

26 February – 3 March 2012

## Weekly summary

Average MOS service payments for the Sydney hub this week were close to \$150,000 a day because the MOS service payment in Sydney on Tuesday was close to \$1 Million dollars. This high MOS payment event on Tuesday is discussed further below under significant market events.

## Long term statistics and explanatory material

A range of longer term data covering gas prices, flows and demand will be available on the AER's website shortly.<sup>1</sup> Also available on the AER's website at [www.aer.gov.au/content/index.phtml/itemId/729309](http://www.aer.gov.au/content/index.phtml/itemId/729309) 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
26 Feb - 03 Mar 2012	3.34	3.41	3.56	3.29
% change from previous week	0	13	4	0
11-12 financial YTD	2.97	3.04	3.66	3.14
% change from previous financial YTD	48	20	31	-

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)
26 Feb - 03 Mar 2012	3.34	-	357
% change from previous week	0	-	3
11-12 financial YTD	2.97	-	551
% change from previous financial YTD	48	-	-9

\*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> This data will be published and updated on the AER website.

<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)
26 Feb - 03 Mar 2012	3.41	3.59	147.59	199	205
% change from previous week	13	3	1367	3	4
11-12 financial YTD	3.04	2.80	42.29	227	223
% change from previous financial YTD	20	-56	80	-2	-6

**Figure 4: Adelaide STTM**

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
26 Feb - 03 Mar 2012	3.56	3.56	14.82	57	56
% change from previous week	4	5	-45	20	25
11-12 financial YTD	3.66	3.62	11.52	66	66
% change from previous financial YTD	31	23	6	10	6

**Figure 5: Brisbane STTM**

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
26 Feb - 03 Mar 2012	3.29	3.11	16.49	147	143
% change from previous week	0	-1	530	-1	-1
From market start (1 Dec)	3.14	2.76	12.07	153	149

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

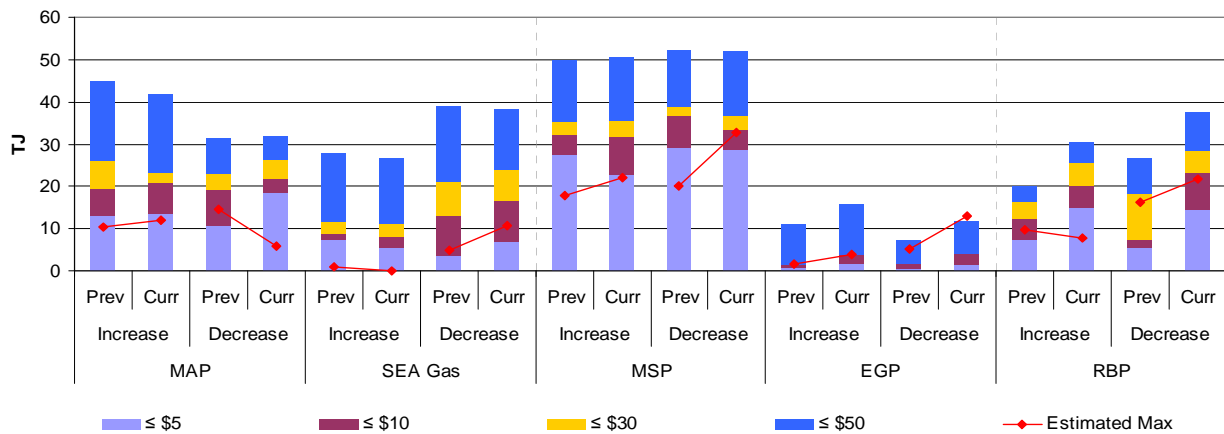
Section 5 provides analysis on production and pipeline flows on the National Gas Bulletin Board, as well as gas-powered generation volumes in each state.

### Significant Market Events or Issues this week

On Monday 27 February, there was an unusually large Market Operator Service (MOS) allocation on the Eastern Gas Pipeline (EGP) at the Sydney STTM hub. The majority of MOS is usually provided to the Sydney hub via park and loan services on the pressure controlled Moomba to Sydney (MSP). On this day, however, EGP provided 19.7 TJ of MOS increase services, at the same time as the MSP provided 17.5 TJ of MOS decrease service. As shown in figure 6 below:

- Increase MOS amounts on the EGP were more than thirteen times higher than the AEMO estimated maximum daily MOS increase of 1.5 TJ.
- Most increase MOS offers on the EGP were priced close to the \$50/GJ price cap.

**Figure 6: MOS\* offers/estimates – previous period\*\* and current period\*\*\***



\* The AER published this figure along with a figure showing MOS volumes distributed between participants in its previous gas weekly.

\*\* (Prev) MOS period from December 2011 to February 2012 including the 27 February 2012 gas day.

\*\*\* (Curr) MOS period refers to the period March to May 2012

As a result of large MOS amounts and high MOS offer prices, a large MOS service payment of around \$924 000 was made for EGP MOS increase services. Part of this EGP MOS payment was for 8.8 TJ of overrun MOS because total MOS offers (10.9 TJ) were less than the MOS services delivered (19.7 TJ).<sup>3</sup> In contrast, MOS service payments on the MSP were comparatively low at around \$48 000 as no overrun MOS was required and the 17.5 TJ of decrease MOS could be met by offers under \$5/GJ.

Jemena EGP has provided the AER with preliminary information on this event. According to Jemena, data system problems caused an increase in operational flows on the EGP. As a result, EGP delivered 116.5 TJ into Horsley Park. This was 19.9 TJ more than nominations of 96.6 TJ for the day and led to the large increase MOS amount. Jemena EGP has informed the AER that it has since introduced measures to prevent a reoccurrence.

Following further enquiries and analysis, the AER intends to publish a more detailed price event report for this gas day. This report will examine market outcomes on the day, including high MOS payments and counteracting MOS.

Section 3 of the detailed report (below) shows that on a number of days this week there was counteracting MOS at the Adelaide hub (see figure 3.4). AEMO is holding a forum on Friday 16 March to discuss counteracting MOS.

There were 2 instances of missing flow data on the Bulletin Board this week for Queensland Gas Company's Berwyndale production facility in Roma.

<sup>3</sup> The high level of MOS delivered on the EGP saw total requirement exceed the increase offer stack, leading to overrun MOS for the first time in the STTM. In this instance, the overrun MOS was paid for at the highest offer price of \$49.99/GJ, totalling around \$441 000 out of the \$972 000 of MOS service payments for the gas day.

# Detailed Market Analysis

26 February – 3 March 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

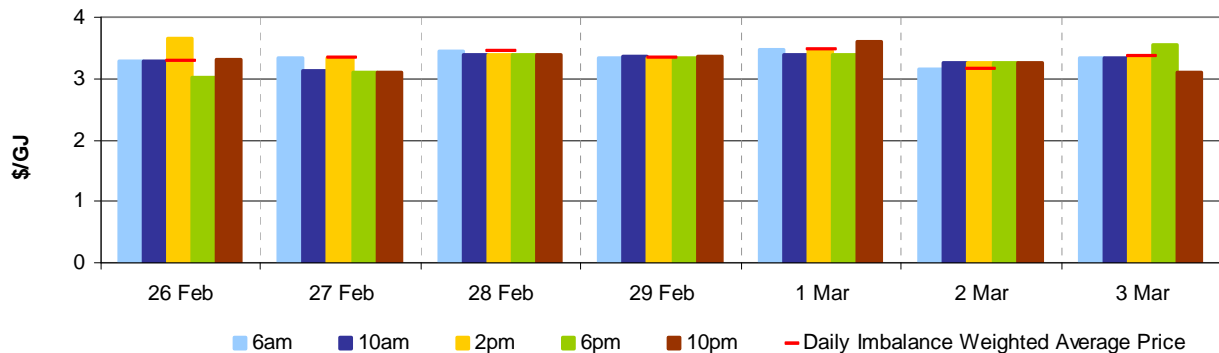
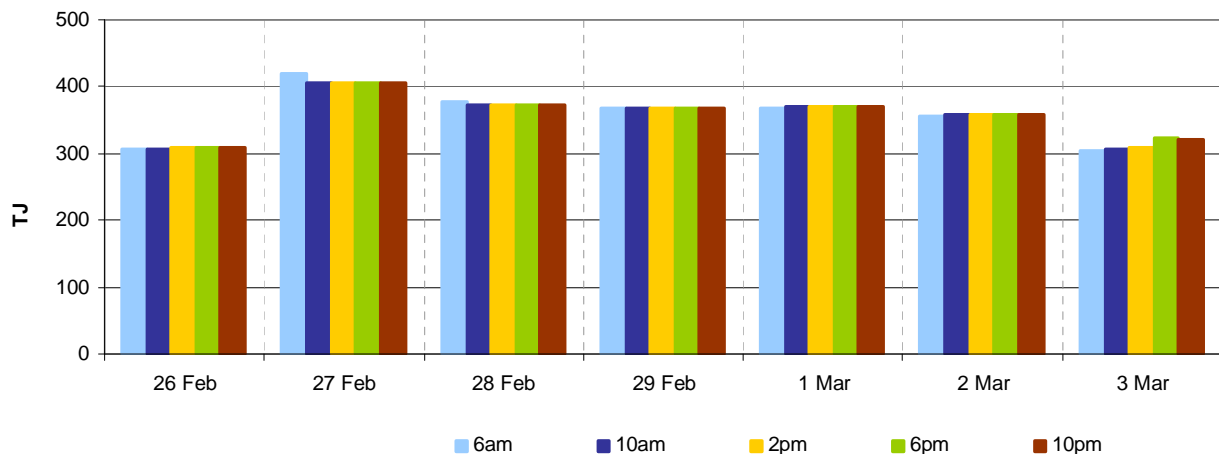


Figure 1.2: Demand forecasts

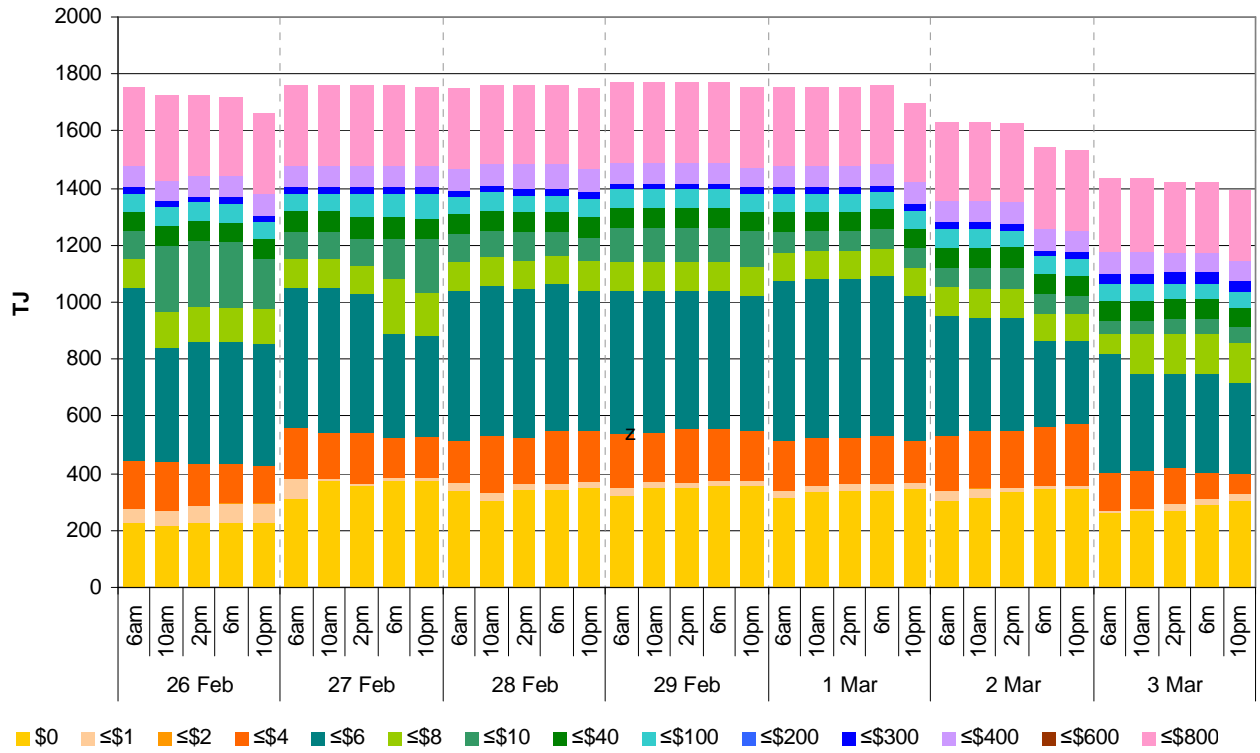


<sup>4</sup> These are Market Participants' aggregate demand forecasts adjusted for any override as applied by AEMO from time to time. The main driver of the amount of gas scheduled on a gas day are these forecasts which are forecasts that cannot respond to price or in other words is gas delivered regardless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

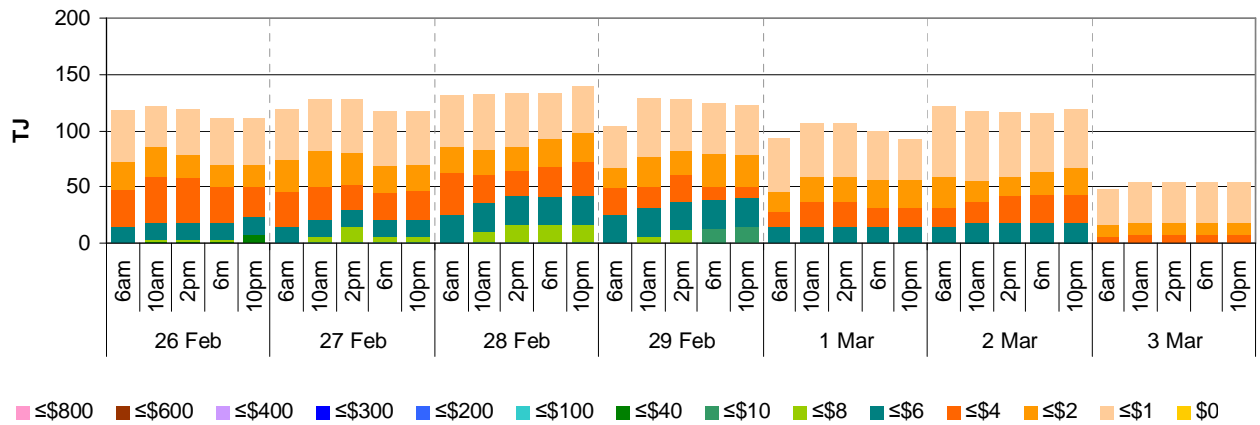
<sup>5</sup> The price might also be affected by transmission or production (contractual) constraints limiting how much gas can be delivered from a locale or System Injection Point (SIP) from time to time.

<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.

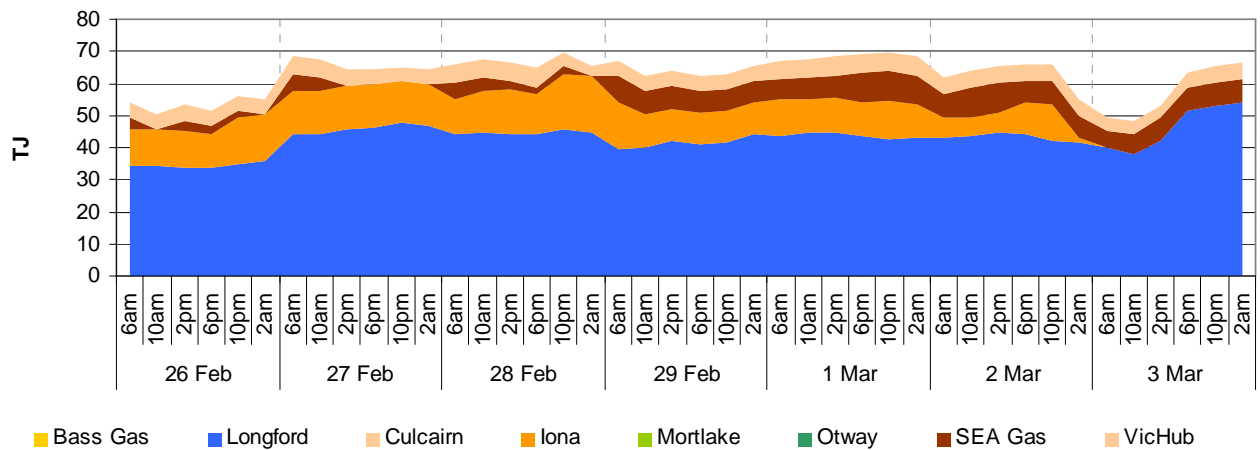
**Figure 1.3: Injection bids by price bands**



**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).

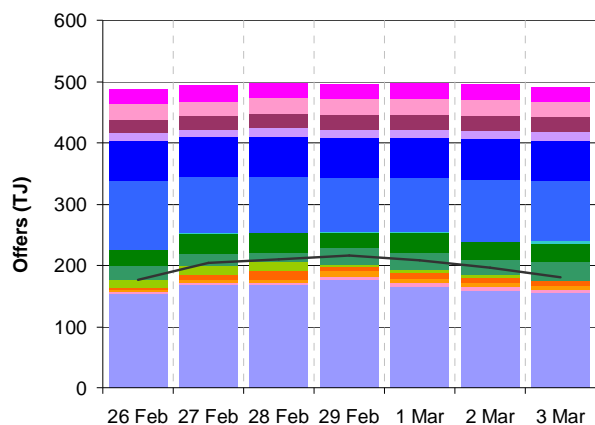
Market Operator Service balancing gas (MOS) payments arise because the amount of gas nominated on pipelines for delivery on a gas day will either exceed or fall short, by some amount, of the amount of gas consumed in the hub. In such circumstances, MOS payments are made to participants for providing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

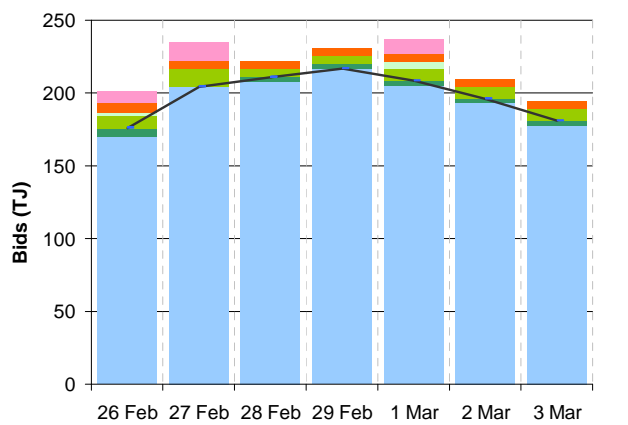
**Figure 2.1: SYD STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	2.80	3.10	3.44	3.67	3.67	3.67	3.55
Ex ante quantity (TJ)	176	204	211	217	208	196	181
Ex post price (\$/GJ)	3.10	3.44	3.55	3.75	3.67	3.98	3.67
Ex Post quantity (TJ)	177	209	212	222	214	210	192

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



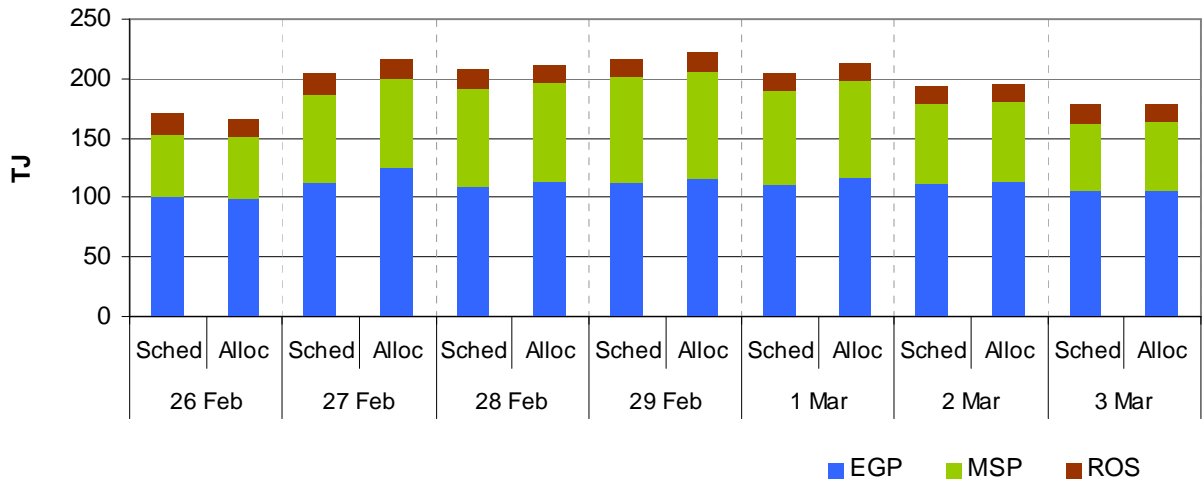
**Figure 2.2(b): Daily hub bids in price bands (\$/GJ)**



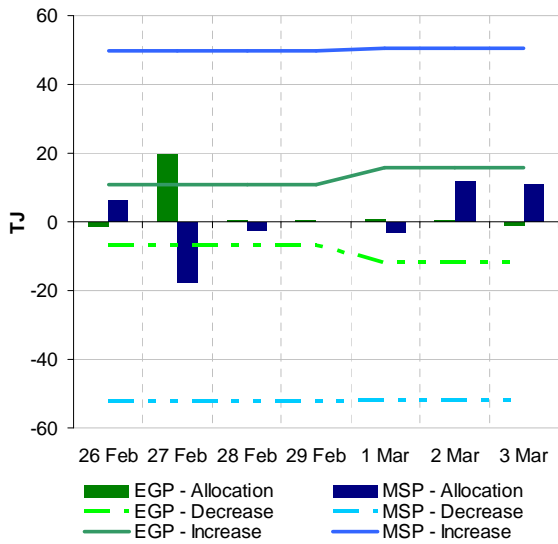
<sup>7</sup> The main driver of the amount of gas scheduled on a gas day is the 'price-taker' bid, which is forecast hub demand that cannot respond to price and which must be delivered, regardless of the price.

<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.

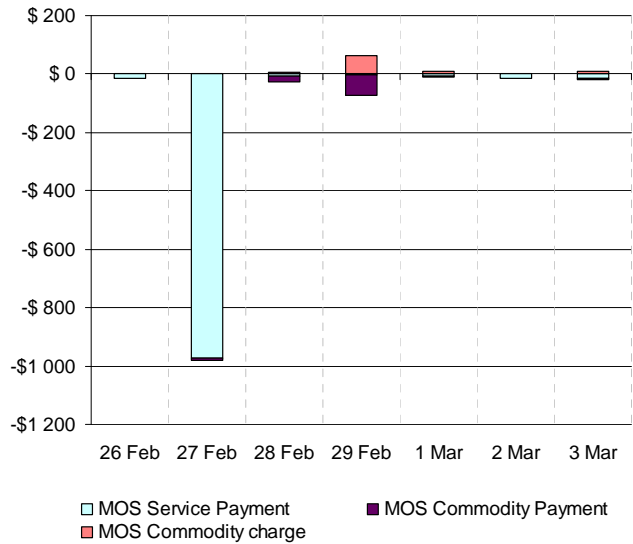
**Figure 2.3: SYD STTM ex ante scheduled and allocated gas volumes by STTM facility**



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



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



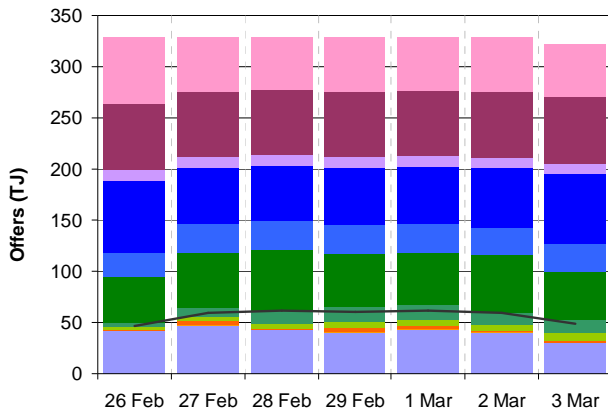
### 3 Adelaide STTM

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.

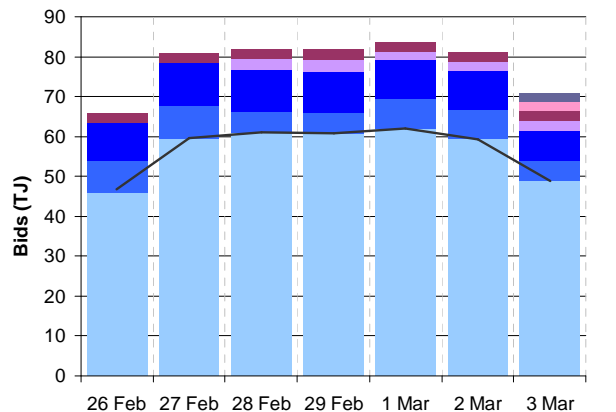
**Figure 3.1: ADL STTM Daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	3.40	3.50	3.72	3.50	3.50	3.75	3.55
Ex ante quantity (TJ)	47	60	61	61	62	59	49
Ex post price (\$/GJ)	3.40	3.40	3.72	3.72	3.48	3.72	3.51
Ex Post quantity (TJ)	47	57	60	64	61	57	47

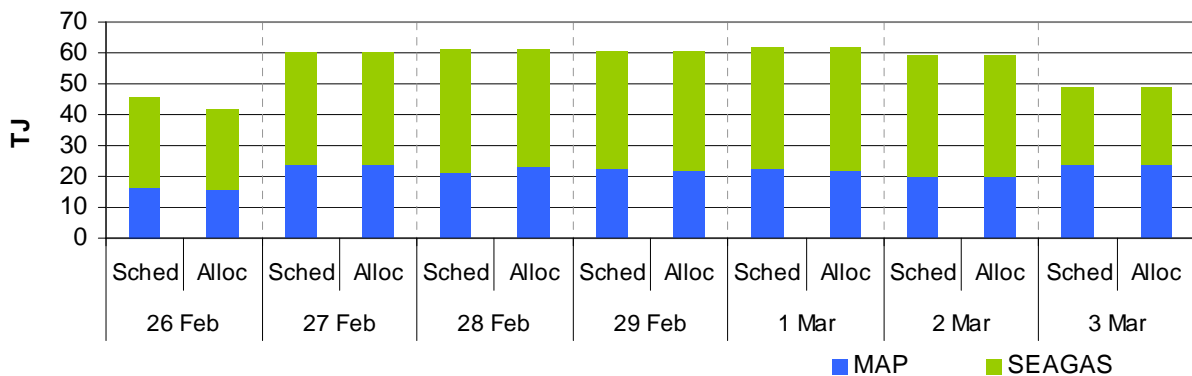
**Figure 3.2 (a) Daily hub offers in price bands (\$/GJ)**



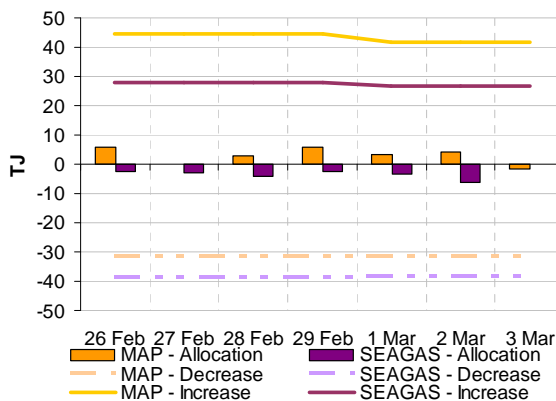
**Figure 3.2(b): Daily hub bids in price bands (\$/GJ)**



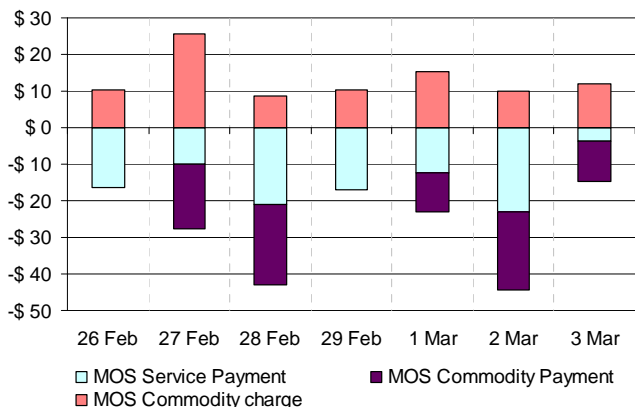
**Figure 3.3: ADL STTM ex ante scheduled and allocated gas volumes by STTM facility**



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



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





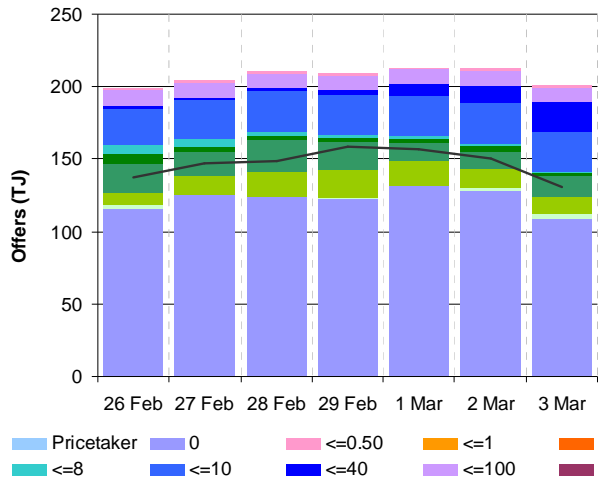
## 4 Brisbane STTM

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.

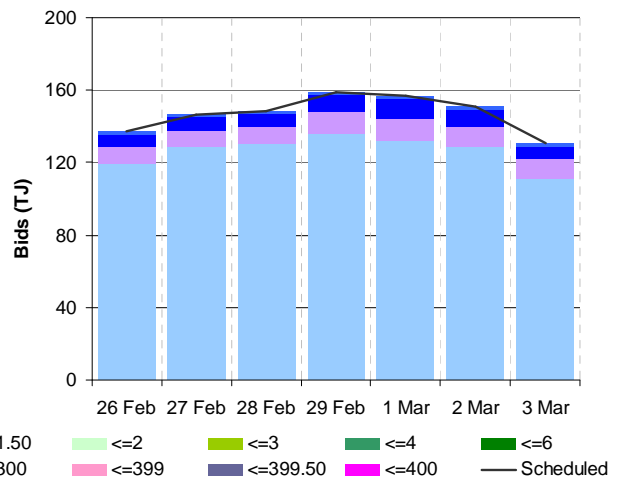
**Figure 4.1: BRI STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	3.29	3.28	3.27	3.30	3.30	3.30	3.27
Ex ante quantity (TJ)	137	147	148	159	157	151	130
Ex post price (\$/GJ)	3.27	3.30	3.29	3.30	3.27	2.55	2.79
Ex Post quantity (TJ)	130	148	154	157	151	137	122

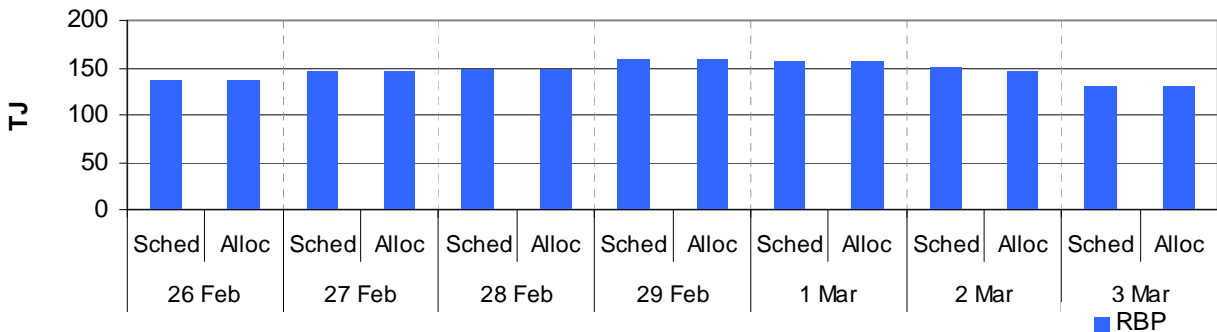
**Figure 4.2 (a) Daily hub offers in price bands (\$/GJ)**



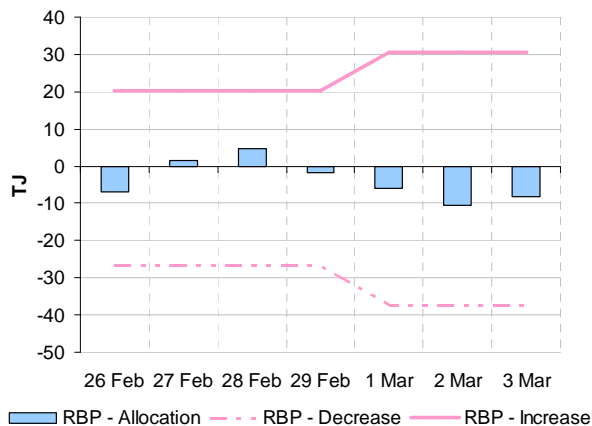
**Figure 4.2(b): Daily hub bids in price bands (\$/GJ)**



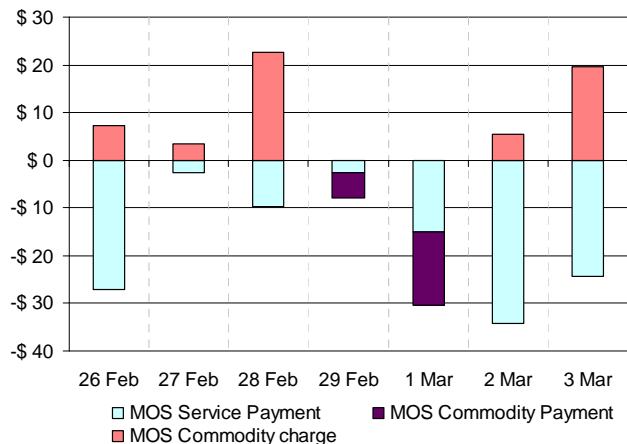
**Figure 4.3: BRI STTM ex ante scheduled and allocated gas volumes by STTM facility**



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



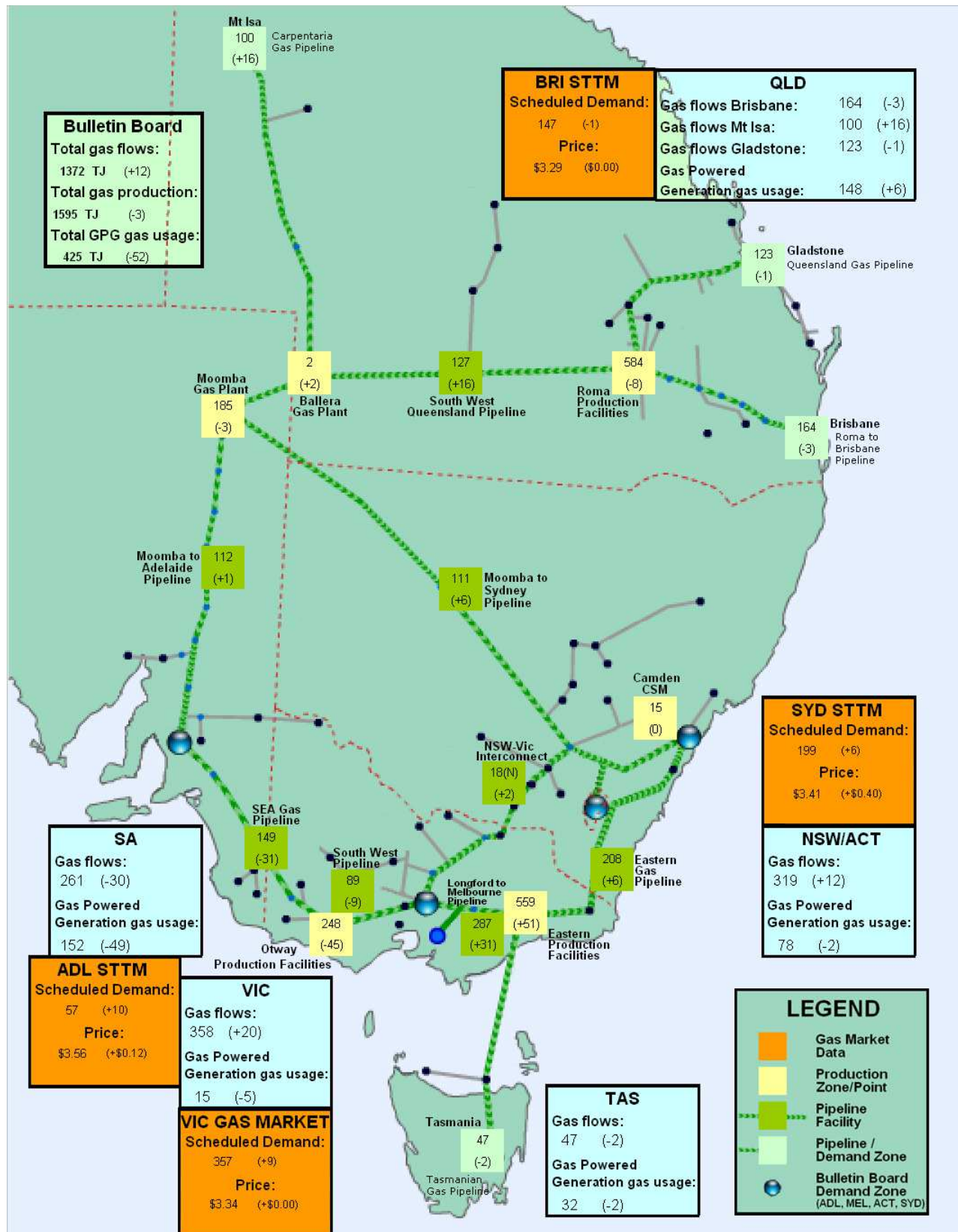
**Figure 4.4 (b): Service payments and commodity payments/charges (\$000)**



## 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