

10–16 February 2013

## Weekly summary

Prices in all hubs were consistent with previous week prices.

## 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 publish 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
10 Feb - 16 Feb 2013	4.60	4.79	4.80	5.76
% change from previous week	-4	0	0	3
12-13 financial YTD	4.51	5.24	5.15	5.66
% change from previous financial YTD	53	73	40	82

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)
10 Feb - 16 Feb 2013	4.60	-	339
% change from previous week	-4	-	2
12-13 financial YTD	4.51	-	567
% change from previous financial YTD	53	-	0

\* Note: 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.

<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)
10 Feb - 16 Feb 2013	4.79	4.44	12.68	218	206
% change from previous week	0	-5	106	2	-2
12-13 financial YTD	5.24	5.55	11.05	242	242
% change from previous financial YTD	73	101	-73	5	7

**Figure 4: Adelaide STTM**

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
10 Feb - 16 Feb 2013	4.80	4.80	3.56	52	52
% change from previous week	0	0	-68	3	5
12-13 financial YTD	5.15	5.07	8.71	70	68
% change from previous financial YTD	40	40	-16	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)
10 Feb - 16 Feb 2013	5.76	5.50	1.44	160	150
% change from previous week	3	-23	-51	8	0
12-13 financial YTD	5.66	5.57	2.62	146	144

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 11 February in the Brisbane hub, the ex ante price reached \$9.25/GJ. This price was significantly higher than the D-3 and D-2 provisional schedules, which were \$5.71/GJ and \$5.78/GJ respectively. Following the high ex ante price, the ex post price dropped to \$3.71/GJ.

Compared to the D-2 provisional schedule, gas scheduled for the gas day (ex ante) was approximately 5 TJ higher at 167 TJ, with the price being set at \$9.25/GJ by an AGL offer. One factor influencing the higher ex ante price was that for the ex ante schedule, Stanwell<sup>2</sup> increased its ex ante bids by 4.7 TJ, however only increased its offers by 3.2 TJ. Whilst the volume 'rebid' by Stanwell for the ex ante schedule appears small, gas prices in the Brisbane hub are particularly sensitive to even small changes in bids and offers. This sensitivity is influenced by low volumes of gas being offered in between \$5 and 8/GJ.

On the day, significantly less gas was required in the hub, which caused the ex post price to drop to \$3.71/GJ. The ex ante schedule forecast gas demand to be around 167 TJ, however the ex post

<sup>2</sup> Stanwell operates gas fired electricity generator Swanbank E which is connected to the Brisbane distribution network.

price was calculated on a total quantity delivered of just under 124 TJ (i.e. there was an imbalance of around 43 TJ). National Electricity Market data indicates that Stanwell's Swanbank E gas power generator had been forecast the day ahead to be operating between 150–350 MW. The Swanbank E unit experienced technical difficulties which saw the unit offline for most of the day. This contributed to the large imbalance.

# Detailed Market Analysis

10–16 February 2013

## 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

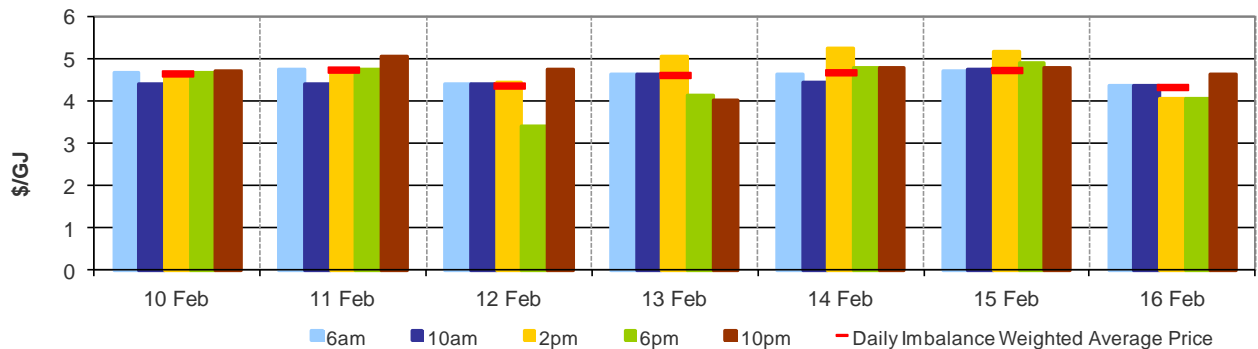
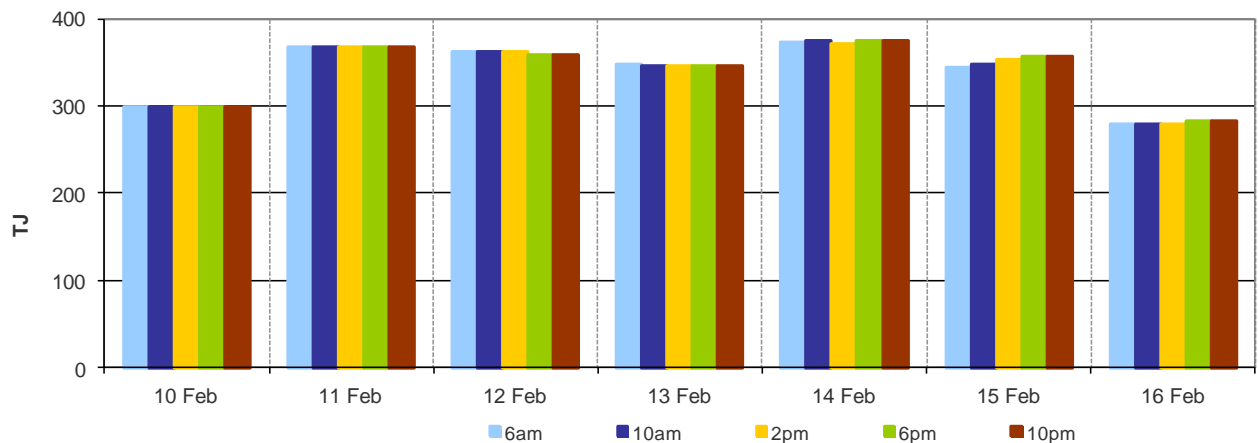


Figure 1.2: Demand forecasts

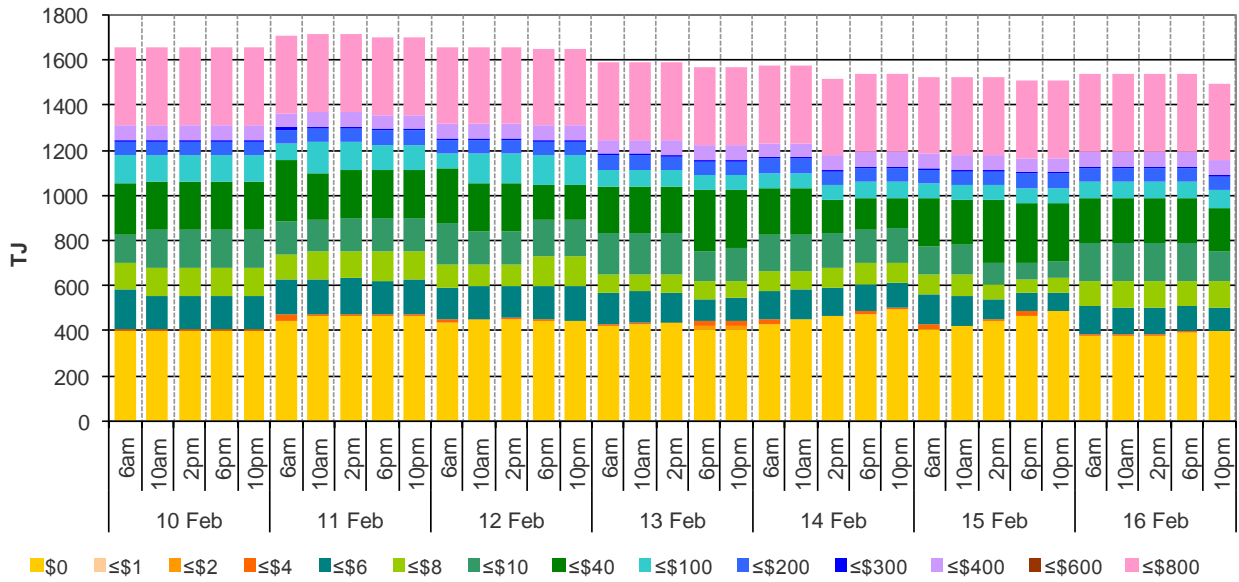


<sup>3</sup> These are Market Participants' aggregate demand forecasts adjusted for any override as applied by AEMO from time to time. The main driver of the amount of gas scheduled on a gas day are these forecasts which are forecasts that cannot respond to price or in other words is gas delivered regardless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

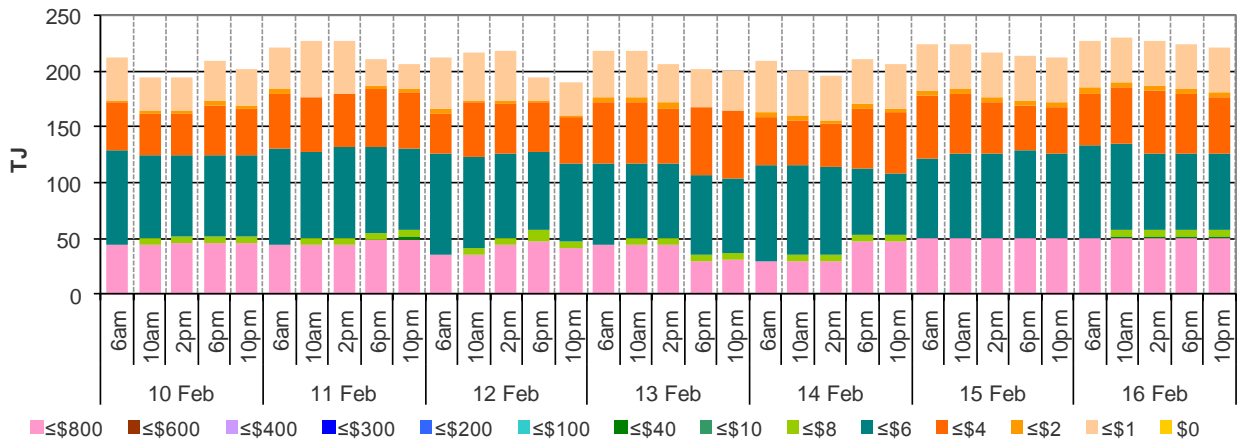
<sup>4</sup> The price might also be affected by transmission or production (contractual) constraints limiting how much gas can be delivered from a locale or System Injection Point (SIP) from time to time.

<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.

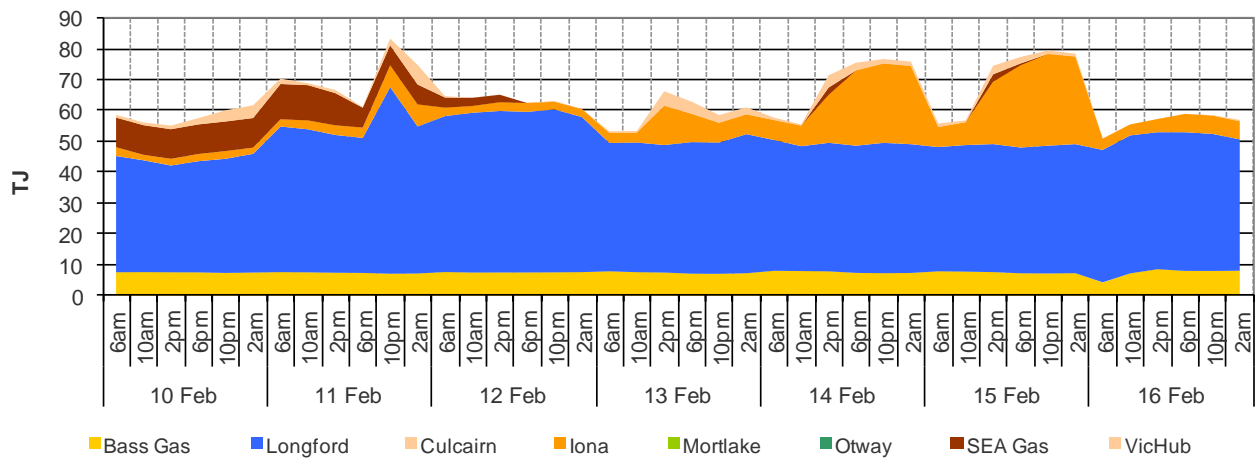
**Figure 1.3: Injection bids by price bands**



**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).

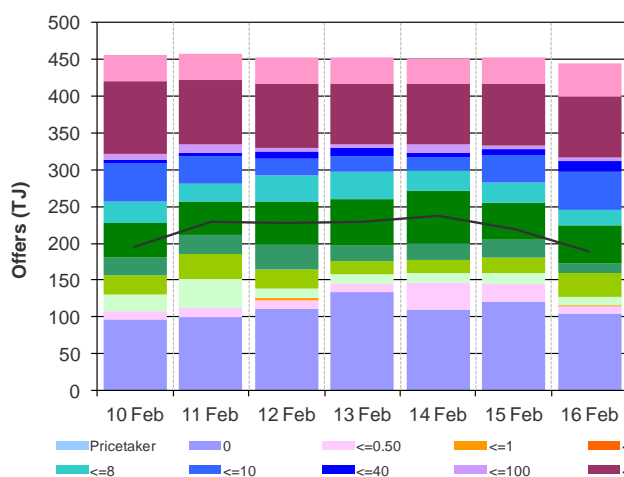
Market Operator Service balancing gas (MOS) payments arise because the amount of gas nominated on pipelines for delivery on a gas day will either exceed or fall short, by some amount, of the amount of gas consumed in the hub. In such circumstances, MOS payments are made to participants for providing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

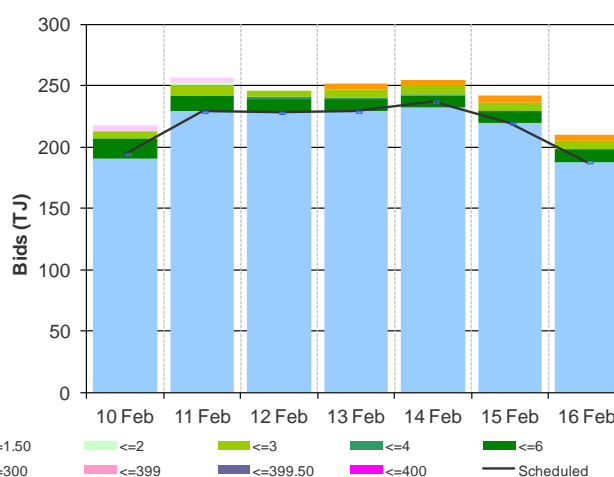
**Figure 2.1: SYD STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	4.80	4.95	4.91	4.90	4.26	4.79	4.89
Ex ante quantity (TJ)	195	229	228	229	237	220	188
Ex post price (\$/GJ)	4.26	4.41	4.41	4.26	4.16	4.79	4.79
Ex Post quantity (TJ)	187	220	217	212	222	210	177

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



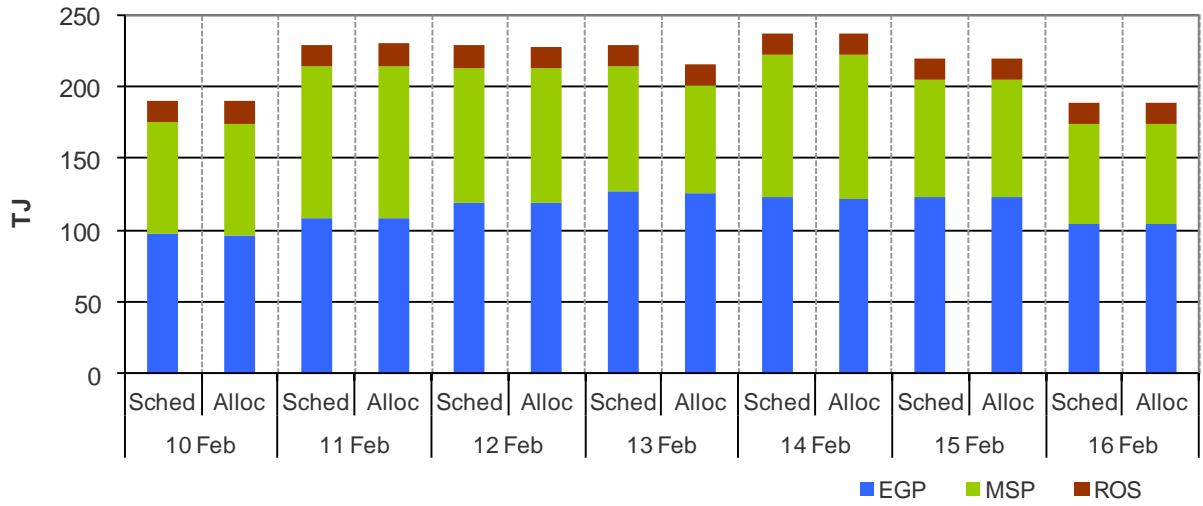
**Figure 2.2(b): Daily hub bids in price bands (\$/GJ)**



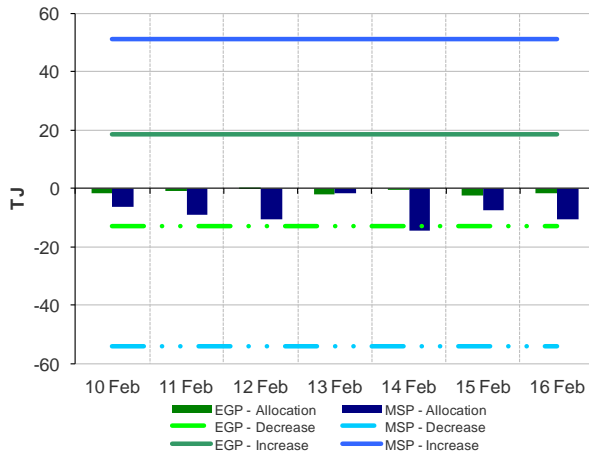
<sup>6</sup> The main driver of the amount of gas scheduled on a gas day is the 'price-taker' bid, which is forecast hub demand that cannot respond to price and which must be delivered, regardless of the price.

<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.

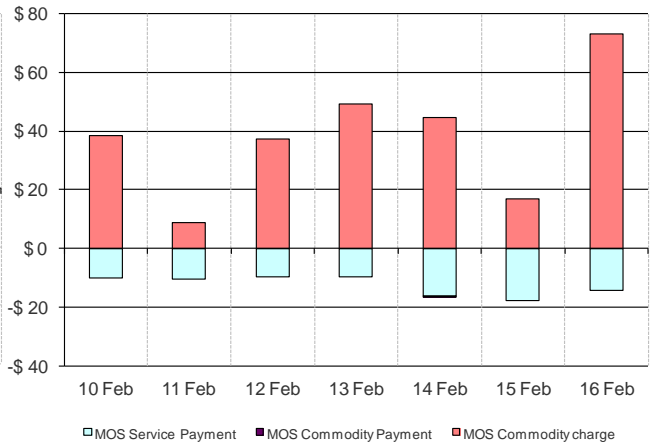
**Figure 2.3: SYD STTM ex ante scheduled and allocated gas volumes by STTM facility**



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



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



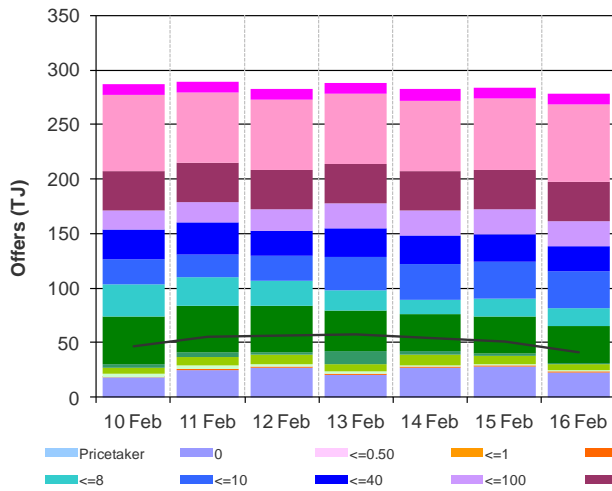
### 3 Adelaide STTM

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.

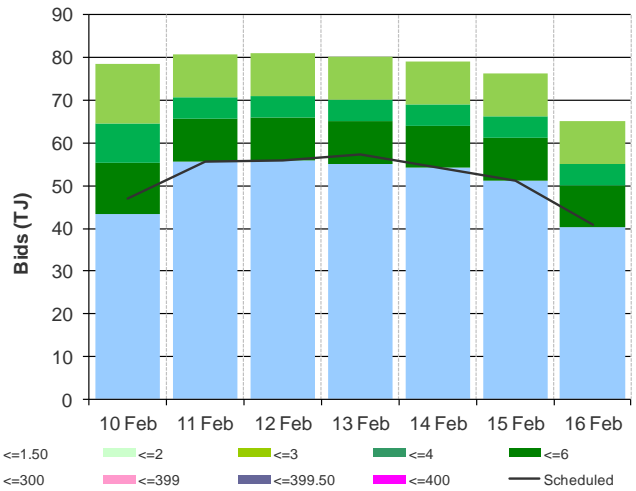
**Figure 3.1: ADL STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	4.79	4.80	4.80	4.79	4.80	4.80	4.79
Ex ante quantity (TJ)	47	56	56	57	54	51	41
Ex post price (\$/GJ)	4.79	4.80	4.80	4.79	4.80	4.79	4.80
Ex Post quantity (TJ)	48	55	57	57	54	50	41

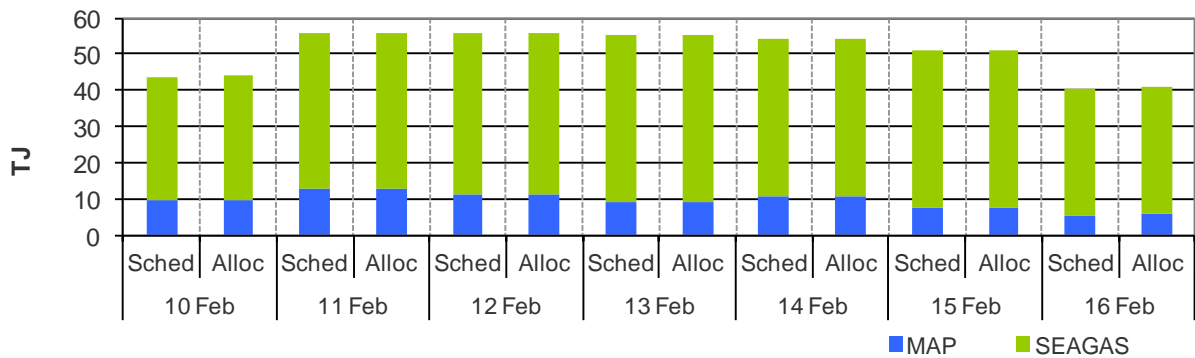
**Figure 3.2 (a) Daily hub offers in price bands (\$/GJ)**



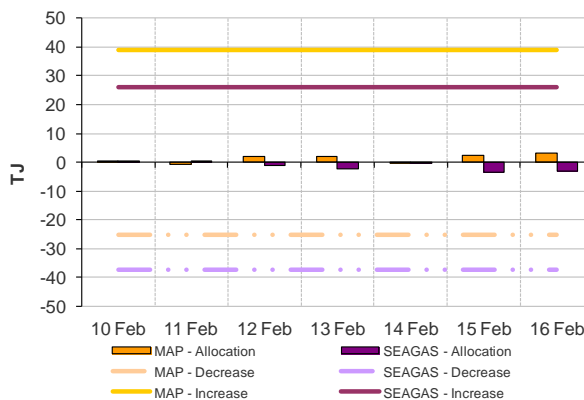
**Figure 3.2(b): Daily hub bids in price bands (\$/GJ)**



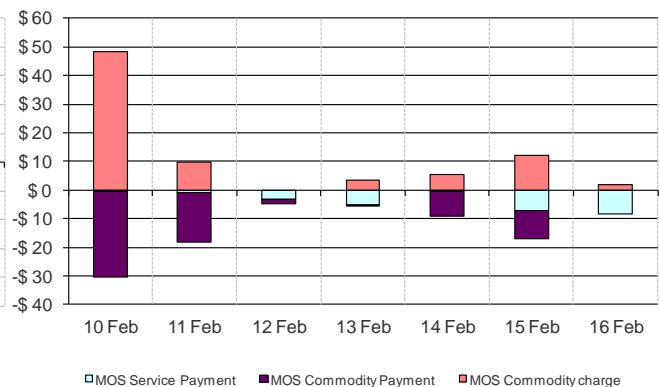
**Figure 3.3: ADL STTM ex ante scheduled and allocated gas volumes by STTM facility**



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



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





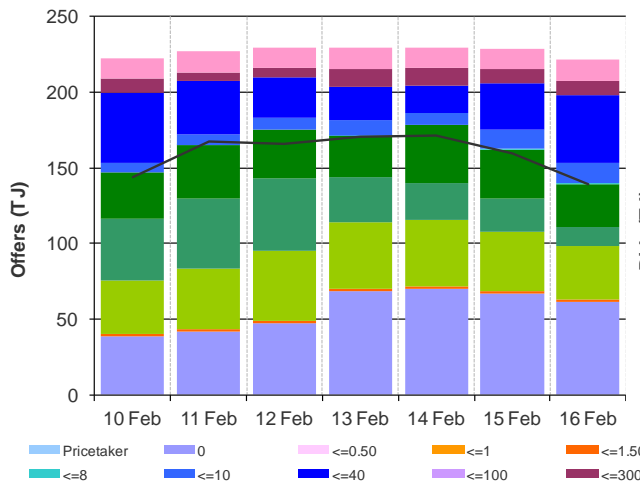
## 4 Brisbane STTM

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.

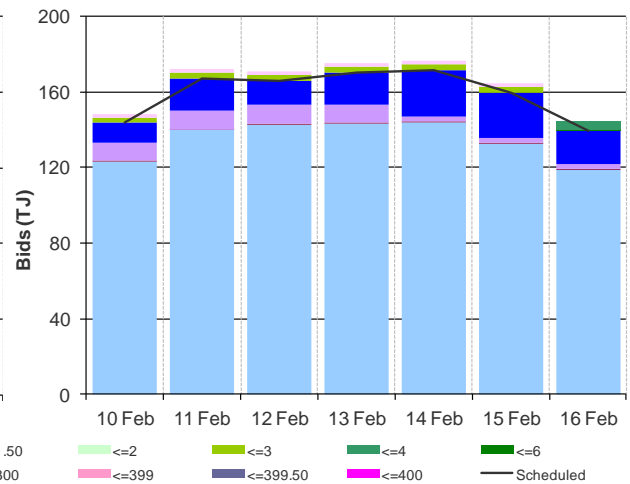
**Figure 4.1: BRI STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	5.06	9.25	4.42	5.03	4.55	5.03	7.01
Ex ante quantity (TJ)	144	167	166	171	171	160	139
Ex post price (\$/GJ)	4.30	3.71	4.42	8.29	4.55	5.03	8.20
Ex Post quantity (TJ)	123	124	165	173	168	159	142

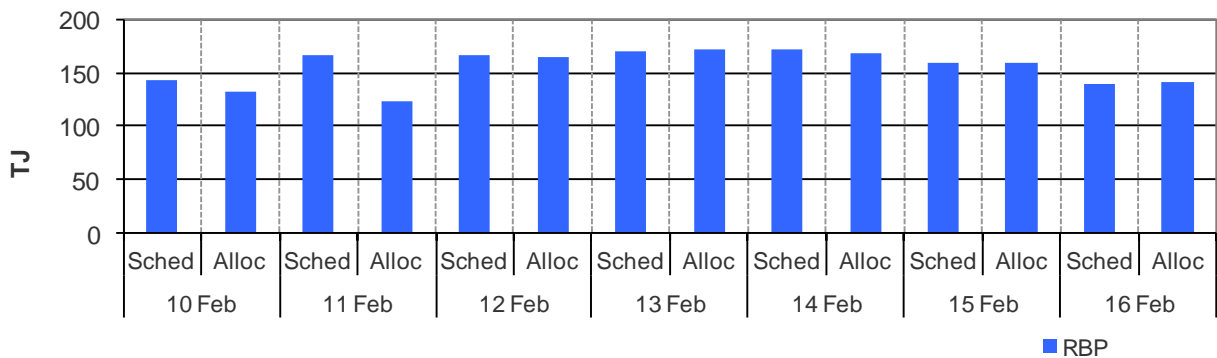
**Figure 4.2 (a) Daily hub offers in price bands (\$/GJ)**



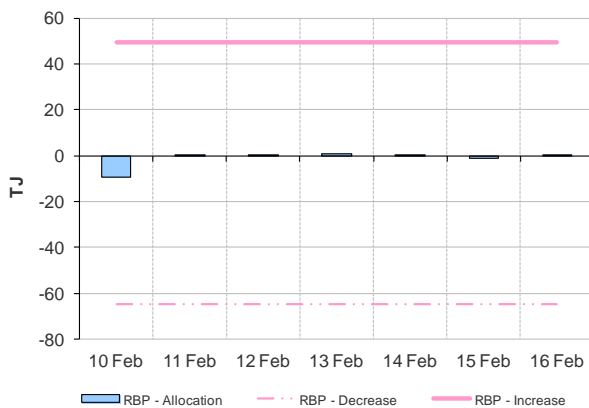
**Figure 4.2(b): Daily hub bids in price bands (\$/GJ)**



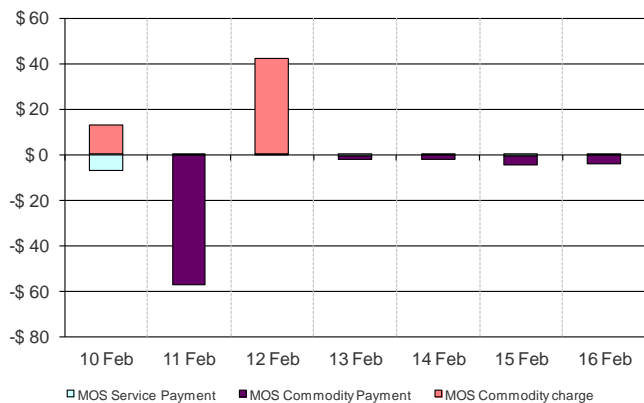
**Figure 4.3: BRI STTM ex ante scheduled and allocated gas volumes by STTM facility**



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



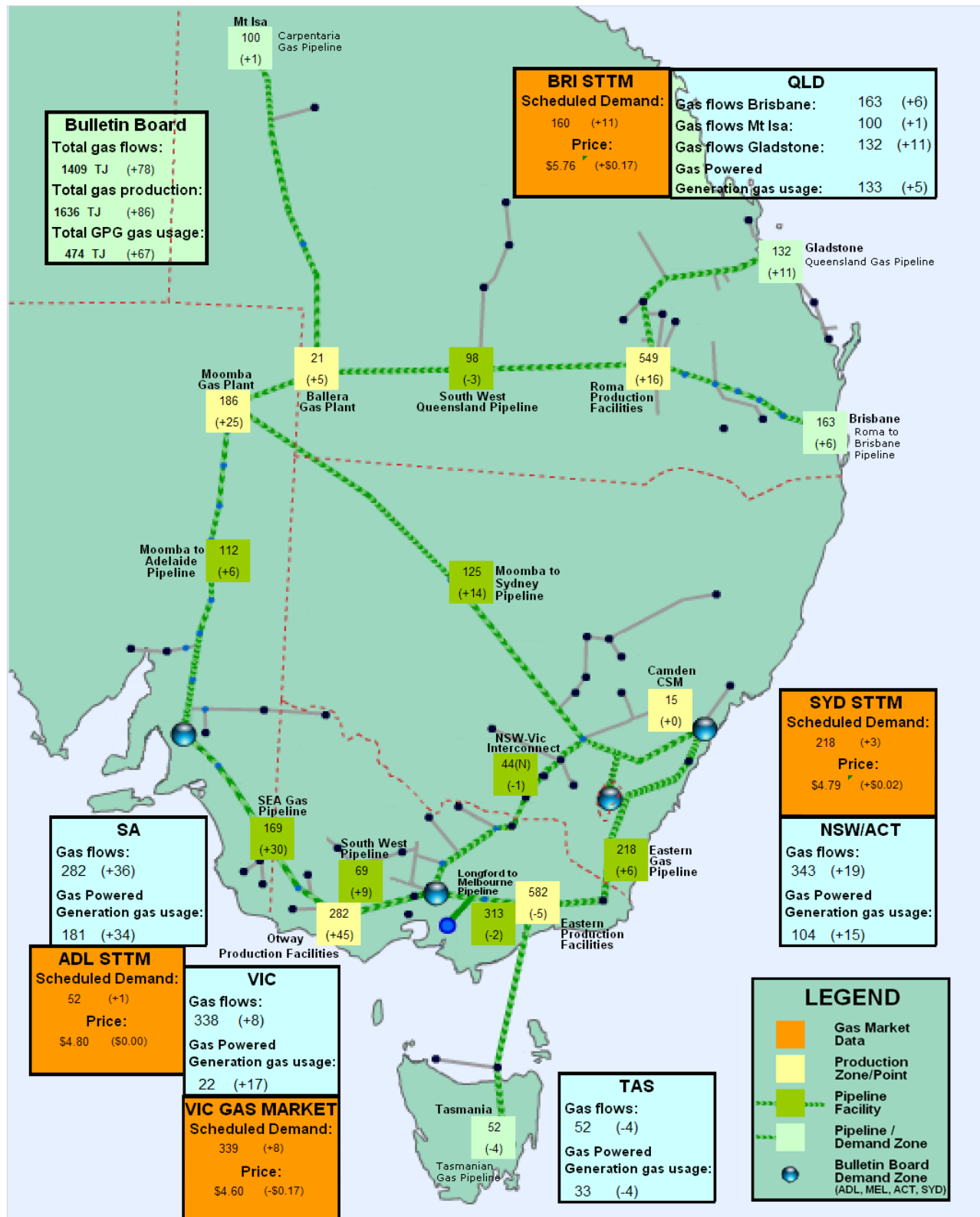
**Figure 4.4 (b): Service payments and commodity payments/charges (\$000)**



## 5 National Gas Bulletin Board

Figure 5.1 shows average daily actual flows for the current week in the aqua boxes<sup>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 do not include gas usage for a number of power stations whose gas consumption is not part of Bulletin Board pipeline flows e.g. Darling Downs and Condamine in Queensland.