

19 – 25 October 2014

## Weekly summary

With cheap LNG ramp gas continuing to flow south from Queensland, a number of low gas prices were observed in each of the markets. Sydney prices fell 68 per cent from the previous week to \$1.09/GJ. The average price in Victoria also decreased significantly to \$2.86/GJ this week, but prices remained relatively stable in Adelaide.

In the Wallumbilla Gas Supply Hub (GSH) new record low prices occurred this week on the Roma Brisbane Pipeline, with prices falling to \$0.20/GJ over two trades. Lower GSH prices were reflected in lower average prices in Brisbane. From 20 October the average price was \$0.48/GJ this week, a 41 per cent decrease from the previous week's average (excluding the high prices set in Brisbane on 17 and 19 October due to constrained capacity).

## 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
19 Oct - 25 Oct 2014	2.86	1.09	3.05	0.98
% change from previous week	-23	-68	-2	-80
14-15 financial YTD	3.58	3.57	3.67	2.26
% change from previous financial YTD	-11	-18	-24	-60

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

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

**Figure 2: Victorian gas market**

	Price (\$/GJ)	Ancillary payments (\$000)*	BOD forecast demand quantity (TJ)
19 Oct - 25 Oct 2014	2.86	-	364
% change from previous week	-23	-	-34
14-15 financial YTD	3.58	-	723
% change from previous financial YTD	-11	-	2

\* 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.

**Figure 3: Sydney STTM**

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
19 Oct - 25 Oct 2014	1.09	1.52	4.78	246	251
% change from previous week	-68	-56	-63	-1	-1
14-15 financial YTD	3.57	3.65	16.81	273	275
% change from previous financial YTD	-18	-12	32	3	6

**Figure 4: Adelaide STTM**

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
19 Oct - 25 Oct 2014	3.05	3.13	12.80	55	58
% change from previous week	-2	-4	24	2	1
14-15 financial YTD	3.67	3.62	14.28	77	77
% change from previous financial YTD	-24	-26	-27	-5	-6

**Figure 5: Brisbane STTM**

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
19 Oct - 25 Oct 2014	0.98	0.47	1.05	157	156
% change from previous week	-80	-20	-5	0	2
14-15 financial YTD	2.26	1.96	1.14	161	160
% change from previous financial YTD	-60	-66	-34	10	9

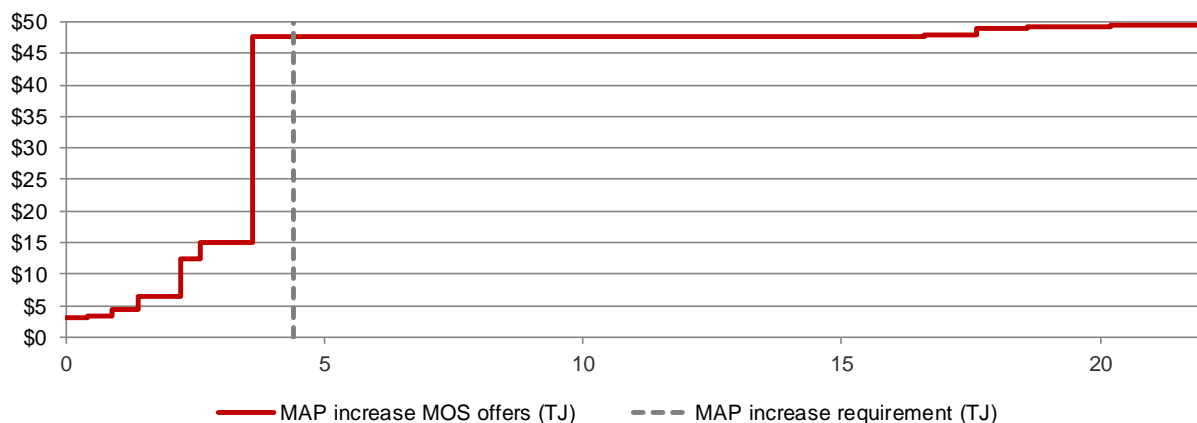
More detailed analysis of the STTM hubs is found in sections 2 to 4.

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 19 October in Adelaide, the cost of MOS reached over \$67 800 despite the requirement for increase MOS on MAP only reaching 4.385 TJ. This was due to low volumes of low priced offers for this service being offered in the market. The steep offer curve for October can be seen in figure 6 below against the volume scheduled on 19 October.

**Figure 6: Moomba to Adelaide Pipeline MOS increase offer curve for 19 October 2014**



On 19 October in Brisbane, there was a capacity constraint price (**CCP**) set at \$4/GJ with the price set by a Visy Paper bid submitted for the ex ante schedule.<sup>2</sup>

Sydney also saw a number of CCPs this week in provisional and ex ante schedules. On 20 and 23 October respectively, capacity prices of \$3.07/GJ and \$0.35/GJ were set on the MSP due to a capacity limit of just over 161 TJ. The days in between also saw some provisional capacity prices which did not progress through to ex ante schedules as capacity forecasts increased to around 175 TJ for 21 October and 186 TJ or higher for 22 October.

There were no capacity payment requirements for any of these days in Sydney and Brisbane, as only firm gas was scheduled on the RBP and MSP on the affected days.

<sup>2</sup> On this day capacity on RBP was reduced from 186 TJ to 121.3 TJ for compressor maintenance. The price was set by the intersection of the bid curve and the capacity constraint, with a vertical offer curve on the day (all supply cleared for the D-2 and ex ante schedules was priced at the floor).

# Detailed Market Figures

19 – 25 October 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

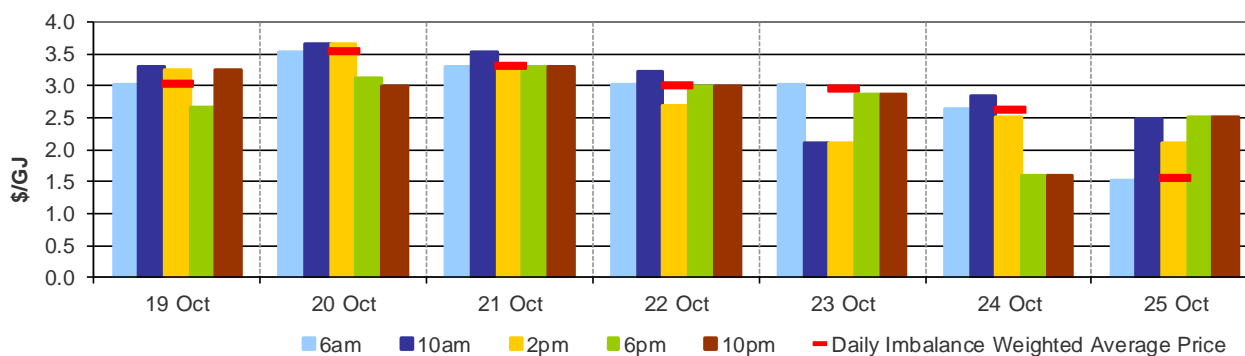
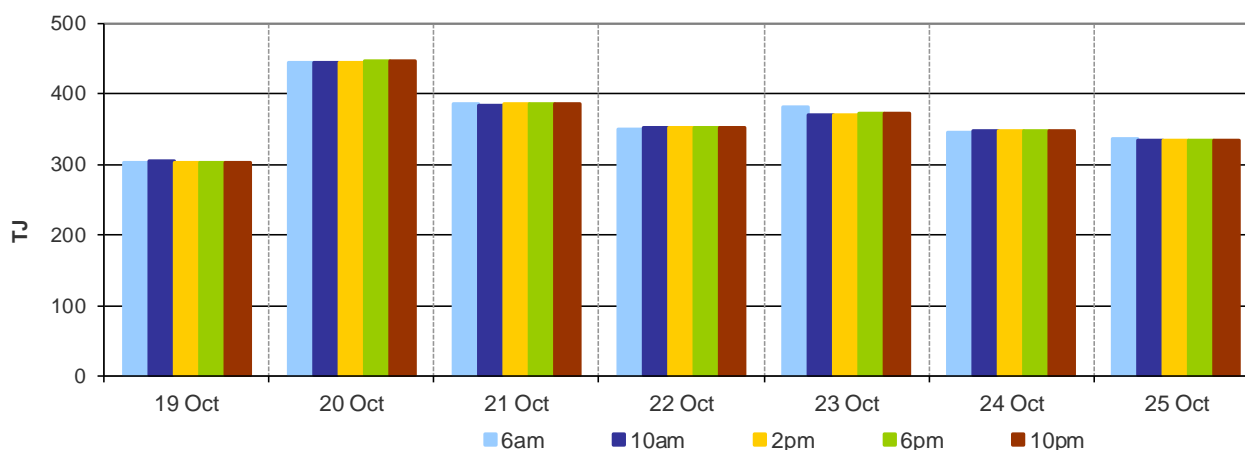


Figure 1.2: Demand forecasts

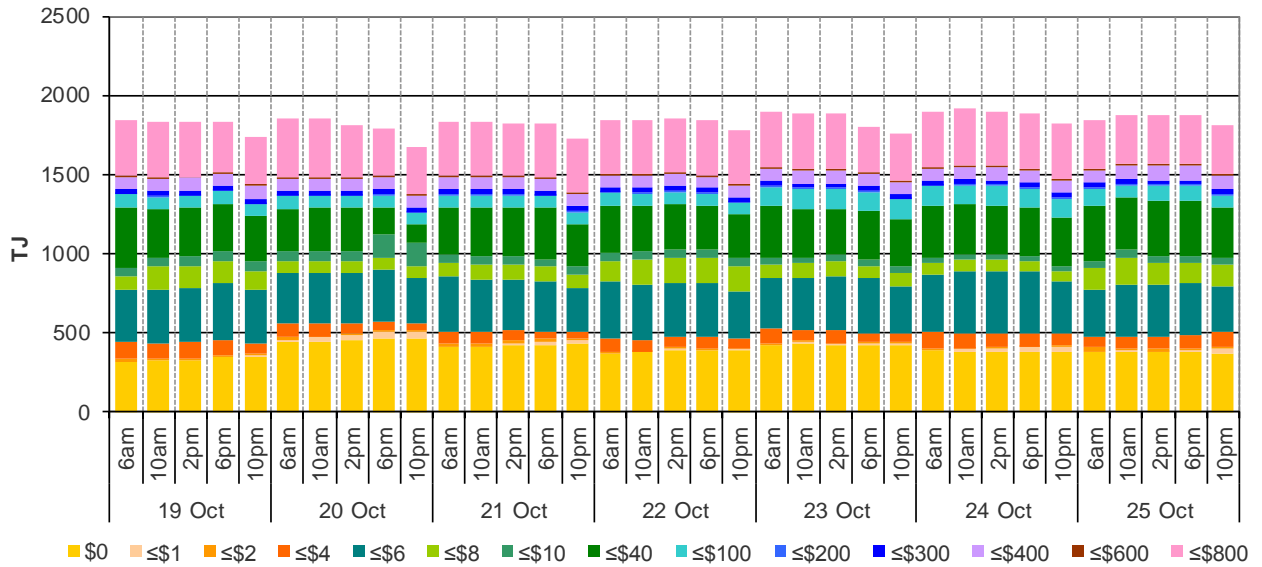


<sup>3</sup> These are Market Participants' aggregate demand forecasts adjusted for any override as applied by AEMO from time to time. The main driver of the amount of gas scheduled on a gas day are these forecasts which are forecasts that cannot respond to price or in other words is gas delivered regardless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

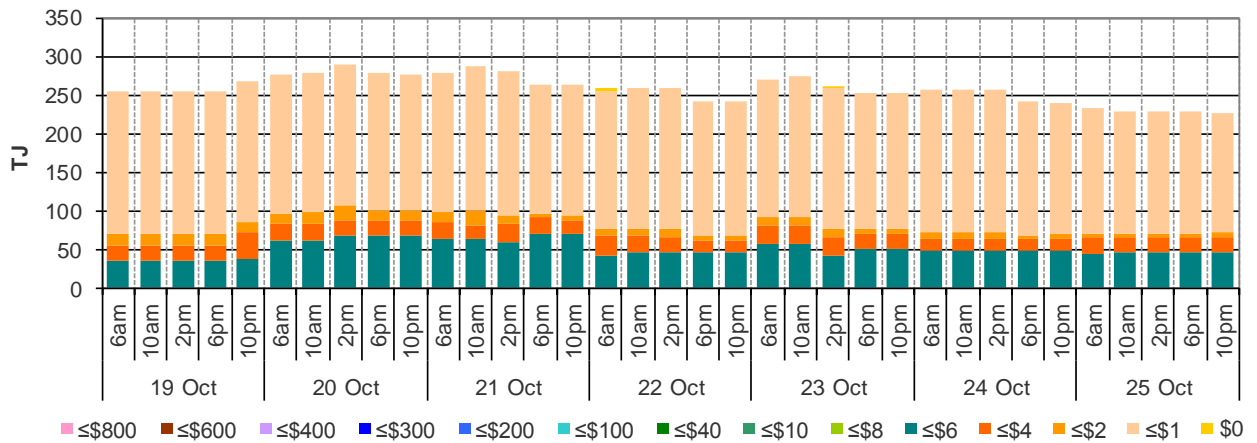
<sup>4</sup> The price might also be affected by transmission or production (contractual) constraints limiting how much gas can be delivered from a locale or System Injection Point (SIP) from time to time.

<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.

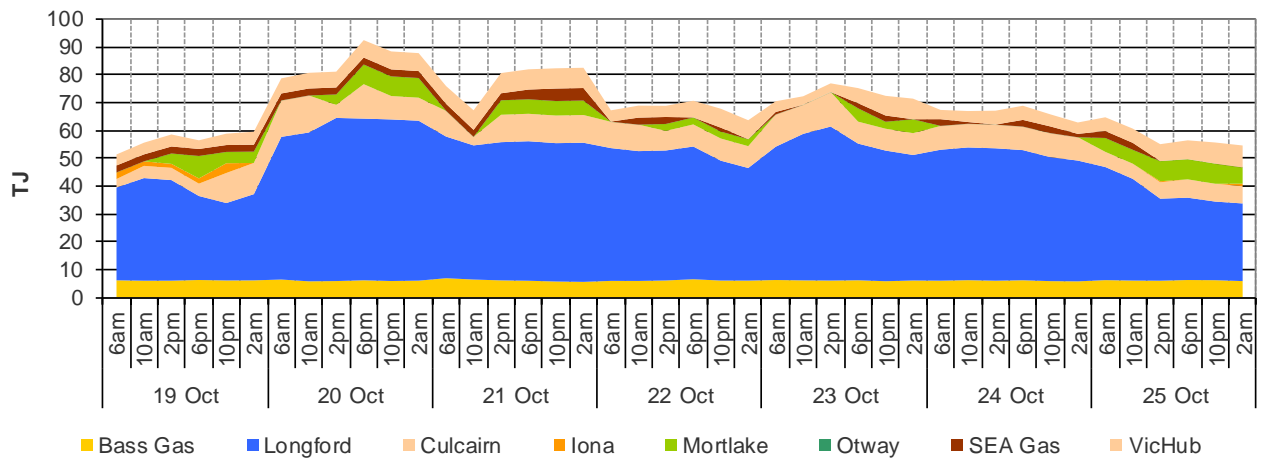
**Figure 1.3: Injection bids by price bands**



**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).

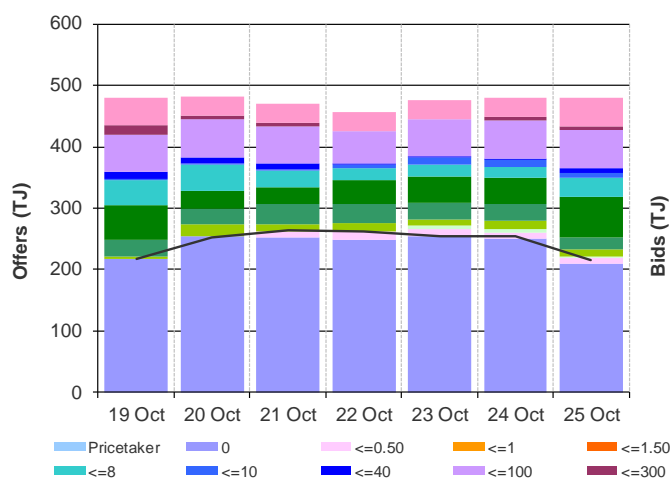
Market Operator Service balancing gas (MOS) payments arise because the amount of gas nominated on pipelines for delivery on a gas day will either exceed or fall short, by some amount, of the amount of gas consumed in the hub. In such circumstances, MOS payments are made to participants for providing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

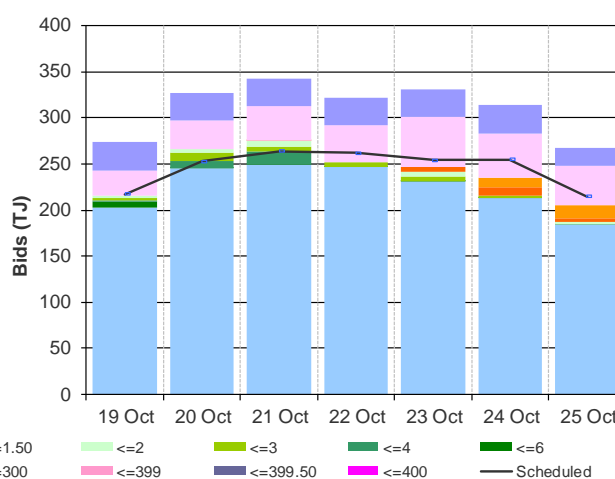
**Figure 2.1: SYD STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	0.25	3.07	2.97	0.26	0.35	0.35	0.38
Ex ante quantity (TJ)	217	253	264	262	254	255	215
Ex post price (\$/GJ)	2.52	3.75	3.01	0.26	0.35	0.35	0.40
Ex post quantity (TJ)	224	259	270	261	260	261	222

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



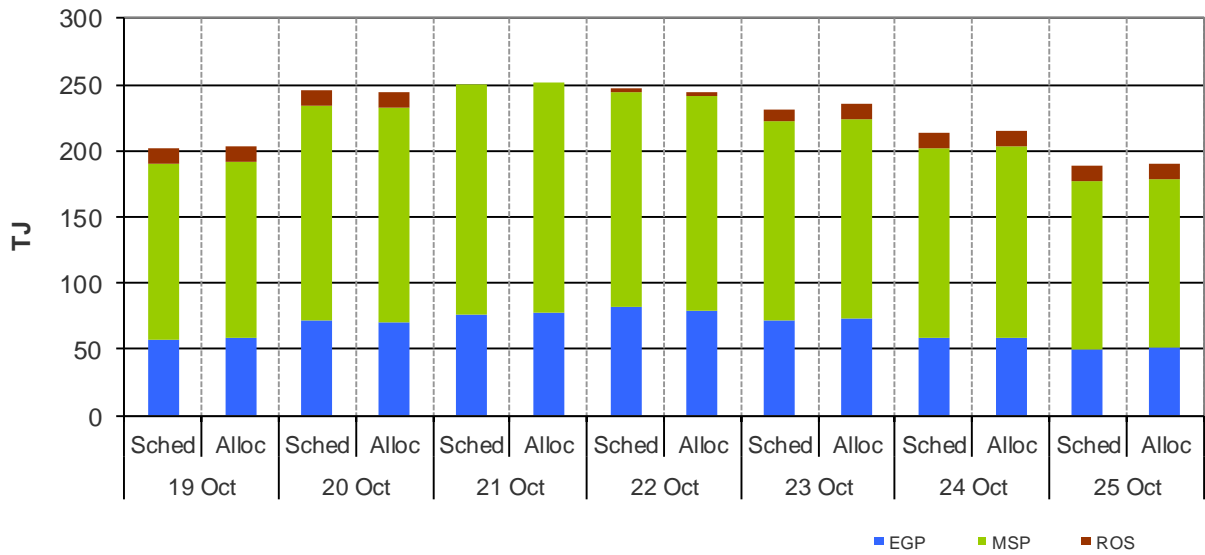
**Figure 2.2 (b): Daily hub bids in price bands (\$/GJ)**



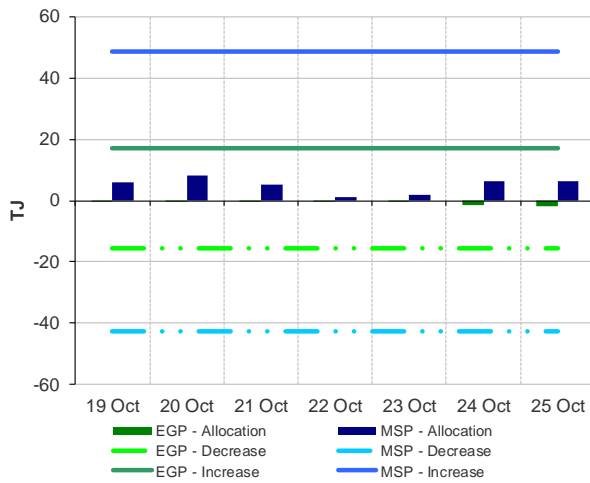
<sup>6</sup> The main driver of the amount of gas scheduled on a gas day is the ‘price-taker’ bid, which is forecast hub demand that cannot respond to price and which must be delivered, regardless of the price.

<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).

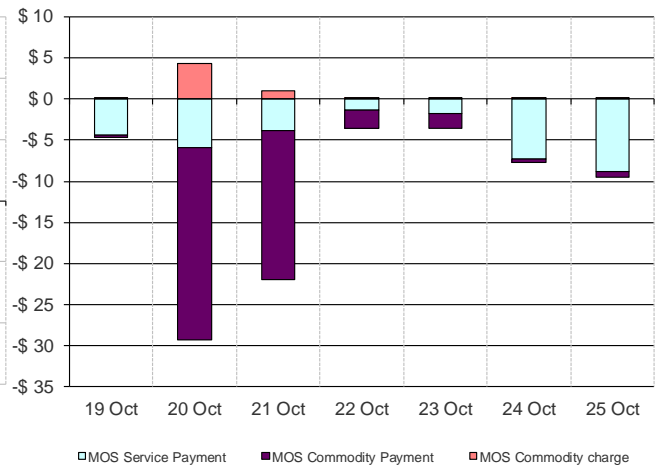
**Figure 2.3: SYD net scheduled and allocated gas volumes (excluding MOS) by STTM facility**



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



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



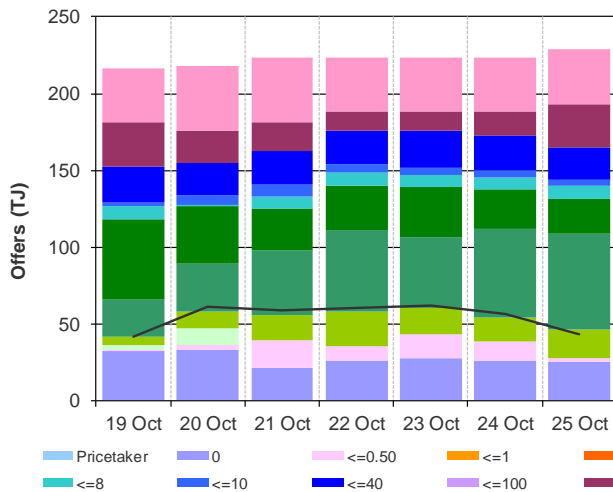
### 3 Adelaide STTM

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.

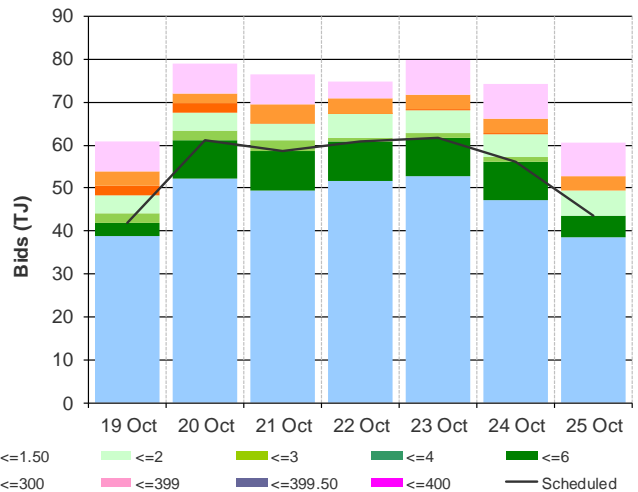
**Figure 3.1: ADL STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	2.91	3.13	3.13	3.10	3.09	3.06	2.96
Ex ante quantity (TJ)	42	61	59	61	62	56	43
Ex post price (\$/GJ)	3.30	3.25	3.13	3.13	3.09	3.06	2.98
Ex post quantity (TJ)	51	63	66	64	61	58	45

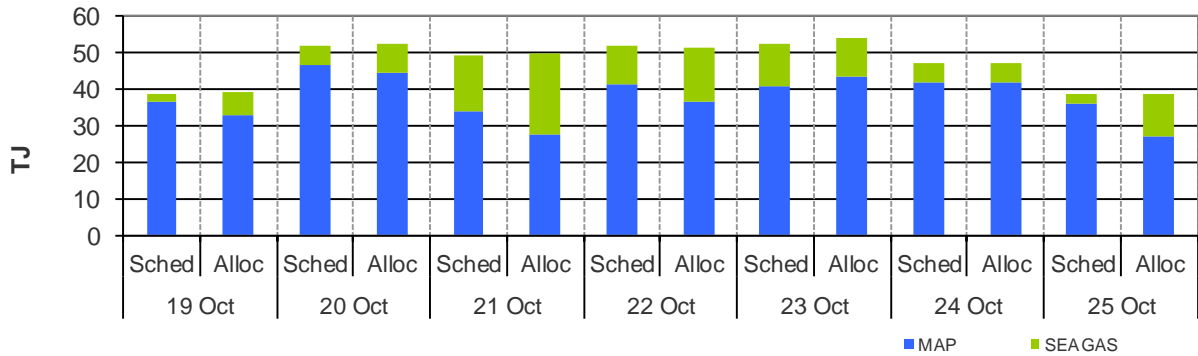
**Figure 3.2 (a): Daily hub offers in price bands (\$/GJ)**



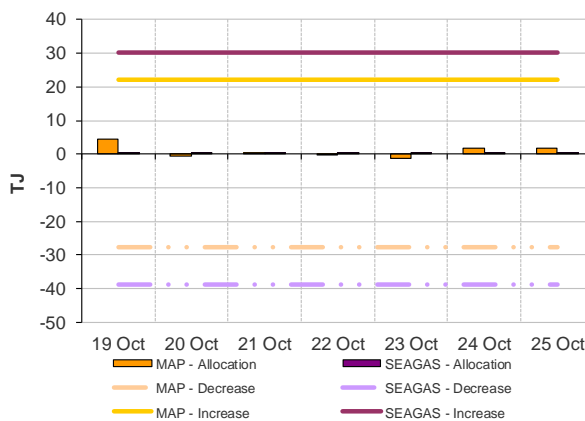
**Figure 3.2 (b): Daily hub bids in price bands (\$/GJ)**



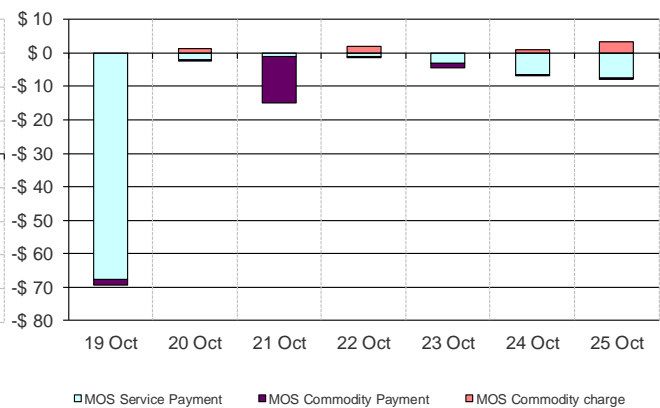
**Figure 3.3: ADL net scheduled and allocated gas volumes (excluding MOS) by STTM facility**



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



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





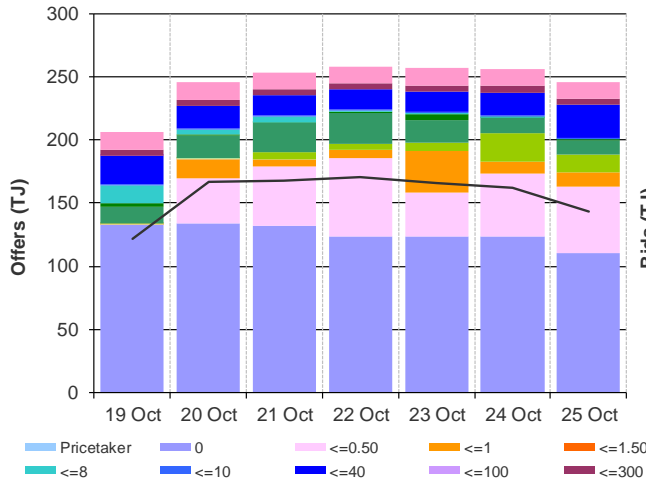
## 4 Brisbane STTM

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.

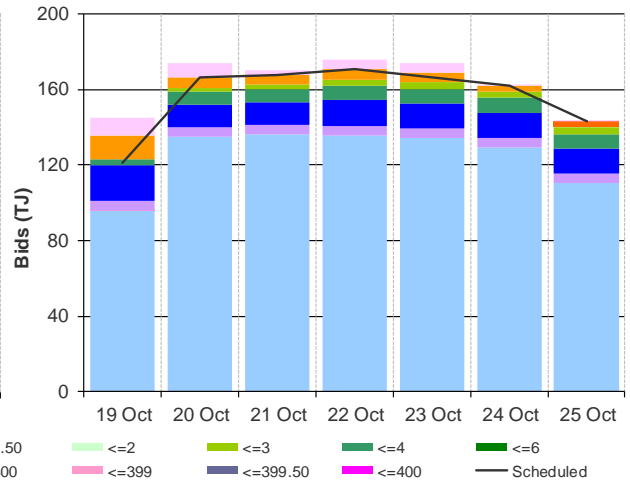
**Figure 4.1: BRI STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	4.00	0.41	0.40	0.50	0.56	0.50	0.50
Ex ante quantity (TJ)	121	167	167	171	166	162	143
Ex post price (\$/GJ)	0.51	0.40	0.40	0.50	0.50	0.50	0.50
Ex post quantity (TJ)	114	162	169	173	160	168	144

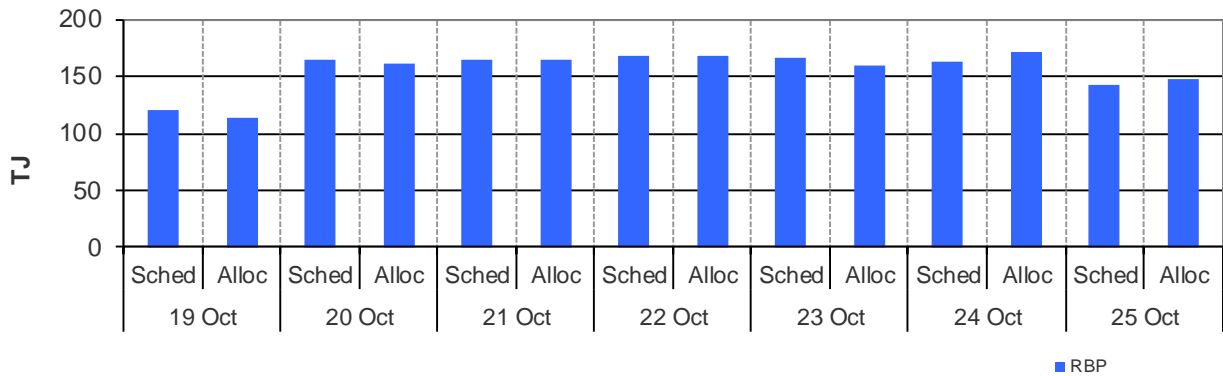
**Figure 4.2 (a): Daily hub offers in price bands (\$/GJ)**



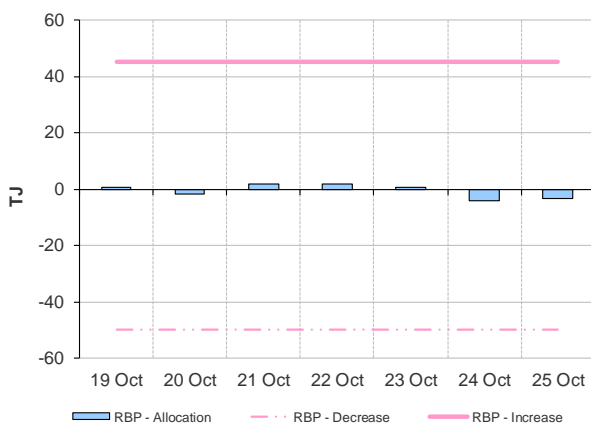
**Figure 4.2 (b): Daily hub bids in price bands (\$/GJ)**



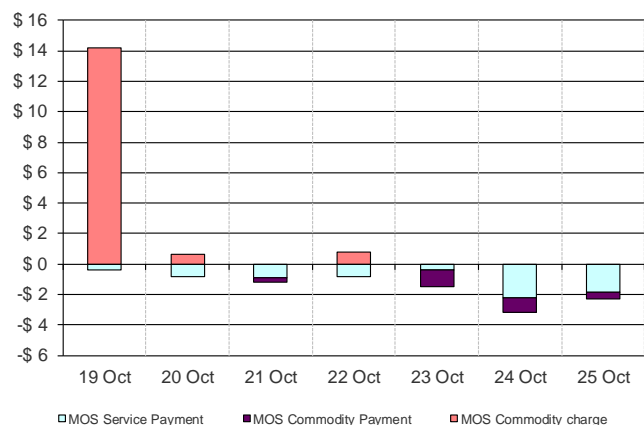
**Figure 4.3: BRI net scheduled and allocated gas volumes (excluding MOS) by STTM facility**



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



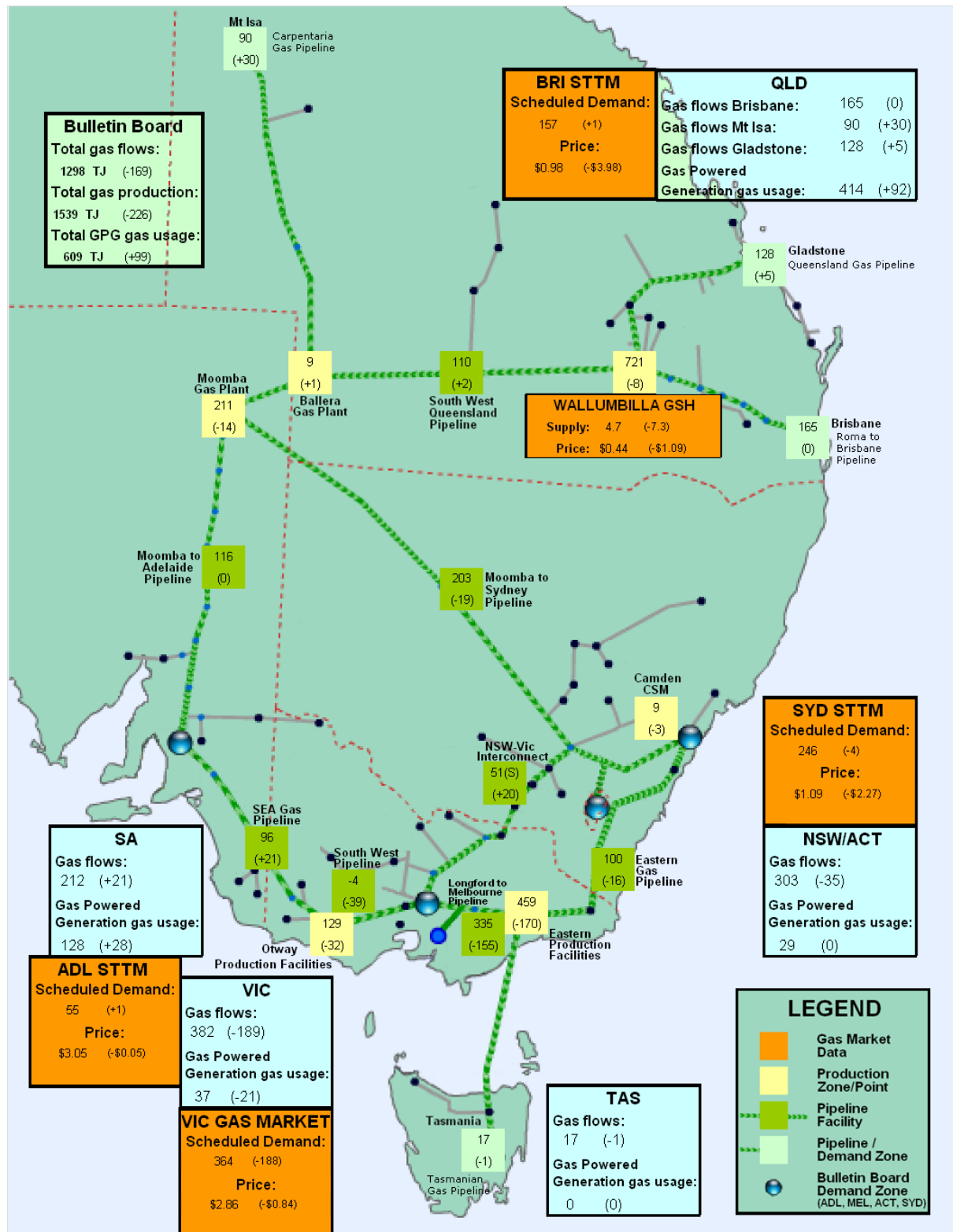
**Figure 4.4 (b): Service payments and commodity payments/charges (\$000)**



## 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<sup>9</sup> 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.

From October 2014, production flows reported for the Roma region include quantities of gas for LNG export trains.

<sup>9</sup> Wallumbilla supply is the average daily volume of gas 'traded', while price is a volume weighted average.

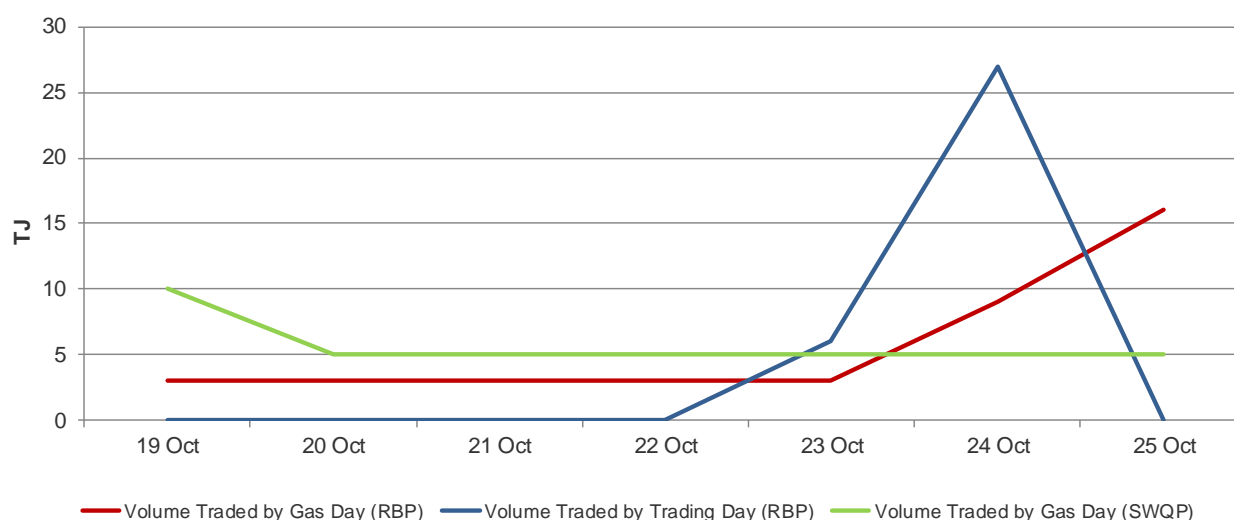
## 6 Gas Supply Hub

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>10</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).

Despite the same number of trades as the previous week, there were no weekly products traded (or intra-day trades) and the volume decreased to 33 TJ over 11 trades. All trades occurred on RBP and the volume weighted price was \$0.44/GJ. A new record for the lowest price occurred this week, falling to \$0.20/GJ over 2 trades. There were also a total of 7 trades priced lower than \$0.50/GJ.

Figure 6.1 shows volumes traded<sup>11</sup> on each gas day and trading day from 19 to 25 October.

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



<sup>10</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.

<sup>11</sup> Volumes shown for weekly products include the 'daily' volume for each relevant 'gas day', and the 'weekly' volume for each relevant 'trading day'.