

30 March – 5 April 2014

## Weekly summary

Average prices ranged from \$3.49/GJ in Brisbane to \$4.06/GJ in Adelaide. The average price in Brisbane was 11 per cent lower than the previous week, sitting at \$4/GJ or lower across the week and falling to \$2.83/GJ on Saturday 5 April.

## Long term statistics and explanatory material

The AER has published an [explanatory note](#) to assist with interpreting the data presented in its weekly gas market reports. The AER also publishes a range of [longer term statistics](#) on the performance of the gas sector including gas prices, production, pipeline flows and consumer demand.

## 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
30 Mar - 05 Apr 2014	3.60	3.86	4.06	3.49
% change from previous week	2	6	6	-11
13-14 financial YTD	3.94	4.11	4.45	5.03
% change from previous financial YTD	-12	-21	-13	-14

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

**Figure 2: Victorian gas market**

	Price (\$/GJ)	Ancillary payments (\$000)*	BOD forecast demand quantity (TJ)
30 Mar - 05 Apr 2014	3.60	-	367
% change from previous week	2	-	2
13-14 financial YTD	3.94	-	505
% change from previous financial YTD	-12	-	-5

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

More detailed analysis on the VGM is provided in section 1.

Figures 3 to 5 show average ex ante and ex post gas prices, Market Operator Service (**MOS**) balancing gas service payments together with the related daily demand quantities against historical averages for the Sydney, Adelaide and Brisbane STTM hubs, respectively.

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

**Figure 3: Sydney STTM**

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
30 Mar - 05 Apr 2014	3.86	3.50	10.13	216	208
% change from previous week	6	-6	200	0	-4
13-14 financial YTD	4.11	3.96	10.88	233	228
% change from previous financial YTD	-21	-27	0	-1	-3

**Figure 4: Adelaide STTM**

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
30 Mar - 05 Apr 2014	4.06	3.90	32.93	56	52
% change from previous week	6	3	1856	2	-2
13-14 financial YTD	4.45	4.44	15.54	65	64
% change from previous financial YTD	-13	-12	92	-3	-1

**Figure 5: Brisbane STTM**

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
30 Mar - 05 Apr 2014	3.49	3.57	1.11	142	142
% change from previous week	-11	-8	-13	-3	-3
13-14 financial YTD	5.03	5.14	1.56	149	150
% change from previous financial YTD	-14	-11	-37	3	4

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 (**Bulletin Board**), as well as gas powered generation (**GPG**) volumes in each state, and section 6 provides information on the gas supply hub at Wallumbilla.

### Significant Market Events or Issues this week

On Tuesday 1 April, the ex post price in Sydney fell to \$2.88/GJ (from \$4.18/GJ ex ante) as a result of a -18.7 TJ imbalance (due to over forecast demand). However, the hub required 10.3 TJ of increase MOS on the day, largely due to renominated pipeline supply. The following day also saw an imbalance of -11.5 TJ, which had minimal impact on the ex post price but also saw increase MOS required under similar circumstances. On Thursday 3 April, Sydney was long by 17.2 TJ due to over forecast demand, leading to around 20 TJ of decrease MOS (see figure 2.4).

A number of days across the week saw low prices during the end of day schedules in Victoria. This was influenced by the lack of available gas at Iona (due to scheduled maintenance from 22 March to 4 April), Longford's contractual arrangements limiting response to renominations after the 6 pm schedule, and constraints preventing net withdrawals at SEAGas and Vic Hub

system points (resulting in high priced withdrawal bids being skipped). This saw 10 pm schedule prices on 1, 2 and 4 April gas days fall to around \$2.18-\$2.35/GJ. On Saturday 5 April, Iona returned to service after the completion of its scheduled maintenance.

On 5 April in Adelaide, over forecast demand led to a -16 TJ imbalance and a fall in the ex post price to \$3.11/GJ (from \$4.05/GJ ex ante). This also led to a decrease MOS requirement of more than 11 TJ, supplied largely on the Moomba to Adelaide Pipeline (see figure 3.4). Some participants' offers for decrease MOS on the pipeline were unable to be dispatched<sup>2</sup>, resulting in higher priced offers being required to balance the market, leading to a significant service cost for the gas day (\$203 081).

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<sup>2</sup> When participants with offers in the MAP MOS decrease stack are not scheduled to flow sufficient quantities to the hub (enough to match the volume of the required decrease MOS), the MOS cannot be allocated in merit order and steps in the MOS stack are skipped in accordance with Rule 421 (4) (b).

# Detailed Market Analysis

30 March – 5 April 2014

## 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>3</sup>, and injection/withdrawal bids.<sup>4</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>5</sup>

Figure 1.1: Prices by schedule

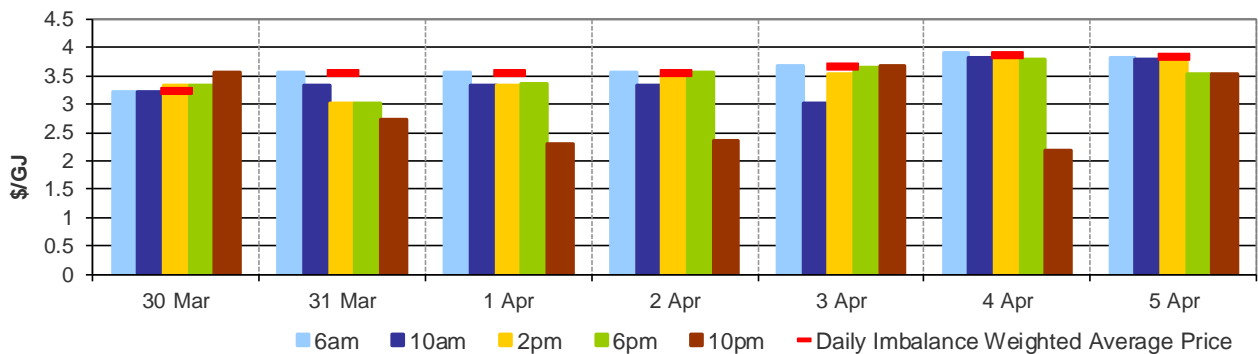
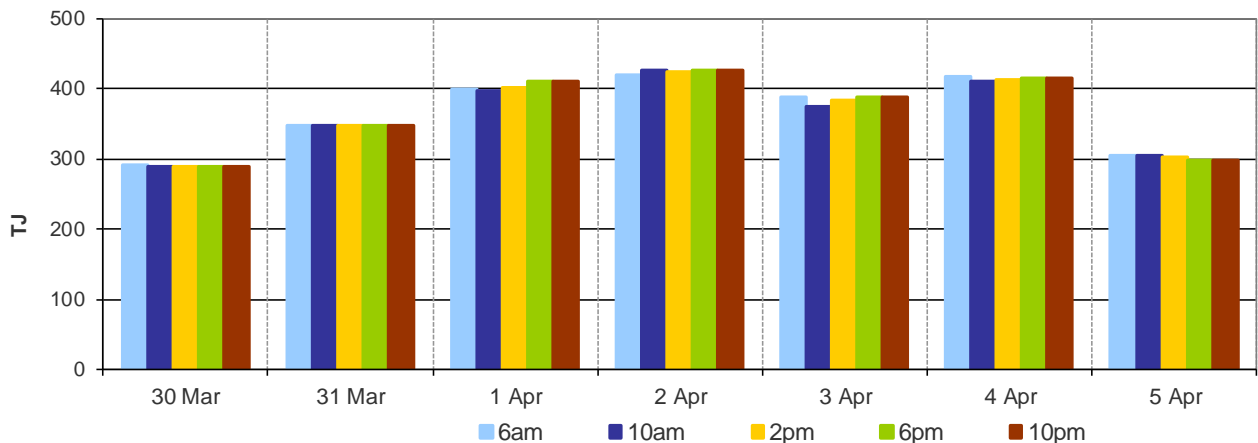


Figure 1.2: Demand forecasts

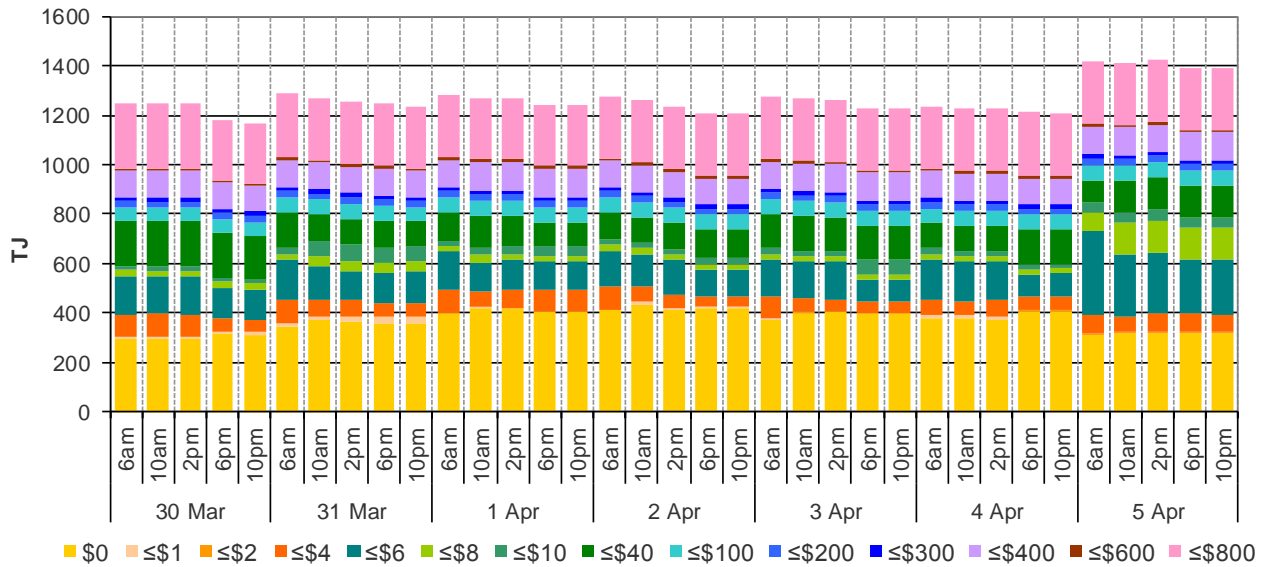


<sup>3</sup> These are Market Participants' aggregate demand forecasts adjusted for any override as applied by AEMO from time to time. The main driver of the amount of gas scheduled on a gas day are these forecasts which are forecasts that cannot respond to price or in other words is gas delivered regardless of the price.

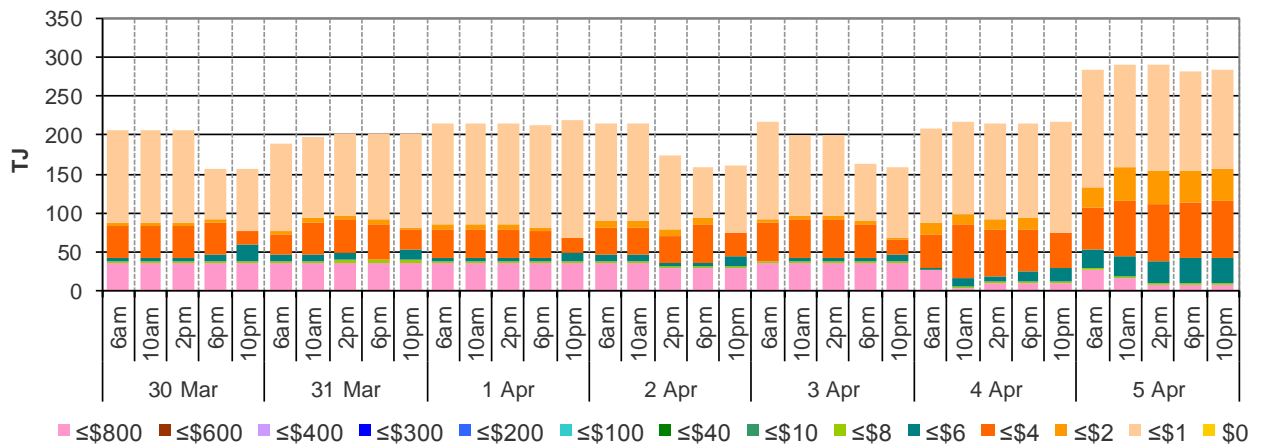
<sup>4</sup> The price might also be affected by transmission or production (contractual) constraints limiting how much gas can be delivered from a locale or System Injection Point (SIP) from time to time.

<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 SIP from time to time.

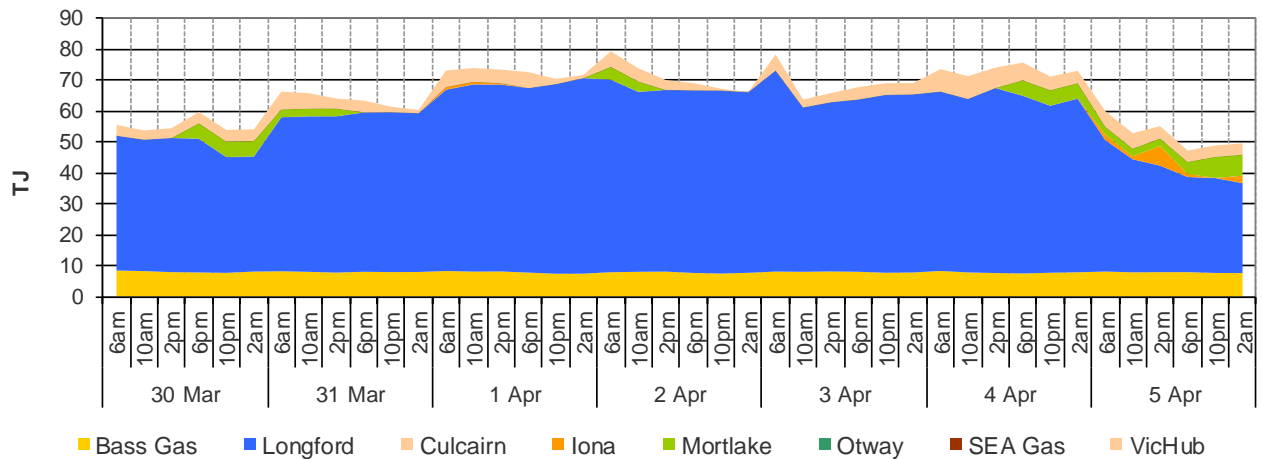
**Figure 1.3: Injection bids by price bands**



**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>6</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).

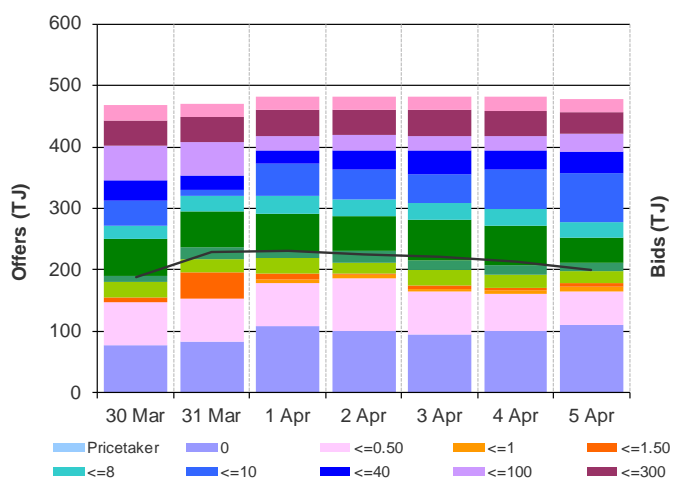
Market Operator Service balancing gas (MOS) payments arise because the amount of gas nominated on pipelines for delivery on a gas day will either exceed or fall short, by some amount, of the amount of gas consumed in the hub. In such circumstances, MOS payments are made to participants for providing a service to park gas on a pipeline or to loan gas from a pipeline to the hub.<sup>7</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.

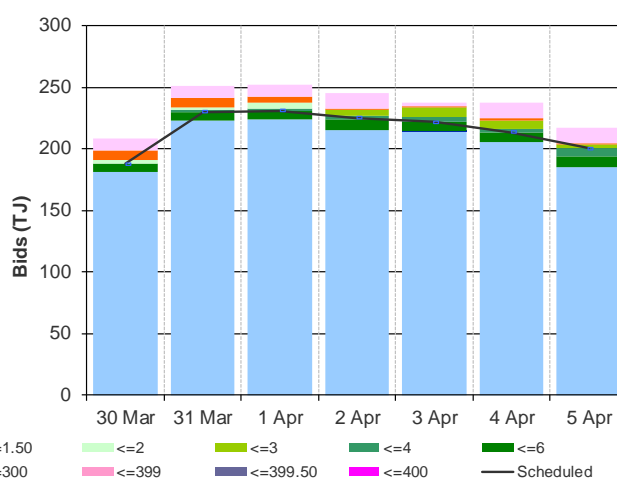
**Figure 2.1: SYD STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	3.85	3.85	4.18	3.41	4.20	4.20	3.36
Ex ante quantity (TJ)	188	230	231	225	222	214	201
Ex post price (\$/GJ)	4.18	3.85	2.88	3.36	3.41	3.90	2.90
Ex post quantity (TJ)	191	229	212	214	205	208	197

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



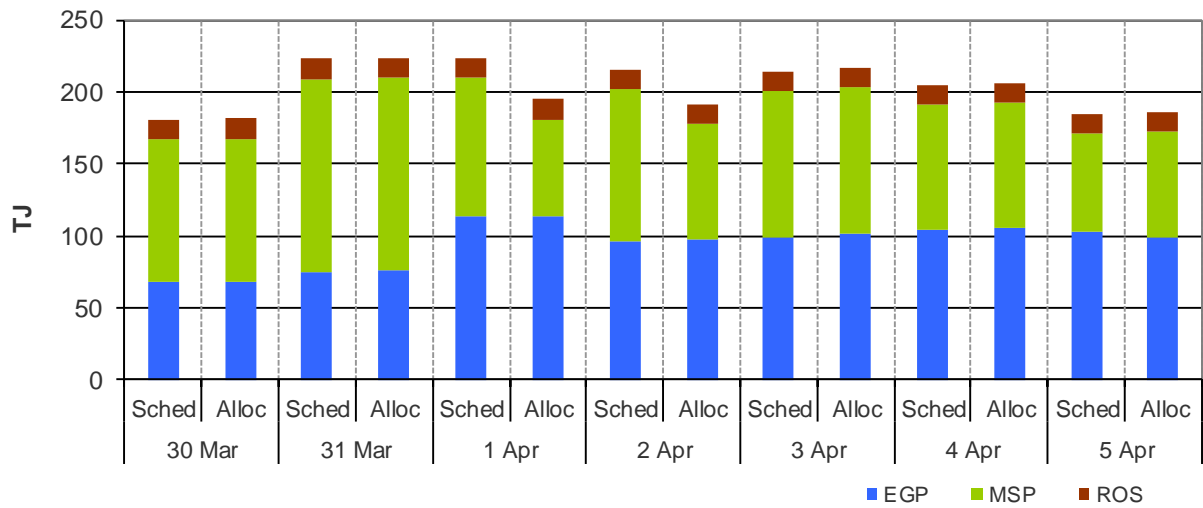
**Figure 2.2 (b): Daily hub bids in price bands (\$/GJ)**



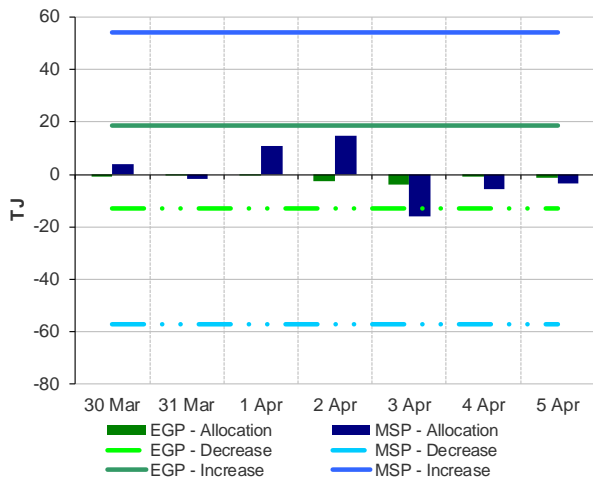
<sup>6</sup> The main driver of the amount of gas scheduled on a gas day is the ‘price-taker’ bid, which is forecast hub demand that cannot respond to price and which must be delivered, regardless of the price.

<sup>7</sup> MOS service payments involve a payment for a MOS increase service when the actual quantity delivered exceeds final gas nominations for delivery to a hub, and a payment for a MOS decrease service when the actual quantity delivered is less than final nominations. 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 (MOS ‘commodity’ payments/charges).

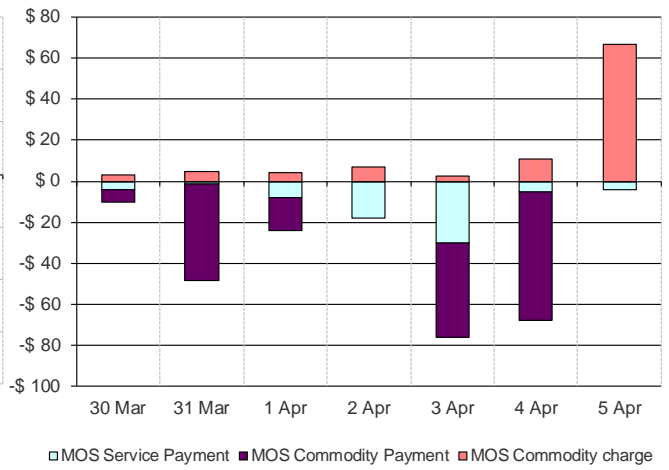
**Figure 2.3: SYD net scheduled and allocated gas volumes (excluding MOS) by STTM facility**



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



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



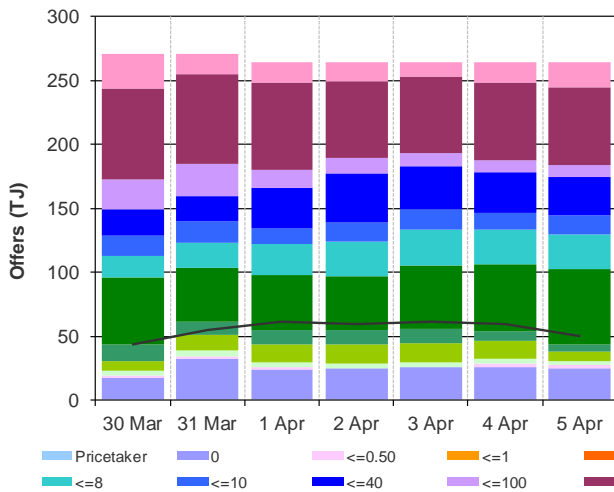
### 3 Adelaide STTM

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.

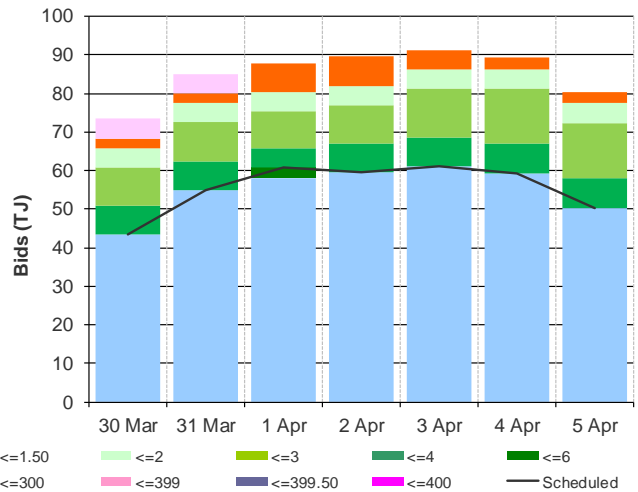
**Figure 3.1: ADL STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	3.90	3.86	4.24	4.24	4.08	4.05	4.05
Ex ante quantity (TJ)	43	55	61	59	61	59	50
Ex post price (\$/GJ)	4.06	3.86	4.08	4.08	4.08	4.05	3.11
Ex post quantity (TJ)	44	54	57	56	61	58	34

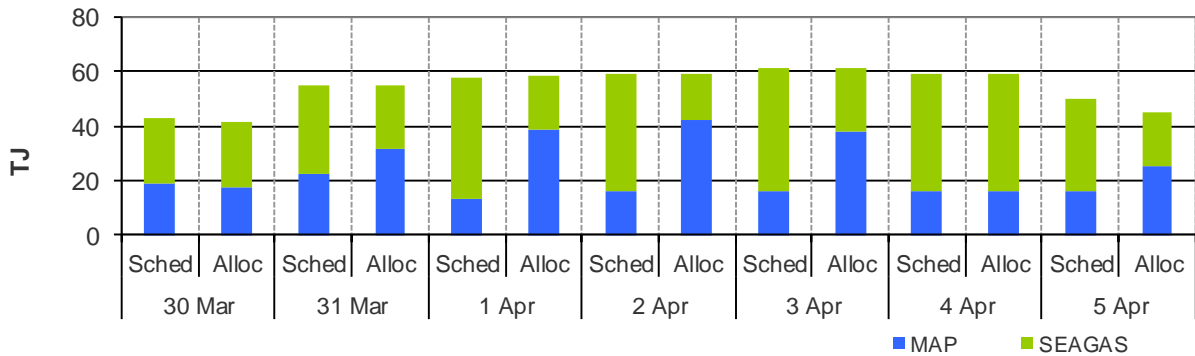
**Figure 3.2 (a): Daily hub offers in price bands (\$/GJ)**



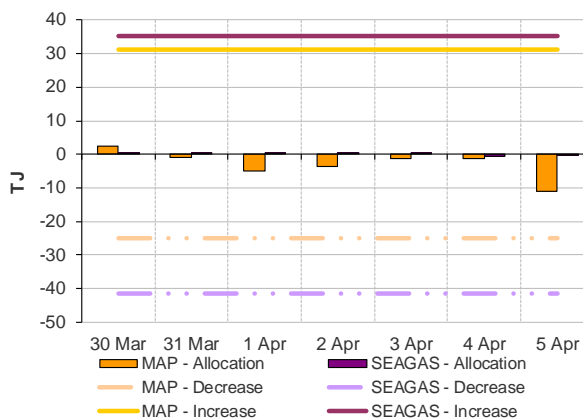
**Figure 3.2 (b): Daily hub bids in price bands (\$/GJ)**



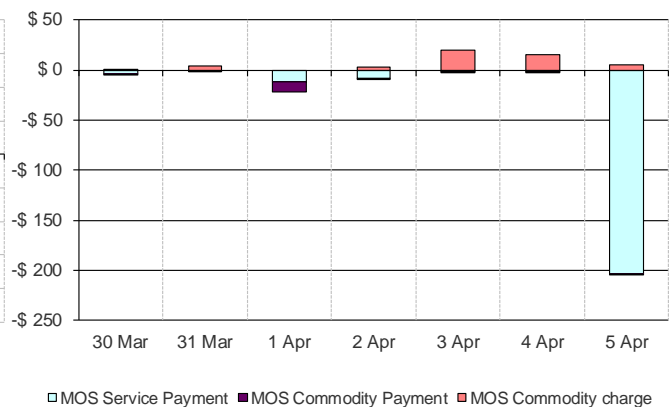
**Figure 3.3: ADL net scheduled and allocated gas volumes (excluding MOS) by STTM facility**



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



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





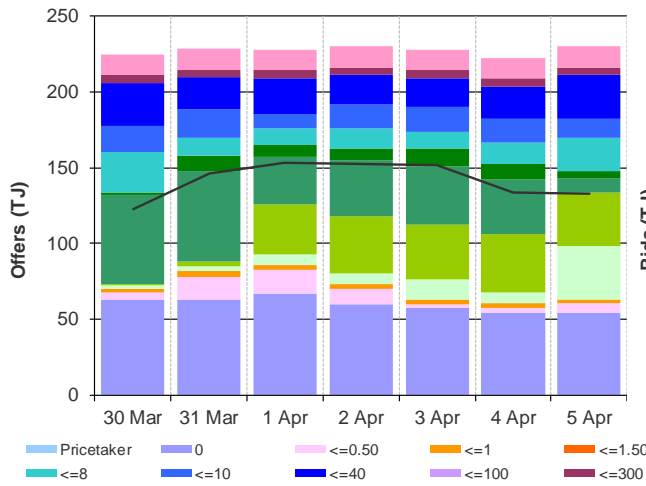
## 4 Brisbane STTM

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.

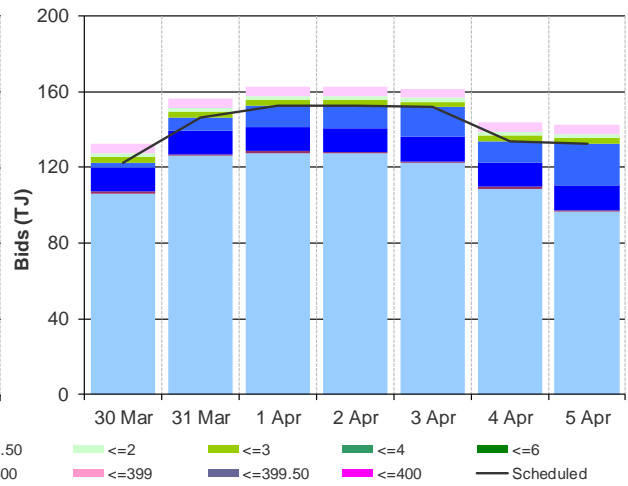
**Figure 4.1: BRI STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	3.32	3.79	3.33	3.80	4.00	3.33	2.83
Ex ante quantity (TJ)	122	146	153	153	152	134	133
Ex post price (\$/GJ)	3.49	3.75	3.79	3.79	4.00	3.33	2.81
Ex post quantity (TJ)	128	145	155	147	151	139	129

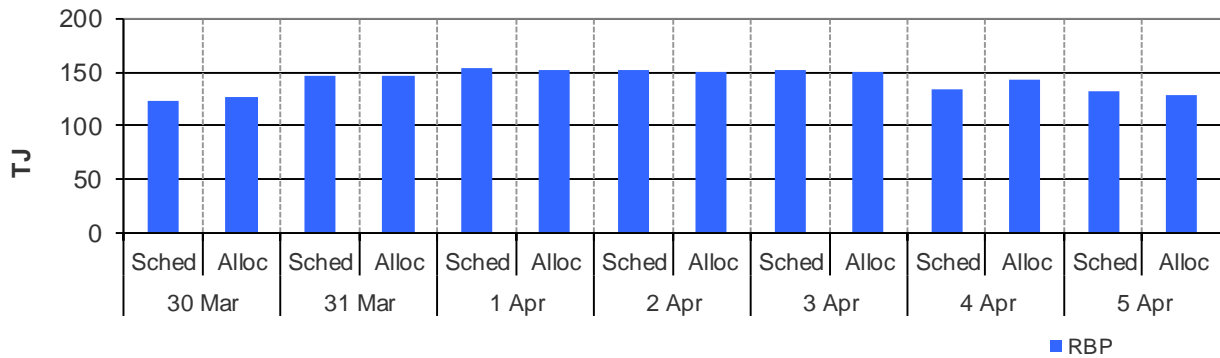
**Figure 4.2 (a): Daily hub offers in price bands (\$/GJ)**



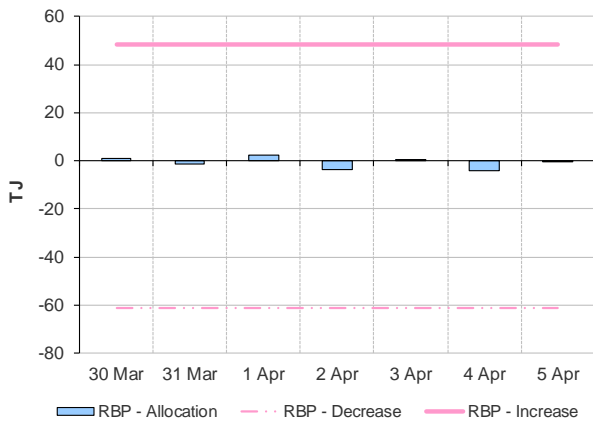
**Figure 4.2 (b): Daily hub bids in price bands (\$/GJ)**



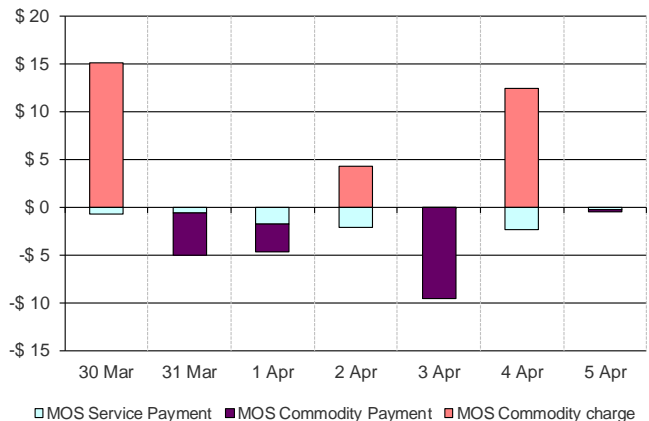
**Figure 4.3: BRI net scheduled and allocated gas volumes (excluding MOS) by STTM facility**



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



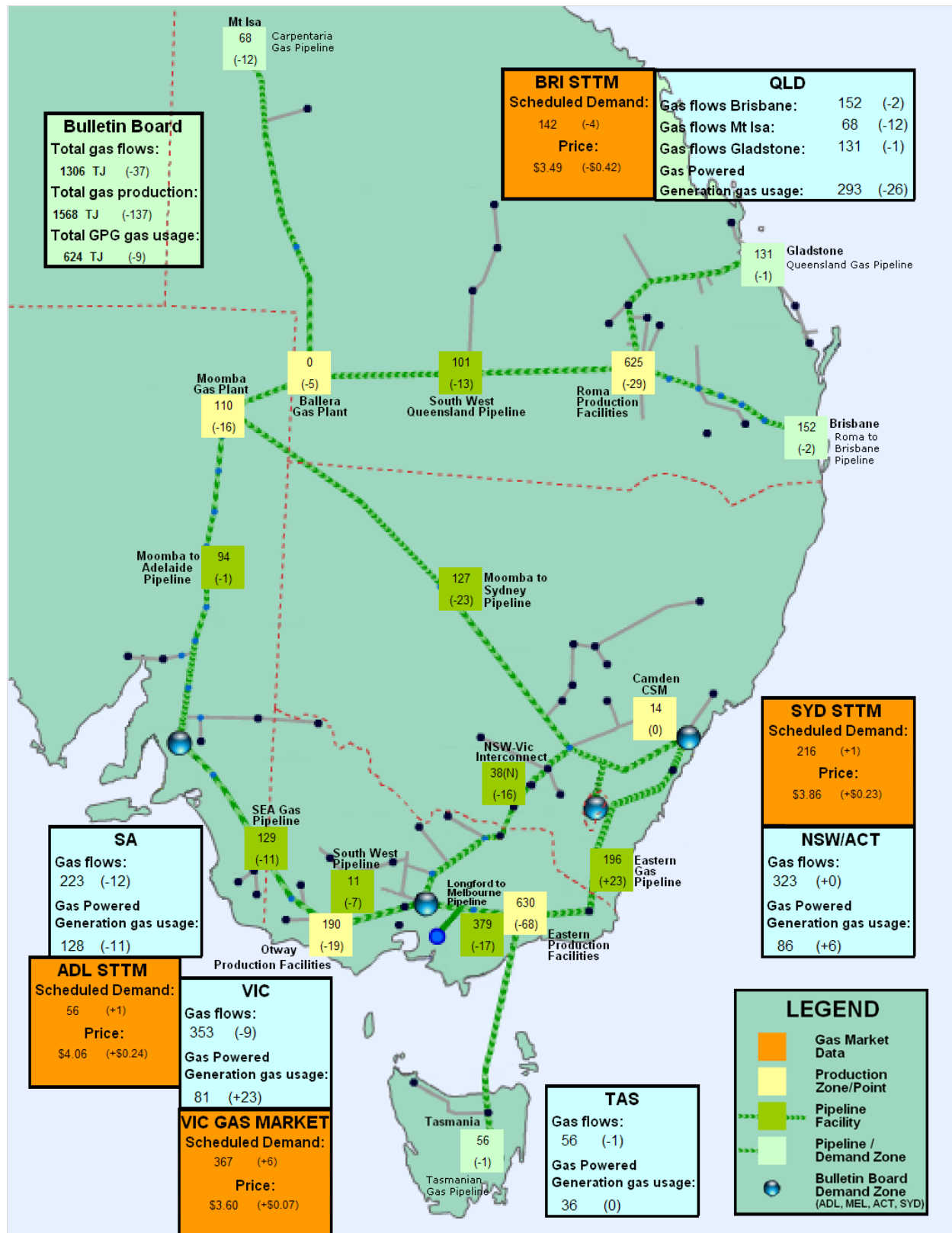
**Figure 4.4 (b): Service payments and commodity payments/charges (\$000)**



## 5 National Gas Bulletin Board

Figure 5.1 shows average daily actual flows for the current week in the aqua boxes<sup>8</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>8</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  
GPG volumes include gas usage that may not show up on Bulletin Board pipeline flows.

## 6 Gas Supply Hub

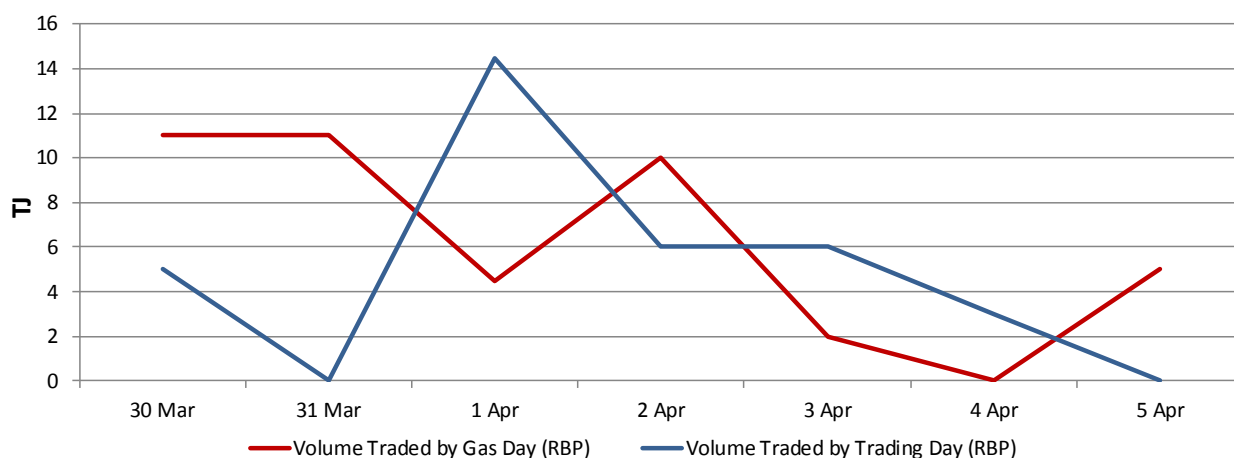
The Gas Supply Hub (GSH) was established for the trading of gas at Wallumbilla because it is located in close proximity to significant gas supply sources and demand locations and is a major transit point between Queensland and the gas markets on Australia's east coast. The GSH is a voluntary market<sup>9</sup> for the supply of gas traded between separate participants, with products listed for sale and purchase at delivery points on three major connecting pipelines at Wallumbilla – the Queensland Gas Pipeline (QGP), the South West Queensland Pipeline (SWQP) and the Roma to Brisbane Pipeline (RBP). There are separate products for each pipeline (each pipeline is considered a trading location, and each has a number of delivery points) and delivery period (daily, day-ahead, balance-of-day and weekly).

From 30 March up to 5 April there were 13 trades, a similar number to the previous week:

- *Trading Location:* All trades in the hub have been on the Roma to Brisbane Pipeline (RBP)
- *Products Traded:* Traded products were mostly day-ahead trades (at least one of each product was traded this week)
- *Prices and Volumes:* 52.5 TJ was traded with a total value of around \$194 000 this week
  - The volume weighted price for these trades was around \$3.69/GJ
  - Daily volume weighted prices for traded products ranged between \$0.39-\$4/GJ
- *Transaction types:* There were also a number of off-market trades submitted this week

Figure 6 shows volumes traded each gas day and trading day from 30 March to 5 April.

**Figure 6.1: Volume Traded (by Gas Day and by Trading Day)**



<sup>9</sup> Market trade is facilitated through an electronic trading platform, with standardised terms and conditions and a market settlement facility for the short-term trading of physical gas and related products. The market is designed to complement existing bilateral gas supply arrangements and gas transportation agreements, through the placement of anonymous offers (to sell) or bids (to buy) at specified quantity and price increments, which are automatically matched on the exchange to form transactions.