



# **Report into Market ancillary service prices above \$5000**

**South Australia,  
11, 12 and 25 October 2015**

22 December 2015

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# 1 Obligation

In accordance with the clause 3.13.7(e) of the National Electricity Rules, the AER is required to monitor significant variation between forecast and actual prices and publish a report where:

- prices for a market ancillary service over a period significantly exceed the relevant spot price for energy; and
- prices for a market ancillary service exceed \$5000 for a number of trading intervals within that period.

The report must:

- describe the significant factors that contributed to the ancillary service prices exceeding \$5000/MWh;
- identify any linkages between spot prices in the energy market and ancillary service prices contributing to the occurrence; and
- assess whether rebidding pursuant to clause 3.8.22 contributed to prices exceeding \$5000/MWh.

On 11 and 12 October and 25 October 2015, local lower and raise regulation FCAS prices in South Australia exceeded \$5000/MW for each service for 92 and 38 consecutive dispatch intervals, respectively in excess of spot prices. This report presents our analysis of the events in accordance with this obligation.

## 2 Summary

The local price for both lower and raise frequency control regulation services (regulation) in South Australia exceeded \$5000/MW for 92 consecutive 5 minute dispatch intervals on 11 and 12 October and for 38 consecutive dispatch intervals on 25 October.<sup>1</sup> These periods of high price breached the Cumulative Price Threshold (CPT) and resulted in periods where administered prices were imposed (see section 3.2). Spot prices for energy during these events did not exceed \$250/MWh.

The total cost for both services was around \$7.4 million on 11 and 12 October and around \$4 million on 25 October. Section 3.11 of the Rules defines ancillary services, their requirement, components, structure and cost allocation to generators and customers.<sup>2</sup>

Two significant factors contributed to the high prices during the Heywood outages. First was a change in AEMO's approach to managing system security in South Australia during outages for the Heywood interconnector augmentation. AEMO now requires 35 MW of regulation to be sourced locally whenever a single contingency could result in South Australia becoming an island.<sup>3</sup> The market was notified of the 35 MW requirement three days before the first outage through the inclusion of the local regulation constraint equations in the Network Outage Scheduler (NOS).<sup>4</sup> AEMO considers the imposition of a pre-contingent local regulation requirement necessary so that after separation the South Australian power system could remain in a satisfactory operating state. Section 4 draws on information published by AEMO and ElectraNet that describes AEMO's reasons for the change in approach.

The second significant factor was rebidding by participants. Limited sources of regulation services in the region created opportunities for some generators to rebid capacity into high price bands.

Based on our review of the events, the AER has the following observations:

- AEMO and ElectraNet have been working together for some time to assess the impact of increasing renewable generation from wind and rooftop PV on system security and uncovered some issues. Consequently, AEMO implemented changes to established protocols with little warning to the market participants and customers. The AER is reviewing whether this change in protocol is consistent with the requirements of AEMO's own procedures and the Rules.
- Limited competition for the supply of regulation services in South Australia created an opportunity for elevated pricing in a period of market scarcity. In this environment, prices for regulation services exceeded \$5000/MW on 11 and 12 October and 25 October as a result of the rebidding of capacity from low to high prices by AGL and Alinta respectively.

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<sup>1</sup> Appendix A contains an explanation of frequency control ancillary services (FCAS).

<sup>2</sup> See the FCAS settlement notes in Appendix A

<sup>3</sup> Previously, the services were locally sourced only after South Australia separated from the market.

<sup>4</sup> After the commencement of the outages, on 12 October 2015 AEMO issued market Notice 50003 (see Appendix E).

### 3 Analysis

This section sets out the factors which contributed to the price outcomes. The imposition of a 35 MW local regulation constraint by AEMO in the days before the commencement of outages on Heywood interconnector provided the opportunity for participants to raise prices. The details of the change in AEMO’s approach are considered in Section 4 of this document.

Table 1 and Table 2 compare actual dispatch prices and effective available capacity for the first dispatch intervals of 11 and 25 October with that forecast 4 and 12 hours ahead. Due to the number of prices, only the first dispatch intervals where prices exceeded \$5000/MW are displayed.

**Table 1: Actual and forecast Lower regulation price, requirement and effective available capacity**

Date	Dispatch interval	FCAS Price (\$/MW)			FCAS requirement (MW)	Effective Available Capacity (MW)		
		Actual	4 hr forecast	12 hr forecast		Requirement	Actual	4 hr forecast
11 Oct	8.25 pm	13 100	0.20	0.208	35	105	58	45
25 Oct	1.10 pm	12 400	0.79	0.80	35	46	57	49

Note: effective available capacity is the offered capacity adjusted for the energy output of the generator.

**Table 2: Actual and forecast Raise regulation price, requirement and effective available capacity**

Date	Dispatch interval	FCAS Price (\$/MW)			FCAS requirement (MW)	Effective Available Capacity (MW)		
		Actual	4 hr forecast	12 hr forecast		Requirement	Actual	4 hr forecast
11 Oct	8.25 pm	13 100	0.015	0.018	35	111	83	70
25 Oct	1.10 pm	12 400	1.20	1.20	35	80	120	120

The high regulation prices were not forecast on any of the days and there was enough effective availability to meet the 35 MW requirements for both regulation services. High prices for both events were triggered by rebidding. On 25 October the actual effective availability was lower than forecast as Pelican Point was rebid unavailable by GDF Suez just before the high price occurred.

What follows is a more extensive exploration of rebidding that caused high regulation prices, triggered the CPT and affected behaviours after the imposition of the administered price cap.

### 3.1 Generator regulation service offers

There were only three power stations registered to provide Raise and Lower regulation services in South Australia:

- Northern Power Station (owned by Alinta Energy);
- Torrens Island A and B (owned by AGL); and
- Pelican Point Power Station (owned by GDF Suez).

Table 3 shows the maximum capacity available by station; Torrens Island is the largest registered provider of regulation services in South Australia with Northern the smallest. If the requirement for regulation services is above 20 MW then either Pelican Point or Torrens Island will need to be dispatched.

**Table 3: Maximum capacity available by station and regulation service**

Power Station	Max Capacity	
	Lower regulation	Raise regulation
Northern	20	20
Pelican Point	100	100
Torrens Island	200	260

The market dispatch engine co-optimises FCAS and energy offers to ensure the most cost effective pricing solution. Similar to energy offers, participants may spread the capacity offered into each FCAS market into different price bands. Co-optimisation in the dispatch process accounts for the targeted energy dispatch level, FCAS requirements and generator offers for all services; while a generator may offer a large volume of capacity into an FCAS market, the effective available capacity may be less depending on how much energy the generator is providing at the time.

#### 3.1.1 Rebidding on 11 and 12 October

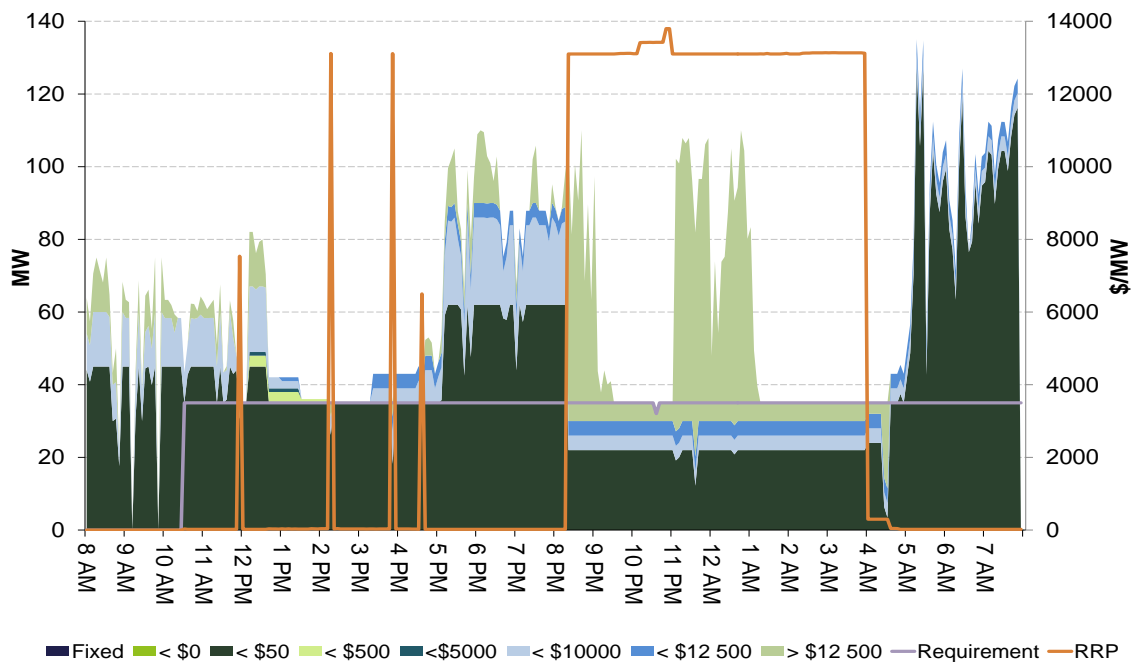
On 11 and 12 October, only Torrens Island and Northern had offers to provide regulation services in South Australia. During the high price period, Torrens Island had four out of eight units operating; Northern was running one unit. Out of 320 MW of capacity registered for lower regulation services, only 110 MW was offered as available to the market. With the requirement set by AEMO at 35 MW, with only 10 MW from Northern, the remaining 25 MW needed to be sourced from Torrens Island. AGL therefore was needed to satisfy the requirement and could set price.

At 8.18 pm, effective from 8.25 pm, AGL rebid 60 MW of capacity at Torrens Island in both lower and raise services from low prices to \$13 100/MW. Immediately the price for both services reached \$13 100/MW, and stayed around that price. At 4.05 pm on 12 October the CPT was breached and the administered price cap of \$300/MW was

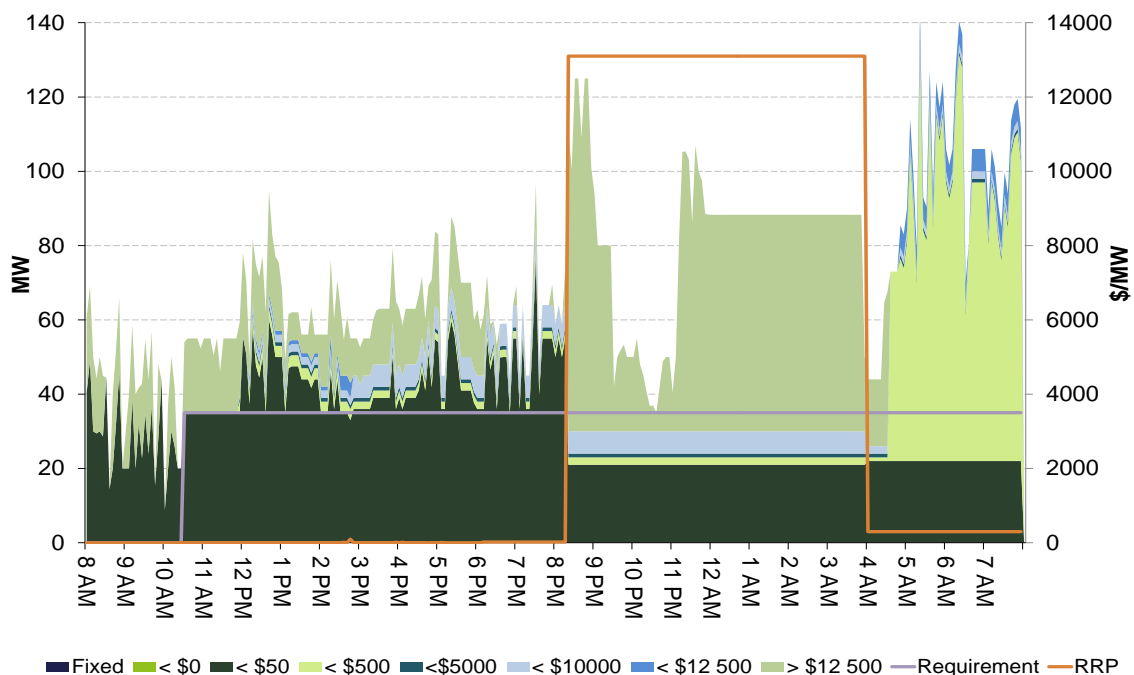
applied (see Appendix A for a description of FCAS and Appendix D for the effect of these rebid on their closing bids).

Figure 1 and Figure 2 show the effective offers for South Australian lower and raise regulation services as well as the price and requirement on 11 and 12 October. It shows the impact of AGL's rebidding.

**Figure 1: South Australian Lower regulation services price, requirement and effective offers on 11 and 12 October**



**Figure 2: South Australian Raise regulation services price, requirement and effective offers on 11 and 12 October**





### 3.1.2 Rebidding on 25 October

Following the high prices of 11 and 12 October a second Northern unit and one Pelican Point unit were brought into service. On 15 October, coinciding with the commencement of the next set of network outages, the local regulation constraints were invoked again and were in place continually until the 26 October. During the period 15 October to 25 October at 12.30 am the three powers stations registered to provide FCAS in South Australia were operating to meet the requirement<sup>5</sup>:

- regulation services prices were operating at around \$300/MW with an occasional spike to about \$6000/MW;
- energy prices were quite variable as a consequence of additional units operating to provide FCAS. Varying between -\$45/MWh and \$250/MWh with an average around \$37/MWh;
- five units in South Australia were offering regulation capacity to the market, including both units of Northern and one Pelican Point unit.

On 25 October, Alinta and GDF Suez made the following amendments to their raise and lower regulation offers, both taking effect from 12.45 pm:

- at 12.35 pm Alinta rebid 10 MW of capacity at Northern from \$0.8/MW to \$1500/MW in regulation; and
- at 12.38 pm GDF Suez withdrew Pelican Point from the market, reducing the offered availability of regulation by 30 MW.

As a result of these rebids, the dispatch price for both services went from \$800/MW (set by Pelican Point) at 12.40 pm to \$1500/MW (set by Northern) at 12.45 pm (the rebids made by the participants in South Australia that effected the regulation price are listed in Appendix C).

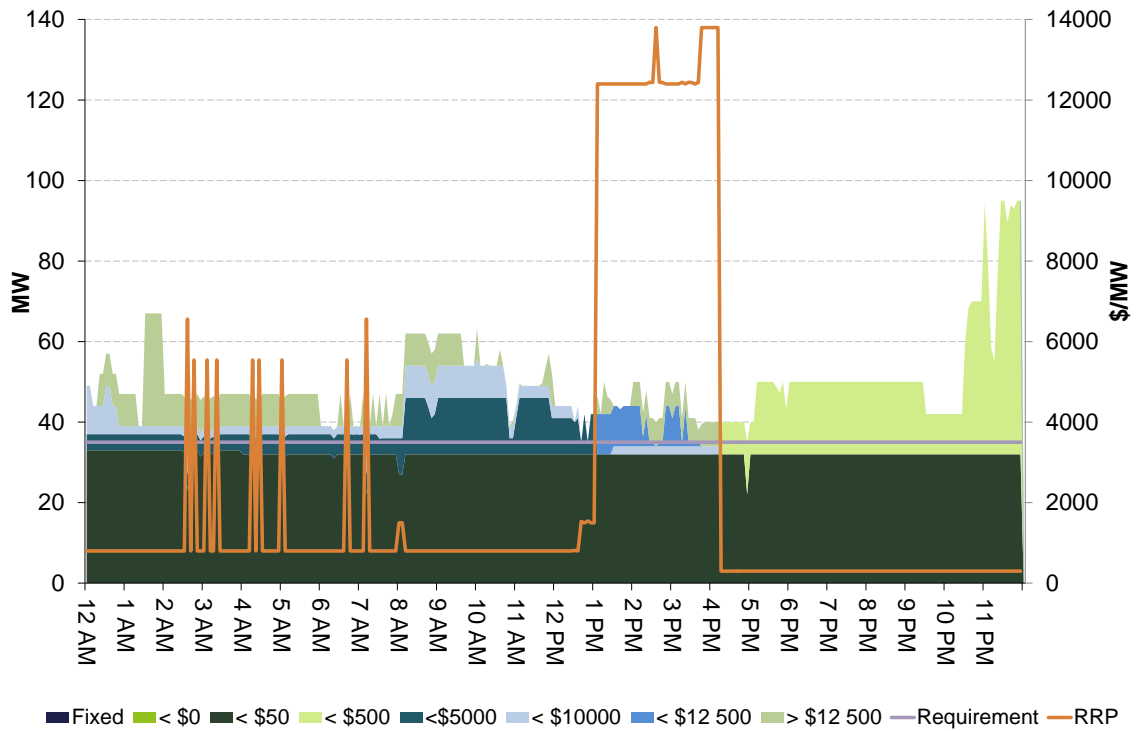
At 1.01 pm, effective from 1.10 pm, Alinta rebid 10 MW of capacity at Northern in both services from \$1500/MW to \$12 400/MW, setting the price. The price of both raise and lower services stayed around or above \$12 400/MW until six times the CPT was again breached and prices were capped to \$300/MW at 4.20 pm.

Figure 3 and Figure 4 show the effective offers for South Australian lower and raise regulation services as well as the price and requirement on 25 October.

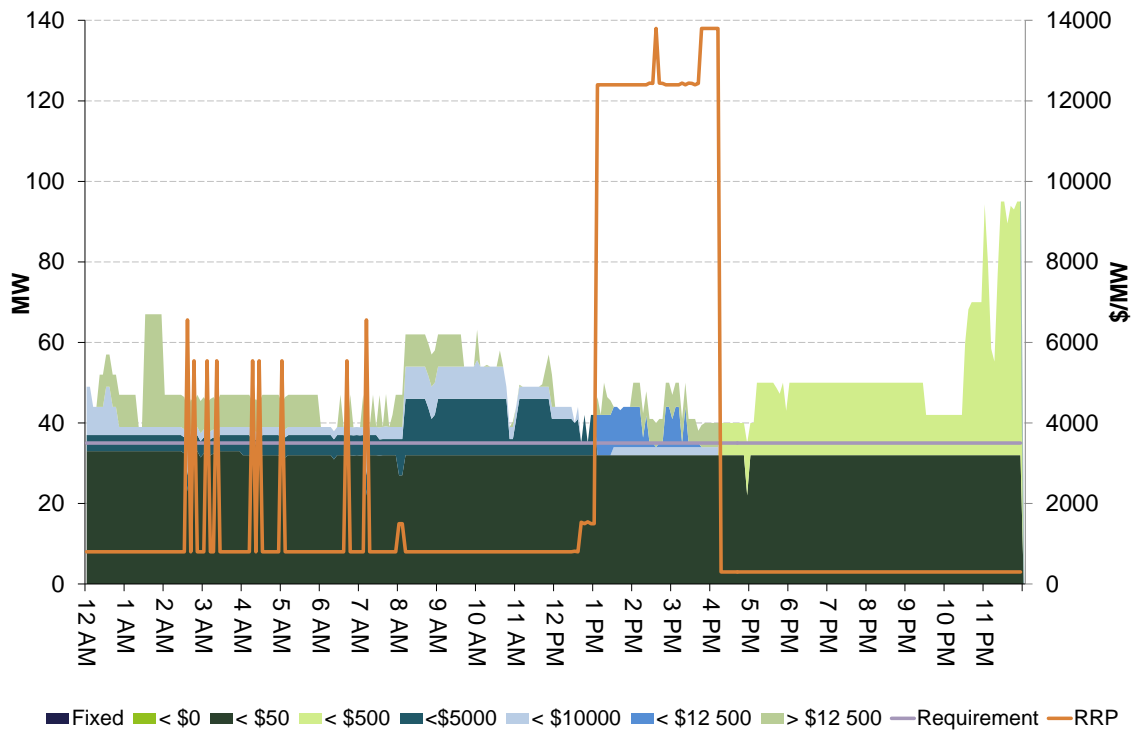
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<sup>5</sup> Pelican Point Power Station returned one unit to services at midday on 15 October 2015.

**Figure 3: South Australian Lower regulation services price, requirement and effective offers on 25 October**



**Figure 4: South Australian raise regulation services price, requirement and effective offers on 25 October**



Appendix F details the generators involved in setting the price during the high-price period and how that price was determined by the market systems. The closing bids of the generators offering lower and raise regulation services are presented in Appendix D.

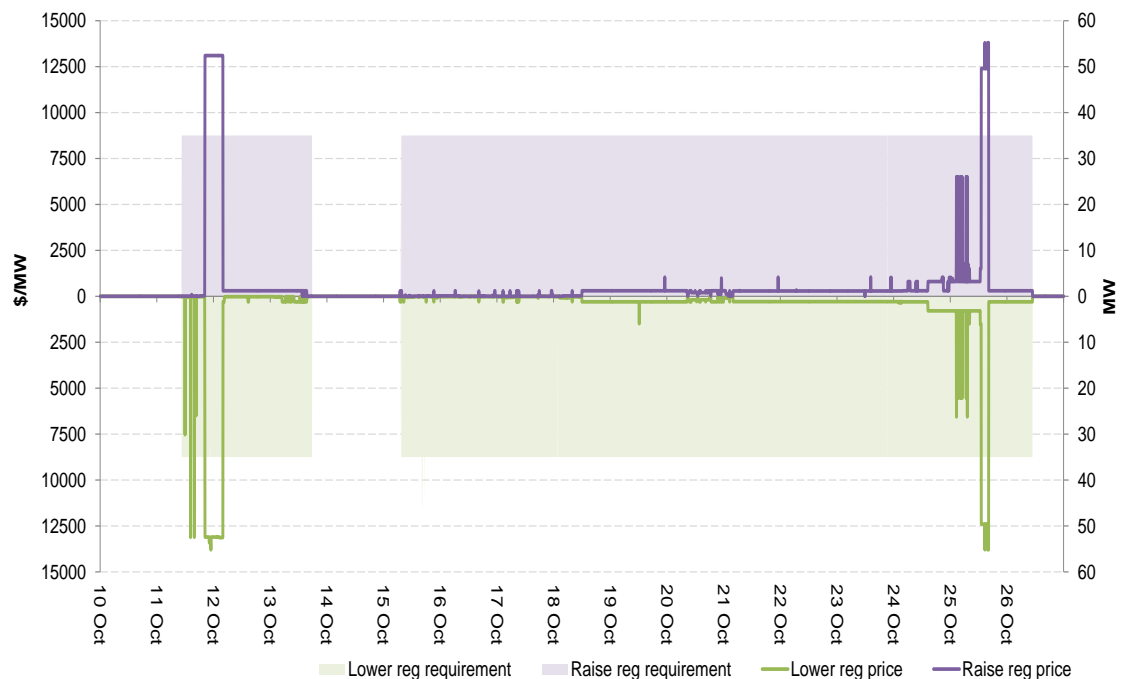
### 3.2 Prices and the cumulative price threshold

Under the National Electricity Rules, if the accumulation of the previous 2016 dispatch prices exceeds six times the Cumulative Price Threshold (CPT) of \$207 000 for any FCAS then an administered price cap of \$300/MW<sup>6</sup> is applied to all services where the price would exceed the administered price cap. In summary:

- From 8.25 pm on 11 October to 4 am on 12 October the price for regulation exceeded \$13 00/MW. The CPT was breached at 4 am on 12 October and the administered price cap of \$300/MW was applied from 4.05 pm until 4 am on 19 October.
- From 1.10 pm to 4.15 pm on 25 October the price for regulation exceeded \$12 300/MW. The CPT was breached at 4.15 pm on 25 October and the administered price cap was applied from 4.20 pm to 4 am on 27 October.

Figure 5 shows the dispatch price and requirements for local regulation in South Australia between 10 and 26 October.

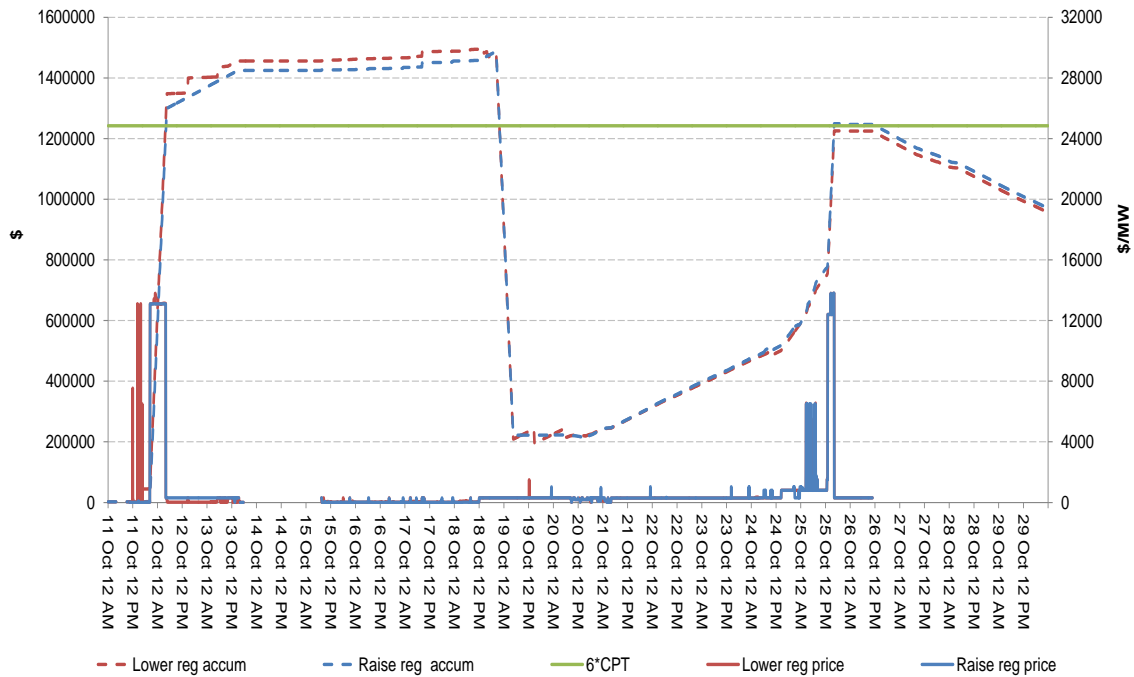
**Figure 5: South Australian local regulation service requirements and price, 10 - 26 October**



<sup>6</sup> See Power System Operating Procedure – Dispatch So\_Op3705 Version: 80 Date: 23 October 2014 , Section 18.5.2 [http://www.aemo.com.au/Electricity/Policies-and-Procedures/System-Operating-Procedures/Dispatch-SO\\_OP3705](http://www.aemo.com.au/Electricity/Policies-and-Procedures/System-Operating-Procedures/Dispatch-SO_OP3705)

Figure 6 shows the accumulated price of regulation, the dispatch price and six times the CPT value. It shows that the threshold was breached on both 12 October (the first time it has been breached for any FCAS) and 25 October and that all FCAS prices were capped at \$300/MW until the accumulated price went below six times the threshold.

**Figure 6: South Australian local regulation services price, cumulative price and CPT**



The solid red and blue lines in Figure 6 show the actual five minute prices for the raise and lower regulation services, while the dashed red and blue lines show the accumulated price of those services. The FCAS CPT is shown as the solid green horizontal line in Figure 6. During an Administered price period the CPT is calculated using the uncapped price based on the generator offers. The dashed red and blue lines continue above the CPT line because generators' regulation offers remained high despite the CPT being triggered and the \$300/MW administrative price cap being imposed.

During the second event, starting 25 October, after the CPT was triggered, the generators adjusted their offers to prices at or around the administered price cap and the cumulative price only exceeded the CPT for a relatively short period of time.

## 4 FCAS requirements for South Australia

### 4.1 Overview

Network arrangements in south eastern South Australia and south western Victoria are complex but reliable. The Heywood Interconnector is an alternating high voltage current transmission link that connects South East Substation in South Australia to the Heywood Terminal Station in south-west Victoria. While Murraylink also transmits energy between South Australia and Victoria, Heywood provides synchronous connection between South Australia and the rest of the NEM rather than just energy<sup>7</sup>.

Since the start of the market in December 1998, the Heywood interconnector has failed on only eight occasions, leaving South Australia as an island. In 2001 the South Australian jurisdictional system security coordinator (JSSC) advised the market operator that a wider frequency range (between 47-52 Hz) would operate for events that would cause separation. In accordance with the Rules, Under Frequency Load Shedding (UFLS) operates in manageable blocks spread over a number of steps within under-frequency bands from 49 Hz down to 47 Hz as nominated by AEMO.<sup>8</sup> The wider frequency range for separation events in South Australia allows UFLS to operate replacing contingency raise services.

Previously, after a separation event, AEMO would then procure local regulation services to maintain the frequency in South Australia in accordance with the standard.

As a result of joint work between AEMO and ElectraNet conducted in 2014, AEMO has formed the view that to maintain the frequency within the standard requested by the JSSC, in addition to the existing UFLS and to ensure that generators registered for FCAS are operating, pre-contingent local regulation FCAS is required for all situations when South Australia is at risk of separation.<sup>9</sup>

### 4.2 The Heywood Interconnector

In March 2014 the Heywood augmentation project to increase the capacity of the transmission system between South Australia and Victoria to 690 MW satisfied the Regulatory Investment Test (transmission). Until the completion of the augmentation, the Heywood interconnector has a nominal capacity of 460 MW. While the Heywood interconnector is notionally only the lines between South East Substation and the Heywood Terminal Station it effectively comprised:

- four parallel circuits (two circuits operating at 275 kV and two circuits operating at 132 kV) between Taillem Bend (near Adelaide) and South East Substation (close to the border). These lines also deliver power to the load centres at Keith, Kincaig; Penola, Blanche and Mount Gambier; and

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<sup>7</sup>

Murraylink is a 200 MW Direct Current interconnector between Berri in South Australia and Red Cliffs in Victoria.

<sup>8</sup>

Rules Clause 4.3.5 (b)

<sup>9</sup>

This requirement will be implemented for all single line outages of the 500/275kV network between Sydenham TS and south east substation.

- two parallel 275 kV circuits between South East Substation to Heywood Terminal Station in south-west Victoria and two parallel 500 kV circuits from the Heywood Terminal Station to Moorabool Terminal Stations and on to the Sydenham Terminal Station in the 29kms north west of Melbourne.

The upgrade works:

- reduce the number of parallel circuits in South Australia between Taillem Bend and South East Substation to three; and
- install an additional transformer and associated switchgear at Heywood terminal station and compensation equipment along the transmission path.

Around 25 outages on the Victorian network were completed in the months leading up to August 2015. In South Australia in the order of 15 non-recall outages were needed.<sup>10</sup> The outages required by ElectraNet for the Heywood upgrade are listed in Appendix B.

ElectraNet listed the outages for the Heywood upgrade into the NOS in June 2015.

### 4.3 Joint studies by AEMO and ElectraNet

The first commercial wind generation was commissioned in South Australia in 2004, and since that time the level of installed wind capacity has progressively increased. More recently, the contribution from distributed domestic roof top PV has also become more material. Currently South Australia has the highest volume wind and rooftop PV generation of any region in the NEM.<sup>11</sup> Almost one in four (25%) residential rooftops in the State has a rooftop PV installation.

The energy contribution of these technologies and lower overall energy demand and changes in the dynamics between the gas and electricity segments has materially altered the role of existing thermal generation. Only three participants were registered in South Australia to provide local frequency control services; AGL (Torrens Island) and Alinta (Northern) and GDF Suez (Pelican Point).<sup>12</sup>

Since February 2014 AEMO has been working with ElectraNet to identify existing limits to secure power system operation in South Australia. In a paper published in October 2014, they concluded that:

*“the SA power system could operate securely when both circuits of the Heywood Interconnector are connected, or at least one of the key conventional synchronous generator registered to provide FCAS (e.g. Northern Power Station, Pelican Point, or Torrens Island) is online.”<sup>13</sup>*

...

<sup>10</sup> A non-recall outage is an outage where, once started, the work must be completed before it can be reinstated.

<sup>11</sup> At present, South Australia has approximately 1,475 MW of wind generation and almost 630 MW of roof top PV, equating to 40% of the total installed wind and 16% of the total PV capacity in the NEM.

<sup>12</sup> Since the high price events in October 2015, Origin Energy has applied to register Quarantine Power Station Unit 5 to provide FCAS, which was approved by AEMO effective from 1 December 2015.

<sup>13</sup> Renewable energy integration in South Australia – Joint AEMO and ElectraNet study – October 2014.

*“while considered a very low probability the worst-case high-impact scenario the loss of the Heywood interconnector would result in a state-wide power outage if no synchronous generator was online at the time.”*

...

*“Under credible separation conditions, AEMO is to ensure there is sufficient generation online in SA to actively control frequency, prior to actual separation occurring. AEMO will establish new arrangements for monitoring the availability of local regulation FCAS in SA, for use when there is a credible risk of separation.”*

AEMO considered that the increased risk of long term islanding, or where electricity would be unavailable until the outages were completed, could be managed by the imposition of local regulation requirements. At a high level AEMO considered the following factors:

- South Australia is a relatively small region with significant levels of large scale intermittent wind and domestic roof top PV in comparison to the typical demand;
- South Australia has a small number of participants registered to supply regulation services and these participants are operating their plant less frequently;
- It is possible that, if there was no market signal from the FCAS requirement, during periods of high wind and solar generation that the generators registered to supply FCAS may de-commit their plant; and
- Analysis by AEMO that, while raising concerns regarding the efficacy of existing arrangements to arrest a frequency excursion during periods of high solar output, indicated that the level of regulation required could be reduced from 70 MW to 35 MW.

AEMO has now adjusted its FCAS management procedures for South Australia such that these regulation constraints will be invoked for all circumstances where a single contingency would island South Australia.<sup>14</sup> This ensures that there are adequate sources of regulation immediately available in a separation event for the management of the frequency within the island post contingency.

## 4.4 Communication

**Table 4: Timeline of events**

Action	Date / Time
Publish - Renewable Energy Integration in South Australia - Joint AEMO and ElectraNet study	October 2014
ElectraNet requests outages	26 June 2015
Medium Term likely to proceed	07 October 2015 09:43
Short Term likely to proceed	07 October 2015 14:01
AEMO completes studies/modelling/analysis	08 October 2015

<sup>14</sup> This includes the lines between Sydenham in Victoria and Taillem Bend in South Australia and circumstances such as: bushfire or lightening in the vicinity of the lines and planned and un-planned outages.

Action	Date / Time
FCAS Constraints invoked	08 October 2015 09:56
FCAS Constraints publically available through NOS	08 October 2015 10:00
Rescheduled to start 1hr earlier, Short Term likely to proceed	09 October 2015 12:59
Pre Dispatch likely to proceed	10 October 2015 16:19
Outages commenced	11 October 2015 07:00
Permission to proceed	11 October 2015 10:36
Market notice 50003 published informing market participants of 35 MW regulation FCAS requirement in South Australia.	12 October 2015 16:08

Table 4 shows the broad timeline of events leading up to, and during the ElectraNet outages for the Heywood augmentation and until the market notices 50003 was issued by AEMO.

While the AEMO – ElectraNet joint study indicated that AEMO would ensure that sufficient generation was online in South Australia to actively control frequency, prior to separation and would monitor the availability of local regulation FCAS in South Australia, AEMO only listed the 35 MW regulation requirement in the NOS only three days prior to the commencement of the first outage.<sup>15</sup>

Listing the constraints in the NOS so close to the commencement of the outages limited market participants’ ability to pursue options to either register to provide these services or take steps to avoid potential adverse financial impacts.

AEMO has a number of procedures that promote engagement with market participants where there are material market consequences and is obliged to notify market participants of the imposition of new constraints. While system security and timing were drivers of AEMO’s approach, their lack of communication of the change to market participants reduced their ability to respond to the new 35 MW regulation requirement.

## Australian Energy Regulator

### December 2015

<sup>15</sup> The 35 MW FCAS regulation constraints were added to the NOS for the planned Heywood outages commencing 10 October 2015, on 8 October 2015.



# Appendix A Explanation of FCAS

Frequency control ancillary services (FCAS) are required to maintain the frequency of the power system within the frequency operating standards. There are two general categories of FCAS:

- Regulation services, which continuously adjust to small changes in demand or supply (changes that cause the frequency to move by only a small amount away from 50 Hz). There are regulation services to increase the frequency (raise regulation or RREG) and services to decrease the frequency (lower regulation or LREG).
- Contingency services, which manage large changes in demand or supply that occur relatively rarely and move the frequency by a large amount. There are three contingency services to increase the frequency and three contingency services to decrease the frequency.

Raise Contingency FCAS are required to be available to correct the frequency excursions that have arisen from a credible contingency event that leads to a decrease in frequency. As these contingency events usually involve step reductions in supply side, the Electricity Rules stipulate that generators pay for these services.

Lower contingency FCAS are the services required to be available to correct the frequency excursions that arise from a credible contingency event that leads to an increase in frequency. As these contingency events usually involve step reductions in customer demand, the Electricity Rules stipulate that customers pay for these services.

Participants providing regulation services will receive adjusted dispatch targets every 5 minutes via their automatic generation control (AGC) signals from AEMO. Participants are paid through the FCAS markets in accordance with their offered volumes. Their energy production, that may be higher or lower depending on the AGC signals they receive, are settled in accordance with energy market prices.

There are three lower and three raise contingency services:

- fast services, which arrest a frequency deviation within the first six seconds of a contingent event (L6 and R6);
- slow services, which stabilise frequency deviations within sixty seconds of the event (L60/R60); and
- delayed services, which stabilise frequency deviations within five minutes of the event (L5/R5).

Participants offering to provide contingency services are enabled in accordance with the “trapezium” supplied in their offers. While participants will not necessarily be supplying these services until a contingency occurs they are paid in accordance with their enablement.

## Local Frequency Control Ancillary Services

AEMO sets the requirement for FCAS to ensure that the frequency standard (as set by the Reliability Panel) is maintained in the event of step changes in supply or demand that results from credible contingencies. Where a credible contingency results in the loss of an interconnector it is termed a “separation event”.

The standard states that in the event of a “separation event” the frequency must be contained within 49 to 51 Hz or a wider band notified to AEMO by a relevant JSSC. In the case of South Australia the JSSC notified AEMO that the frequency band for separation of the South Australian power system is 47 to 52 Hz and that under frequency relays will operate at frequency levels in the low end of this range.

When there is a potential separation event caused by the loss of an interconnector “local frequency control ancillary services” are usually required.

If the region was exporting at the time the interconnector fails, then as a consequence of the immediate over supply situation local contingency “lower” services are required in the islanded region to lower the frequency (typically generators offer to quickly reduce output to lower frequency). In other words, the loss of the Heywood interconnector when power is flowing from South Australia, results in an oversupply of generation, increasing the frequency in South Australia. Contingency lower services are sourced from registered suppliers in South Australia (typically generators) in proportion to the flow across the interconnector from South Australia to Victoria to quickly reduce that over frequency.

A similar situation exists for contingency “raise” services for all other regions except South Australia where, in accordance with the advice from the JSSC, the raise requirement is covered by under frequency load shedding. In other words, the loss of the Heywood interconnector when power is flowing into South Australia, results in an undersupply of generation decreasing the frequency in South Australia. Under frequency load shedding reduces demand in blocks to arrest the falling frequency until supply matches demand and the frequency is restored.

In either event, in the past, in the period immediately following the separation event AEMO would invoke local regulation services and establish a local regulation reference source to manage frequency until the region can be reconnected to the rest of the NEM. It is this aspect that has been recently changed by AEMO. AEMO will now impose a requirement for local lower and raise regulation services in South Australia prior to the failure of the interconnector so that frequency after an island is formed, and after the contingency services have operated, can be smoothly maintained.

## Frequency Control Ancillary Service Settlement

AEMO settles the FCAS markets on a weekly basis, as follows<sup>16</sup>.

- Contingency FCAS: Generators pay for Raise Services and customers pay for Lower Services.
- Regulation FCAS: Cost recovery on a “causer pays” basis using the Causer Pays Procedure<sup>17</sup> developed by AEMO in accordance with the appropriate NER procedures.

The ‘Causer Pays’ Procedure allocates regulation FCAS costs to those market generators, customers and small generation aggregators with facilities that have the metering capable of determining their contribution to frequency deviations at any time.

Every four weeks based on historical data AEMO calculates a single causer pays contribution factor that represents each market participants aggregate contribution to the need for Regulation FCAS on a portfolio basis across the NEM. This contribution factor is not dependent on the amount of energy purchased/consumed by the participant – consequently a generator with a non-zero factor in a particular period will still pay a share of FCAS costs irrespective of how much of its generation is running. Any market generator, with a non-zero contribution factor with generating units in SA, will incur regulation FCAS costs.

Since not all of the costs will be recovered from generators, the residual costs are recovered from market customers (including retailers) in the relevant region, based on the amount of energy each market customer is purchasing.

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<sup>16</sup> For a full description go to <http://www.aemo.com.au/Electricity/Data/Ancillary-Services/Ancillary-Services-Payments-and-Recovery>

<sup>17</sup> For a full description go to <http://www.aemo.com.au/Electricity/Market-Operations/Ancillary-Services/Process-Documentation/Ancillary-Services-Causer-Pays-Contribution-Factors>

## Appendix B ElectraNet Network outages for the Heywood interconnector upgrade

The Rules require Transmission Network Service Providers to provide information, up to two years in advance, to AEMO and the market of upcoming network outages and their implications. The following tables list the outages planned by ElectraNet to complete the South Australian interconnector upgrade works. AEMO applied the FCAS regulation requirement for all of these outages. Constraints to manage these outages were first entered into the NOS on 26 June 2015.

**Table F1 – Heywood Outages scheduled by ElectraNet on the South East Heywood no 1 275kV Line**

Out of service Date	Return to service date	Outage duration (days)
11/10/2015 07:00	15/10/2015 07:00	4.00
15/10/2015 07:00	20/10/2015 07:00	5.00
20/10/2015 07:00	22/10/2015 16:30	2.40
22/10/2015 16:30	22/10/2015 18:30	0.08
22/10/2015 18:30	23/10/2015 07:00	0.52
23/10/2015 07:00	23/10/2015 12:30	0.23
23/10/2015 12:30	24/10/2015 07:00	0.77
24/10/2015 07:00	24/10/2015 12:30	0.23

**Table F2 – Heywood Outages scheduled by ElectraNet on the South East Heywood no 2 275kV Line**

Out of service date	Return to service date	Outage duration (days)
29/10/2015 07:00	03/11/2015 07:00	5.00
03/11/2015 07:00	05/11/2015 16:30	2.40
05/11/2015 16:30	05/11/2015 18:30	0.08
05/11/2015 18:30	06/11/2015 07:00	0.52
06/11/2015 07:00	06/11/2015 12:30	0.23
06/11/2015 12:30	07/11/2015 07:00	0.77
07/11/2015 07:00	07/11/2015 12:30	0.23

## Appendix C Significant Rebids

The rebidding tables highlight the relevant rebids submitted by generators that impacted on market outcomes during the time of high prices. It details the time the rebid was submitted and used by the dispatch process, the capacity involved, the change in the price of the capacity was being offered and the rebid reason.

### Significant rebids for 11 October – lower and raise regulation

Submit time	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MW)	Price to (\$/MW)	Rebid reason
8.18 pm	8.25 pm	AGL	Torrens	80	<8000	13 100	1955~A~020 AEMO MARKET NOTICE~ID 49991

Note: At 8.32 AGL submitted a correcting rebid which only changed the rebid reason to reference Market Notice ID 49990 for the 8.18 pm rebid.

### Significant rebids for 25 October – lower and raise regulation

Submit time	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MW)	Price to (\$/MW)	Rebid reason
12.35 pm	12.45 pm	Alinta	Northern	10	0.80	1500	1230~F~FCAS ENERGY OPTIMISATION. SA SPOT PRICE NEGATIVE \$45. NPS2 TO MIN LOAD.~
12.38 pm	12.45 pm	GDF Suez	Pelican Point	-30	>800	N/A	1235A AVOID UNECONOMIC DISPATCH: ADJUST OOS PROFILE SL
1.01 pm	1.10 pm	Alinta	Northern	10	1500	12 400	1300~F~FCAS ENERGY OPTIMISATION ~

## Appendix D Closing bids

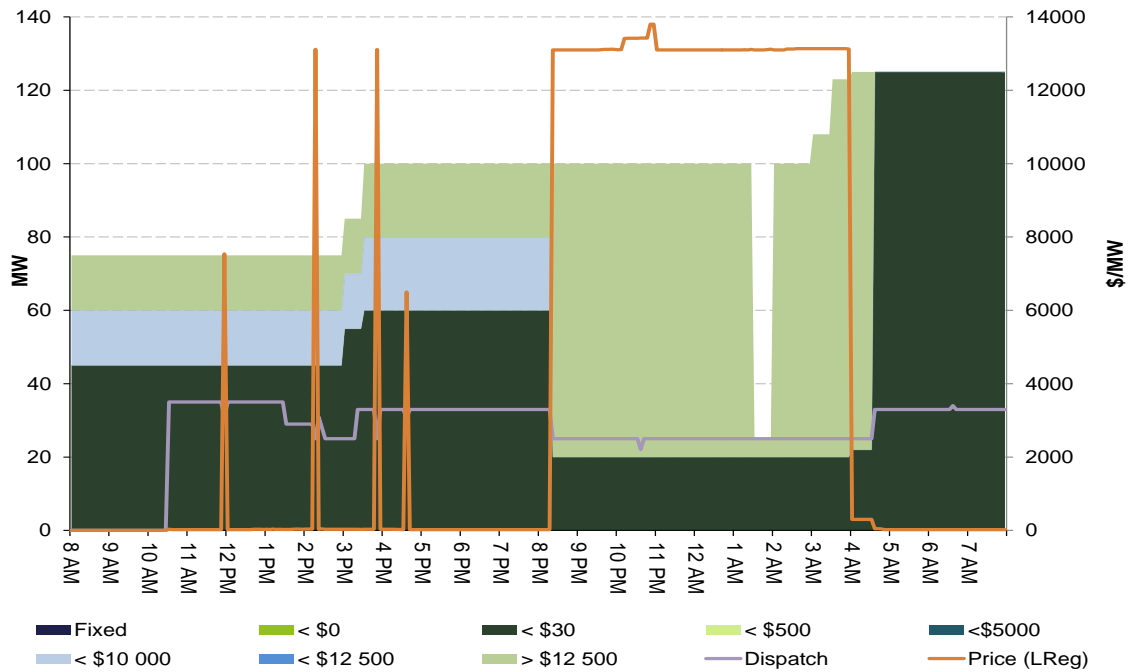
Figures D1a to D10a highlight for each dispatch interval the lower and raise regulation services closing bids for AGL, Alinta Energy and GDF Suez (the only participants in South Australia with ancillary service capability). It also shows the dispatch level of the respective services at each station and the dispatch price.

Regulation services, like all other FCAS services, are co-optimised with energy offers. For example a generator that is operating at its maximum capacity cannot provide raise services so their effective available capacity for raise services would be zero.

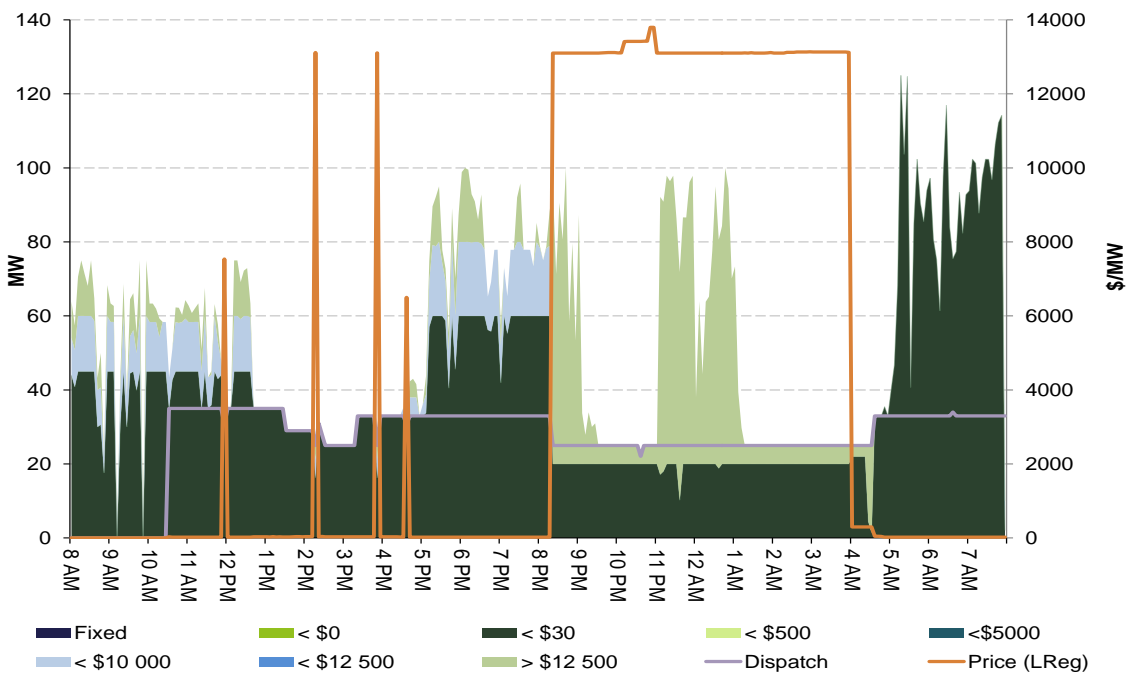
Figures denoted with an “a” refer to the quantities offered while those with a “b” refer to the effective quantities available to the market after accounting for the interaction between energy and FCAS.

Rebidding of 60 MW of lower regulation from Torrens Island capacity by AGL from prices <\$30/MW to >\$12 500 is evident in Figure D1a and Figure D1b at about 8 pm on 11 October, initiating high prices. These rebids remained in place until after the administrative price cap was imposed at about 4 am on 12 October.

**Figure D1a: Torrens Island (AGL) lower regulation service closing bid prices, dispatch and dispatch price for 11 and 12 October**

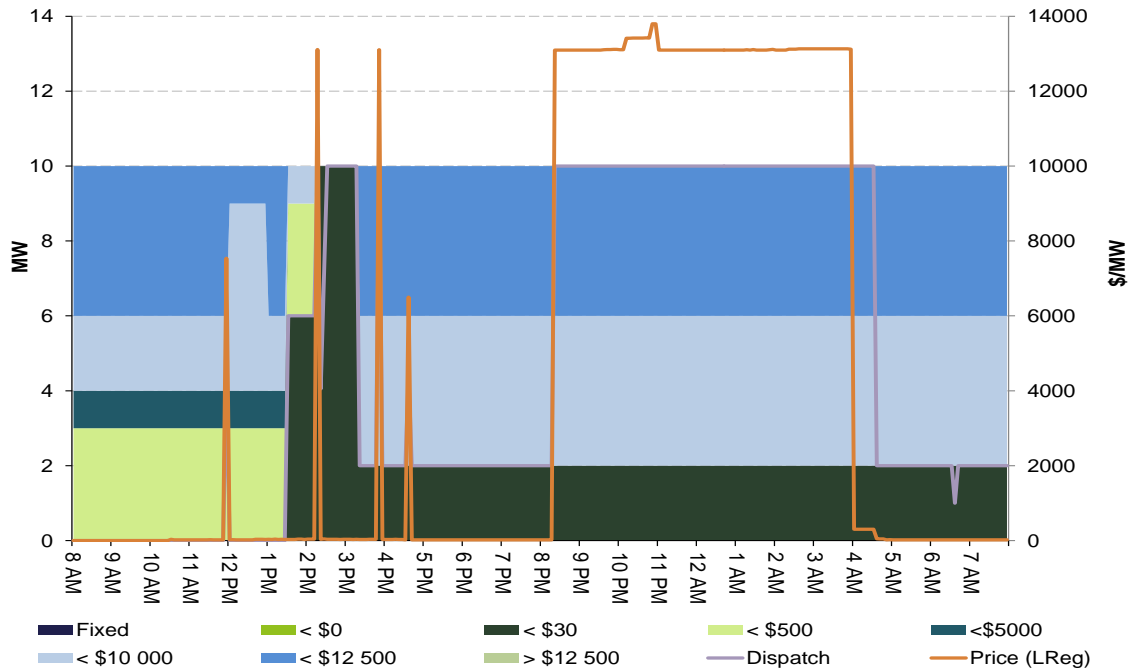


**Figure D1b: Torrens Island (AGL) lower regulation service closing bid prices, dispatch and dispatch price for 11 and 12 October – effective offers**

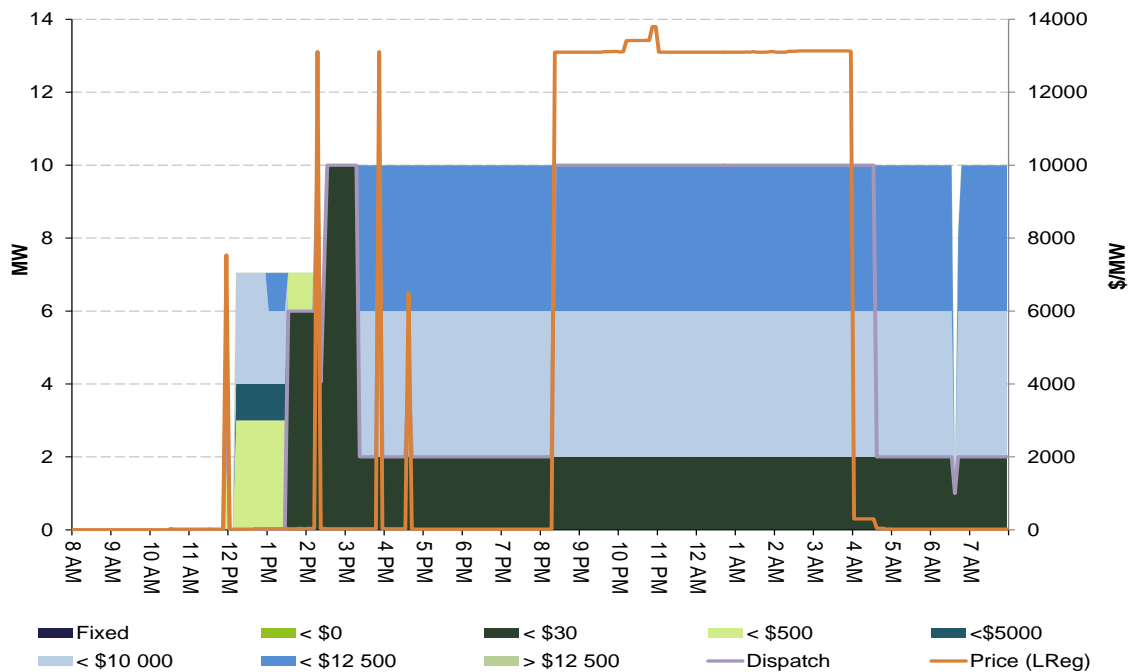


As shown in Figure D2a and Figure D2b, in the hours prior to, and during, the high price period Alinta's offers remained static.

**Figure D2a: Northern Power Station (Alinta Energy) lower regulation service closing bid prices, dispatch and dispatch price for 11 and 12 October**



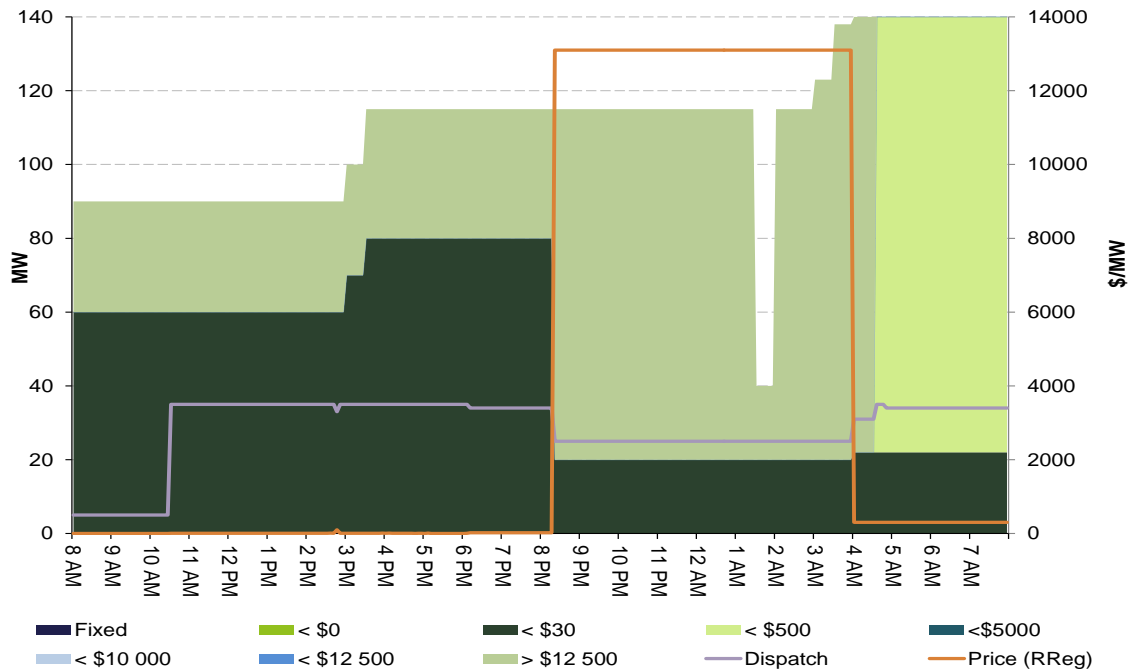
**Figure D2b: Northern Power Station (Alinta Energy) lower regulation service closing bid prices, dispatch and dispatch price for 11 and 12 October – effective offers**



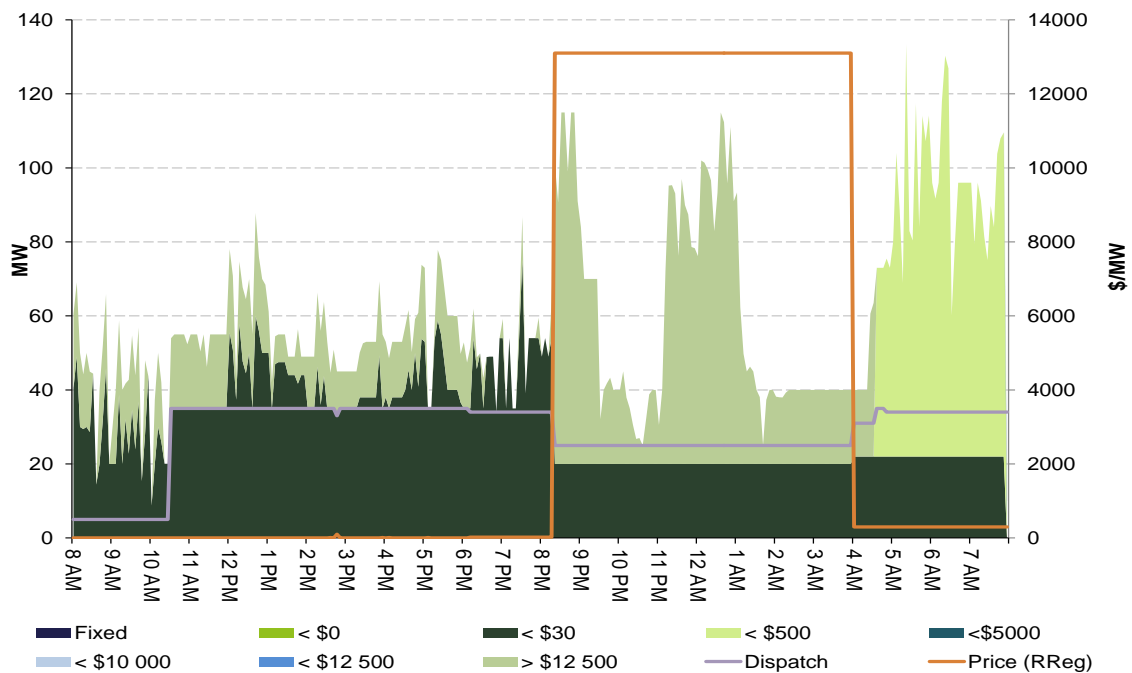


The rebidding of Torrens Island capacity by AGL that occurred for lower services also occurred in raise regulation where 60 MW of raise regulation was rebid from <\$30/MW to >\$12 500 as evident in Figure D3a and Figure D3b. These rebids remained in place until after the administrative price cap was imposed at about 4 am on 12 October.

**Figure D3a: Torrens Island (AGL) raise regulation service closing bid prices, dispatch and dispatch price for 11 and 12 October**

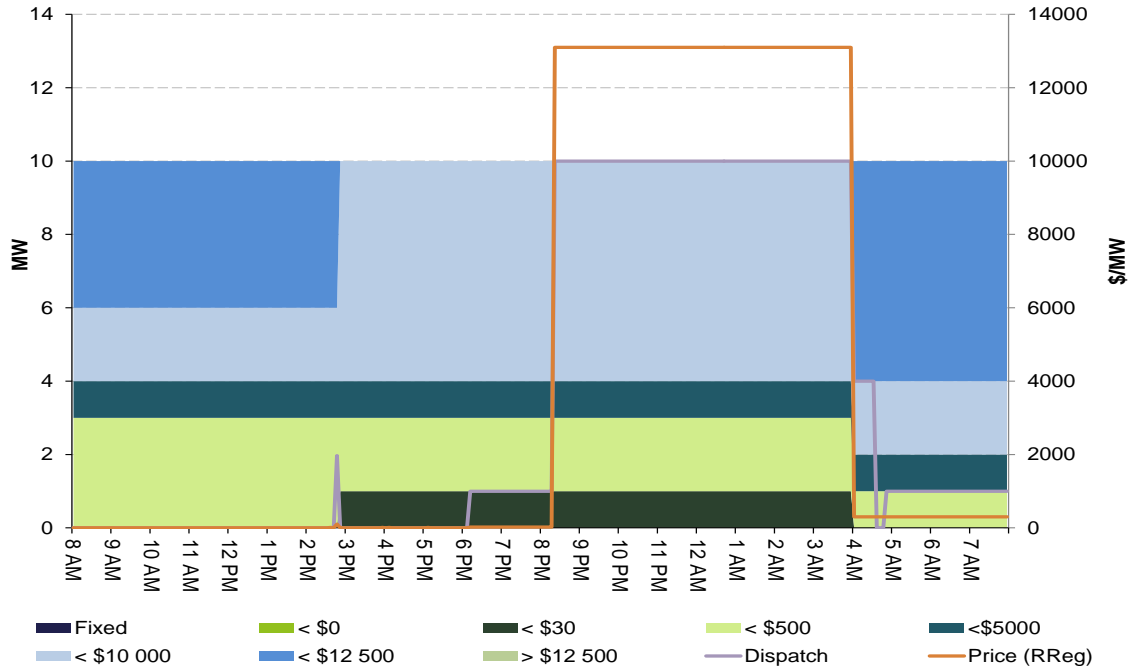


**Figure D3b: Torrens Island (AGL) raise regulation service closing bid prices, dispatch and dispatch price for 11 and 12 October – effective offers**

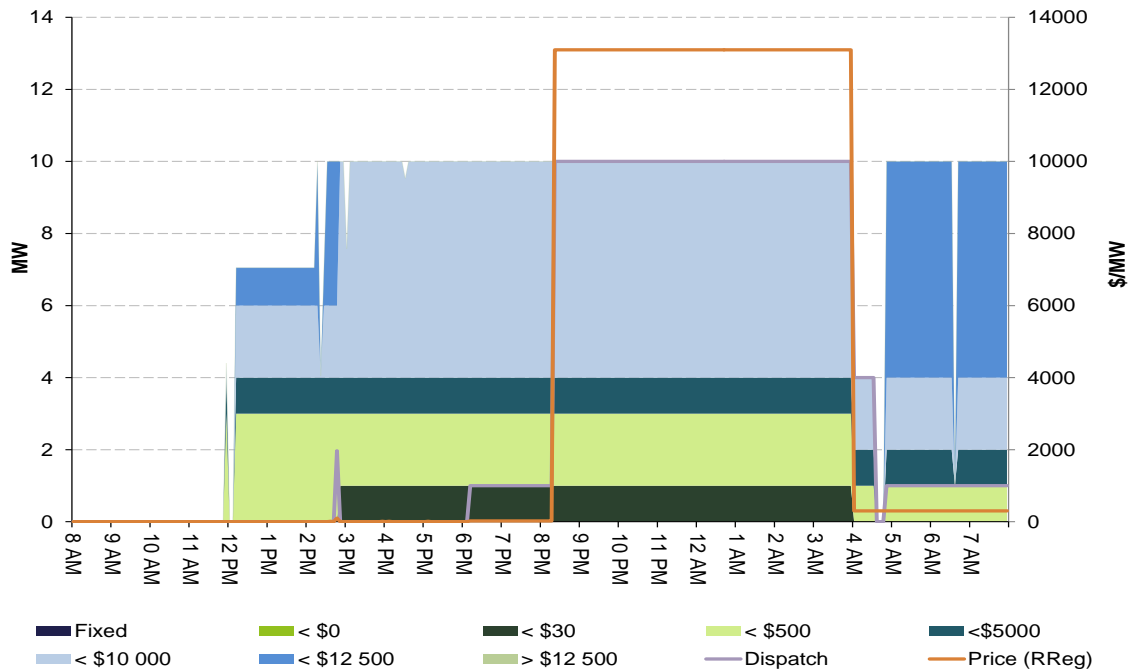


As shown in Figure D4a and Figure D4b, in the hours prior to, and during, the high price period Alinta's offers remained static.

**Figure D4a: Northern Power Station (Alinta Energy) raise regulation service closing bid prices, dispatch and dispatch price for 11 and 12 October**

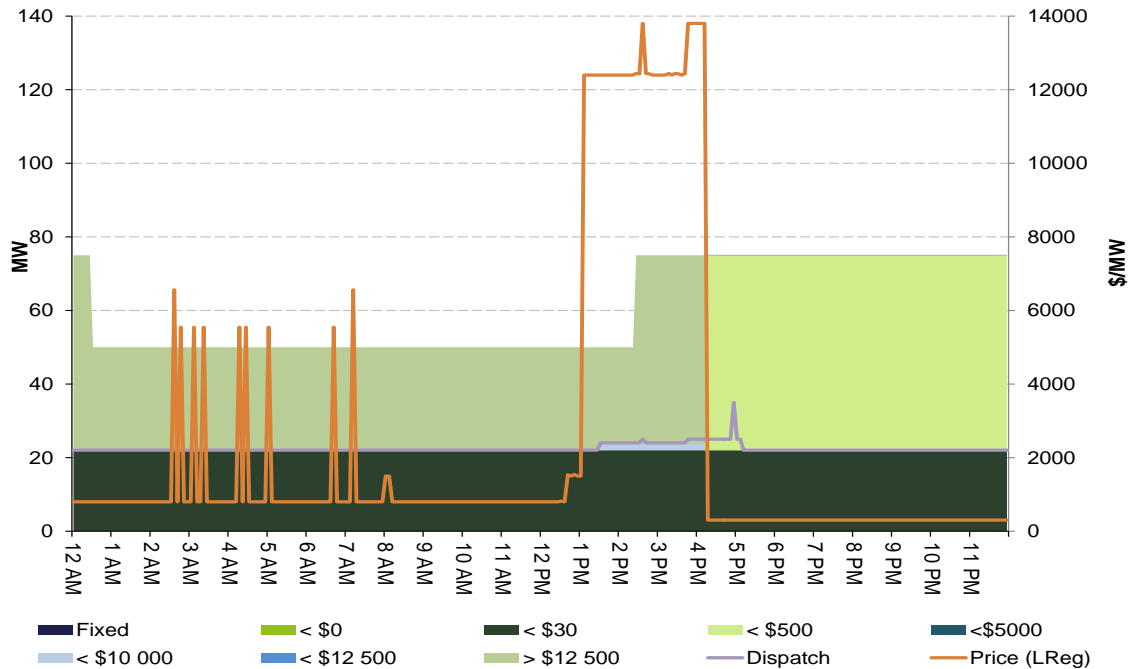


**Figure D4b: Northern Power Station (Alinta Energy) raise regulation service closing bid prices, dispatch and dispatch price for 11 and 12 October – effective offers**

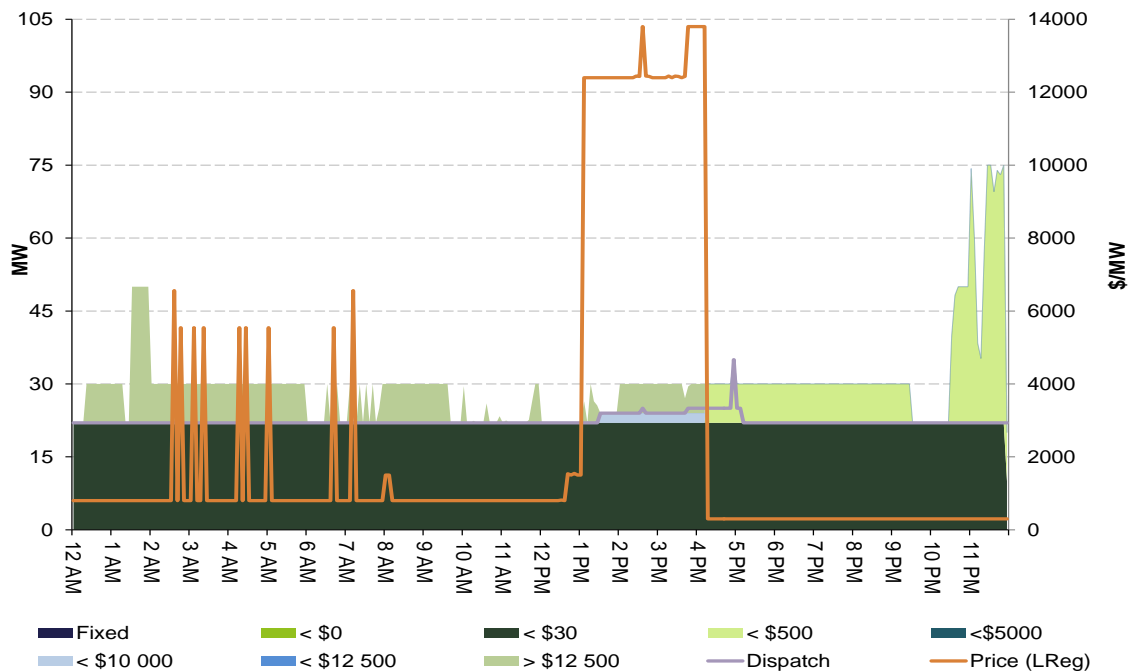


As shown in Figure D5a and Figure D5b, in the hours prior to, and during, the high price period AGL's offers remained static. Once the administrative price cap had been imposed AGL rebid to redistribute their regulation offers into bands between \$30/MW and \$500/MW.

**Figure D5a: Torrens Island (AGL) lower regulation service closing bid prices, dispatch and dispatch price for 25 October**

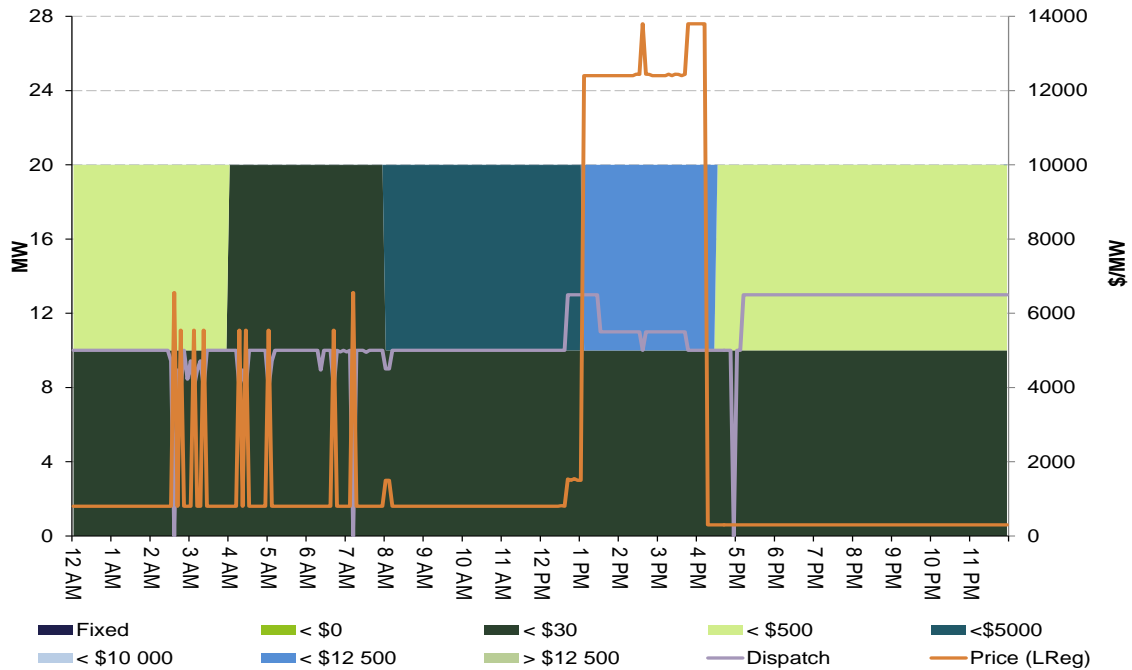


**Figure D5b: Torrens Island (AGL) lower regulation service closing bid prices, dispatch and dispatch price for 25 October – effective offers**



As shown in Figure D6a and Figure D6b, at about 12.45 pm Alinta rebid 10 MW of capacity at Northern from about zero to \$1500/MW in both services and at about 1 pm rebid 10 MW from \$1500/MW to \$12 400/MW.

**Figure D6a: Northern Power Station (Alinta Energy) lower regulation service closing bid prices, dispatch and dispatch price for 25 October**



**Figure D6b: Northern Power Station (Alinta Energy) lower regulation service closing bid prices, dispatch and dispatch price for 25 October – effective offers**

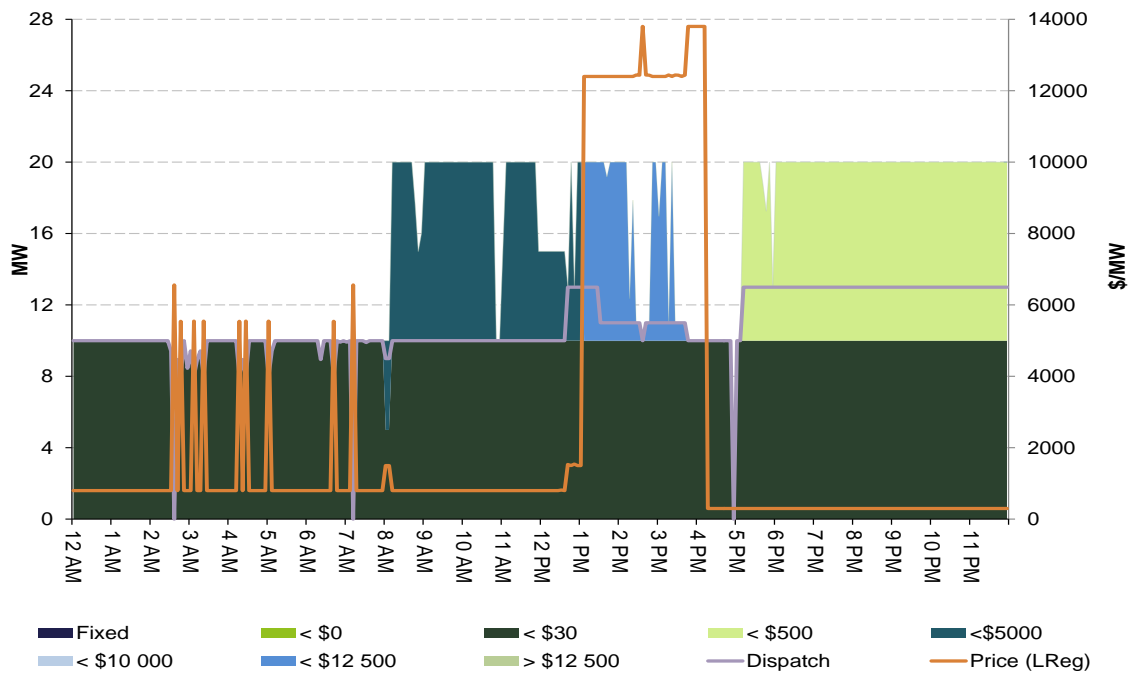
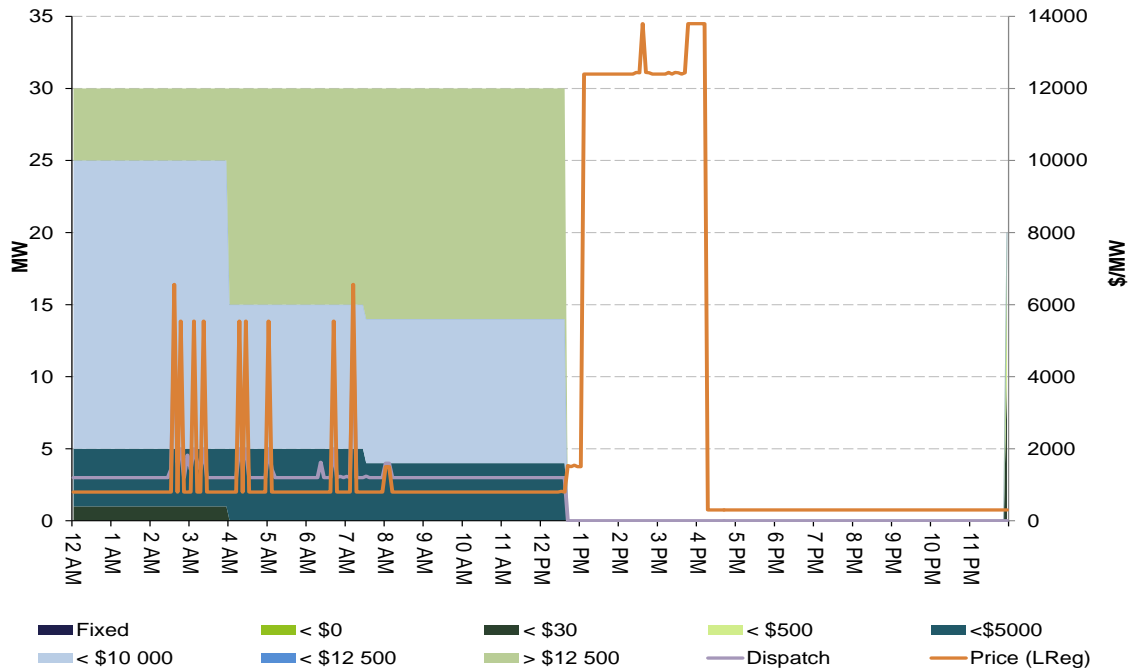
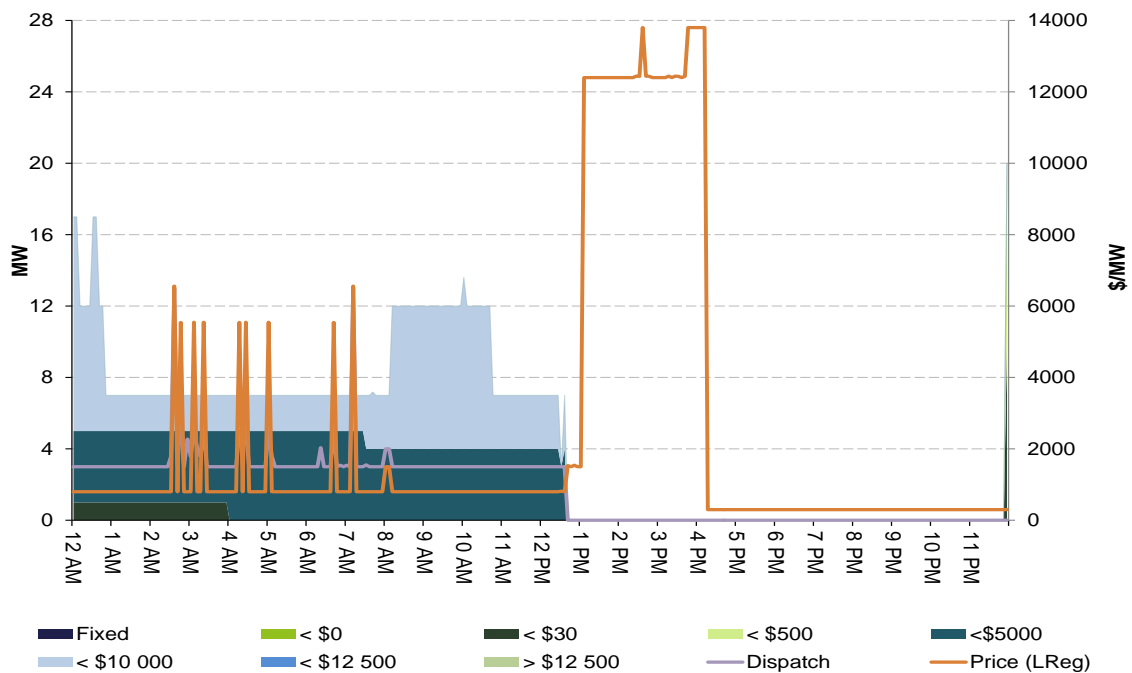


Figure D7a and Figure D7b for Pelican Point Power Station show clearly their withdrawal from the market at about 12.30 pm. At the time pelican point shut down the price increased to \$1500/MW set by Northern Power Station.

**Figure D7a: Pelican Point Power Station (GDF Suez) lower regulation service closing bid prices, dispatch and dispatch price for 25 October**

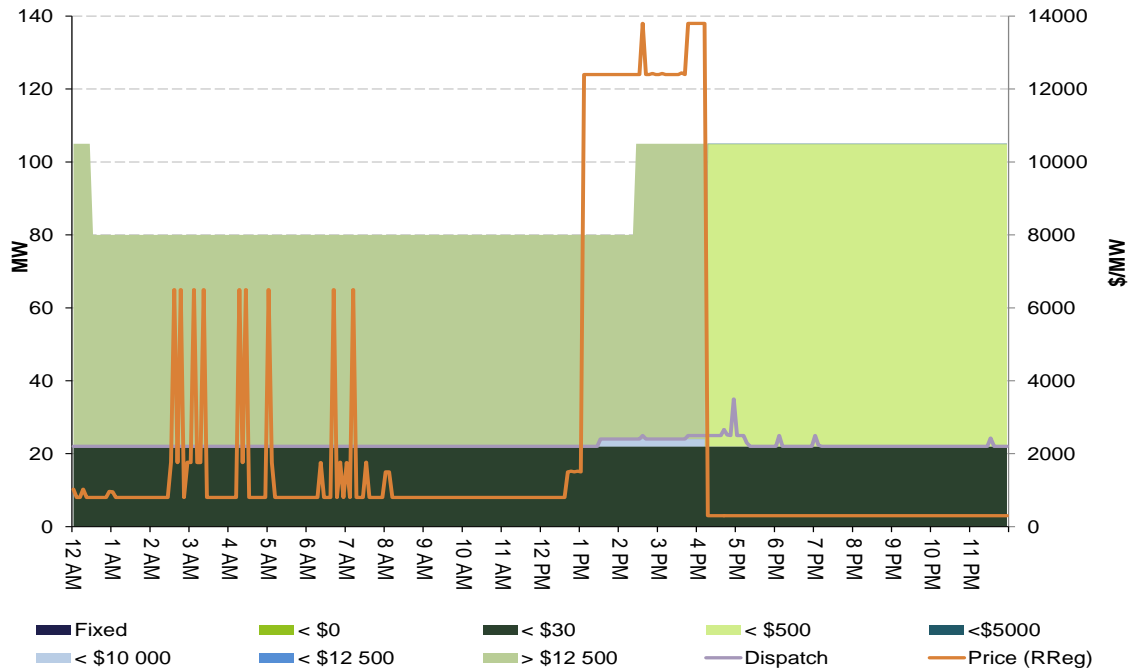


**Figure D7b: Pelican Point Power Station (GDF Suez) lower regulation service closing bid prices, dispatch and dispatch price for 25 October – effective offers**

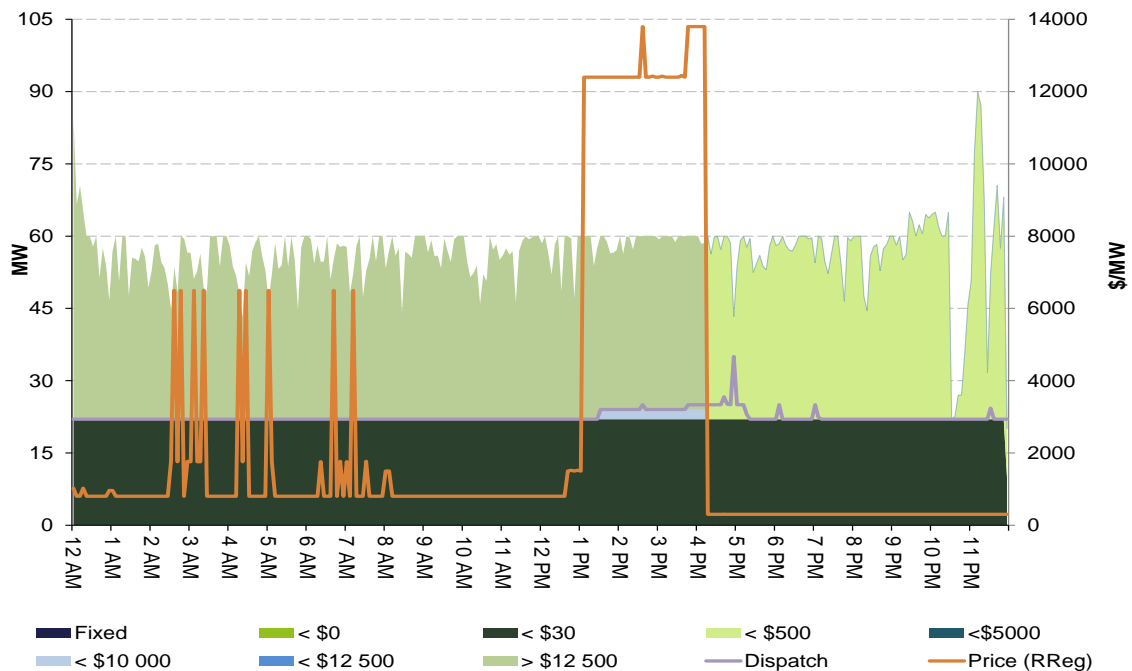


As shown in Figure D8a and Figure D8b, in the hours prior to, and during, the high price period AGL's offers remained static. Once the administrative price cap had been imposed AGL rebid to redistribute their regulation offers into bands between \$30/MW and \$500/MW.

**Figure D8a: Torrens Island (AGL) raise regulation service closing bid prices, dispatch and dispatch price for 25 October**

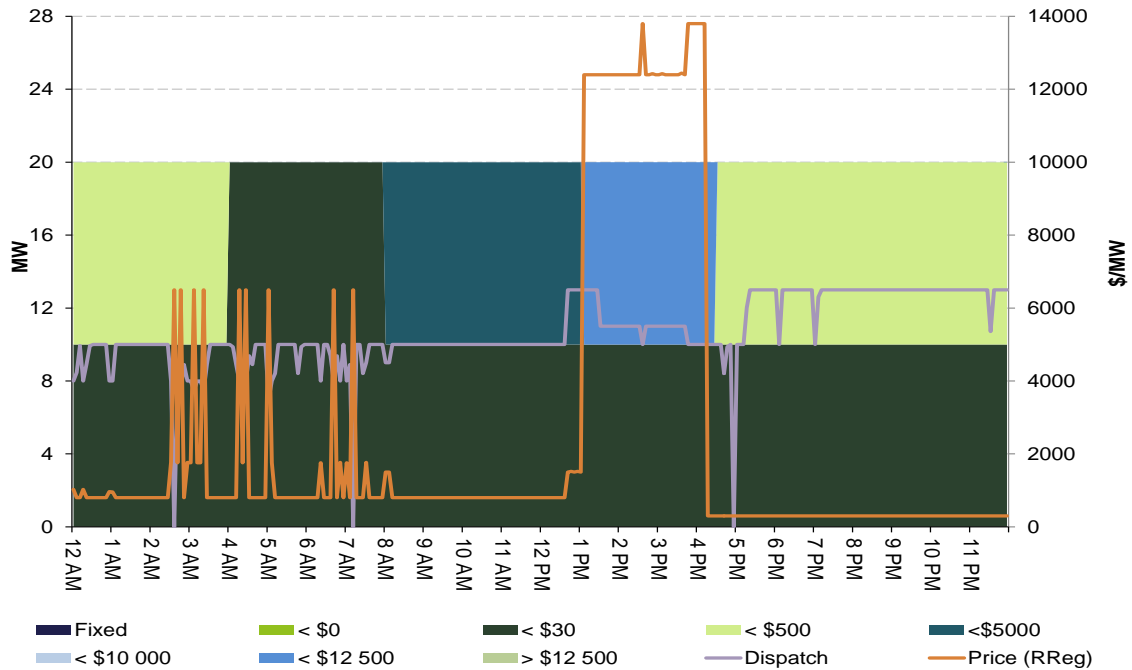


**Figure D8b: Torrens Island (AGL) raise regulation service closing bid prices, dispatch and dispatch price for 25 October – effective offers**



As shown in Figure D9a and Figure D9b, at about 12.45 pm Alinta rebid 10 MW of capacity at Northern from about zero to \$1500/MW in both services and at about 1 pm rebid 10 MW from \$1500/MW to \$12 400/MW.

**Figure D9a: Northern Power Station (Alinta Energy) raise regulation service closing bid prices, dispatch and dispatch price for 25 October**



**Figure D9b: Northern Power Station (Alinta Energy) raise regulation service closing bid prices, dispatch and dispatch price for 25 October – effective offers**

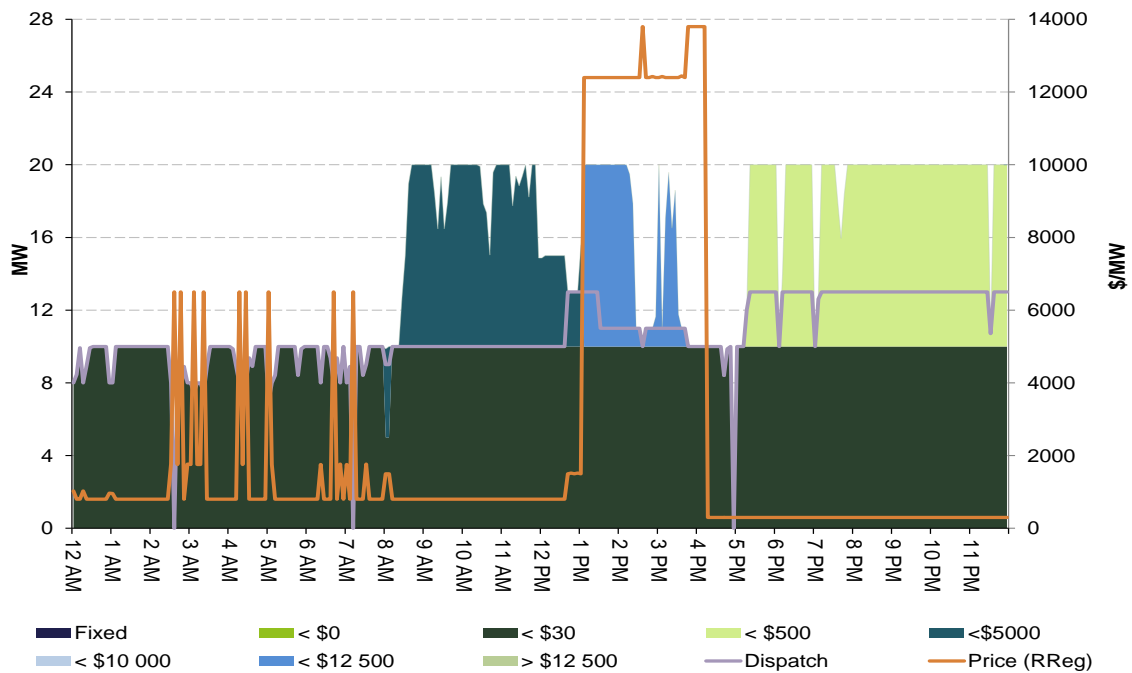
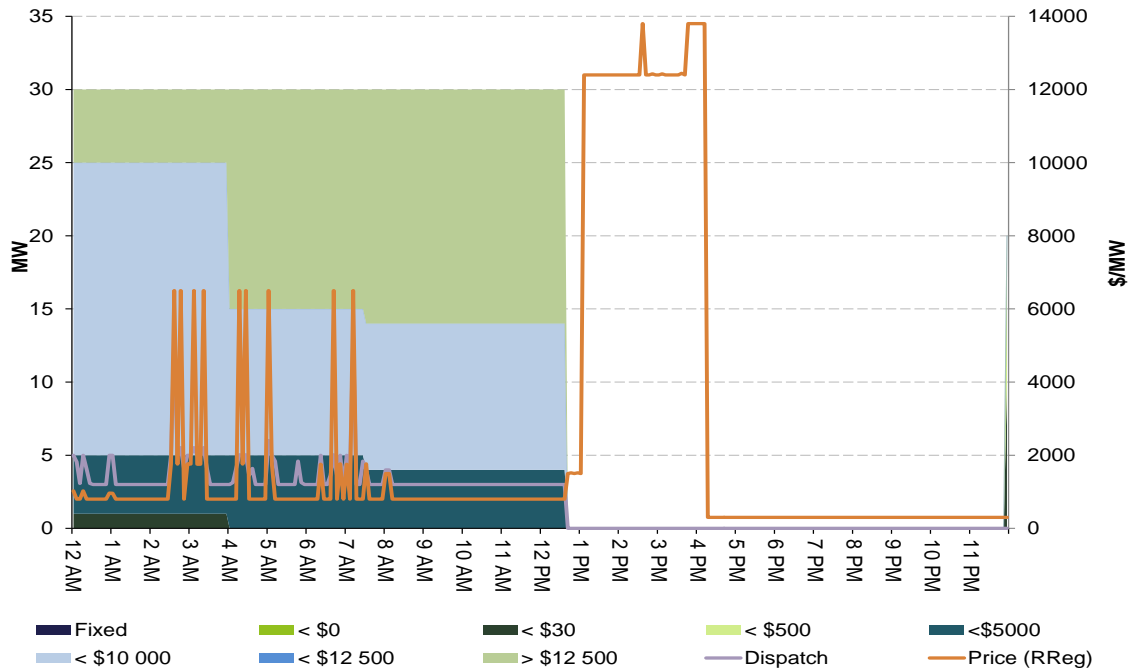
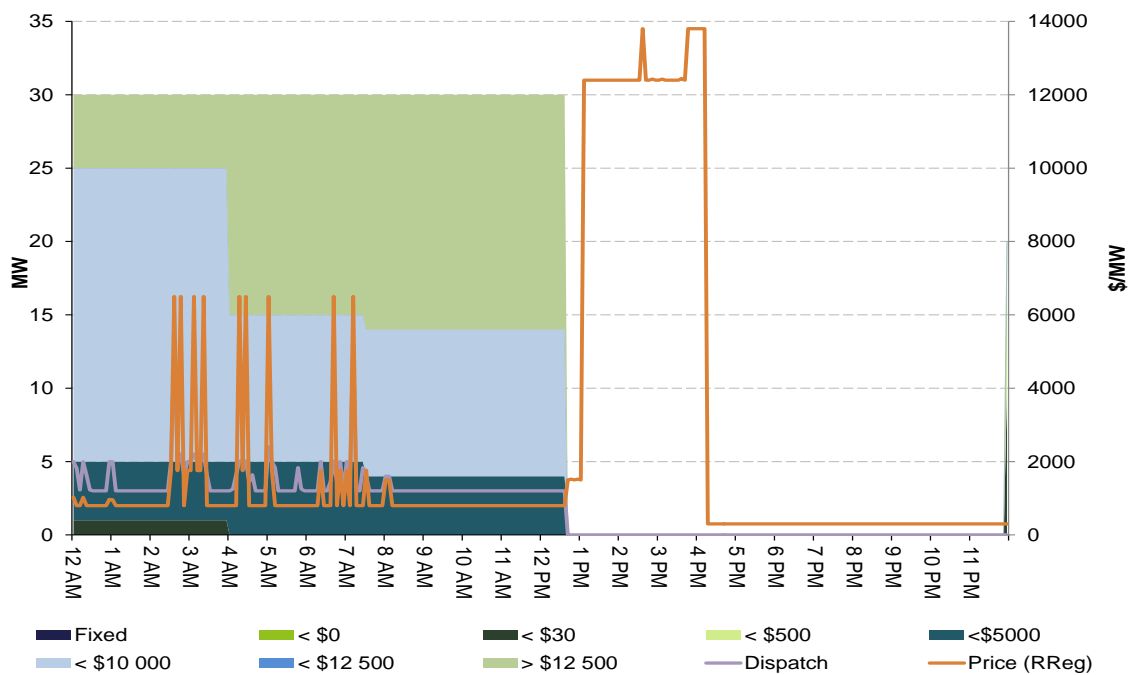


Figure D10a and Figure D10b for Pelican Point Power Station show clearly their withdrawal from the market at about 12.30 pm. At the time pelican point shut down the price increased to \$1500/MW set by Northern Power Station.

**Figure D10a: Pelican Point Power Station (GDF Suez) raise regulation service closing bid prices, dispatch and dispatch price for 25 October**



**Figure D10b: Pelican Point Power Station (GDF Suez) raise regulation service closing bid prices, dispatch and dispatch price for 25 October – effective offers**





## Appendix E Relevant Market Notices

The following market notices either were notifying the market of the regulation requirement for South Australia or were referenced in participant rebidding reasons.

Market notice 50003 was issued on 12 October one day after the commencement of the outage.

Market Notice	Type	Date of issue	Last Changed
50003	General Notice	12/10/2015 16:08:36	12/10/2015 16:08:36

### Reason

#### AEMO ELECTRICITY MARKET NOTICE

For the outages of the South East - Heywood 275kV lines AEMO has invoked constraint equations for South Australian raise and lower regulation of 35 MW in the following constraint sets:

F-S\_RREG\_0035

F-S\_LREG\_0035

In the event of South Australia islanding this ensures sufficient raise and lower regulation is available within 30 minutes.

More information on the Settlements outcomes, for cost recovery, is available via MMS Data Interchange table: SET\_FCAS\_RECOVERY

These constraint sets have been attached to the NOS entries for all the outages of the South East - Heywood 275kV lines. For future outages please refer to the Network Outage Schedule on the AEMO website: <http://www.aemo.com.au/Electricity/Data/Network-Data/Network-Outage-Schedule>.

Ben Blake

AEMO Operations

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Market Notice	Type	Date of issue	Last Changed
49990	Reclassify Contingency	11/10/2015 19:34:24	11/10/2015 19:34:24

#### External Reference

Reclassification of a Non-Credible Contingency Event: Dederang - Glenrowan No. 1 and No. 3 220 kV Lines in Victoria due to Lightning.

#### Reason

AEMO ELECTRICITY MARKET NOTICE

Reclassification of a Non-Credible Contingency Event: Dederang - Glenrowan No. 1 and No. 3 220 kV Lines in Victoria due to Lightning.

Lightning is occurring near the Dederang - Glenrowan No. 1 and No. 3 220 kV Lines.

AEMO considers the simultaneous trip of those circuits to now be more likely.

Therefore AEMO has reclassified this as a credible contingency event from 1925 hrs Sunday, 11 October 2015 until further notice.

Constraint Set V-DDGN\_N-2 invoked.

This Constraint Set contains equations with the following interconnectors on the LHS.

V-S-MNSP1

V-SA

VIC1-NSW1

Manager NEM Real Time Operations

Market Notice	Type	Date of issue	Last Changed
49991	Reclassify Contingency	11/10/2015 19:55:20	11/10/2019:55:20

#### External Reference

Reclassification of a Non Credible Contingency Event: Eildon-Mt. Beauty No.1 and No.2 220kV lines in Victoria.

#### Reason

AEMO ELECTRICITY MARKET NOTICE

Reclassification of a Non Credible Contingency Event: Eildon-Mt. Beauty No.1 and No.2 220kV lines in Victoria.

Lightning is occurring near the Eildon- Mt. Beauty No.1 and No.2 220kV lines.

AEMO considers the simultaneous trip of those circuits to now be more likely.

Therefore AEMO has reclassified this as a credible contingency event from 1950 hrs Sunday, 11 October 2015 until further notice.

Manager NEM Real Time Operations

## Appendix F Price setter

The following tables identify for each five-minute dispatch interval where regulation dispatch prices were above \$5000/MW, the price and the generating units involved in setting the price for each of the lower and raise regulation services in South Australia. This information is published by AEMO.<sup>18</sup> Also shown are the offer prices involved in determining the dispatch price, together with the quantity of that service and the contribution to the total price. AEMO reports an increase as a negative marginal change in FCAS price setter. Generator offers which contributed zero to the price have been removed for clarity.

### Lower regulation 11 and 12 October

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
20:25	\$13 100.00	AGL (SA)	TORRA4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
20:30	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
20:35	\$13 100.00	AGL (SA)	TORRA4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
20:40	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
20:45	\$13 100.00	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
20:50	\$13 100.00	AGL (SA)	TORRA3	Lower reg	\$13 100.00	-1.00	-\$13 100.00
20:55	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
21:00	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
21:05	\$13 100.00	AGL (SA)	TORRA3	Lower reg	\$13 100.00	-1.00	-\$13 100.00
21:10	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
21:15	\$13 100.00	AGL (SA)	TORRA4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRA3	Raise 6 sec	\$0.50	-1.00	-\$0.50
		AGL (SA)	TORRA4	Raise 6 sec	\$0.50	1.00	\$0.50
21:20	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
21:25	\$13 100.00	AGL (SA)	TORRA3	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRA1	Raise 6 sec	\$0.50	-1.00	-\$0.50
		AGL (SA)	TORRA3	Raise 6 sec	\$0.50	1.00	\$0.50
21:30	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
21:35	\$13 100.00	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
21:40	\$13 108.94	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$45.99	-1.00	-\$45.99
		Origin Energy	ER01	Energy	\$28.30	0.33	\$9.34
		Origin Energy	ER02	Energy	\$28.30	0.33	\$9.34
		Origin Energy	ER03	Energy	\$28.30	0.33	\$9.34
		Origin Energy	ER04	Energy	\$28.30	0.33	\$9.34

<sup>18</sup> Details on how the price is determined can be found at [www.aemo.com.au](http://www.aemo.com.au)

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
			ENOF,TORRA		\$0.00	15.00	\$0.00
			ENOF,TORRA		\$0.00	15.00	\$0.00
			ENOF,TORRA		\$0.00	15.00	\$0.00
			ENOF,TORRB		\$0.00	-40.00	\$0.00
			ENOF,TORRB		\$0.00	-40.00	\$0.00
21:45	\$13 113.66	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-0.18	-\$2358.00
		AGL (SA)	TORRA3	Lower reg	\$13 100.00	-0.18	-\$2358.00
		AGL (SA)	TORRA3	Raise reg	\$13 100.00	-0.18	-\$2358.00
		AGL (SA)	TORRA4	Lower reg	\$13 100.00	-0.18	-\$2358.00
		AGL (SA)	TORRA4	Raise reg	\$13 100.00	-0.18	-\$2358.00
		AGL (SA)	TORRB4	Lower reg	\$13 100.00	-0.47	-\$6157.00
		AGL (SA)	TORRB4	Raise reg	\$13 100.00	0.35	\$4585.00
		AGL (SA)	TORRA1	Energy	\$45.99	-0.18	-\$8.28
		AGL (SA)	TORRA3	Energy	\$45.99	-0.18	-\$8.28
		AGL (SA)	TORRA4	Energy	\$45.99	-0.18	-\$8.28
		AGL (SA)	TORRB4	Energy	\$45.99	-0.47	-\$21.62
		Origin Energy	ER01	Energy	\$28.30	0.34	\$9.62
		Origin Energy	ER02	Energy	\$28.30	0.34	\$9.62
		Origin Energy	ER04	Energy	\$28.30	0.34	\$9.62
		AGL Energy	LYA1	Energy	\$16.20	0.06	\$0.97
		AGL Energy	LYA3	Energy	\$16.20	0.06	\$0.97
		AGL Energy	LYA4	Energy	\$16.20	0.06	\$0.97
			ENOF,ER01,4		\$0.00	-34.37	\$0.00
			ENOF,ER02,4		\$0.00	-34.37	\$0.00
			ENOF,ER03,4		\$0.00	-34.37	\$0.00
			ENOF,LYA1,4,		\$0.00	3.89	\$0.00
			ENOF,LYA2,4,		\$0.00	3.89	\$0.00
			ENOF,LYA2,4,		\$0.00	3.89	\$0.00
			ENOF,TORRA		\$0.00	-7.06	\$0.00
			ENOF,TORRA		\$0.00	-7.06	\$0.00
			ENOF,TORRA		\$0.00	-7.06	\$0.00
			ENOF,TORRA		\$0.00	-7.06	\$0.00
			ENOF,TORRA		\$0.00	-7.06	\$0.00
			ENOF,TORRA		\$0.00	-7.06	\$0.00
			ENOF,TORRB		\$0.00	-18.82	\$0.00
			ENOF,TORRB		\$0.00	-18.82	\$0.00
21:50	\$13 114.81	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-0.21	-\$2751.00
		AGL (SA)	TORRA1	Raise reg	\$13 100.00	-0.21	-\$2751.00

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
		AGL (SA)	TORRA3	Lower reg	\$13 100.00	-0.21	-\$2751.00
		AGL (SA)	TORRA3	Raise reg	\$13 100.00	-0.21	-\$2751.00
		AGL (SA)	TORRB4	Lower reg	\$13 100.00	-0.57	-\$7467.00
		AGL (SA)	TORRB4	Raise reg	\$13 100.00	0.43	\$5633.00
		AGL (SA)	TORRA1	Energy	\$45.99	-0.21	-\$9.66
		AGL (SA)	TORRA3	Energy	\$45.99	-0.21	-\$9.66
		AGL (SA)	TORRB4	Energy	\$45.99	-0.57	-\$26.21
		Origin Energy	ER03	Energy	\$28.30	1.02	\$28.87
		AGL Energy	LYA1	Energy	\$16.20	0.05	\$0.81
		AGL Energy	LYA3	Energy	\$16.20	0.05	\$0.81
		AGL Energy	LYA4	Energy	\$16.20	0.05	\$0.81
		Delta Electricity	VP5	Lower reg	\$0.50	-1.02	-\$0.51
		Origin Energy	ER03	Lower reg	\$0.43	1.02	\$0.44
			ENOF,ER01,4		\$0.00	101.70	\$0.00
			ENOF,ER02,4		\$0.00	101.70	\$0.00
			ENOF,ER03,4		\$0.00	101.70	\$0.00
			ENOF,LYA1,4,		\$0.00	3.06	\$0.00
			ENOF,LYA2,4,		\$0.00	3.06	\$0.00
			ENOF,LYA2,4,		\$0.00	3.06	\$0.00
			ENOF,TORRA		\$0.00	-3.21	\$0.00
			ENOF,TORRA		\$0.00	-8.57	\$0.00
			ENOF,TORRA		\$0.00	-8.57	\$0.00
			ENOF,TORRA		\$0.00	-3.21	\$0.00
			ENOF,TORRA		\$0.00	-8.57	\$0.00
			ENOF,TORRA		\$0.00	-8.57	\$0.00
			ENOF,TORRA		\$0.00	-8.57	\$0.00
			ENOF,TORRA		\$0.00	-8.57	\$0.00
			ENOF,TORRB		\$0.00	-22.86	\$0.00
			ENOF,TORRB		\$0.00	-22.86	\$0.00
21:55	\$13 117.21	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$45.99	-1.00	-\$45.99
		Origin Energy	ER01	Energy	\$25.54	0.34	\$8.68
		Origin Energy	ER02	Energy	\$25.54	0.34	\$8.68
		Origin Energy	ER04	Energy	\$25.54	0.34	\$8.68
		AGL Energy	LYA1	Energy	\$16.20	0.06	\$0.97
		AGL Energy	LYA3	Energy	\$16.20	0.06	\$0.97
		AGL Energy	LYA4	Energy	\$16.20	0.06	\$0.97
		AGL Energy	LYA3	Lower 5 min	\$0.50	-1.02	-\$0.51
		Origin Energy	ER01	Lower reg	\$0.43	0.34	\$0.15

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
		Origin Energy	ER02	Lower reg	\$0.43	0.34	\$0.15
		Origin Energy	ER04	Lower reg	\$0.43	0.34	\$0.15
			ENOF,ER01,3		\$0.00	-13.61	\$0.00
			ENOF,ER02,3		\$0.00	-13.61	\$0.00
			ENOF,ER03,3		\$0.00	-13.61	\$0.00
			ENOF,LYA1,4,		\$0.00	3.43	\$0.00
			ENOF,LYA2,4,		\$0.00	3.43	\$0.00
			ENOF,LYA2,4,		\$0.00	3.43	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRB		\$0.00	-40.00	\$0.00
			ENOF,TORRB		\$0.00	-40.00	\$0.00
22:00	\$13 116.81	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$45.99	-1.00	-\$45.99
		AGL Energy	BW01	Energy	\$25.46	0.34	\$8.66
		AGL Energy	BW03	Energy	\$25.46	0.34	\$8.66
		AGL Energy	BW04	Energy	\$25.46	0.34	\$8.66
		AGL Energy	LYA1	Energy	\$16.20	0.06	\$0.97
		AGL Energy	LYA3	Energy	\$16.20	0.06	\$0.97
		AGL Energy	LYA4	Energy	\$16.20	0.06	\$0.97
			ENOF,BW01,4		\$0.00	95.66	\$0.00
			ENOF,BW02,4		\$0.00	95.66	\$0.00
			ENOF,BW02,4		\$0.00	95.66	\$0.00
			ENOF,LYA1,4,		\$0.00	3.81	\$0.00
			ENOF,LYA2,4,		\$0.00	3.81	\$0.00
			ENOF,LYA2,4,		\$0.00	3.81	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRB		\$0.00	-40.00	\$0.00
			ENOF,TORRB		\$0.00	-40.00	\$0.00
22:05	\$13 106.43	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$45.99	-1.00	-\$45.99
		EnergyAustralia	TALWA1	Energy	\$34.02	1.05	\$35.72
		AGL Energy	LYA1	Energy	\$16.20	0.08	\$1.30
		AGL Energy	LYA3	Energy	\$16.20	0.08	\$1.30
		AGL Energy	LYA4	Energy	\$16.20	0.08	\$1.30

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
			ENOF,LYA1,4,		\$0.00	4.78	\$0.00
			ENOF,LYA2,4,		\$0.00	4.78	\$0.00
			ENOF,LYA2,4,		\$0.00	4.78	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRB		\$0.00	-40.00	\$0.00
			ENOF,TORRB		\$0.00	-40.00	\$0.00
22:10	\$13 107.39	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA3	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA3	Raise reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA4	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA4	Raise reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRB4	Raise reg	\$13 100.00	0.67	\$8777.00
		AGL (SA)	TORRA1	Energy	\$45.99	-0.33	-\$15.18
		AGL (SA)	TORRA3	Energy	\$45.99	-0.33	-\$15.18
		AGL (SA)	TORRA4	Energy	\$45.99	-0.33	-\$15.18
		AGL Energy	BW01	Energy	\$33.96	0.21	\$7.13
		AGL Energy	BW03	Energy	\$33.96	0.21	\$7.13
		AGL Energy	LD01	Energy	\$33.96	0.31	\$10.53
		AGL Energy	LD04	Energy	\$33.96	0.31	\$10.53
		AGL Energy	LYA1	Energy	\$16.20	0.07	\$1.13
		AGL Energy	LYA3	Energy	\$16.20	0.07	\$1.13
		AGL Energy	LYA4	Energy	\$16.20	0.07	\$1.13
			ENOF,BW01,5		\$0.00	4.16	\$0.00
			ENOF,BW01,5		\$0.00	-4.16	\$0.00
			ENOF,BW02,5		\$0.00	4.16	\$0.00
			ENOF,BW02,5		\$0.00	6.25	\$0.00
			ENOF,BW02,5		\$0.00	6.25	\$0.00
			ENOF,BW03,5		\$0.00	-4.16	\$0.00
			ENOF,BW04,5		\$0.00	-6.25	\$0.00
			ENOF,BW04,5		\$0.00	-6.25	\$0.00
			ENOF,LYA1,4,		\$0.00	4.02	\$0.00
			ENOF,LYA2,4,		\$0.00	4.02	\$0.00
			ENOF,LYA2,4,		\$0.00	4.02	\$0.00
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	13.33	\$0.00

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	13.33	\$0.00
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	13.33	\$0.00
22:15	\$13 413.64	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$350.99	-1.00	-\$350.99
		CS Energy	GSTONE2	Energy	\$34.00	1.02	\$34.68
		AGL Energy	LYA1	Energy	\$16.20	0.05	\$0.81
		AGL Energy	LYA3	Energy	\$16.20	0.05	\$0.81
		AGL Energy	LYA4	Energy	\$16.20	0.05	\$0.81
			ENOF,GSTON		\$0.00	-102.11	\$0.00
			ENOF,GSTON		\$0.00	-102.11	\$0.00
			ENOF,GSTON		\$0.00	102.11	\$0.00
			ENOF,GSTON		\$0.00	-102.11	\$0.00
			ENOF,GSTON		\$0.00	102.11	\$0.00
			ENOF,LYA1,4,		\$0.00	3.26	\$0.00
			ENOF,LYA2,4,		\$0.00	3.26	\$0.00
			ENOF,LYA2,4,		\$0.00	3.26	\$0.00
22:20	\$13 417.30	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$350.99	-1.00	-\$350.99
		Origin Energy	ER03	Energy	\$28.30	1.05	\$29.72
		AGL Energy	LYA1	Energy	\$16.20	0.07	\$1.13
		AGL Energy	LYA3	Energy	\$16.20	0.07	\$1.13
		AGL Energy	LYA4	Energy	\$16.20	0.07	\$1.13
		Stanwell	TARONG#4	Raise reg	\$0.79	1.05	\$0.83
		Origin Energy	ER03	Raise reg	\$0.05	-1.05	-\$0.05
			ENOF,ER01,4		\$0.00	104.63	\$0.00
			ENOF,ER02,4		\$0.00	104.63	\$0.00
			ENOF,ER03,4		\$0.00	104.63	\$0.00
			ENOF,LYA1,4,		\$0.00	4.09	\$0.00
			ENOF,LYA2,4,		\$0.00	4.09	\$0.00
			ENOF,LYA2,4,		\$0.00	4.09	\$0.00
22:25	\$13 418.50	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$350.99	-1.00	-\$350.99
		Origin Energy	ER01	Energy	\$28.30	0.26	\$7.36
		Origin Energy	ER02	Energy	\$28.30	0.26	\$7.36



DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
		Origin Energy	ER03	Energy	\$28.30	0.26	\$7.36
		Origin Energy	ER04	Energy	\$28.30	0.26	\$7.36
		AGL Energy	LYA1	Energy	\$16.20	0.06	\$0.97
		AGL Energy	LYA3	Energy	\$16.20	0.06	\$0.97
		AGL Energy	LYA4	Energy	\$16.20	0.06	\$0.97
			ENOF,LYA1,4,		\$0.00	3.70	\$0.00
			ENOF,LYA2,4,		\$0.00	3.70	\$0.00
			ENOF,LYA2,4,		\$0.00	3.70	\$0.00
22:30	\$13 419.95	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$350.99	-1.00	-\$350.99
		Origin Energy	ER01	Energy	\$28.30	0.26	\$7.36
		Origin Energy	ER02	Energy	\$28.30	0.26	\$7.36
		Origin Energy	ER03	Energy	\$28.30	0.26	\$7.36
		Origin Energy	ER04	Energy	\$28.30	0.26	\$7.36
		AGL Energy	LYA1	Energy	\$16.20	0.04	\$0.65
		AGL Energy	LYA3	Energy	\$16.20	0.04	\$0.65
		AGL Energy	LYA4	Energy	\$16.20	0.04	\$0.65
			ENOF,LYA1,4,		\$0.00	2.51	\$0.00
			ENOF,LYA2,4,		\$0.00	2.51	\$0.00
			ENOF,LYA2,4,		\$0.00	2.51	\$0.00
22:35	\$13 418.45	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$350.99	-1.00	-\$350.99
		Stanwell	TARONG#1	Energy	\$32.04	0.32	\$10.25
		Stanwell	TARONG#3	Energy	\$32.04	0.32	\$10.25
		Stanwell	TARONG#4	Energy	\$32.04	0.32	\$10.25
		AGL Energy	LYA1	Energy	\$16.20	0.04	\$0.65
		AGL Energy	LYA3	Energy	\$16.20	0.04	\$0.65
		AGL Energy	LYA4	Energy	\$16.20	0.04	\$0.65
			ENOF,LYA1,4,		\$0.00	2.14	\$0.00
			ENOF,LYA2,4,		\$0.00	2.14	\$0.00
			ENOF,LYA2,4,		\$0.00	2.14	\$0.00
22:40	\$13420.57	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$350.99	-1.00	-\$350.99
		Origin Energy	ER01	Energy	\$28.30	0.26	\$7.36
		Origin Energy	ER02	Energy	\$28.30	0.26	\$7.36
		Origin Energy	ER03	Energy	\$28.30	0.26	\$7.36
		Origin Energy	ER04	Energy	\$28.30	0.26	\$7.36
		AGL Energy	LYA1	Energy	\$16.20	0.03	\$0.49

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
		AGL Energy	LYA3	Energy	\$16.20	0.03	\$0.49
		AGL Energy	LYA4	Energy	\$16.20	0.03	\$0.49
			ENOF,LYA1,4,		\$0.00	1.84	\$0.00
			ENOF,LYA2,4,		\$0.00	1.84	\$0.00
			ENOF,LYA2,4,		\$0.00	1.84	\$0.00
22:45	\$13 422.65	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$350.99	-1.00	-\$350.99
		AGL Energy	LD01	Energy	\$25.47	0.34	\$8.66
		AGL Energy	LD02	Energy	\$25.47	0.34	\$8.66
		AGL Energy	LD04	Energy	\$25.47	0.34	\$8.66
		AGL Energy	LYA1	Energy	\$16.20	0.04	\$0.65
		AGL Energy	LYA3	Energy	\$16.20	0.04	\$0.65
		AGL Energy	LYA4	Energy	\$16.20	0.04	\$0.65
			ENOF,LYA1,4,		\$0.00	2.58	\$0.00
			ENOF,LYA2,4,		\$0.00	2.58	\$0.00
			ENOF,LYA2,4,		\$0.00	2.58	\$0.00
22:50	\$13 421.24	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$350.99	-1.00	-\$350.99
		AGL Energy	LD01	Energy	\$25.47	0.35	\$8.91
		AGL Energy	LD02	Energy	\$25.47	0.35	\$8.91
		AGL Energy	LD04	Energy	\$25.47	0.35	\$8.91
		AGL Energy	LYA1	Energy	\$16.20	0.06	\$0.97
		AGL Energy	LYA3	Energy	\$16.20	0.06	\$0.97
		AGL Energy	LYA4	Energy	\$16.20	0.06	\$0.97
			ENOF,LYA1,4,		\$0.00	3.78	\$0.00
			ENOF,LYA2,4,		\$0.00	3.78	\$0.00
			ENOF,LYA2,4,		\$0.00	3.78	\$0.00
22:55	\$26 866.93	AGL (SA)	TORRB4	Energy	\$13 800.00	-1.00	-\$13 800.00
		AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		Origin Energy	ER01	Energy	\$28.30	0.53	\$15.00
		Origin Energy	ER04	Energy	\$28.30	0.53	\$15.00
		AGL Energy	LYA1	Energy	\$16.20	0.07	\$1.13
		AGL Energy	LYA3	Energy	\$16.20	0.07	\$1.13
		AGL Energy	LYA4	Energy	\$16.20	0.07	\$1.13
		Delta Electricity	VP6	Lower reg	\$0.50	-1.05	-\$0.53
		Origin Energy	ER01	Lower reg	\$0.43	0.53	\$0.23
		Origin Energy	ER04	Lower reg	\$0.43	0.53	\$0.23
			ENOF,ER01,4		\$0.00	-52.60	\$0.00

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
			ENOF,ER01,4		\$0.00	-52.60	\$0.00
			ENOF,ER02,4		\$0.00	-52.60	\$0.00
			ENOF,ER03,4		\$0.00	-52.60	\$0.00
			ENOF,LYA1,4,		\$0.00	4.16	\$0.00
			ENOF,LYA2,4,		\$0.00	4.16	\$0.00
			ENOF,LYA2,4,		\$0.00	4.16	\$0.00
			ENOF,PPCCG		\$0.00	-250.00	\$0.00
			ENOF,QPS1,1		\$0.00	-25.00	\$0.00
			ENOF,QPS2,1		\$0.00	-25.00	\$0.00
			ENOF,QPS3,1		\$0.00	-25.00	\$0.00
			ENOF,QPS4,1		\$0.00	-25.00	\$0.00
			ENOF,QPS5,1		\$0.00	-128.00	\$0.00
			ENOF,TORRB		\$0.00	-10.00	\$0.00
			ENOF,TORRB		\$0.00	-10.00	\$0.00
			ENOF,TORRB		\$0.00	-10.00	\$0.00
23:00	\$26 870.67	AGL (SA)	TORRB4	Energy	\$13 800.00	-1.00	-\$13 800.00
		AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL Energy	BW01	Energy	\$25.46	0.35	\$8.91
		AGL Energy	BW03	Energy	\$25.46	0.35	\$8.91
		AGL Energy	BW04	Energy	\$25.46	0.35	\$8.91
		AGL Energy	LYA1	Energy	\$16.20	0.06	\$0.97
		AGL Energy	LYA3	Energy	\$16.20	0.06	\$0.97
		AGL Energy	LYA4	Energy	\$16.20	0.06	\$0.97
			ENOF,BW01,4		\$0.00	97.42	\$0.00
			ENOF,BW02,4		\$0.00	97.42	\$0.00
			ENOF,BW02,4		\$0.00	97.42	\$0.00
			ENOF,LYA1,4,		\$0.00	3.40	\$0.00
			ENOF,LYA2,4,		\$0.00	3.40	\$0.00
			ENOF,LYA2,4,		\$0.00	3.40	\$0.00
			ENOF,PPCCG		\$0.00	-250.00	\$0.00
			ENOF,QPS1,1		\$0.00	-25.00	\$0.00
			ENOF,QPS2,1		\$0.00	-25.00	\$0.00
			ENOF,QPS3,1		\$0.00	-25.00	\$0.00
			ENOF,QPS4,1		\$0.00	-25.00	\$0.00
			ENOF,QPS5,1		\$0.00	-128.00	\$0.00
			ENOF,TORRB		\$0.00	-10.00	\$0.00
			ENOF,TORRB		\$0.00	-10.00	\$0.00
			ENOF,TORRB		\$0.00	-10.00	\$0.00

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
23:05	\$13 100.00	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
23:10	\$13 100.00	AGL (SA)	TORRA4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
23:15	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
23:20	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
23:25	\$13 100.00	AGL (SA)	TORRA3	Lower reg	\$13 100.00	-1.00	-\$13 100.00
23:30	\$13 100.00	AGL (SA)	TORRA3	Lower reg	\$13 100.00	-1.00	-\$13 100.00
23:35	\$13 100.00	AGL (SA)	TORRA3	Lower reg	\$13 100.00	-1.00	-\$13 100.00
23:40	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
23:45	\$13 100.00	AGL (SA)	TORRA3	Lower reg	\$13 100.00	-1.00	-\$13 100.00
23:50	\$13 100.00	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
23:55	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
00:00	\$13 100.00	AGL (SA)	TORRA3	Lower reg	\$13 100.00	-1.00	-\$13 100.00
00:05	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
00:10	\$13 100.00	AGL (SA)	TORRA3	Lower reg	\$13 100.00	-1.00	-\$13 100.00
00:15	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
00:20	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
00:25	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
00:30	\$13 100.00	AGL (SA)	TORRA4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
00:35	\$13 100.00	AGL (SA)	TORRA3	Lower reg	\$13 100.00	-1.00	-\$13 100.00
00:40	\$13 100.00	AGL (SA)	TORRA3	Lower reg	\$13 100.00	-1.00	-\$13 100.00
00:45	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
00:50	\$13 100.00	AGL (SA)	TORRA3	Lower reg	\$13 100.00	-1.00	-\$13 100.00
00:55	\$13 100.00	AGL (SA)	TORRA3	Lower reg	\$13 100.00	-1.00	-\$13 100.00
01:00	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
01:05	\$13 100.00	AGL (SA)	TORRA4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
01:10	\$13 100.00	AGL (SA)	TORRA4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
01:15	\$13 100.00	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-1.00	-\$13 100.00
01:20	\$13 105.70	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA1	Raise reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA3	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA4	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRB4	Raise reg	\$13 100.00	0.33	\$4323.00
		AGL (SA)	TORRA1	Energy	\$45.99	-0.33	-\$15.18
		AGL (SA)	TORRA3	Energy	\$45.99	-0.33	-\$15.18
		AGL (SA)	TORRA4	Energy	\$45.99	-0.33	-\$15.18
		AGL Energy	BW01	Energy	\$25.46	0.53	\$13.49
		AGL Energy	BW03	Energy	\$25.46	0.53	\$13.49
		AGL Energy	BW04	Energy	\$25.46	0.53	\$13.49

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	3.33	\$0.00
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	3.33	\$0.00
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	3.33	\$0.00
01:25	\$13 100.00	AGL (SA)	TORRA1	Raise reg	\$13 100.00	0.50	\$6550.00
		AGL (SA)	TORRA3	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRA3	Raise reg	\$13 100.00	-0.50	-\$6550.00
		AGL (SA)	TORRA1	Energy	\$45.99	0.50	\$23.00
		AGL (SA)	TORRA3	Energy	\$45.99	-1.00	-\$45.99
		AGL (SA)	TORRA4	Energy	\$45.99	0.50	\$23.00
			ENOF,TORRA		\$0.00	-22.50	\$0.00
			ENOF,TORRA		\$0.00	20.00	\$0.00
			ENOF,TORRA		\$0.00	20.00	\$0.00
			ENOF,TORRA		\$0.00	-5.00	\$0.00
			ENOF,TORRA		\$0.00	-22.50	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	10.00	\$0.00
			ENOF,TORRA		\$0.00	20.00	\$0.00
			ENOF,TORRA		\$0.00	20.00	\$0.00
			ENOF,TORRA		\$0.00	-5.00	\$0.00
01:30	\$13 113.29	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA1	Raise reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA3	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA3	Raise reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA4	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRB4	Raise reg	\$13 100.00	0.67	\$8777.00
		AGL (SA)	TORRA1	Energy	\$45.99	-0.33	-\$15.18
		AGL (SA)	TORRA3	Energy	\$45.99	-0.33	-\$15.18
		AGL (SA)	TORRA4	Energy	\$45.99	-0.33	-\$15.18
		Stanwell	TARONG#1	Energy	\$24.97	0.37	\$9.24
		Stanwell	TARONG#3	Energy	\$24.97	0.37	\$9.24
		Stanwell	TARONG#4	Energy	\$24.97	0.37	\$9.24

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
		GDF Suez	LOYYB1	Energy	\$10.50	0.22	\$2.31
		GDF Suez	LOYYB2	Energy	\$10.50	0.22	\$2.31
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	3.33	\$0.00
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	3.33	\$0.00
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	-13.33	\$0.00
			ENOF,TORRA		\$0.00	3.33	\$0.00
01:35	\$13 100.00	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRA1	Energy	\$45.99	0.33	\$15.18
		AGL (SA)	TORRA3	Energy	\$45.99	0.33	\$15.18
		AGL (SA)	TORRA4	Energy	\$45.99	0.33	\$15.18
		AGL (SA)	TORRB4	Energy	\$45.99	-1.00	-\$45.99
			ENOF,TORRA		\$0.00	-18.33	\$0.00
			ENOF,TORRA		\$0.00	-18.33	\$0.00
			ENOF,TORRA		\$0.00	-18.33	\$0.00
01:40	\$13 100.00	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
01:45	\$13 100.00	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
01:50	\$13 100.00	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
01:55	\$13 109.00	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL (SA)	TORRA1	Energy	\$45.99	0.33	\$15.18
		AGL (SA)	TORRA3	Energy	\$45.99	0.33	\$15.18
		AGL (SA)	TORRA4	Energy	\$45.99	0.33	\$15.18
			ENOF,TORRA		\$0.00	-3.33	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-3.33	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-3.33	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
02:00	\$13 118.58	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$45.99	-1.00	-\$45.99
		AGL Energy	BW01	Energy	\$18.96	0.21	\$3.98
		AGL Energy	BW02	Energy	\$18.96	0.16	\$3.03
		AGL Energy	BW03	Energy	\$18.96	0.21	\$3.98

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
		AGL Energy	BW04	Energy	\$18.96	0.21	\$3.98
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$16.20	0.21	\$3.40
		GDF Suez	LOYYB2	Energy	\$16.20	0.21	\$3.40
			ENOF,LOYYB		\$0.00	12.61	\$0.00
			ENOF,LOYYB		\$0.00	12.61	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
02:05	\$13 100.00	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
02:10	\$13 100.00	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
02:15	\$13 100.00	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
02:20	\$13 100.00	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
02:25	\$13 123.22	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$45.99	-1.00	-\$45.99
		AGL Energy	BW01	Energy	\$18.96	0.20	\$3.79
		AGL Energy	BW02	Energy	\$18.96	0.16	\$3.03
		AGL Energy	BW03	Energy	\$18.96	0.20	\$3.79
		AGL Energy	BW04	Energy	\$18.96	0.20	\$3.79
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.14	\$1.47
		GDF Suez	LOYYB2	Energy	\$10.50	0.14	\$1.47
		GDF Suez	LOYYB1	Lower 60 sec	\$0.15	0.14	\$0.02
		GDF Suez	LOYYB2	Lower 60 sec	\$0.15	-0.14	-\$0.02
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
02:30	\$13 123.88	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$45.99	-1.00	-\$45.99
		Origin Energy	ER02	Energy	\$18.97	1.05	\$19.92
		GDF Suez	LOYYB1	Energy	\$10.50	0.13	\$1.37
		GDF Suez	LOYYB2	Energy	\$10.50	0.13	\$1.37
		EnergyAustralia	YWPS2	Lower 5 min	\$0.79	-1.05	-\$0.83
		Origin Energy	ER02	Lower reg	\$0.43	1.05	\$0.45

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
		EnergyAustralia	YWPS2	Lower 60 sec	\$0.17	-0.25	-\$0.04
		GDF Suez	LOYYB1	Lower 60 sec	\$0.15	0.13	\$0.02
		GDF Suez	LOYYB2	Lower 60 sec	\$0.15	0.13	\$0.02
			ENOF,ER01,2		\$0.00	41.80	\$0.00
			ENOF,ER02,2		\$0.00	41.80	\$0.00
			ENOF,ER02,2		\$0.00	41.80	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
02:35	\$13 123.94	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$45.99	-1.00	-\$45.99
		AGL Energy	BW01	Energy	\$18.96	0.20	\$3.79
		AGL Energy	BW02	Energy	\$18.96	0.16	\$3.03
		AGL Energy	BW03	Energy	\$18.96	0.20	\$3.79
		AGL Energy	BW04	Energy	\$18.96	0.20	\$3.79
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.12	\$1.26
		GDF Suez	LOYYB2	Energy	\$10.50	0.12	\$1.26
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
02:40	\$13 133.22	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW02	Energy	\$18.96	0.16	\$3.03
		AGL Energy	BW03	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW04	Energy	\$18.96	0.19	\$3.60
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.11	\$1.16
		GDF Suez	LOYYB2	Energy	\$10.50	0.11	\$1.16
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
02:45	\$13 133.51	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00



DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW02	Energy	\$18.96	0.15	\$2.84
		AGL Energy	BW03	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW04	Energy	\$18.96	0.19	\$3.60
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.10	\$1.05
		GDF Suez	LOYYB2	Energy	\$10.50	0.10	\$1.05
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
02:50	\$13 133.51	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW02	Energy	\$18.96	0.15	\$2.84
		AGL Energy	BW03	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW04	Energy	\$18.96	0.19	\$3.60
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.10	\$1.05
		GDF Suez	LOYYB2	Energy	\$10.50	0.10	\$1.05
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
02:55	\$13 133.51	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW02	Energy	\$18.96	0.15	\$2.84
		AGL Energy	BW03	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW04	Energy	\$18.96	0.19	\$3.60
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.10	\$1.05
		GDF Suez	LOYYB2	Energy	\$10.50	0.10	\$1.05

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
03:00	\$13 134.75	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.23	\$4.36
		AGL Energy	BW02	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW03	Energy	\$18.96	0.23	\$4.36
		AGL Energy	LD01	Energy	\$18.96	0.12	\$2.28
		AGL Energy	LD02	Energy	\$18.96	0.12	\$2.28
		AGL Energy	LD04	Energy	\$18.96	0.12	\$2.28
		GDF Suez	LOYYB1	Energy	\$10.50	0.06	\$0.63
		GDF Suez	LOYYB2	Energy	\$10.50	0.06	\$0.63
		GDF Suez	LOYYB1	Lower 60 sec	\$0.15	-0.06	-\$0.01
		GDF Suez	LOYYB2	Lower 60 sec	\$0.15	0.06	\$0.01
			ENOF,BW01,3		\$0.00	-23.37	\$0.00
			ENOF,BW02,3		\$0.00	-18.70	\$0.00
			ENOF,BW03,3		\$0.00	-23.37	\$0.00
			ENOF,BW04,3		\$0.00	-11.69	\$0.00
			ENOF,BW04,3		\$0.00	-11.69	\$0.00
			ENOF,BW04,3		\$0.00	-11.69	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
03:05	\$13 133.81	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW02	Energy	\$18.96	0.15	\$2.84
		AGL Energy	BW03	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW04	Energy	\$18.96	0.19	\$3.60
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.09	\$0.95
		GDF Suez	LOYYB2	Energy	\$10.50	0.09	\$0.95
		EnergyAustralia	YWPS2	Lower 60 sec	\$0.17	-0.17	-\$0.03
		GDF Suez	LOYYB1	Lower 60 sec	\$0.15	0.09	\$0.01
		GDF Suez	LOYYB2	Lower 60 sec	\$0.15	0.09	\$0.01

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
03:10	\$13 134.47	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW02	Energy	\$18.96	0.15	\$2.84
		AGL Energy	BW03	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW04	Energy	\$18.96	0.19	\$3.60
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.07	\$0.74
		GDF Suez	LOYYB2	Energy	\$10.50	0.07	\$0.74
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
03:15	\$13 134.20	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW02	Energy	\$18.96	0.15	\$2.84
		AGL Energy	BW03	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW04	Energy	\$18.96	0.19	\$3.60
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.08	\$0.84
		GDF Suez	LOYYB2	Energy	\$10.50	0.08	\$0.84
		GDF Suez	LOYYB1	Lower 60 sec	\$0.15	0.08	\$0.01
		GDF Suez	LOYYB2	Lower 60 sec	\$0.15	-0.08	-\$0.01
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
03:20	\$13 133.23	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW02	Energy	\$18.96	0.16	\$3.03
		AGL Energy	BW03	Energy	\$18.96	0.19	\$3.60

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
		AGL Energy	BW04	Energy	\$18.96	0.19	\$3.60
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.11	\$1.16
		GDF Suez	LOYYB2	Energy	\$10.50	0.11	\$1.16
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
03:25	\$13 133.51	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW02	Energy	\$18.96	0.15	\$2.84
		AGL Energy	BW03	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW04	Energy	\$18.96	0.19	\$3.60
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.10	\$1.05
		GDF Suez	LOYYB2	Energy	\$10.50	0.10	\$1.05
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
03:30	\$13 133.24	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW02	Energy	\$18.96	0.16	\$3.03
		AGL Energy	BW03	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW04	Energy	\$18.96	0.19	\$3.60
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.11	\$1.16
		GDF Suez	LOYYB2	Energy	\$10.50	0.11	\$1.16
		GDF Suez	LOYYB1	Lower 60 sec	\$0.15	-0.11	-\$0.02
		GDF Suez	LOYYB2	Lower 60 sec	\$0.15	0.11	\$0.02
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
			ENOF,TORRA		\$0.00	-40.00	\$0.00
03:35	\$13 132.96	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.20	\$3.79
		AGL Energy	BW02	Energy	\$18.96	0.16	\$3.03
		AGL Energy	BW03	Energy	\$18.96	0.20	\$3.79
		AGL Energy	BW04	Energy	\$18.96	0.20	\$3.79
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.12	\$1.26
		GDF Suez	LOYYB2	Energy	\$10.50	0.12	\$1.26
		EnergyAustralia	YWPS2	Lower 60 sec	\$0.17	-0.23	-\$0.04
		GDF Suez	LOYYB1	Lower 60 sec	\$0.15	0.12	\$0.02
		GDF Suez	LOYYB2	Lower 60 sec	\$0.15	0.12	\$0.02
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
03:40	\$13 132.67	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.20	\$3.79
		AGL Energy	BW02	Energy	\$18.96	0.16	\$3.03
		AGL Energy	BW03	Energy	\$18.96	0.20	\$3.79
		AGL Energy	BW04	Energy	\$18.96	0.20	\$3.79
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.12	\$1.26
		GDF Suez	LOYYB2	Energy	\$10.50	0.12	\$1.26
		GDF Suez	LOYYB1	Lower 60 sec	\$0.15	0.12	\$0.02
		GDF Suez	LOYYB2	Lower 60 sec	\$0.15	-0.12	-\$0.02
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
03:45	\$13 132.39	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.20	\$3.79
		AGL Energy	BW02	Energy	\$18.96	0.16	\$3.03

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
		AGL Energy	BW03	Energy	\$18.96	0.20	\$3.79
		AGL Energy	BW04	Energy	\$18.96	0.20	\$3.79
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.13	\$1.37
		GDF Suez	LOYYB2	Energy	\$10.50	0.13	\$1.37
		EnergyAustralia	YWPS2	Lower 60 sec	\$0.17	-0.27	-\$0.05
		GDF Suez	LOYYB1	Lower 60 sec	\$0.15	0.13	\$0.02
		GDF Suez	LOYYB2	Lower 60 sec	\$0.15	0.13	\$0.02
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
03:50	\$13 132.94	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.20	\$3.79
		AGL Energy	BW02	Energy	\$18.96	0.16	\$3.03
		AGL Energy	BW03	Energy	\$18.96	0.20	\$3.79
		AGL Energy	BW04	Energy	\$18.96	0.20	\$3.79
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.12	\$1.26
		GDF Suez	LOYYB2	Energy	\$10.50	0.12	\$1.26
		GDF Suez	LOYYB1	Lower 60 sec	\$0.15	0.12	\$0.02
		GDF Suez	LOYYB2	Lower 60 sec	\$0.15	-0.12	-\$0.02
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
03:55	\$13 133.79	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW02	Energy	\$18.96	0.15	\$2.84
		AGL Energy	BW03	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW04	Energy	\$18.96	0.19	\$3.60
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
		GDF Suez	LOYYB1	Energy	\$10.50	0.09	\$0.95
		GDF Suez	LOYYB2	Energy	\$10.50	0.09	\$0.95
		GDF Suez	LOYYB1	Lower 60 sec	\$0.15	0.09	\$0.01
		GDF Suez	LOYYB2	Lower 60 sec	\$0.15	-0.09	-\$0.01
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
04:00	\$13 122.66	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$45.99	-1.00	-\$45.99
		AGL Energy	BW01	Energy	\$18.96	0.20	\$3.79
		AGL Energy	BW02	Energy	\$18.96	0.16	\$3.03
		AGL Energy	BW03	Energy	\$18.96	0.20	\$3.79
		AGL Energy	BW04	Energy	\$18.96	0.20	\$3.79
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.16	\$1.68
		GDF Suez	LOYYB2	Energy	\$10.50	0.16	\$1.68
		EnergyAustralia	YWPS2	Lower 60 sec	\$0.17	-0.31	-\$0.05
		GDF Suez	LOYYB1	Lower 60 sec	\$0.15	0.16	\$0.02
		GDF Suez	LOYYB2	Lower 60 sec	\$0.15	0.16	\$0.02
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
			ENOF,TORRA		\$0.00	-15.00	\$0.00
04:05	\$13 133.22	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW02	Energy	\$18.96	0.16	\$3.03
		AGL Energy	BW03	Energy	\$18.96	0.19	\$3.60
		AGL Energy	BW04	Energy	\$18.96	0.19	\$3.60
		AGL Energy	LD01	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD02	Energy	\$18.96	0.10	\$1.90
		AGL Energy	LD04	Energy	\$18.96	0.10	\$1.90
		GDF Suez	LOYYB1	Energy	\$10.50	0.11	\$1.16
		GDF Suez	LOYYB2	Energy	\$10.50	0.11	\$1.16
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
			ENOF,TORRA		\$0.00	-40.00	\$0.00
04:10	\$13 125.71	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$25.46	0.35	\$8.91
		AGL Energy	BW03	Energy	\$25.46	0.35	\$8.91
		AGL Energy	BW04	Energy	\$25.46	0.35	\$8.91
		GDF Suez	LOYYB1	Energy	\$10.50	0.13	\$1.37
		GDF Suez	LOYYB2	Energy	\$10.50	0.13	\$1.37
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
04:15	\$13 126.32	AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRB4	Energy	\$54.99	-1.00	-\$54.99
		AGL Energy	BW01	Energy	\$25.46	0.35	\$8.91
		AGL Energy	BW03	Energy	\$25.46	0.35	\$8.91
		AGL Energy	BW04	Energy	\$25.46	0.35	\$8.91
		GDF Suez	LOYYB1	Energy	\$10.50	0.11	\$1.16
		GDF Suez	LOYYB2	Energy	\$10.50	0.11	\$1.16
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
			ENOF,TORRA		\$0.00	-40.00	\$0.00
04:20	\$26 871.02	AGL (SA)	TORRB4	Energy	\$13 800.00	-1.00	-\$13 800.00
		AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		Delta Electricity	VP5	Energy	\$25.45	0.56	\$14.25
		Delta Electricity	VP6	Energy	\$25.45	0.48	\$12.22
		GDF Suez	LOYYB1	Energy	\$10.50	0.12	\$1.26
		GDF Suez	LOYYB2	Energy	\$10.50	0.12	\$1.26
			ENOF,LADBR		\$0.00	-50.00	\$0.00
			ENOF,LADBR		\$0.00	-50.00	\$0.00
			ENOF,PPCCG		\$0.00	-250.00	\$0.00
			ENOF,QPS1,1		\$0.00	-25.00	\$0.00
			ENOF,QPS2,1		\$0.00	-25.00	\$0.00
			ENOF,QPS3,1		\$0.00	-25.00	\$0.00
			ENOF,QPS4,1		\$0.00	-25.00	\$0.00
			ENOF,QPS5,1		\$0.00	-128.00	\$0.00
			ENOF,TORRB		\$0.00	-10.00	\$0.00



DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
			ENOF,TORRB		\$0.00	-10.00	\$0.00
			ENOF,TORRB		\$0.00	-10.00	\$0.00
04:25	\$26 870.84	AGL (SA)	TORRB4	Energy	\$13 800.00	-1.00	-\$13 800.00
		AGL (SA)	TORRB4	Lower reg	\$13 100.00	-1.00	-\$13 100.00
		AGL Energy	BW01	Energy	\$25.46	0.35	\$8.91
		AGL Energy	BW03	Energy	\$25.46	0.35	\$8.91
		AGL Energy	BW04	Energy	\$25.46	0.35	\$8.91
		GDF Suez	LOYYB1	Energy	\$10.50	0.12	\$1.26
		GDF Suez	LOYYB2	Energy	\$10.50	0.12	\$1.26
			ENOF,LADBR		\$0.00	-50.00	\$0.00
			ENOF,LADBR		\$0.00	-50.00	\$0.00
			ENOF,PPCCG		\$0.00	-250.00	\$0.00
			ENOF,QPS1,1		\$0.00	-25.00	\$0.00
			ENOF,QPS2,1		\$0.00	-25.00	\$0.00
			ENOF,QPS3,1		\$0.00	-25.00	\$0.00
			ENOF,QPS4,1		\$0.00	-25.00	\$0.00
			ENOF,QPS5,1		\$0.00	-128.00	\$0.00
			ENOF,TORRB		\$0.00	-10.00	\$0.00
			ENOF,TORRB		\$0.00	-10.00	\$0.00
			ENOF,TORRB		\$0.00	-10.00	\$0.00
04:30	\$13 117.59	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA1	Raise reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA3	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA4	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRB4	Raise reg	\$13 100.00	0.33	\$4323.00
		AGL (SA)	TORRA1	Energy	\$45.99	-0.33	-\$15.18
		AGL (SA)	TORRA3	Energy	\$45.99	-0.33	-\$15.18
		AGL (SA)	TORRA4	Energy	\$45.99	-0.33	-\$15.18
		AGL Energy	LD01	Energy	\$25.47	0.34	\$8.66
		AGL Energy	LD02	Energy	\$25.47	0.34	\$8.66
		AGL Energy	LD04	Energy	\$25.47	0.34	\$8.66
		GDF Suez	LOYYB1	Energy	\$10.50	0.10	\$1.05
		GDF Suez	LOYYB2	Energy	\$10.50	0.10	\$1.05
			ENOF,TORRA		\$0.00	-3.33	\$0.00
			ENOF,TORRA		\$0.00	3.33	\$0.00
			ENOF,TORRA		\$0.00	-3.33	\$0.00
			ENOF,TORRA		\$0.00	-3.33	\$0.00
			ENOF,TORRA		\$0.00	3.33	\$0.00

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
			ENOF,TORRA		\$0.00	3.33	\$0.00
04:35	\$13 117.12	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA3	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA4	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA1	Energy	\$45.99	-0.33	-\$15.18
		AGL (SA)	TORRA3	Energy	\$45.99	-0.33	-\$15.18
		AGL (SA)	TORRA4	Energy	\$45.99	-0.33	-\$15.18
		AGL Energy	LD01	Energy	\$25.47	0.35	\$8.91
		AGL Energy	LD02	Energy	\$25.47	0.35	\$8.91
		AGL Energy	LD04	Energy	\$25.47	0.35	\$8.91
		GDF Suez	LOYYB1	Energy	\$10.50	0.11	\$1.16
		GDF Suez	LOYYB2	Energy	\$10.50	0.11	\$1.16
			ENOF,TORRA		\$0.00	-3.33	\$0.00
			ENOF,TORRA		\$0.00	3.33	\$0.00
			ENOF,TORRA		\$0.00	-3.33	\$0.00
			ENOF,TORRA		\$0.00	-3.33	\$0.00
			ENOF,TORRA		\$0.00	3.33	\$0.00
			ENOF,TORRA		\$0.00	3.33	\$0.00
			ENOF,TORRA		\$0.00	3.33	\$0.00
04:35	\$13 117.12	AGL (SA)	TORRA1	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA3	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA4	Lower reg	\$13 100.00	-0.33	-\$4323.00
		AGL (SA)	TORRA1	Energy	\$45.99	-0.33	-\$15.18
		AGL (SA)	TORRA3	Energy	\$45.99	-0.33	-\$15.18
		AGL (SA)	TORRA4	Energy	\$45.99	-0.33	-\$15.18
		AGL Energy	LD01	Energy	\$25.47	0.35	\$8.91
		AGL Energy	LD02	Energy	\$25.47	0.35	\$8.91
		AGL Energy	LD04	Energy	\$25.47	0.35	\$8.91
		GDF Suez	LOYYB1	Energy	\$10.50	0.11	\$1.16
		GDF Suez	LOYYB2	Energy	\$10.50	0.11	\$1.16
			ENOF,TORRA		\$0.00	-3.33	\$0.00
			ENOF,TORRA		\$0.00	3.33	\$0.00
			ENOF,TORRA		\$0.00	-3.33	\$0.00
			ENOF,TORRA		\$0.00	-3.33	\$0.00
			ENOF,TORRA		\$0.00	3.33	\$0.00
			ENOF,TORRA		\$0.00	3.33	\$0.00

## Raise regulation 11 and 12 October

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
20:25	\$13 100.00	AGL (SA)	TORRA1	Raise reg	\$13 100.00	-1.00	-\$13 100.00
20:30	\$13 100.00	AGL (SA)	TORRA1	Raise reg	\$13 100.00	-1.00	-\$13 100.00
20:35	\$13 100.00	AGL (SA)	TORRA3	Raise reg	\$13 100.00	-1.00	-\$13 100.00
20:40	\$13 100.00	AGL (SA)	TORRA3	Raise reg	\$13 100.00	-1.00	-\$13 100.00
20:45	\$13 100.00	AGL (SA)	TORRA1	Raise reg	\$13 100.00	-1.00	-\$13 100.00
20:50	\$13 100.00	AGL (SA)	TORRA4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
20:55	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
21:00	\$13 100.00	AGL (SA)	TORRA3	Raise reg	\$13 100.00	-1.00	-\$13 100.00
21:05	\$13 100.00	AGL (SA)	TORRA4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
21:10	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
21:15	\$13 100.00	AGL (SA)	TORRA3	Raise reg	\$13 100.00	-1.00	-\$13 100.00
21:20	\$13 100.00	AGL (SA)	TORRA4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
21:25	\$13 100.00	AGL (SA)	TORRA1	Raise reg	\$13 100.00	-1.00	-\$13 100.00
21:30	\$13 100.00	AGL (SA)	TORRA1	Raise reg	\$13 100.00	-1.00	-\$13 100.00
21:35	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
21:40	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
21:45	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
21:50	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
21:55	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
22:00	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
22:05	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
22:10	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
22:15	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
22:20	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
22:25	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
22:30	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
22:35	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
22:40	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
22:45	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
22:50	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
22:55	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
23:00	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
23:05	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
23:10	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
23:15	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
23:20	\$13 100.00	AGL (SA)	TORRA3	Raise reg	\$13 100.00	-1.00	-\$13 100.00
23:25	\$13 100.00	AGL (SA)	TORRA3	Raise reg	\$13 100.00	-1.00	-\$13 100.00
23:30	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
23:35	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
23:40	\$13 100.00	AGL (SA)	TORRA4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
23:45	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
23:50	\$13 100.00	AGL (SA)	TORRA1	Raise reg	\$13 100.00	-1.00	-\$13 100.00
23:55	\$13 100.00	AGL (SA)	TORRA1	Raise reg	\$13 100.00	-1.00	-\$13 100.00
00:00	\$13 100.00	AGL (SA)	TORRA4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
00:05	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
00:10	\$13 100.00	AGL (SA)	TORRA3	Raise reg	\$13 100.00	-1.00	-\$13 100.00
00:15	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
00:20	\$13 100.00	AGL (SA)	TORRA1	Raise reg	\$13 100.00	-1.00	-\$13 100.00
00:25	\$13 100.00	AGL (SA)	TORRA1	Raise reg	\$13 100.00	-1.00	-\$13 100.00
00:30	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
00:35	\$13 100.00	AGL (SA)	TORRA1	Raise reg	\$13 100.00	-1.00	-\$13 100.00
00:40	\$13 100.00	AGL (SA)	TORRA4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
00:45	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
00:50	\$13 100.00	AGL (SA)	TORRA1	Raise reg	\$13 100.00	-1.00	-\$13 100.00
00:55	\$13 100.00	AGL (SA)	TORRA4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
01:00	\$13 100.00	AGL (SA)	TORRA4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
01:05	\$13 100.00	AGL (SA)	TORRA1	Raise reg	\$13 100.00	-1.00	-\$13 100.00
01:10	\$13 100.00	AGL (SA)	TORRA4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
01:15	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
01:20	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
01:25	\$13 100.00	AGL (SA)	TORRA3	Raise reg	\$13 100.00	-1.00	-\$13 100.00
01:30	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
01:35	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
01:40	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
01:45	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
		AGL (SA)	TORRA1	Energy	\$45.99	-0.33	-\$15.18
		AGL (SA)	TORRA3	Energy	\$45.99	-0.33	-\$15.18
		AGL (SA)	TORRA4	Energy	\$45.99	-0.33	-\$15.18
		AGL (SA)	TORRB4	Energy	\$45.99	1.00	\$45.99
			ENOF,TORRA		\$0.00	-18.33	\$0.00
			ENOF,TORRA		\$0.00	-18.33	\$0.00
			ENOF,TORRA		\$0.00	-18.33	\$0.00
01:50	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
01:55	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
02:00	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
02:05	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
02:10	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
02:15	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
02:20	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
02:25	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
02:30	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
02:35	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
02:40	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
02:45	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
02:50	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
02:55	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
03:00	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
03:05	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
03:10	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
03:15	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
03:20	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
03:25	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
03:30	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
03:35	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
03:40	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
03:45	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
03:50	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
03:55	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
04:00	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
04:05	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
04:10	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
04:15	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
04:20	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
04:25	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
04:30	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00
04:35	\$13 100.00	AGL (SA)	TORRB4	Raise reg	\$13 100.00	-1.00	-\$13 100.00

### Lower regulation 25 October

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
13:10	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
13:15	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
13:20	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
13:25	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
13:30	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
13:35	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
13:40	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
13:45	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
13:50	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
13:55	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
14:00	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
14:05	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
14:10	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
14:15	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
14:20	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
14:25	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
14:30	\$12 442.33	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
			ENOF,NPS1,2		\$0.00	-40.00	\$0.00
		Alinta Power	NPS2	Energy	-\$0.95	-1.00	\$0.95
			SNOWTWN1	Energy	-\$43.49	1.00	-\$43.49
14:35	\$12 433.70	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
			ENOF,NPS1,2		\$0.00	-40.00	\$0.00
			ENOF,SNOW		\$0.00	144.00	\$0.00
		Alinta Power	NPS2	Energy	-\$0.95	-1.00	\$0.95
			SNOWSTH1	Energy	-\$34.86	1.00	-\$34.86
14:40	\$13 800.00	AGL (SA)	TORRB4	Lower reg	\$13 800.00	-1.00	-\$13 800.00
14:45	\$12 442.33	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
			ENOF,NPS1,2		\$0.00	-40.00	\$0.00
		Alinta Power	NPS2	Energy	-\$0.95	-1.00	\$0.95
			SNOWTWN1	Energy	-\$43.49	1.00	-\$43.49
14:50	\$12 433.70	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
			ENOF,NPS1,2		\$0.00	-40.00	\$0.00
			ENOF,SNOW		\$0.00	144.00	\$0.00
		Alinta Power	NPS2	Energy	-\$0.95	-1.00	\$0.95
			SNOWSTH1	Energy	-\$34.86	1.00	-\$34.86
14:55	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
15:00	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
15:05	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
15:10	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
15:15	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
15:20	\$12442.33	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
			ENOF,NPS1,2		\$0.00	40.00	\$0.00

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
		Alinta Power	NPS2	Energy	-\$0.95	-1.00	\$0.95
			SNOWTWN1	Energy	-\$43.49	1.00	-\$43.49
15:25	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
15:30	\$12 442.33	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
			ENOF,NPS1,2		\$0.00	40.00	\$0.00
		Alinta Power	NPS2	Energy	-\$0.95	-1.00	\$0.95
			SNOWTWN1	Energy	-\$43.49	1.00	-\$43.49
15:35	\$12 433.70	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
			ENOF,NPS1,2		\$0.00	40.00	\$0.00
			ENOF,SNOW		\$0.00	-144.00	\$0.00
		Alinta Power	NPS2	Energy	-\$0.95	-1.00	\$0.95
			SNOWSTH1	Energy	-\$34.86	1.00	-\$34.86
15:40	\$12 399.79	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
15:45	\$12 433.70	Alinta Power	NPS2	Lower reg	\$12 399.79	-1.00	-\$12 399.79
			ENOF,NPS1,2		\$0.00	40.00	\$0.00
			ENOF,SNOW		\$0.00	-144.00	\$0.00
		Alinta Power	NPS2	Energy	-\$0.95	-1.00	\$0.95
			SNOWSTH1	Energy	-\$34.86	1.00	-\$34.86
15:50	\$13 800.00	AGL (SA)	TORRB4	Lower reg	\$13 800.00	-1.00	-\$13 800.00
15:55	\$13 800.00	AGL (SA)	TORRB4	Lower reg	\$13 800.00	-1.00	-\$13 800.00
16:00	\$13 800.00	AGL (SA)	TORRB2	Lower reg	\$13 800.00	-1.00	-\$13 800.00
16:05	\$13 800.00	AGL (SA)	TORRB4	Lower reg	\$13 800.00	-1.00	-\$13 800.00
16:10	\$13 800.00	AGL (SA)	TORRB4	Lower reg	\$13 800.00	-1.00	-\$13 800.00
16:15	\$13 800.00	AGL (SA)	TORRB4	Lower reg	\$13 800.00	-1.00	-\$13 800.00

## Raise regulation 25 October

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
13:10	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
13:15	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
13:20	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
13:25	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
13:30	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
13:35	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
13:40	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
13:45	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
13:50	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
13:55	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79

DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
14:00	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
14:05	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
14:10	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
14:15	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
14:20	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
14:25	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
14:30	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
14:35	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
14:40	\$13 800.00	AGL (SA)	TORRB2	Raise reg	\$13 800.00	-1.00	-\$13 800.00
14:45	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
14:50	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
14:55	\$12 427.43	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
		Origin Energy	ER01	Energy	\$33.98	-0.30	-\$10.19
		Origin Energy	ER02	Energy	\$33.98	-0.30	-\$10.19
		Origin Energy	ER04	Energy	\$33.98	-0.30	-\$10.19
		AGL Energy	LYA3	Energy	\$16.20	0.12	\$1.94
		AGL Energy	LYA4	Energy	\$16.20	0.12	\$1.94
			ENOF,ER01,4		\$0.00	15.06	\$0.00
			ENOF,ER02,4		\$0.00	15.06	\$0.00
			ENOF,ER03,4		\$0.00	15.06	\$0.00
			ENOF,LYA1,4,		\$0.00	6.21	\$0.00
			ENOF,LYA1,4,		\$0.00	6.21	\$0.00
			ENOF,LYA2,4,		\$0.00	7.45	\$0.00
			ENOF,LYA2,4,		\$0.00	7.45	\$0.00
			ENOF,NPS1,2		\$0.00	40.00	\$0.00
		Alinta Power	NPS2	Energy	-\$0.95	1.00	-\$0.95
15:00	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
15:05	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
15:10	\$12 427.09	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
		Origin Energy	ER01	Energy	\$33.98	-0.17	-\$5.78
		Origin Energy	ER02	Energy	\$33.98	-0.17	-\$5.78
		Origin Energy	ER03	Energy	\$33.98	-0.17	-\$5.78
		Origin Energy	ER04	Energy	\$33.98	-0.17	-\$5.78
		AGL Energy	LYA1	Energy	\$16.20	-0.07	-\$1.13
		AGL Energy	LYA3	Energy	\$16.20	-0.07	-\$1.13
		AGL Energy	LYA4	Energy	\$16.20	-0.07	-\$1.13
		AGL (SA)	TORRB4	Lower 6 sec	\$0.04	1.21	\$0.05
		GDF Suez	LOYYB1	Lower 6 sec	\$0.02	-1.21	-\$0.02



DI	Dispatch Price (\$/MW)	Participant	Unit	Service	Offer price (\$/MW)	Marginal change	Contribution
			ENOF,LYA1,4,		\$0.00	-3.91	\$0.00
			ENOF,LYA2,4,		\$0.00	-3.91	\$0.00
			ENOF,LYA2,4,		\$0.00	-3.91	\$0.00
			ENOF,NPS1,2		\$0.00	40.00	\$0.00
		Alinta Power	NPS2	Energy	-\$0.95	1.00	-\$0.95
15:15	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
15:20	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
15:25	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
15:30	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
15:35	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
15:40	\$12 442.33	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
			ENOF,NPS1,2		\$0.00	40.00	\$0.00
		Alinta Power	NPS2	Energy	-\$0.95	-1.00	\$0.95
			SNOWTWN1	Energy	-\$43.49	1.00	-\$43.49
15:45	\$12 399.79	Alinta Power	NPS2	Raise reg	\$12 399.79	-1.00	-\$12 399.79
15:50	\$13 800.00	AGL (SA)	TORRB4	Raise reg	\$13 800.00	-1.00	-\$13 800.00
15:55	\$13 800.00	AGL (SA)	TORRB2	Raise reg	\$13 800.00	-1.00	-\$13 800.00
16:00	\$13 800.00	AGL (SA)	TORRB4	Raise reg	\$13 800.00	-1.00	-\$13 800.00
16:05	\$13 800.00	AGL (SA)	TORRB4	Raise reg	\$13 800.00	-1.00	-\$13 800.00
16:10	\$13 800.00	AGL (SA)	TORRB4	Raise reg	\$13 800.00	-1.00	-\$13 800.00
16:15	\$13 800.00	AGL (SA)	TORRB4	Raise reg	\$13 800.00	-1.00	-\$13 800.00