

**2015 Ancillary Service Report -  
Summary  
MAC Meeting #84, 9 September 2015,**

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System Management



# Synopsis

The aim of this presentation is to give MAC members a summary of the 2015 Ancillary Service Report (“Report”) for their information

The “Report” is published on the IMO website at  
<http://www.imowa.com.au/home/electricity/market-information/system-management-reports>

# Report Requirements

Clause 3.11.11 of the Market Rules requires Western Power (acting through System Management) to prepare an annual Ancillary Services Report

The Report must contain

1. Historic Quantities and their Adequacy
2. Historic Costs
3. Proposed Future Requirements and Procurement Plan

There are 5 defined Ancillary Services

1. Load Following – controls the frequency near nominal in response to changes in generation and load
2. Spinning Reserve – controls the frequency after the loss of large generation
3. Load Rejection – controls the frequency after the loss of large load
4. System Restart – restores the SWIS to normal operation after a system shutdown
5. Dispatch Support – any other security or reliability service, including but not limited to voltage support services which are required beyond that provided in an access contract (e.g. synchronous compensator operation or reactive power provision beyond 0.8 power factor)

# Historic Adequacy – past 2 years

## Load Following

Frequency Variations around 50.0 Hz (excluding contingency events)

Monthly Average within 49.8 to 50.2 Hz, 99.99% of the time (required performance > 99.9%)

Monthly Average within 50 +/- 25 mHz 84.8% of the time (inside the governor dead-band)

## Spinning Reserve

Average quantities

- 300MW On Peak
- 275MW Off Peak

(required amount normally 240MW if Collie is generating)

- Note one instance of load shedding on 9/11/2014 after loss of 475MW of generation when 3 generators failed at the same time

# Historic Adequacy – past 2 years

## Load Rejection

Average quantities

370/330MW (2013\_14/2014\_15) - On Peak

290/215MW (2013\_14/2014\_15) - Off Peak

(required performance , no contingency causes frequency to rise above 51.0 Hz)

## System Restart

Three services contracted, however not geographically diversified

## Dispatch Support

Mungarra - approx 60,000 MWh, up from 50,000 MWh in the previous year

Kalgoorlie – approx 1,400 MWh, down from 3,100 MWh in the previous year

(no set standard or quantity)

# Historic Costs -past 2 years

ANCILLARY SERVICE	Total Payment (Excluding GST)		
	1/4/2014 – 31/3/2015	1/4/2013 – 31/3/2014	1/4/2012 – 31/3/2013
<b>LOAD FOLLOWING</b>			
<b>Capacity Total</b>	\$10,807,114.82	\$13,001,881.69	\$12,352,161.14
<b>Availability</b>			
Availability raise	\$13,055,049.98	\$23,679,099.50	-
Availability lower	\$21,169,117.79	\$16,718,720.02	-
<b>Availability Total</b>	\$34,224,167.78	\$40,397,819.52	\$44,764,743.06
<b>Load Following Total</b>	<b>\$45,031,282.59</b>	<b>\$53,399,701.21</b>	<b>\$57,116,904.20</b>
<b>SPINNING RESERVE</b>	\$12,300,700.58	\$18,055,126.19	\$ 21,468,550.36
<b>LOAD REJECTION</b>	\$0.00	\$ 0.00	\$ 0.00
<b>SYSTEM RESTART</b>	\$516,659.25	\$505,584.00	\$497,046.68
<b>DISPATCH SUPPORT</b>	\$5,428,607.41	\$4,745,982.05	\$6,011,828.22
<b>TOTAL</b>	<b>\$63,277,249.83</b>	<b>\$76,706.393.45</b>	<b>\$85,094,329.46<sup>3</sup></b>

# Costs – major changes for 2015/16

**Spinning Reserve** – a large rise due to change to margin values, refer to IMO presentation at July 2015 MAC 82 meeting

**Dispatch Support** – a large reduction due to new 330kV line to Three Springs, reducing quantity at Mungarra

# 2015/16 Requirements and Procurement

## **Load Following**

Requirement - Maintain Frequency between 49.8 and 50.2 hz for 99.9% of the time, unchanged.

Converts to a Market Value of +/- 72MW , unchanged

Procurement via LFAS market

## **Spinning Reserve**

Requirement - Maintain at least 70% of largest contingency, unchanged  
(normally during peak equates to 240MW if Collie is online)

Procurement via contracts 68MW, remainder via Synergy dispatch

## **Load Rejection**

Requirement - Maintain Frequency below 51.0 Hz after a contingency, unchanged

Converts to a Dispatch Value of 120MW

Procurement via Synergy dispatch



# 2015/16 Requirements and Procurement

## **Dispatch Support**

Requirement - meet security constraints , unchanged.

Procurement via existing contract with Synergy

## **System Restart**

Requirement - Three services geographically diverse - not achievable

Procurement via existing contracts with Synergy/Western Energy

Note procurement process underway for three geographically diverse services starting 1/7/2016