA_PNJ_U1 tripped resulting in the loss of approximately 130MW of generation and a deviation in frequency to approximately 49.77hz
<b>System Management action</b>	Continued to dispatch as per the latest BMO

<b>Date</b>	17 June 2014
<b>Interval/s</b>	17:2 to 6:1
<b>DA Number</b>	4588
<b>Details</b>	Faults on transmission network in the South West due to storms could potentially result in involuntary load shedding
<b>System Management action</b>	Continued to dispatch as per the latest BMO

<b>Date</b>	19 June 2014
<b>Interval/s</b>	16:1 to 21:1
<b>DA Number</b>	4595
<b>Details</b>	An issue with the transmission system at the Muja substation resulted in a heightened risk to Power System Security and Reliability in the South West
<b>System Management action</b>	Vinalco Facilities cycled to allow network access to resolve the transmission system issues

<b>Date</b>	20 June 2014
<b>Interval/s</b>	17:1 to 6:1
<b>DA Number</b>	4599
<b>Details</b>	MUJA_G4 tripped causing an increased risk to Power System Security in the Great Southern region
<b>System Management action</b>	MUJA_G3 ramping as per BMO and TESLA_PICTON_G1 and TESLA_KEMERTON_G1 dispatched

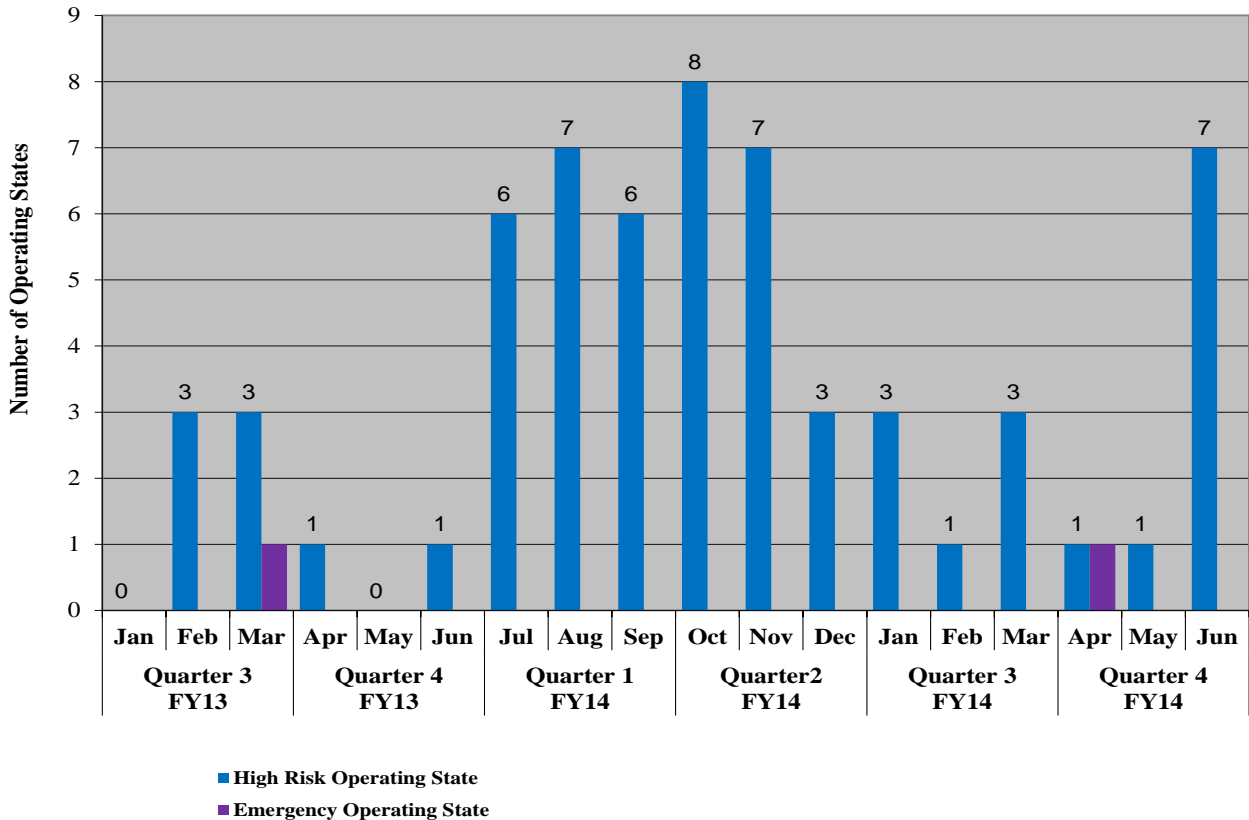
<b>Date</b>	21 June 2014
<b>Interval/s</b>	20:2 to current
<b>DA Number</b>	4603
<b>Details</b>	MUJA_G1 tripped causing an increased risk to Power System Security in the Great Southern region
<b>System Management action</b>	Continued to dispatch as per the latest BMO with Out of Merit dispatch as required to manage Power System Security

## 6.2 Emergency Operating State

During the reporting period, a total of one Emergency Operating State was issued.

<b>Date</b>	11 April 2014
<b>Interval/s</b>	8:2 to 9:1
<b>DA Number</b>	4129
<b>Details</b>	On the 11 <sup>th</sup> of April during an outage on the Three Springs 132kV busbar section North of Three Springs was running islanded from the rest of the SWIS. At approximately 8:30am supply was lost to the islanded region, impacting substations at Three Springs, Geraldton, Chapman, Durlacher and Rangeway.
<b>System Management action</b>	Restoration was initiated in approximately 13 minutes via on site switching and all transmission equipment was restored to its previous state by 9:17am.

Figure 4 below provides historical data for High Risk and Emergency Operating States that have occurred since 1 January 2013.



**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

Section 6.2 DA 4129 provides details for 11 April 2014 where involuntary curtailment of load occurred.

## 7 LFAS Facilities out of Merit Order

During the current reporting period there were no reported 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