

1–7 July 2012

## Weekly summary

The average daily ex ante price in all markets exceeded \$6/GJ this week.

Sydney and Adelaide's average ex ante prices were the highest prices since these STTM hubs commenced on 1 September 2010. At the same time, average daily scheduled deliveries were at the highest level ever for both hubs.

Brisbane's average ex ante price was the highest since this newer STTM hub commenced on 1 December 2011.

Victorian average ex ante prices were the highest since the week ending 22 November 2008. This resulted from the daily weighted average imbalance price reaching its highest level since the 22 November 2008 gas day, at \$15.57/GJ on Saturday 7 July.

## 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>1</sup>**

	Victoria	Sydney	Adelaide	Brisbane
01 Jul - 07 Jul 2012	8.14	7.14	9.07	6.41
% change from previous week	49	-4	65	23
12-13 financial YTD	8.14	7.14	9.07	6.41
% change from previous financial YTD	124	95	132	-

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)
01 Jul - 07 Jul 2012	8.14	-	1051
% change from previous week	49	-	3

<sup>1</sup> The weighted average daily imbalance price applies for Victoria.

12-13 financial YTD	8.14	-	1051
% change from previous financial YTD	124	-	10

\*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.

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)
01 Jul - 07 Jul 2012	7.14	7.00	24.36	319	314
% change from previous week	-4	21	-53	3	5
12-13 financial YTD	7.14	7.00	24.36	319	314
% change from previous financial YTD	95	141	-71	9	13

**Figure 4: Adelaide STTM**

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
01 Jul - 07 Jul 2012	9.07	10.34	18.12	103	106
% change from previous week	65	87	366	11	15
12-13 financial YTD	9.07	10.34	18.12	103	106
% change from previous financial YTD	132	152	12	21	19

**Figure 5: Brisbane STTM**

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
01 Jul - 07 Jul 2012	6.41	5.52	8.72	167	162
% change from previous week	23	39	86	2	1
From market start (1 Dec)	6.41	5.52	8.72	167	162

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

On each day this week, daily prices and/or intra-day schedule prices exceeded \$9/GJ in one or more of the markets. The AER will publish a significant event report for the month of July. The report will include further analysis of gas days in this report.

Further analysis indicates several of the high ex ante prices seen in the STTM hubs were not forecast in the provisional schedules. These are identified below.

### *Victoria*

The average daily price in Victoria was 49 per cent higher than the previous week. However, the average was heavily influenced by the ex ante price for the 7 July gas day (see figure 1.1). Excluding this gas day, daily prices were in line with the previous week.

On 7 July, the 6am schedule price exceeded \$16/GJ. The high price was influenced by both high demand (it was the coldest morning in 4 years with a temperature in Melbourne of 2.3 degrees Celsius), and supply constraints (Iona was operating at reduced capacity which required LNG to be scheduled to meet demand).

The gas price varied within days, particularly on Sunday and Monday, with the price rising to above \$9/GJ at the 6 pm schedule as, caused in part, by more high priced gas for withdrawal being offered into competitive price bands at 6 pm. (see figure 1.4).

### *Sydney*

Higher than normal prices continued in the Sydney hub this week, however they remained consistent with the previous week's prices despite increased average daily demand.

The high ex ante prices on 3 and 6 July were not forecast in the provisional schedules. The ex ante price for 3 July was \$7.30/GJ, however the provisional schedules forecast prices around \$5.50/GJ. The ex ante price for 6 July was \$8.02/GJ, however the provisional schedules forecast prices around \$6.00/GJ.

### *Adelaide*

The average daily price in Adelaide was 65 per cent higher than the previous week. The ex ante price was \$5.46/GJ on each day of the previous week (except Wednesday). This week, prices started at \$5.46/GJ, however reached as high as \$14.89/GJ (on 4 July) and averaged \$9.07/GJ (see figure 3.1).

Prices were influenced by deliveries reaching record levels this week at an average of 103 TJ/day, with the 3 July gas day seeing the highest level of deliveries to the hub since market start (111 TJ). However, a change during the week to lower volumes of gas being offered into the hub under \$6/GJ, on 4, 5 and 6 July (see figure 3.2(a)), also appears a significant driver of prices.

The high ex ante prices on 3 and 4 July were not forecast in provisional (D-3, D-2) schedules. The ex ante price

- for 3 July was \$10.00/GJ, *higher* than provisional schedules prices which were around \$6.00/GJ.
- for 4 July was \$14.88/GJ, *higher* than provisional schedules prices which were around \$7.50/GJ.

Conversely for 5 July the ex ante price was \$10.50, *lower* than the D-2 price of \$14.88/GJ and the ex ante price for 6 July was \$8.60/GJ; *lower* than the D-3 and D-2 prices of \$14.24/GJ and \$10/GJ respectively.

### *Brisbane*

The average daily price in Brisbane was 23 per cent higher than the previous week. The increase was influenced by four gas days starting Tuesday 3 July where the ex ante price was around \$8/GJ. Throughout the week the quantity of \$2/GJ to \$3/GJ priced gas offers into the market gradually decreased, most notably on the last three days of the week. This appears to have forced higher priced gas to be scheduled to meet demand.

The high ex ante prices on 3, 5 and 6 July were not forecast in the provisional schedules. The ex ante prices for 3, 5 and 6 July were over \$8/GJ, however the provisional schedules forecast prices around \$4.50/GJ.

# Detailed Market Analysis

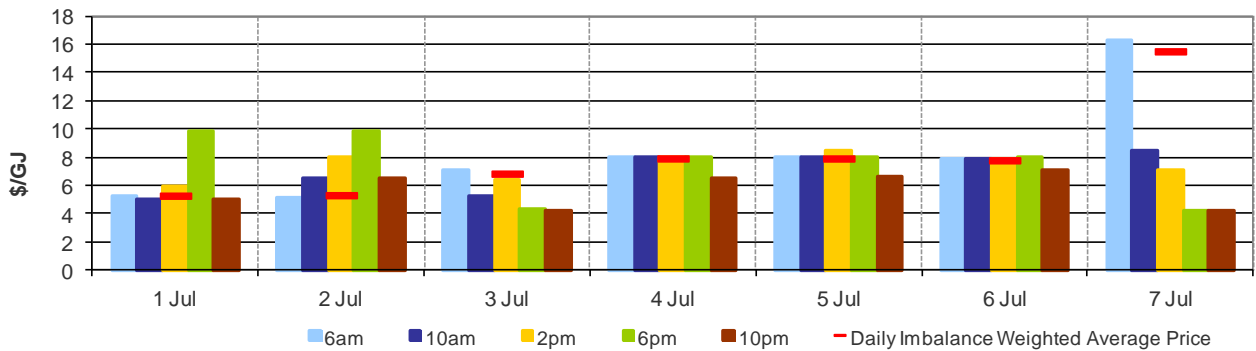
1–7 July 2012

## 1 Victorian Declared Wholesale Market

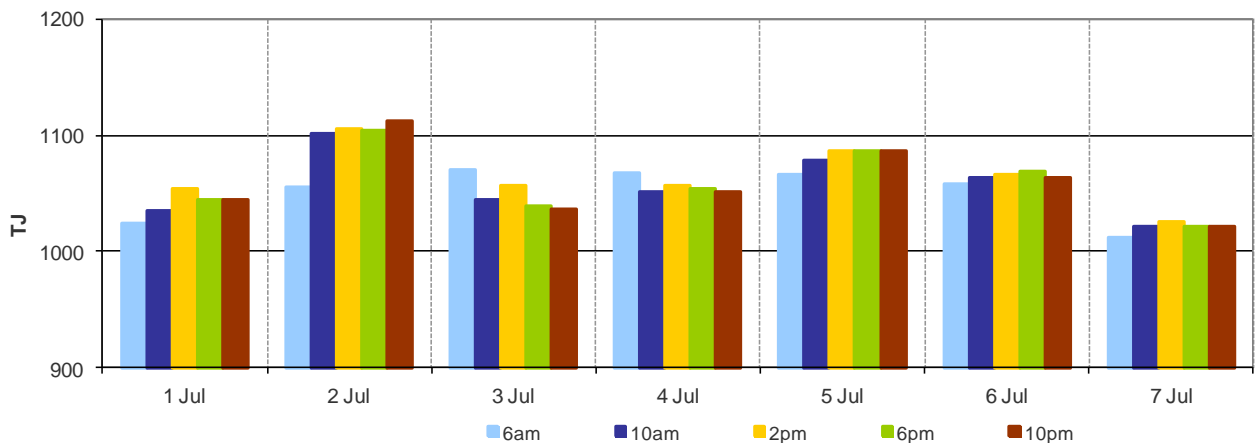
In the Victorian Gas Market gas is priced five times daily at 6 am, 10 am, 2 pm, 6 pm and 10 pm. However, the volume weighted gas price on a gas day tends towards the 6 am price which is the schedule at which most gas is traded.

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>2</sup>, and injection/withdrawal bids<sup>3</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>4</sup>

**Figure 1.1: Prices by schedule**



**Figure 1.2: Demand forecasts**

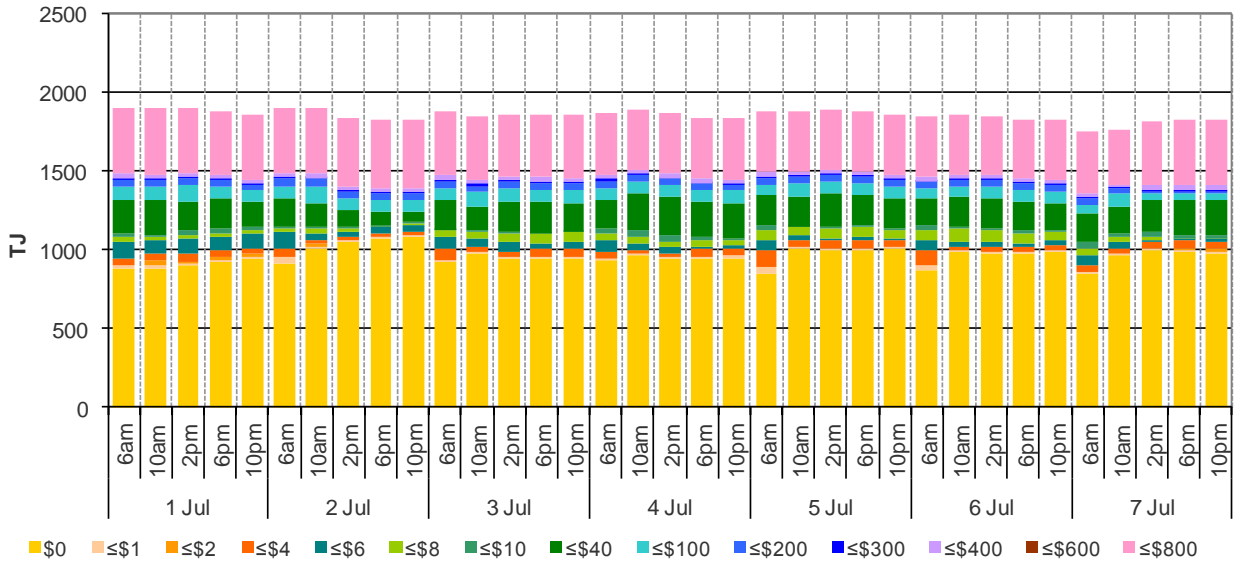


<sup>2</sup> These are Market Participants' aggregate demand forecasts adjusted for any override as applied by AEMO from time to time. The main driver of the amount of gas scheduled on a gas day are these forecasts which are forecasts that cannot respond to price or in other words is gas delivered regardless of the price.

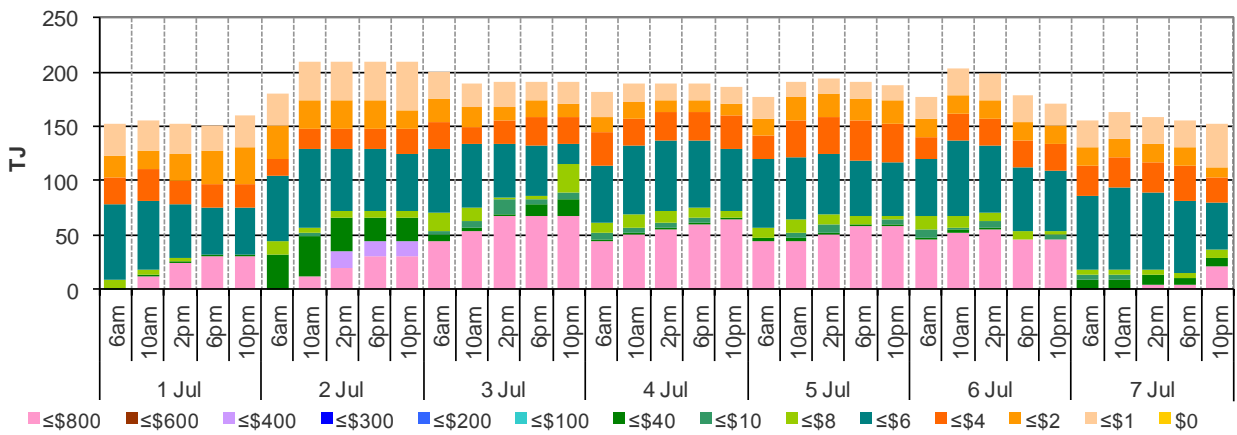
<sup>3</sup> The price might also be affected by transmission or production (contractual) constraints limiting how much gas can be delivered from a locale or System Injection Point (SIP) from time to time.

<sup>4</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.

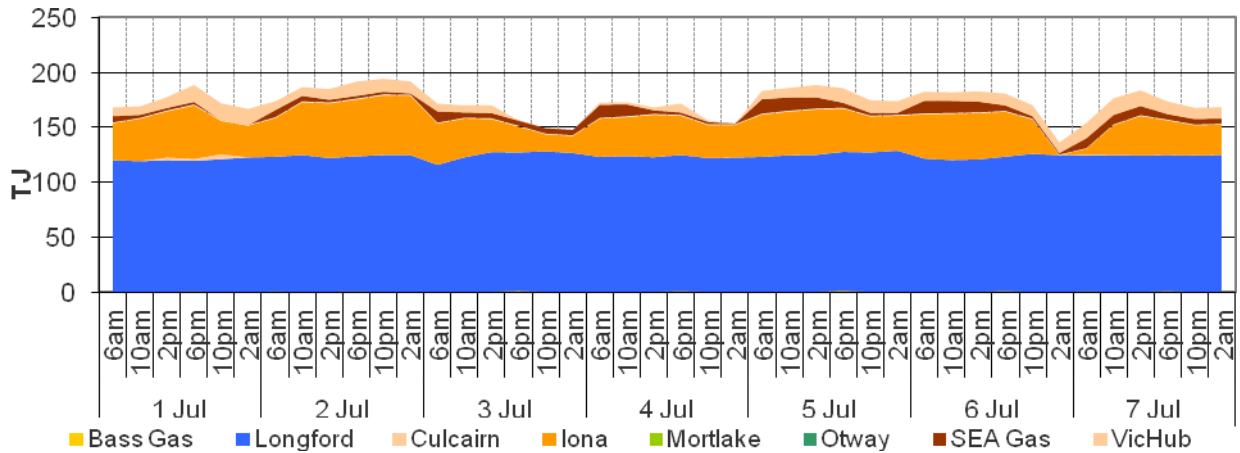
**Figure 1.3: Injection bids by price bands**



**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>5</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).

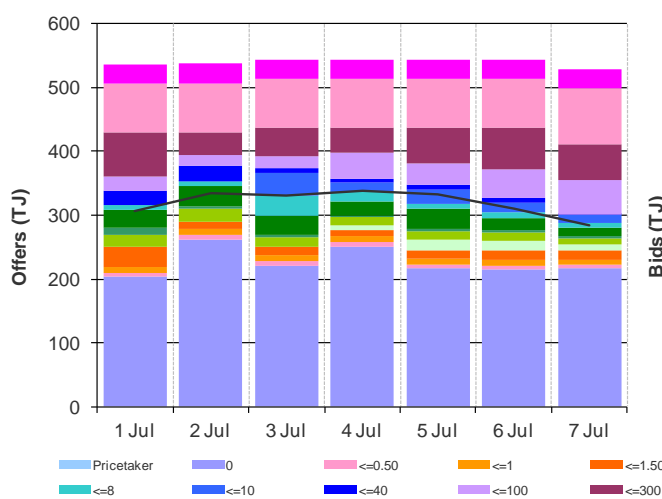
Market Operator Service balancing gas (MOS) payments arise because the amount of gas nominated on pipelines for delivery on a gas day will either exceed or fall short, by some amount, of the amount of gas consumed in the hub. In such circumstances, MOS payments are made to participants for providing a service to park gas on a pipeline or to loan gas from a pipeline to the hub.<sup>6</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.

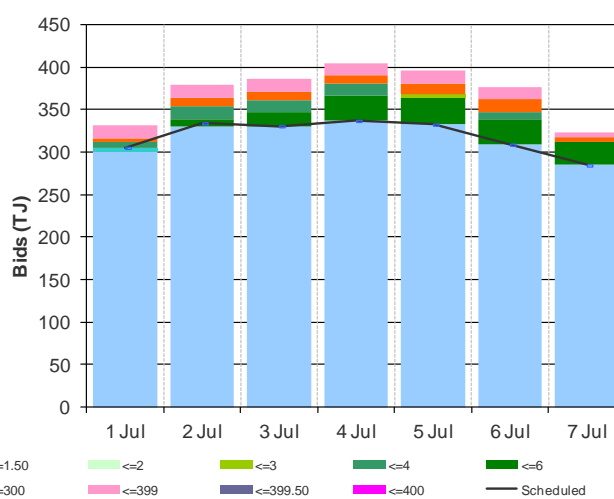
**Figure 2.1: SYD STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	5.49	5.00	7.30	8.02	9.10	8.03	7.00
Ex ante quantity (TJ)	306	335	331	337	333	309	285
Ex post price (\$/GJ)	4.50	4.52	8.45	8.00	8.98	8.52	5.99
Ex Post quantity (TJ)	282	326	333	334	330	317	277

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



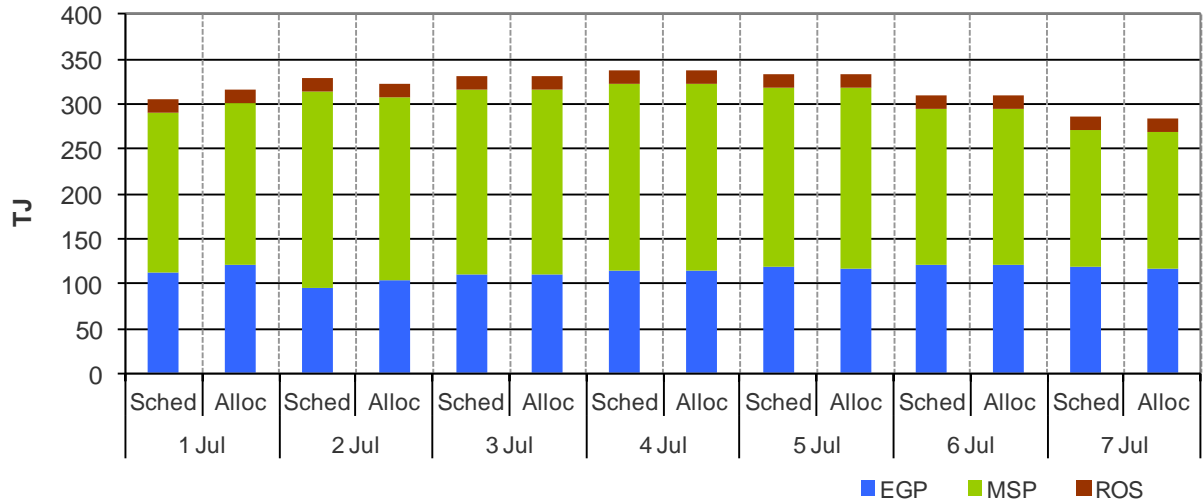
**Figure 2.2(b): Daily hub bids in price bands (\$/GJ)**



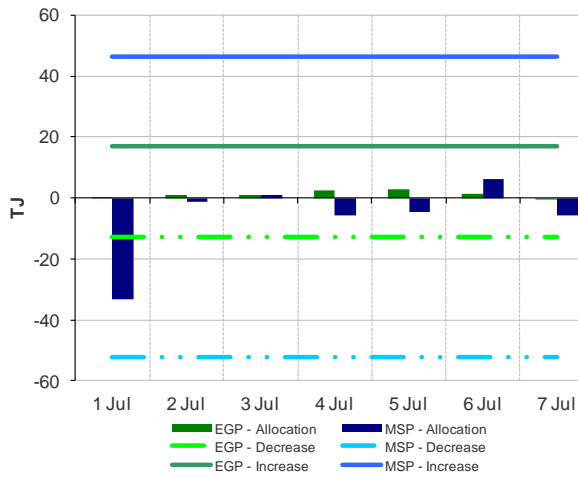
<sup>5</sup> The main driver of the amount of gas scheduled on a gas day is the 'price-taker' bid, which is forecast hub demand that cannot respond to price and which must be delivered, regardless of the price.

<sup>6</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.

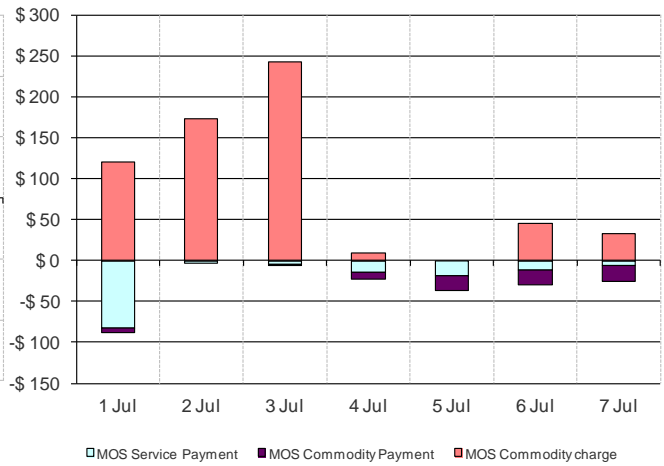
**Figure 2.3: SYD STTM ex ante scheduled and allocated gas volumes by STTM facility**



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



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





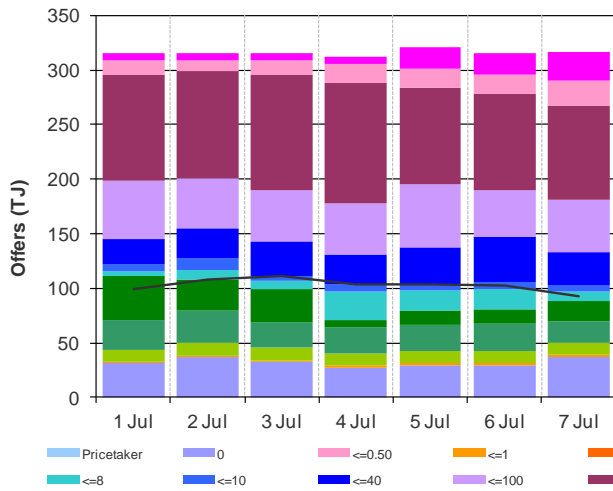
### 3 Adelaide STTM

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.

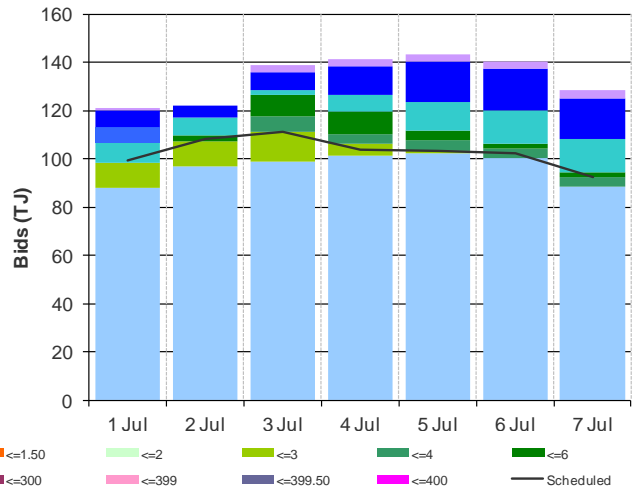
**Figure 3.1: ADL STTM Daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	5.46	6.22	10.00	14.89	10.50	8.60	7.82
Ex ante quantity (TJ)	99	108	111	104	104	102	92
Ex post price (\$/GJ)	5.46	9.60	14.89	16.00	9.60	9.10	7.71
Ex Post quantity (TJ)	100	122	116	107	100	104	90

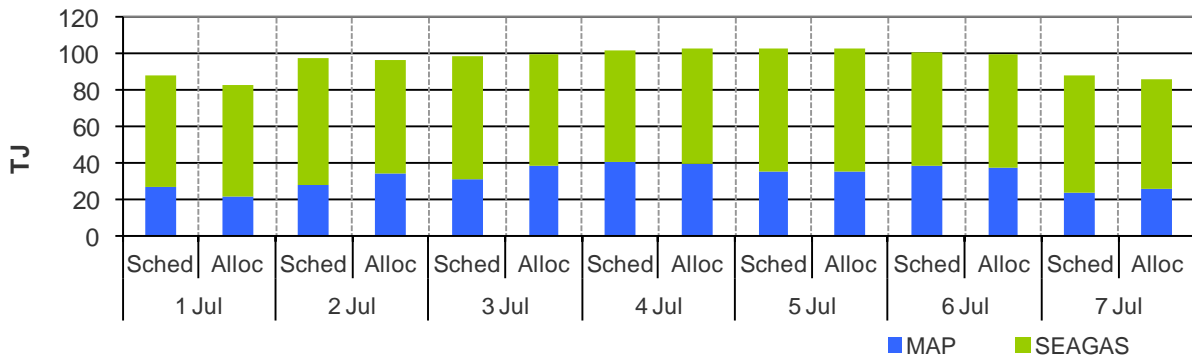
**Figure 3.2 (a) Daily hub offers in price bands (\$/GJ)**



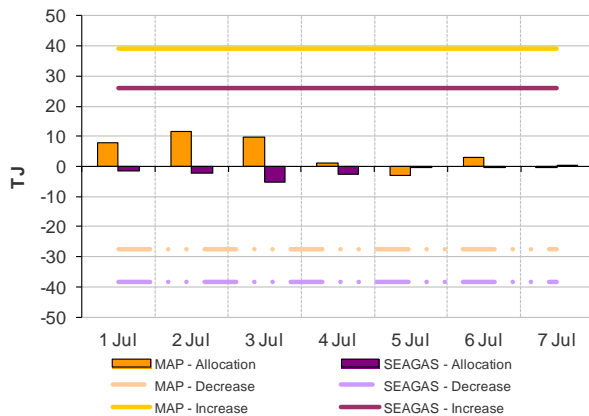
**Figure 3.2(b): Daily hub bids in price bands (\$/GJ)**



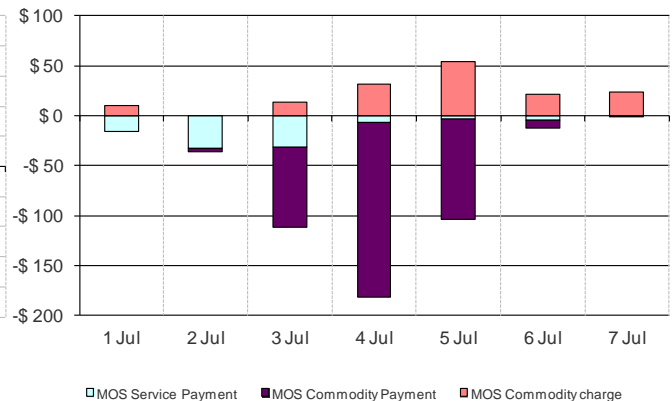
**Figure 3.3: ADL STTM ex ante scheduled and allocated gas volumes by STTM facility**



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



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



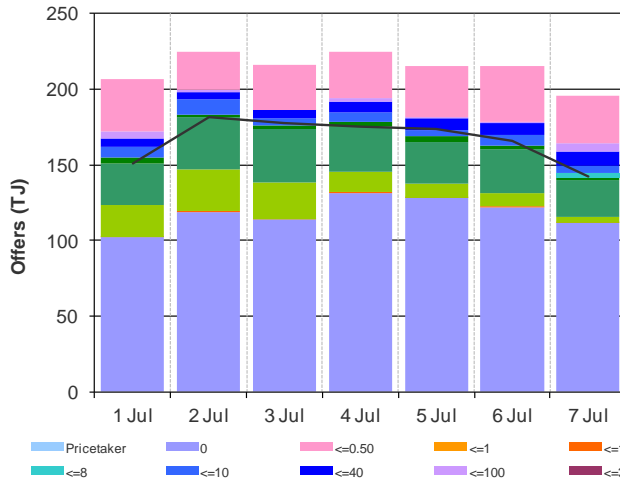
## 4 Brisbane STTM

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.

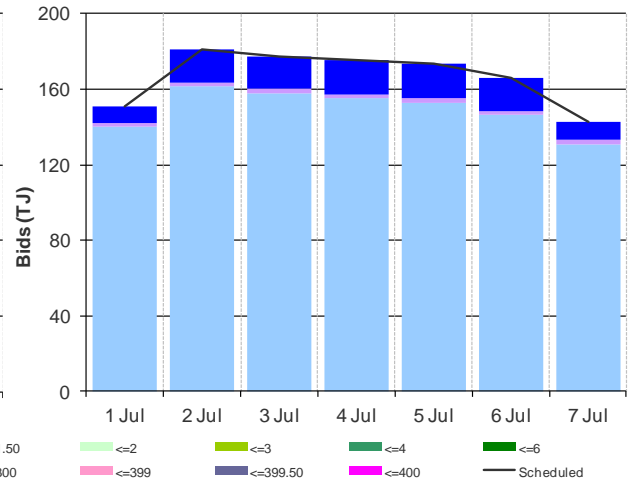
**Figure 4.1: BRI STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	4.45	3.62	8.21	4.45	8.22	8.04	7.90
Ex ante quantity (TJ)	151	181	178	175	174	166	143
Ex post price (\$/GJ)	3.60	3.30	3.62	3.65	8.21	8.03	8.21
Ex Post quantity (TJ)	148	170	169	169	171	164	145

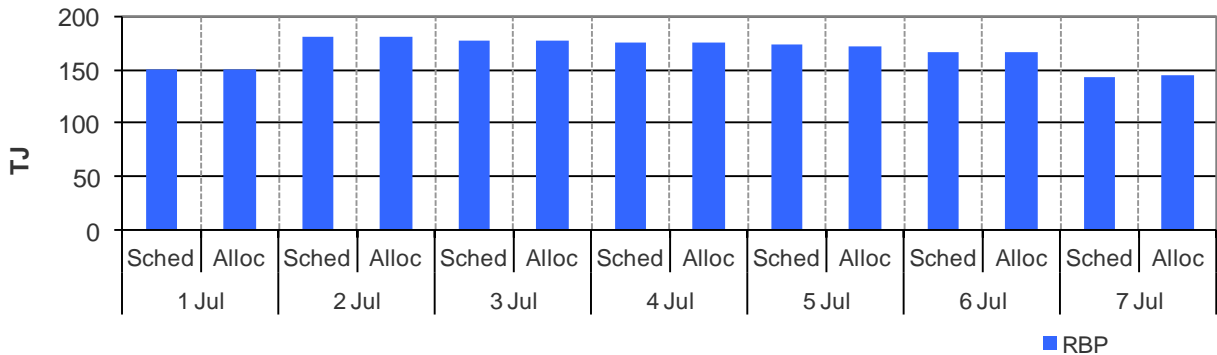
**Figure 4.2 (a) Daily hub offers in price bands (\$/GJ)**



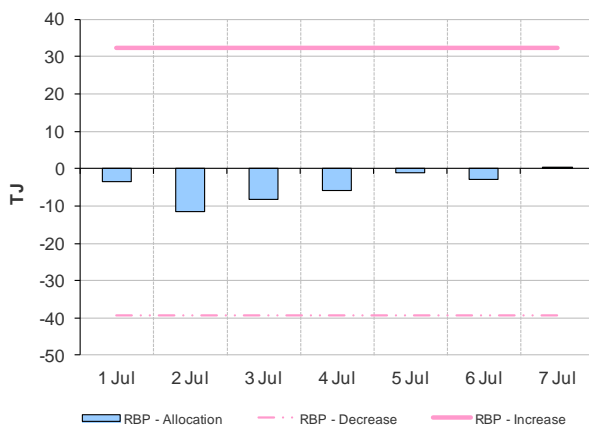
**Figure 4.2(b): Daily hub bids in price bands (\$/GJ)**



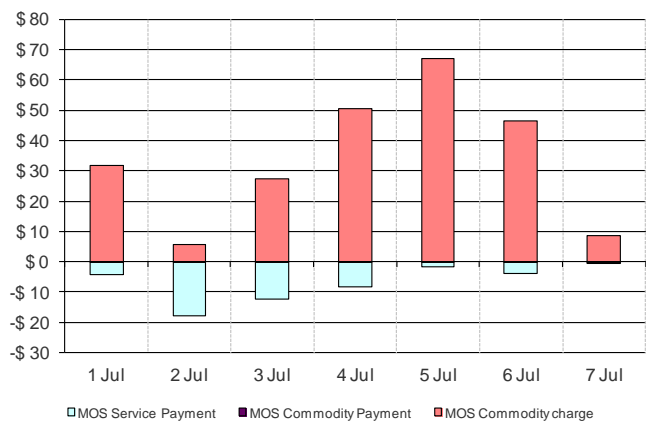
**Figure 4.3: BRI STTM ex ante scheduled and allocated gas volumes by STTM facility**



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



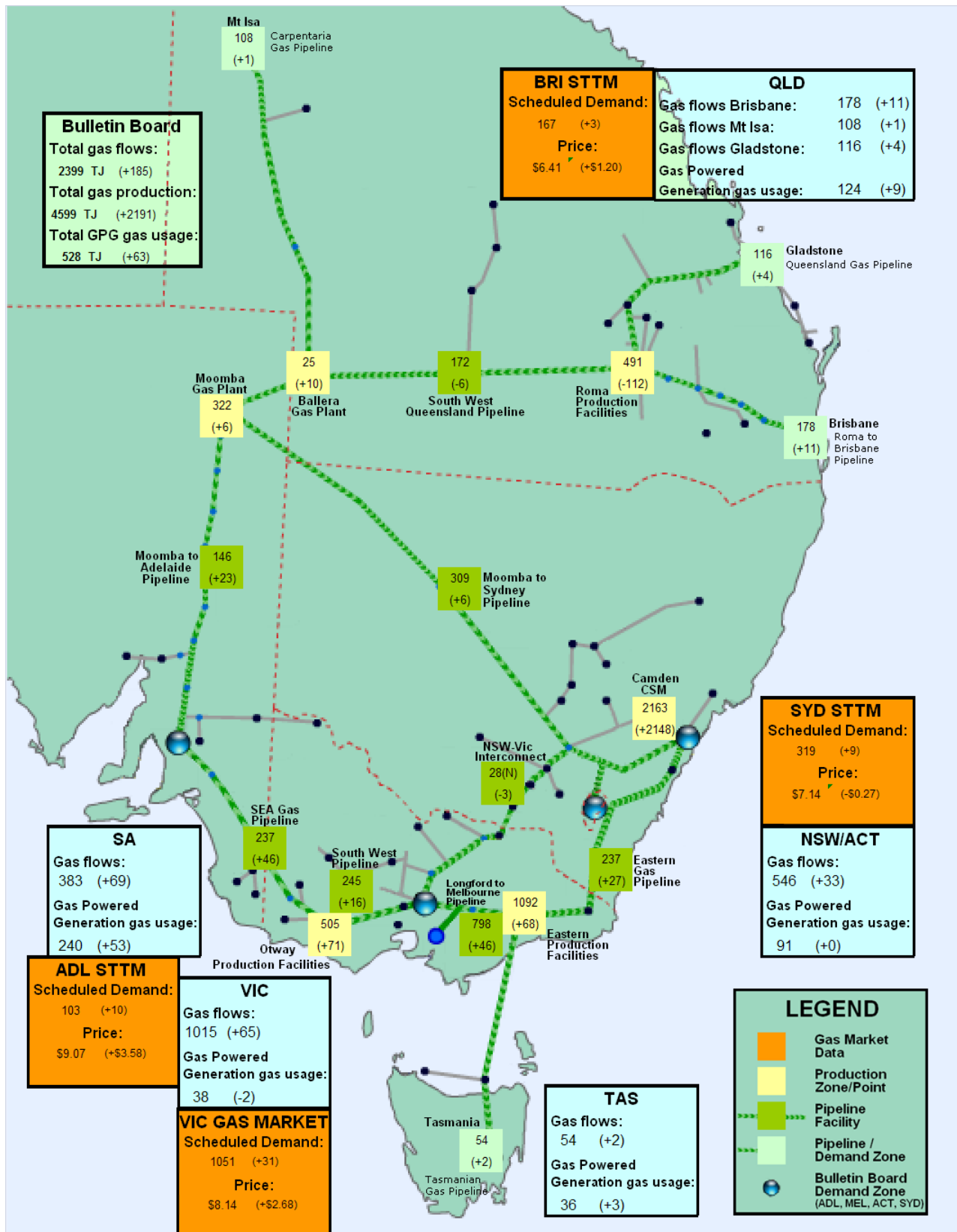
**Figure 4.4 (b): Service payments and commodity payments/charges (\$000)**



## 5 National Gas Bulletin Board

Figure 5.1 shows average daily actual flows for the current week in the aqua boxes<sup>7</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>7</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