

17 – 23 June 2012

## Weekly summary

Average daily prices were above \$5/GJ in Victoria, Sydney and Adelaide. Sydney's average daily price of \$8.28/GJ was \$2.60 higher than the previous highest average daily price of \$5.68 for the week ending 16 June 2012.<sup>1</sup>

## Long term statistics and explanatory material

A range of longer term data covering gas prices, flows and demand is available on the AER's website at <http://www.aer.gov.au/node/456>. Also available on the AER's website at <http://www.aer.gov.au/node/451> is a document explaining how to interpret the data provided in each weekly gas market report.

## Market overview

Figure 1 sets out the average daily prices (\$/GJ) in the Victorian Declared Wholesale Market (**VGM or Victorian gas market**) and for the Sydney (**SYD**), Adelaide (**ADL**) and Brisbane (**BRI**) Short Term Trading Market hubs (**STTM**) for the current week compared to historical averages.

**Figure 1: Average daily prices – all markets (\$/GJ)<sup>2</sup>**

	Victoria	Sydney	Adelaide	Brisbane
17 Jun - 23 Jun 2012	5.68	8.28	5.21	4.34
% change from previous week	14	46	0	-11
11-12 financial YTD	3.23	3.37	3.76	3.45
% change from previous financial YTD	33	18	19	-

Figure 2 compares average weekly gas prices, ancillary market payments and scheduled injections against historical averages for the Vic gas market.

**Figure 2: Victorian gas market**

	Price (\$/GJ)	Ancillary payments (\$000)	BOD forecast demand quantity (TJ)
17 Jun - 23 Jun 2012	5.68	-	977
% change from previous week	14	-	7
11-12 financial YTD	3.23	-	574
% change from previous financial YTD	33	-	-6

\*Note: From February 18, only positive ancillary payments, reflecting system constraints will be shown here

More detailed analysis on the Victorian declared wholesale market is provided in Section 1.

<sup>1</sup> The AER has not included in this comparison, the daily Sydney price on 1 November 2010, when incorrect data supplied by APA caused the ex ante price to reach \$150/GJ.

<sup>2</sup> The weighted average daily imbalance price applies for Victoria.

Figures 3 to 5 show average ex ante and ex post gas prices, MOS balancing gas service payments together with the related daily demand quantities against historical averages for the Sydney, Adelaide and Brisbane wholesale gas markets, respectively.

**Figure 3: Sydney STTM**

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
17 Jun - 23 Jun 2012	8.28	8.05	65.25	314	313
% change from previous week	46	46	-13	6	7
11-12 financial YTD	3.37	3.14	40.27	235	231
% change from previous financial YTD	18	-41	17	-5	-8

**Figure 4: Adelaide STTM**

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
17 Jun - 23 Jun 2012	5.21	5.32	12.12	77	83
% change from previous week	0	2	-22	2	10
11-12 financial YTD	3.76	3.73	10.22	68	67
% change from previous financial YTD	19	14	-44	8	4

**Figure 5: Brisbane STTM**

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
17 Jun - 23 Jun 2012	4.34	4.12	3.81	160	156
% change from previous week	-11	-4	29	-2	-3
From market start (1 Dec)	3.45	3.15	9.50	155	152

More detailed analysis of the STTM hubs is found in sections 2 to 4.

Section 5 provides analysis on production and pipeline flows on the National Gas Bulletin Board, as well as gas-powered generation volumes in each state.

### Significant Market Events or Issues this week

From Wednesday 20 June to Saturday 23 June, daily prices and/or intra-day schedule prices exceeded \$10/GJ in Victoria and Sydney. The AER will publish a significant event report for the month of June. This report will include further analysis of the 20-23 June gas days, and other significant gas days as part of an analysis of trading activity over the month.

#### *Victoria*

On Wednesday 20 June, despite the 2 pm schedule price reaching \$14.84/GJ (set by an LNG bid), the weighted average daily price was \$6.94/GJ (see figure 1.1).

Forecast demand at the beginning of the day (6 am) was around 1000 TJ. However, due to colder weather than originally predicted, forecast demand increased to around 1050 TJ for later market schedules (see figure 1.2). At the 2 pm schedule, 28 TJ of (higher priced) Liquefied Natural Gas

(LNG) was scheduled into the market to meet system demand over the remainder of the day. The need to schedule LNG to meet the increase in demand was because of:

- the continuing full outage for maintenance at Bass Gas (with a plant capacity of 60 TJ)<sup>3</sup>
- Culcairn exporting gas north towards Sydney
- Hourly gas deliveries to Melbourne from the west being limited by the maximum capacity of the South West Pipeline (SWP)

On Thursday 21 June, despite the 6 pm price reaching \$10/GJ, the weighted average price was \$4.19/GJ. The price for the 10 pm schedule dropped to 17 cents/GJ (see figure 1.1).

Friday 22 June saw the highest forecast beginning of day (6 am) demand for the week (see figure 1.2). The 6 am price was \$10.23/GJ and the daily weighted price \$9.95/GJ (see figure 1.1). As for Wednesday, maximum hourly flows on the SWP were capacity constrained.

### *Sydney*

On Thursday 21 June, a 7.7 TJ increase MOS requirement on the Eastern Gas Pipeline (EGP), caused over \$200 000 of service costs on the day (see figure 2.4). Increase MOS quantities in the current MOS stack are priced below \$10/GJ for the first 3.9 TJ of offers and above \$45/GJ for all other offers. As a result increase MOS requirements above 3.9TJ on the EGP will result in high MOS payments.

Prices were high in Sydney on Friday 22 June and Saturday 23 June, despite scheduled and actual demand being noticeably lower than on other days during the week (see figure 2.1). On Friday the ex ante price was \$13.98/GJ and the ex post price was \$18.30/GJ and on Saturday the ex ante price was \$17.30/GJ and ex post price of \$9.97/GJ. This intra-week price increase appears due to a large amount of gas volumes offered in between \$6/GJ and \$8/GJ earlier in the week being moved into higher price bands (above \$10/GJ) (see figure 2.2(a)). Notably, the high ex ante prices and ex post prices for Friday were not reflected in the provisional D-3, D-2 schedule prices, which were around \$7/GJ.

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<sup>3</sup> BassGas is currently expected to resume gas production in late August.

# Detailed Market Analysis

17 – 23 June 2012

## 1 Victorian Declared Wholesale Market

In the Victorian Gas Market gas is priced five times daily at 6 am, 10 am, 2 pm, 6 pm and 10 pm. However, the volume weighted gas price on a gas day tends towards the 6 am price which is the schedule at which most gas is traded.

The main drivers of price are demand forecasts together with bids to inject or withdraw gas from the market. For each of the five gas day pricing schedules, figures 1.1 to 1.4 below show the daily prices, demand forecasts<sup>4</sup>, and injection/withdrawal bids<sup>5</sup>. Figure 1.5 provides information on which system injection points were used to deliver gas, in turn indicating the location and relative quantity of gas bids cleared through the market. Gas is priced five times daily (at 6 am, 10 am, 2 pm, 6 pm and 10 pm) when the first schedule and four reschedules apply, while the last 8-hour schedule has been separated into two 4-hour blocks for a consistent comparison with other scheduled injection volumes. The main drivers of price are demand forecasts and gas bids.<sup>6</sup>

Figure 1.1: Prices by schedule

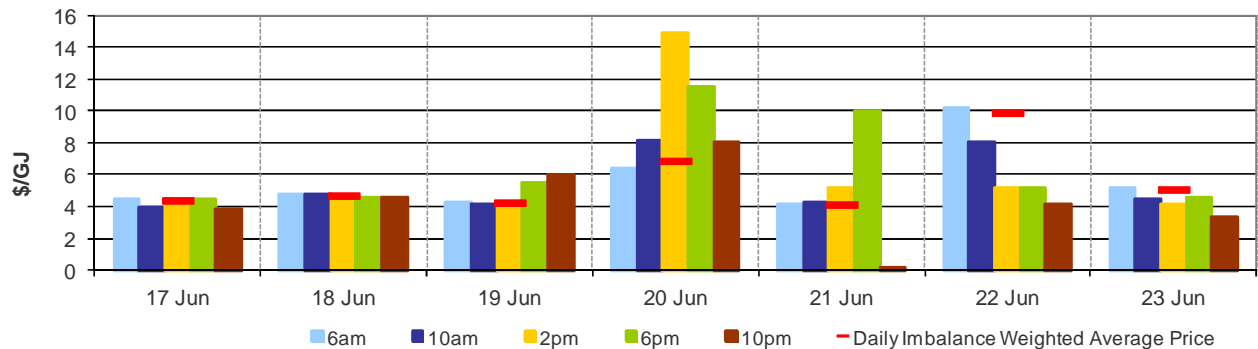
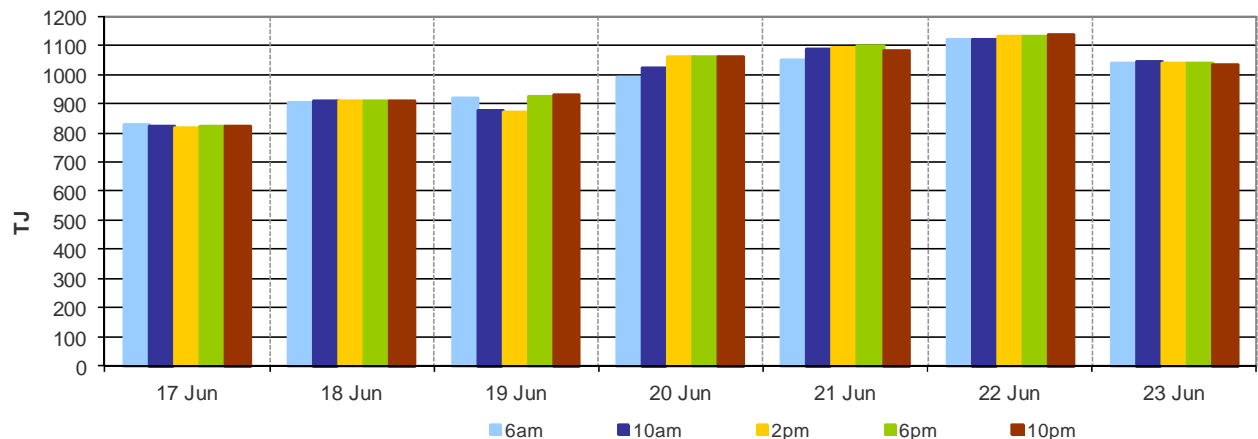


Figure 1.2: Demand forecasts

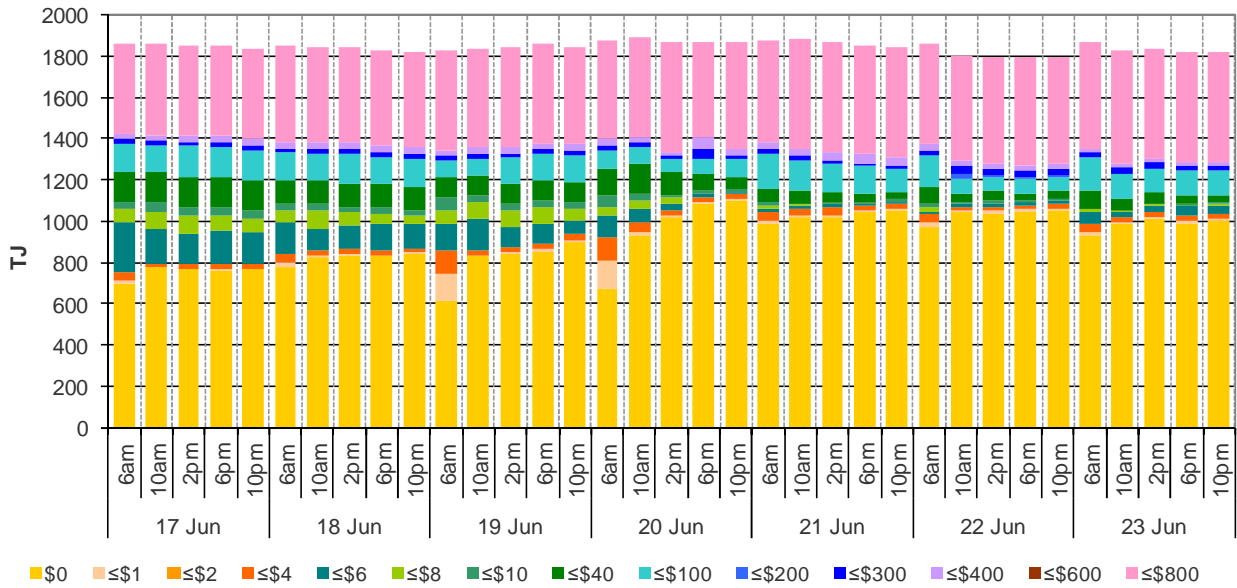


<sup>4</sup> These are Market Participants' aggregate demand forecasts adjusted for any override as applied by AEMO from time to time. The main driver of the amount of gas scheduled on a gas day are these forecasts which are forecasts that cannot respond to price or in other words is gas delivered regardless of the price.

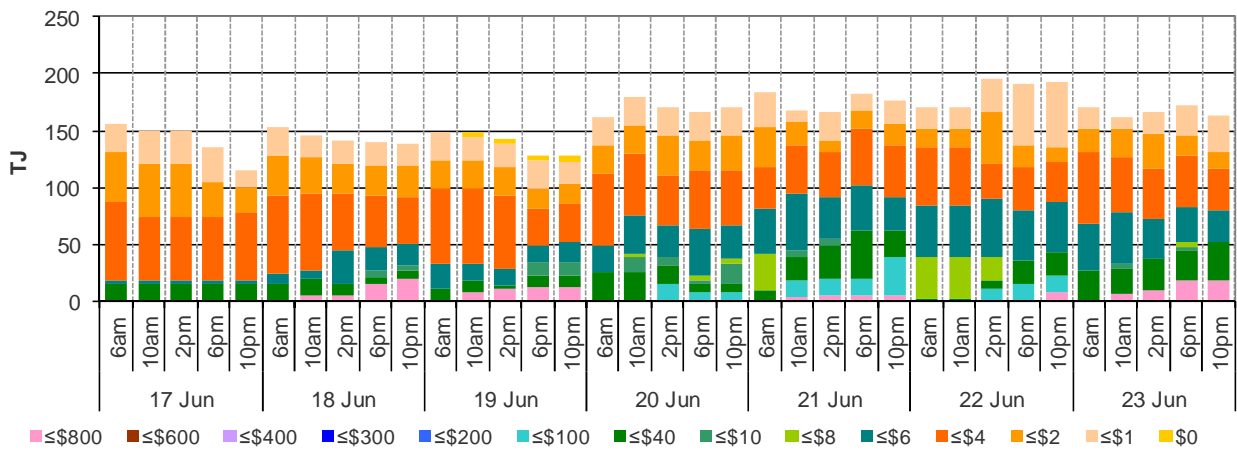
<sup>5</sup> The price might also be affected by transmission or production (contractual) constraints limiting how much gas can be delivered from a locale or System Injection Point (SIP) from time to time.

<sup>6</sup> The price might also be affected by transmission or production (contractual) constraints limiting how much gas can be delivered from a locale or SIP from time to time.

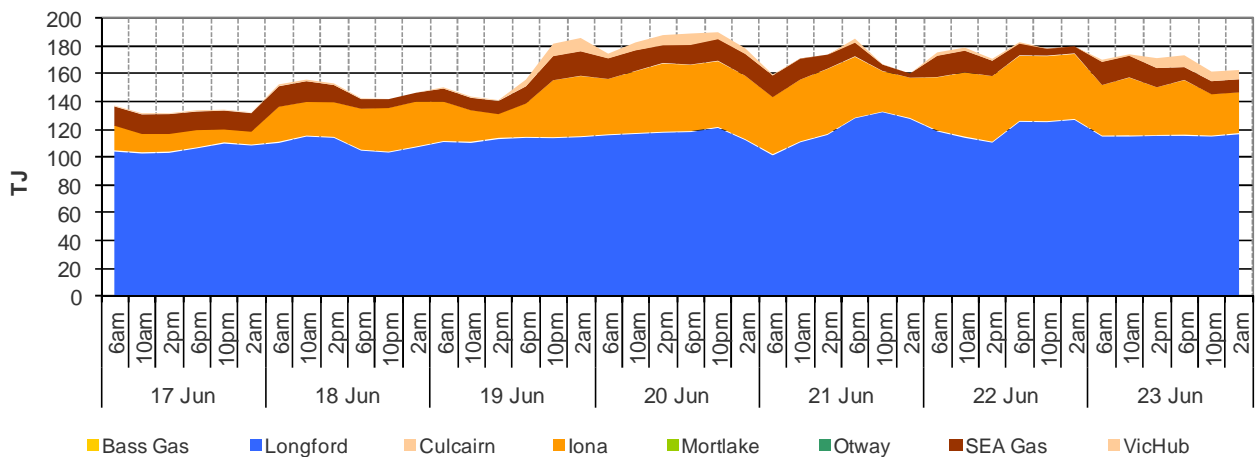
**Figure 1.3: Injection bids by price bands**



**Figure 1.4: Withdrawal bids by price bands**



**Figure 1.5: Metered Injections by System Injection Point**



## 2 Sydney STTM

In each STTM hub, gas is priced once before each gas day (the ex ante price) and once after the gas day (the ex post price). The main drivers of ex ante and ex post prices are demand forecasts, together with participant offers and offers to inject or bids to withdraw gas traded through the hub.<sup>7</sup> Prices before and after the gas day may also vary depending on how much gas is scheduled before the gas day (setting the ex ante price) and how much gas is consumed in the hub on a gas day (setting the ex post price).

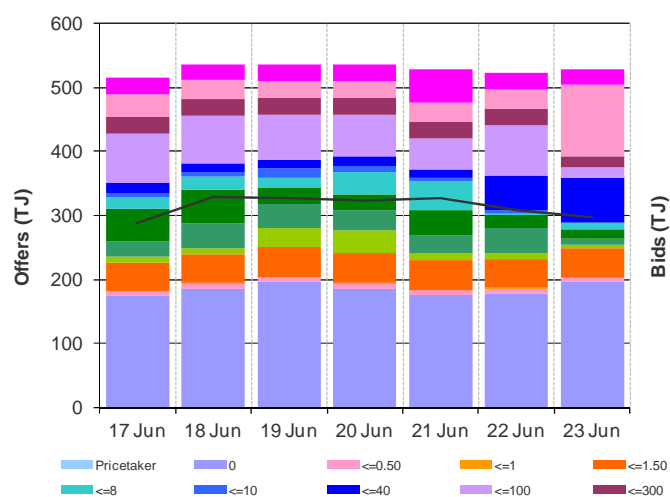
Market Operator Service balancing gas (MOS) payments arise because the amount of gas nominated on pipelines for delivery on a gas day will either exceed or fall short, by some amount, of the amount of gas consumed in the hub. In such circumstances, MOS payments are made to participants for providing a service to park gas on a pipeline or to loan gas from a pipeline to the hub.<sup>8</sup>

Figures 2.1 and 2.2 show daily prices, demand, offers and bids. Figures 2.3 and 2.4 show gas scheduled and allocated on pipelines, indicating the location and relative quantity of gas offers across pipelines and also the amount of MOS allocated for each pipeline.

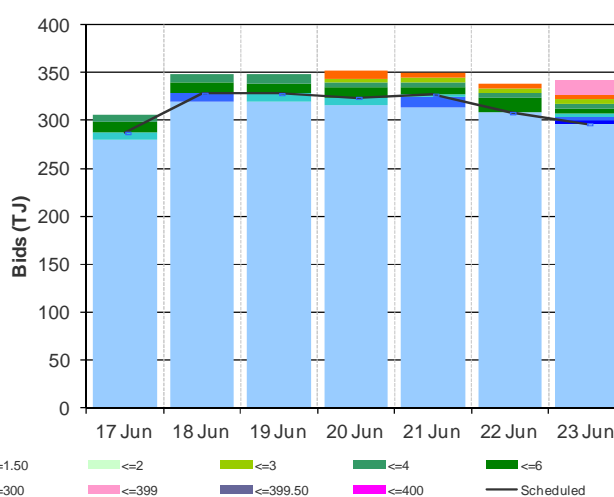
**Figure 2.1: SYD STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	5.27	5.28	4.52	4.52	7.10	13.98	17.30
Ex ante quantity (TJ)	287	328	328	324	327	308	296
Ex post price (\$/GJ)	5.20	5.27	4.52	6.01	7.10	18.30	9.97
Ex Post quantity (TJ)	277	318	328	336	338	310	286

**Figure 2.2 (a) Daily hub offers in price bands (\$/GJ)**



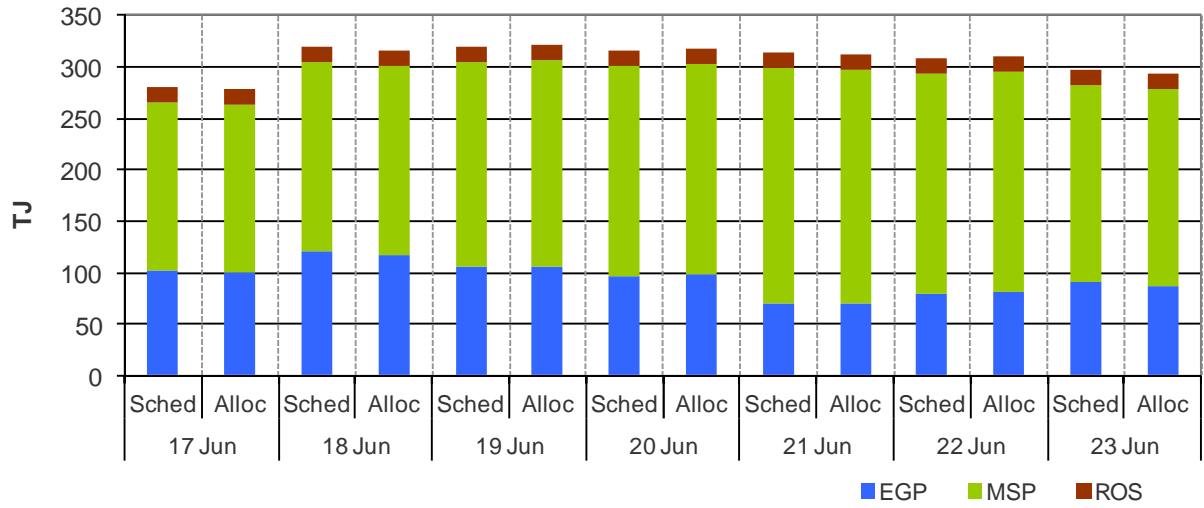
**Figure 2.2(b): Daily hub bids in price bands (\$/GJ)**



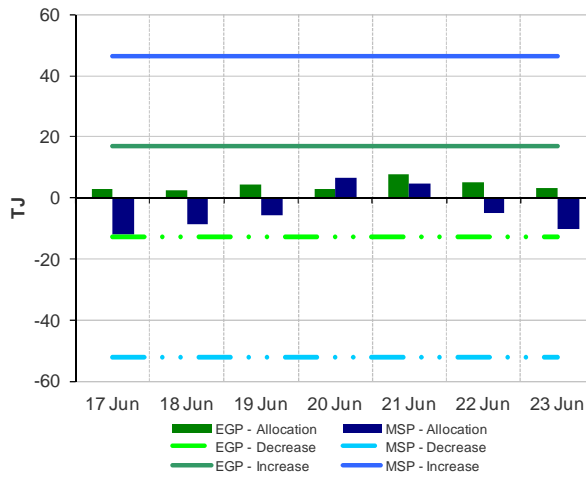
<sup>7</sup> The main driver of the amount of gas scheduled on a gas day is the 'price-taker' bid, which is forecast hub demand that cannot respond to price and which must be delivered, regardless of the price.

<sup>8</sup> MOS payments involve a payment for a MOS decrease service when the quantity delivered exceeds actual final gas nominations and a MOS increase applies otherwise. As well as a MOS service payment, as shown in figure 2.4 MOS providers are paid for or pay for the quantity of MOS sold into the market or bought from the market.

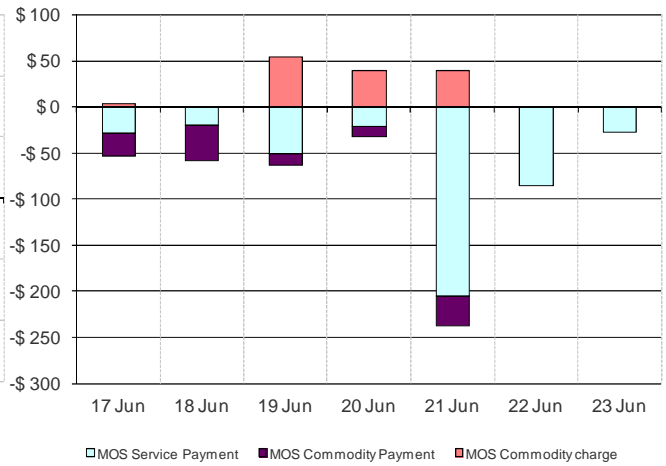
**Figure 2.3: SYD STTM ex ante scheduled and allocated gas volumes by STTM facility**



**Figure 2.4 (a) SYD STTM MOS allocations (TJ)**



**Figure 2.4 (b): Service payments and commodity payments/charges (\$000)**



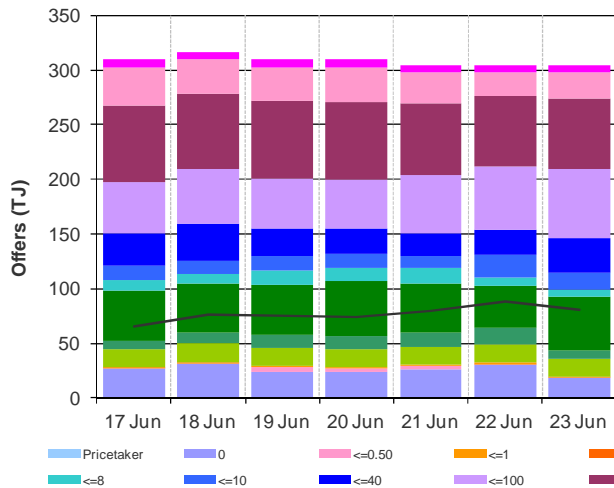
### 3 Adelaide STTM

The Adelaide STTM hub functions in the same way as the Sydney STTM hub. The same data that was presented for the Sydney hub is presented for the Adelaide hub in the figures below.

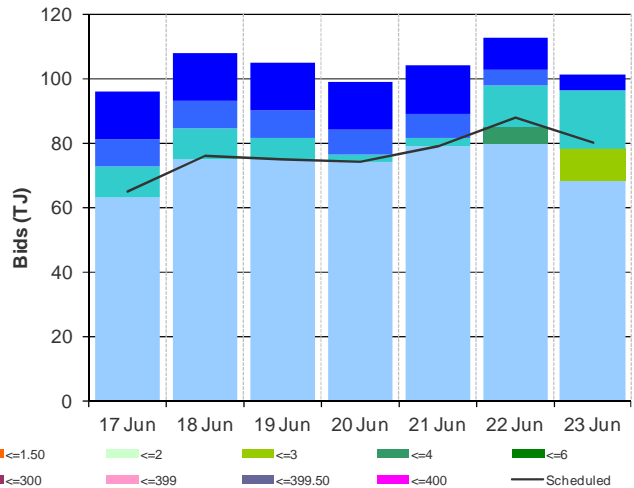
**Figure 3.1: ADL STTM Daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	5.13	5.12	5.15	5.12	5.11	5.34	5.46
Ex ante quantity (TJ)	65	76	75	74	79	88	80
Ex post price (\$/GJ)	5.14	5.14	5.34	5.34	5.34	5.45	5.46
Ex Post quantity (TJ)	68	78	78	81	88	100	91

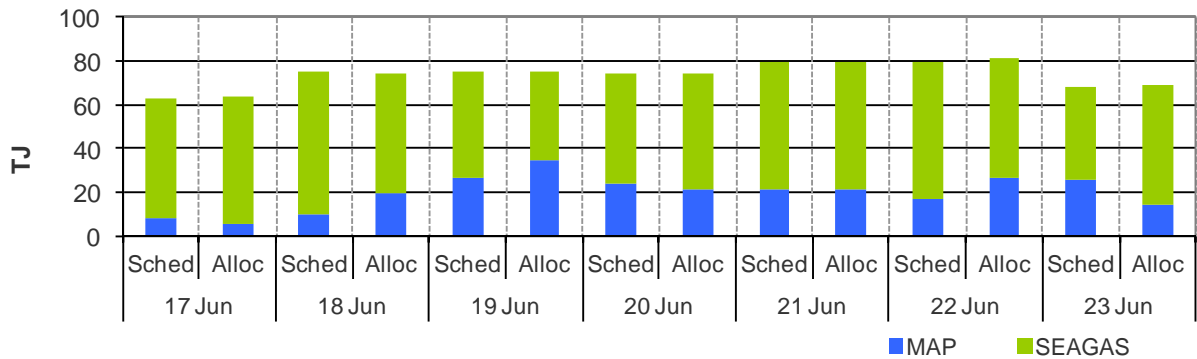
**Figure 3.2 (a) Daily hub offers in price bands (\$/GJ)**



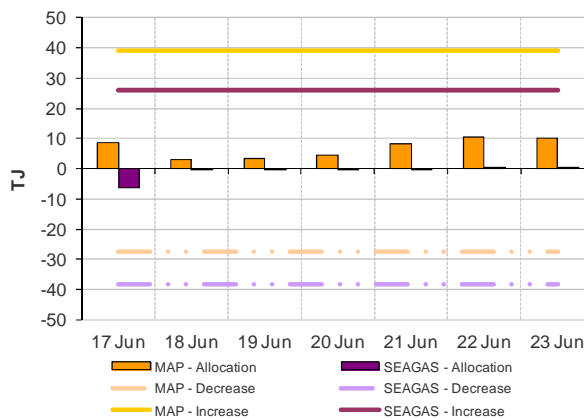
**Figure 3.2(b): Daily hub bids in price bands (\$/GJ)**



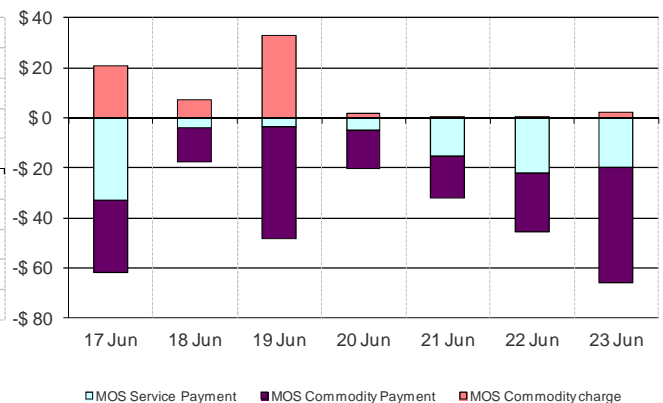
**Figure 3.3: ADL STTM ex ante scheduled and allocated gas volumes by STTM facility**



**Figure 3.4 (a) ADL STTM MOS allocations (TJ)**



**Figure 3.4 (b): Service payments and commodity payments/charges (\$000)**





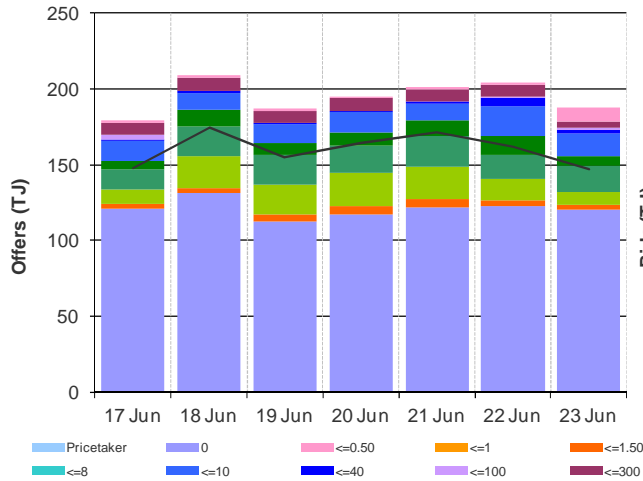
## 4 Brisbane STTM

The Brisbane STTM hub functions in the same way as the Sydney STTM hub. The same data that was presented for the Sydney hub is presented for the Brisbane hub in the figures below.

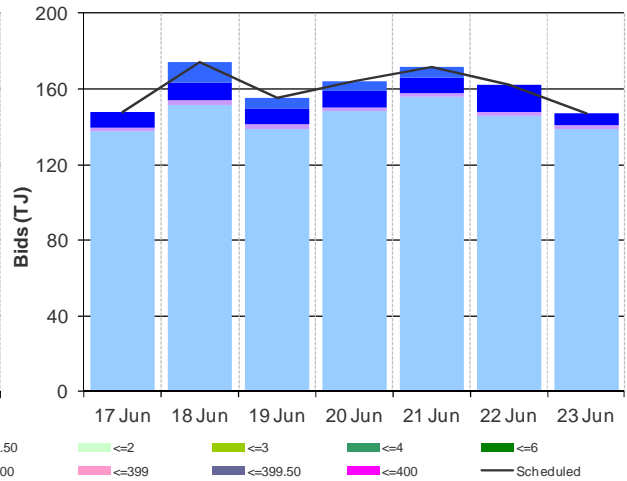
**Figure 4.1: BRI STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	4.45	3.47	3.51	4.45	5.48	5.50	3.53
Ex ante quantity (TJ)	148	174	155	164	172	162	147
Ex post price (\$/GJ)	3.46	3.30	5.50	3.52	3.53	5.99	3.53
Ex Post quantity (TJ)	143	163	160	155	164	165	143

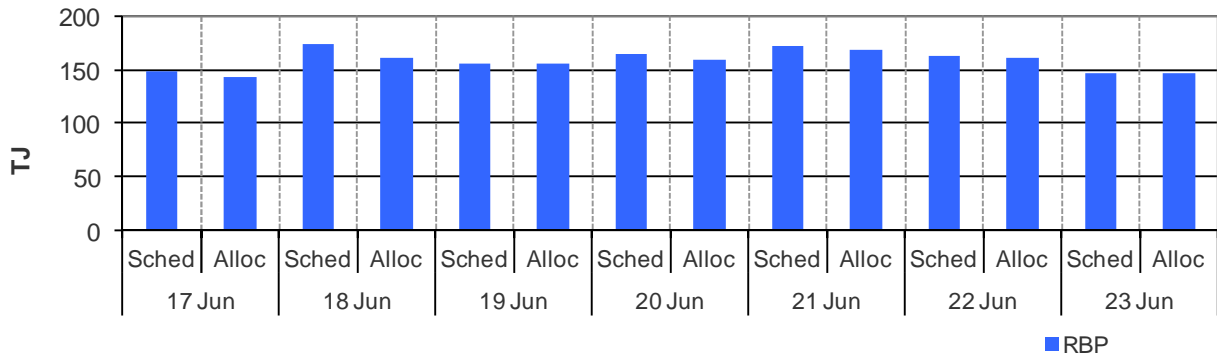
**Figure 4.2 (a) Daily hub offers in price bands (\$/GJ)**



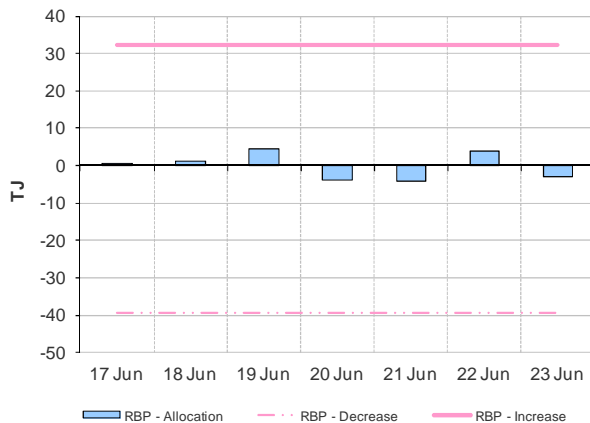
**Figure 4.2(b): Daily hub bids in price bands (\$/GJ)**



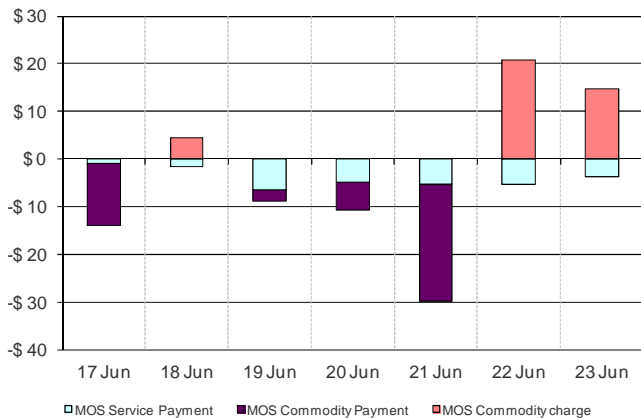
**Figure 4.3: BRI STTM ex ante scheduled and allocated gas volumes by STTM facility**



**Figure 4.4 (a) BRI STTM MOS allocations (TJ)**



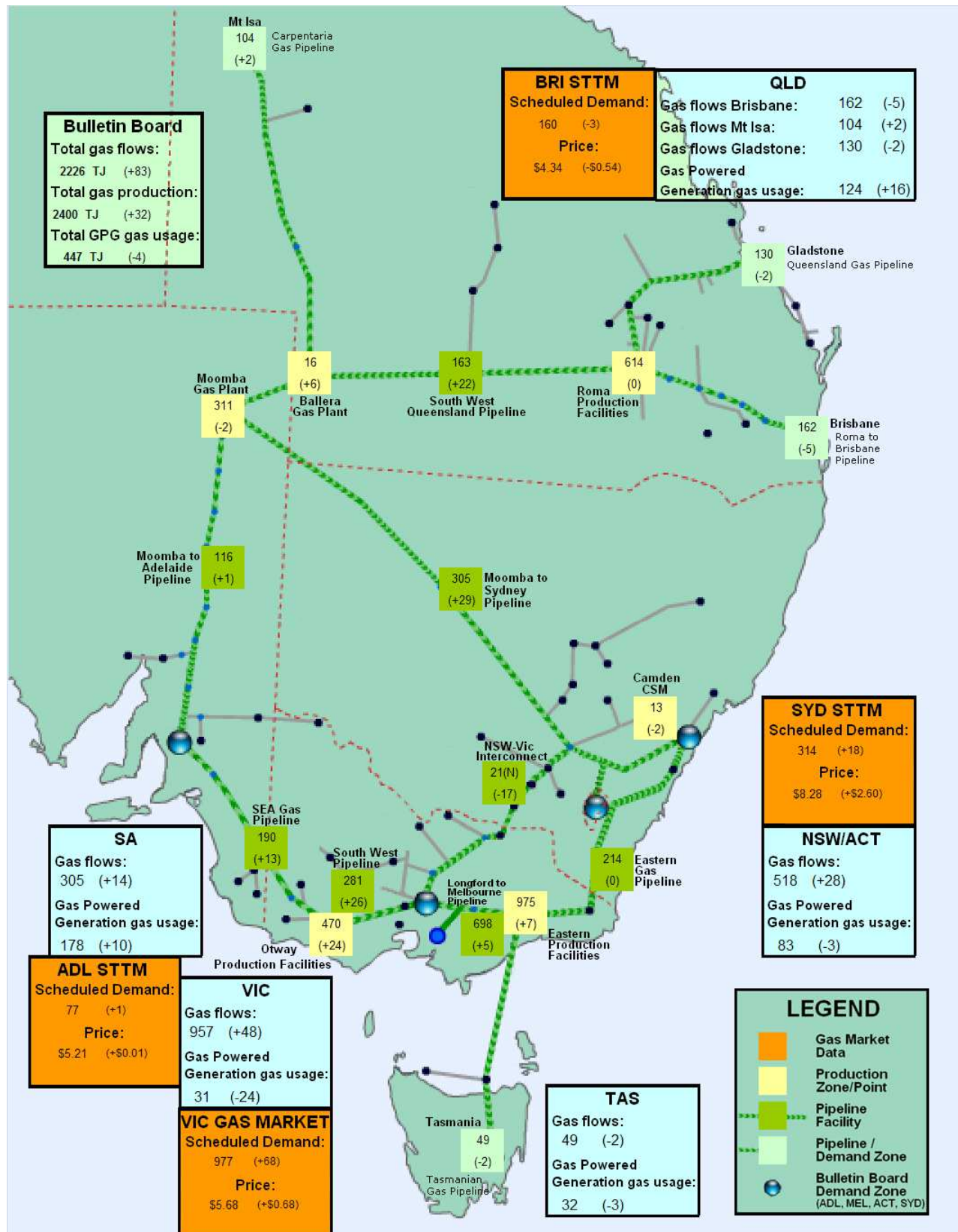
**Figure 4.4 (b): Service payments and commodity payments/charges (\$000)**



## 5 National Gas Bulletin Board

Figure 5.1 shows average daily actual flows for the current week in the aqua boxes<sup>9</sup> from the Bulletin Board (changes from the previous week's average are shown in brackets). Gas-powered generation (GPG) gas usage is also shown in each region in the aqua boxes. In the orange boxes average daily scheduled volumes and prices for each gas market are provided.

Figure 5.1: Gas market data (\$/GJ, TJ); Production, Consumption and Pipeline flows (TJ)



<sup>9</sup> Regional Gas Flows: SA = MAP + SEAGAS, VIC = SWP + LMP - negative(NSW-VIC), NSW/ACT = EGP + MSP, TAS = TGP, QLD (Brisbane) = RBP, QLD (Mt Isa) = CGP, QLD (Gladstone) = QGP