Status Report prepared under clause 7.12 of the Market Rules by System Management
1 January 2015 – 31 March 2015

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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 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 January 2015 to 31 March 2015.

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 9466 Dispatch Instructions to Market Participants during the current reporting period.

Figure 1 below shows the number of Dispatch instructions issued by month since 1 October 2014.

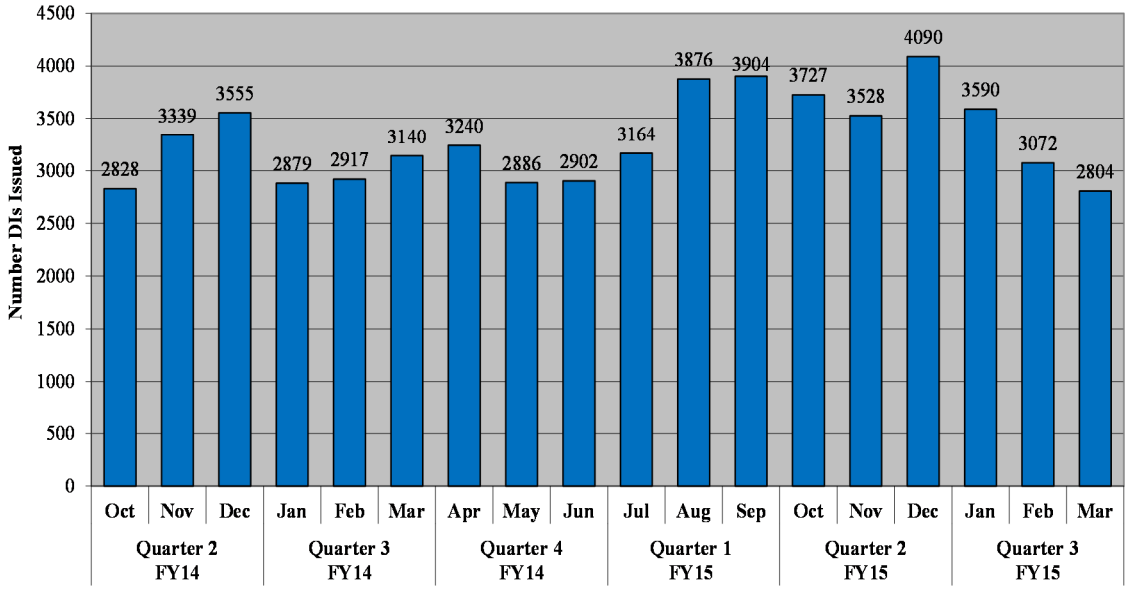

***Figure 1*: Dispatch Instructions per month**

During the current reporting period, System Management issued a total of 37 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 October 2014.

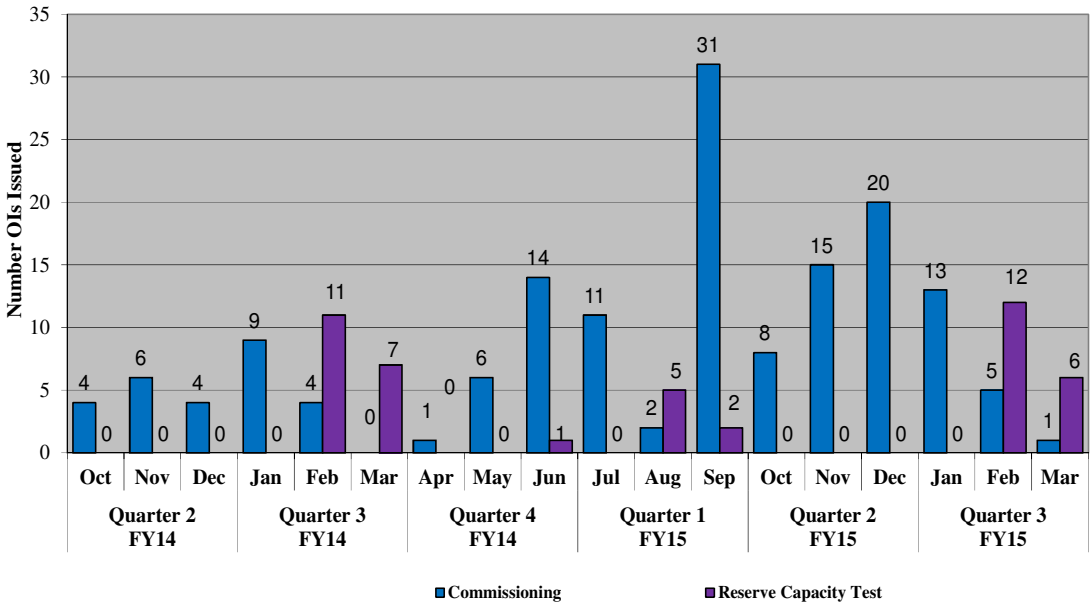

***Figure 2*: Operating Instructions per month**

3 Non-compliance with Dispatch and Operating Instructions

In the current reporting period, System Management reported 435 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 20,803 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 123 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.

Figure 3, below provides historical non-compliance data since 1 October 2014.

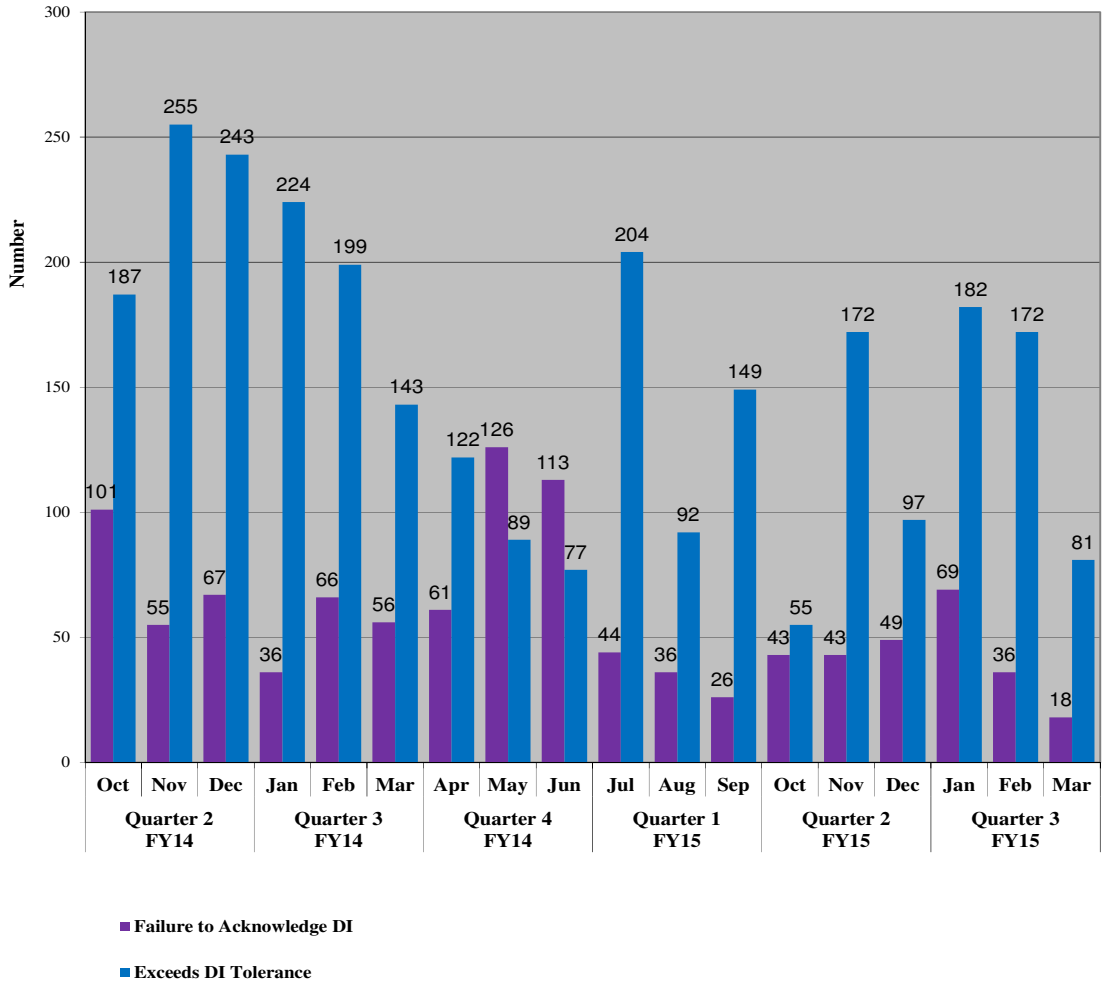

Figure 3: Dispatch Instruction non-compliance notifications (end of interval) and non-acknowledged Dispatch Instructions

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 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.

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 5 January 2015 a forced outage on MUBTT1 transformer and high loads forecasted between 5 January to 6 January required the following Facility to be dispatched commencing at Interval 6:1 and ending at Interval 17:2 (refer to Dispatch Advisory numbers 6841 and 6843):
    - MUJA_G2 constrained on for 71 Intervals
- On 5 January 2015 during Interval 13:2 the KEM-KMP line tripped resulting in a loss of 150MW of generation and a frequency deviation to approximately 49.82Hz. Out of Merit Dispatch of the following Facility was required to ensure Power System Security and Power System Reliability (refer to Dispatch Advisory number 6844):
    - NEWGEN_NEERABUP_GT1 constrained on for 5 intervals
- On 5 January 2015 commencing Interval 13:2 bushfires affecting the TS-ENB81 line required the North Country region to remain on radial supply at Three Springs until the line could be returned to service. Curtailment of the following Non-Scheduled Generators were required to ensure Power System Security and Reliability. (Refer to Dispatch Advisories 6844, 6847 and 6848):
    - ALINTA_WWF constrained for 41 Intervals
    - MWF_MUMBIDA_WF1 constrained for 11 Intervals
- On 26 January 2015 commencing Interval 12:1 and ending 31 January 2015 Interval 6:1 hot weather and load within the South West Region forecast higher than normal, required the following Vinalco facilities to be dispatched to maintain Power System security and reliability (refer to Dispatch Advisory 6919 and 6924):
    - MUJA_G1 constrained on for 157 intervals
    - MUJA_G2 constrained on for 207 intervals

- On 1 February 2015 commencing 7:1 and ending interval 8:2 a planned transmission outage on the MGA_GTN81 line required the following Non-Scheduled Generator to be curtailed:
    - ALINTA_WWF constrained for 3 intervals
- On 1 February 2015 commencing interval 17:1 significant lightning strikes in the North Country resulted in the MOR_TS line tripping at 17:07. On 2 February 2015 the MGA_GTN 81 line tripped and on 5 February 2015 urgent maintenance was required on the MOR__MUC 81 line. The period 1 February 2015 commencing interval 17:1 to 5 February 2015 ending interval 22:2 saw the North Country Region either islanded or at risk of the region becoming islanded under a single contingency event due to excessive loss of transmission assets in the area. This resulted in the curtailment of the following Non-Scheduled Generators to maintain Power system Security and Reliability (Refer to Dispatch Advisories 6941, 6943, 6944, 6946, 6947, 6949, 6952, 6954 and 6955):
    - ALINTA_WWF_1 constrained for 143 intervals
    - MWF_MUMBIDA_WF1 constrained for 115
- On 7 February 2015 commencing interval 7:1 urgent maintenance required on the MOR_MUC 81 line put the North Country Region under risk of islanding during a single contingency event. System Management maintained Power System Security and Reliability in the North Country region by curtailing the following Non-Scheduled Generators (refer to Dispatch Advisories 6959 and 6961):
    - ALINTA_WWF constrained for 15 Intervals
    - MWF_MUBIDA_WF1 constrained for 8 Intervals
- On 8 February 2015 commencing Interval 12:1 and ending 12 February 2015 Interval 16:1, hot weather and load within the South West Region forecast higher than normal required the following Facility to be dispatched to maintain Power System Security and Power System Reliability (refer to Dispatch Advisory 6964):
    - MUJA_G2 constrained on for 201 Intervals
- On 16 February 2015 commencing Interval 10:2 and ending 18 February 2015 Interval 20:2, hot weather and load within the South West Region forecast higher than normal required the following Facility to be constrained on to maintain Power System Security and Reliability (refer to Dispatch Advisory 6986):
    - MUJA_G2 constrained on for 116 intervals
- On 24 February 2015 commencing Interval 8:2 and ending 25 February 2015 Interval 20:1, hot weather and load within the South West Region forecast higher than normal required the following Facility to be constrained on to maintain Power System Security and Reliability (refer to Dispatch Advisory 7006):
    - MUJA_G1 constrained on for 67 intervals

- On 4 March 2015 commencing Interval 9:1 and ending 11:2 a planned Network outage on the WKT810.0 circuit breaker required the following Non-Scheduled Generator to be constrained to allow for switching:
    - INVESTECT_COLLGAR_WF1 constrained for 3 intervals
- On 5 March 2015 commencing interval 6:2 and ending 12 March Interval 18:1 a planned transmission outage in the North Country region required the constraint of the following Non-Scheduled Generators (refer Dispatch Advisories 7026 and 7049).
    - ALINTA_WWF constrained for 119 intervals
    - MWF_MUMBIDA_WF1 constrained for 89 intervals
- Planned transmission outages in the North Country commencing from interval 7:1 on 17 March 2015 through to 31 March 2015 interval 18:1 required the following Non-Scheduled Generators to be curtailed daily throughout this period (refer Dispatch Advisories 7067, 7069, 7072, 7074, 7077, 7080 and 7088):
    - ALINTA_WWF constrained for 227 Intervals
    - MWF_MUMBIDA_WF1 constrained for 70 Intervals

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

6.1 High Risk Operating State

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

Date	5 January 2015
Interval/s	13:2 to 17:2
DA Number	DA 6844
Details	The KEM-KMP line tripped at approximately 13:45 resulting in a loss of 150MW of generation and a frequency deviation to approximately 49.82Hz. Out of Merit Dispatch was required to ensure Power System Security and Power System Reliability. Additionally, due to bushfires affecting lines, the North Country region was on radial supply at Three Springs.
System Management action	NEWGEN_NEERABUP_GT1 was dispatched to 325MW

Date	20 January 2015
Interval/s	15:1 (20/1/15) to 6:1 (21/1/15)
DA Number	DA 6901
Details	At 15:08PINJAR_GT10 tripped from exporting approximately 100MW. This resulted in a frequency deviation to approximately 49.84Hz.
System Management action	Issued Out of Merit Dispatched Instructions to TIWEST_COG1, ALINTA_PNJ_U2, BW1_BLUEWATERS_G2, NEWGEN_KWINANA_CCG1 and NEWGEN_NEERABUP_GT1

Date	27 January 2015
Interval/s	17:2 to 20:2
DA Number	DA 6925
Details	Due to a bush fire in close vicinity to the Pinjar Power Station, the facilities PINJAR GT2 and PINJAR GT7 needed to desynchronise and there was a risk that Out of Merit Dispatch may be necessary to maintain Power System Security and Power System Reliability.
System Management action	PINJAR_GT2 de-synchronised at 17:24 and PINJAR_GT7 de-synchonised at 17:32. Issued Dispatch Instructions as per the latest BMO.

Date	1 February 2015
Interval/s	17:1 (1/1/15) to 16:1 (5/2/15)
DA Number	DA 6943
Details	At 17:07 the MOR_TS line tripped due to significant lightning strikes in the North Country. There was the possibility of the ENB-TS line also being affected from further lightning in the area which would result in the islanding of the North Country region.
System Management action	ALINTA_WWF was constrained between 0- 20MW and MWF_MUMBIDA_WF1 was constrained between 0-30MW

Date	3 February 2015
Interval/s	7:2 (03/02/15) to 9:2 (04/02/15)
DA Number	DA 6949
Details	The North Country Region was islanded due to the excessive loss of transmission assets in the area.
System Management action	ALINTA_WWF was constrained to 0MW and MWF_MUMBIDA_WF1 was constrained to a range between 0-30MWs.

Date	4 February 2015
Interval/s	9:2 to 21:1
DA Number	DA 6952
Details	There was a risk that the North Country region would become islanded again under a single contingency event due to loss of transmission assets in the region.
System Management action	ALINTA_WWF was constrained to 0MW and MWF_MUMBIDA_WF1 constrained to a range between 0-30MW's.

Date	5 February 2015
Interval/s	7:2 to 22:2
DA Number	DA 6954 -6955
Details	Due to urgent maintenance required on the MOR-MUC 81 line, there was a risk the North Country Region would become islanded under a single contingency event.
System Management action	ALINTA_WWF was constrained to 0 – 20MW and MWF_MUMBIDA_WF1 constrained to a range between 0-30MWs.

Date	7 February 2015
Interval/s	7:1 to 15:1
DA Number	DA 6959
Details	Due to urgent maintenance required on the MUC-MOR 81 line, there was a risk that the North Country Region would become islanded under a single contingency event.
System Management action	ALINTA_WWF was constrained to 0MW

Date	7 February 2015
Interval/s	7:2 to 15:1
DA Number	DA 6961
Details	Further to DA 6959 and due to urgent maintenance required on the MUC-MOR 81 line, there was a risk that the North Country Region would become islanded under a single contingency event.
System Management action	MWF_MUMBIDA_WF1 constrained to a range between 0-30MWs

Date	8 February 2015
Interval/s	12:1 (08/02/15) to 16:1 (12/02/15)
DA Number	DA 6964
Details	Due to hot weather and the load within the South West Region forecast to be higher than normal, there was a requirement for Out of Merit Dispatch of MUJA_G2 to maintain Power System Security.
System Management action	Dispatched MUJA_G2 to 27.5MW

Date	10 February 2015
Interval/s	13:1 to 13:2
DA Number	DA 6967
Details	At 13:13 a trip on the CGT _WKT 220kV line required the constraint of INVESTEC_COLLGAR_WF1 to 0MW in order to maintain Power System Security and Power System Reliability.
System Management action	Constrained INVESTEC_COLLGAR_WF1 to 0MW until the line returned to service at 13:41.

Date	24 February 2015
Interval/s	8:2 (24/02/15) to 20:1 (25/02/15)
DA Number	DA 7006
Details	Due to hot weather and the load within the South West Region forecast to be higher than normal, there was a requirement to constrain on MUJA_G1 from 08:30 on 24 February 2015 to maintain Power System Security and Reliability.
System Management action	Dispatched Muja_G1 at Interval 8:2 to 5MW, with this increasing to a maximum of 27.5MW by approximately 10:30am as the load increased.

Date	28 March 2015
Interval/s	5:1 to 5:2
DA Number	DA 7089
Details	Some System Management SCADA functions were out of service from 05:00am until 06:00am on 28 March 2015.
System Management action	Issued Dispatch Instructions as per the latest Balancing Merit Order. Dispatch was not affected, and alternate data sources were utilised where necessary for reporting.

6.2 Emergency Operating State

During the reporting period, no Emergency Operating States were issued.

Figure 4 below provides historical data for High Risk and Emergency Operating States that have occurred since 1 October 2014.

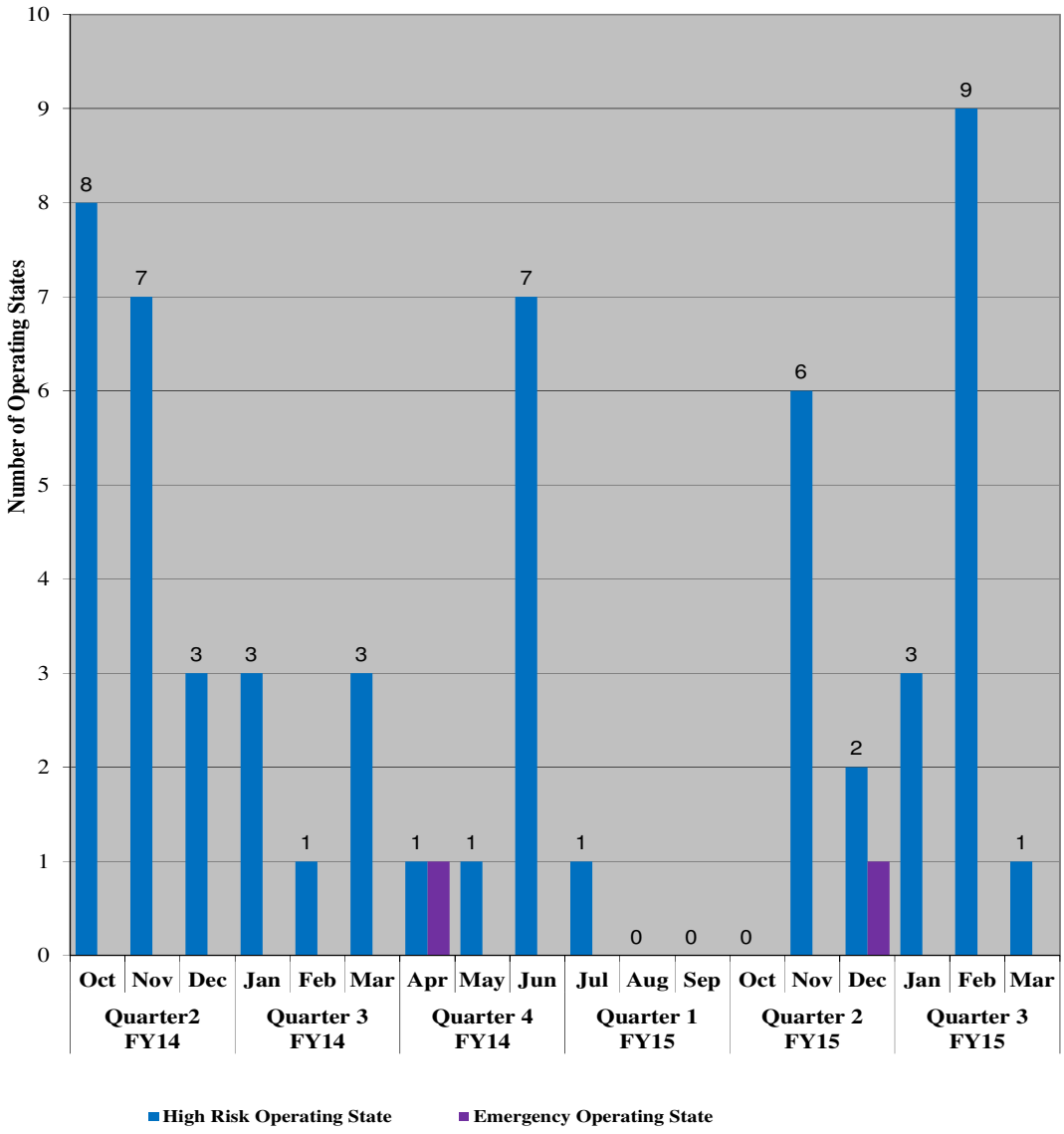

Figure 4: Number of High Risk and Emergency Operating States

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.