

Weekly Gas Market Report



AUSTRALIAN ENERGY
REGULATOR

22 – 28 December 2013

Weekly summary

The average price in Adelaide fell significantly compared to the previous week. The majority of this decline related to the \$0/GJ price set in the hub on Sunday.

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)¹

	Victoria	Sydney	Adelaide	Brisbane
22 Dec - 28 Dec 2013	3.75	3.84	3.51	4.88
% change from previous week	-4	0	-21	2
13-14 financial YTD	3.98	4.19	4.52	5.41
% change from previous financial YTD	-13	-23	-14	3

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)
22 Dec - 28 Dec 2013	3.75	-	279
% change from previous week	-4	-	-17
13-14 financial YTD	3.98	-	600
% change from previous financial YTD	-13	-	-6

* 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.

¹ 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)
22 Dec - 28 Dec 2013	3.84	3.68	6.91	174	168
% change from previous week	0	0	-35	-18	-17
13-14 financial YTD	4.19	4.04	11.11	248	243
% change from previous financial YTD	-23	-31	5	-1	-4

Figure 4: Adelaide STTM

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
22 Dec - 28 Dec 2013	3.51	3.51	23.91	51	52
% change from previous week	-21	-18	213	-14	-11
13-14 financial YTD	4.52	4.56	15.56	73	73
% change from previous financial YTD	-14	-11	78	-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)
22 Dec - 28 Dec 2013	4.88	4.89	1.87	120	123
% change from previous week	2	6	31	-21	-17
13-14 financial YTD	5.41	5.48	1.58	148	148
% change from previous financial YTD	3	6	-44	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, as well as gas-powered generation volumes in each state.

Significant Market Events or Issues this week

A PFDC occurs in the Adelaide STTM hub for the 9th, 10th and 11th time

Pipeline Flow Directional Constraint (PFDC) prices affecting offers and bids on the Moomba to Adelaide Pipeline (MAP) occurred three times this week. It was envisaged such prices would be rare before market start in any STTM hub, as it requires more backhaul gas bids to be scheduled above (or at) the market price on one pipeline than forward haul gas offers scheduled to the hub (below or at the market price) on the same pipeline, in normal merit order. Nevertheless this has been the outcome in the Adelaide STTM hub (which is served by the SEAGas and MAP pipelines) on a number of occasions. This reflects a trend to relatively more volumes of cheap gas supply offers on the SEAGas pipeline compared to MAP, at the same time as significant quantities of backhaul bids on the MAP are being scheduled i.e. often above 10 TJ.

22 December 2013 - \$4.507/GJ PFDC price

On Sunday 22 December, the highest PFDC price in the Adelaide STTM hub to date of \$4.507/GJ occurred. This high price occurred because the Adelaide STTM hub ex ante price was set at \$0/GJ due to a very high amount of \$0/GJ gas offers on SEAGas, while at the same time Origin submitted a bid to pay \$4.51/GJ to backhaul gas on the MAP.

Compared to the D-2 provisional schedule, offers for the ex ante schedule priced at \$0/GJ on the MAP decreased by 4 TJ (to 3.51 TJ) and increased on SEAGas by 16.26 TJ (to 44.26 TJ). As a result, there was enough \$0/GJ gas supply offers on SEAGas and MAP to supply hub demand of 39.8 TJ plus 3.5 TJ of MAP backhaul.

Additional to the 3.5 TJ of offers scheduled on MAP, another 5.6 TJ of offers on MAP priced above \$0/GJ were nevertheless priced under Origin's \$4.507/GJ bid. This 5.6 TJ was cleared in accordance with the PFDC mechanism to meet the same quantity of backhaul bid. The constraint price was set as the difference between the \$0/GJ ex ante price and the bid price, leading to PFDC payments of around \$41 000 to participants who shipped gas on the MAP.

23 and 28 December 2013 - PFDC prices of \$0.1712/GJ and \$0.0112/GJ respectively

On Monday 23 December and Saturday 28 December, there were also PFDC prices set on the MAP. These prices were much lower due to the ex ante prices being set at \$3.9288/GJ and \$4.1388/GJ respectively. On both days, there was more than enough gas priced below the bid price (\$4.507/GJ) on MAP. The PFDC prices in this case were set as the difference between the ex ante price and the last offer cleared to meet each of the backhaul bid volumes.

Detailed Market Analysis

22 – 28 December 2013

2 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 forecasts², and injection/withdrawal bids³. 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.⁴

Figure 2.1: Prices by schedule

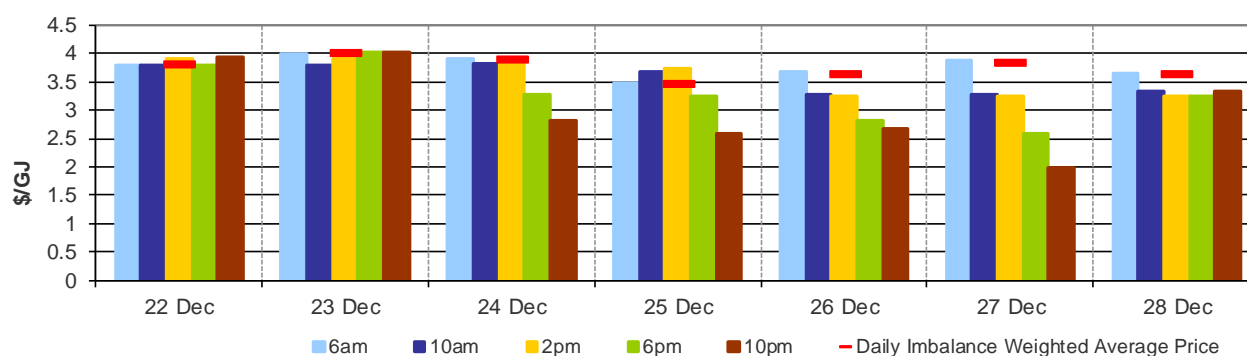
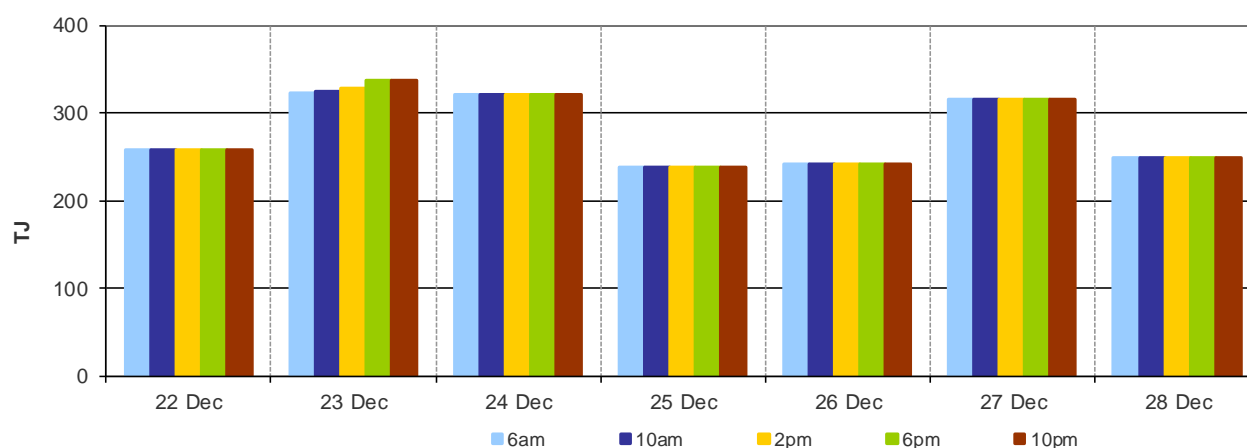


Figure 2.2: Demand forecasts



² 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.

³ 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.

⁴ 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 2.3: Injection bids by price bands

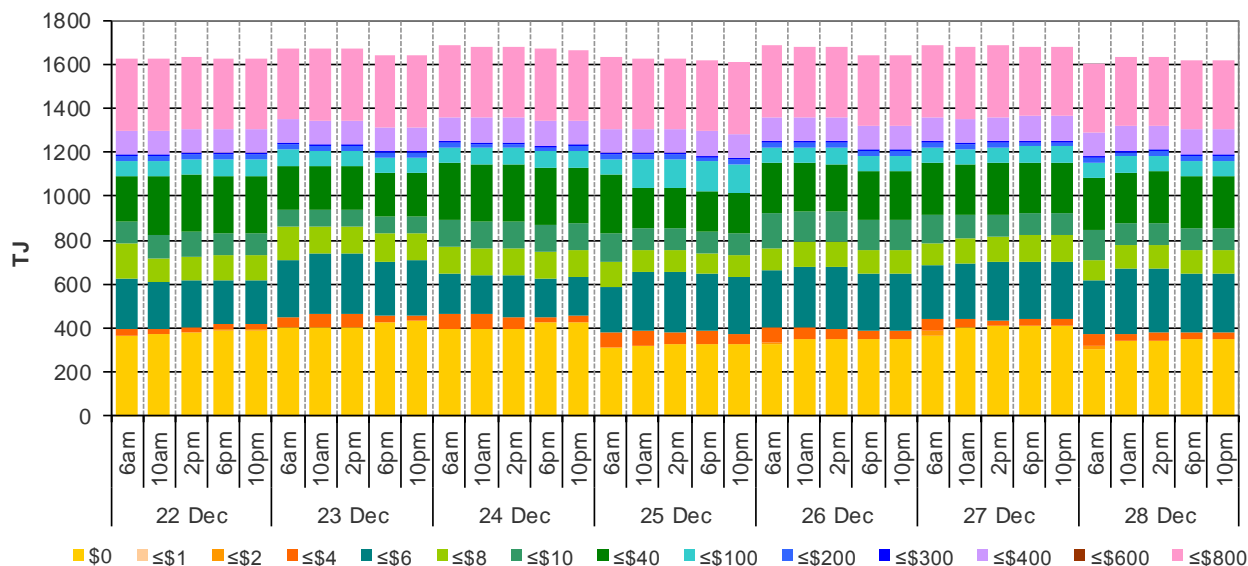


Figure 2.4: Withdrawal bids by price bands

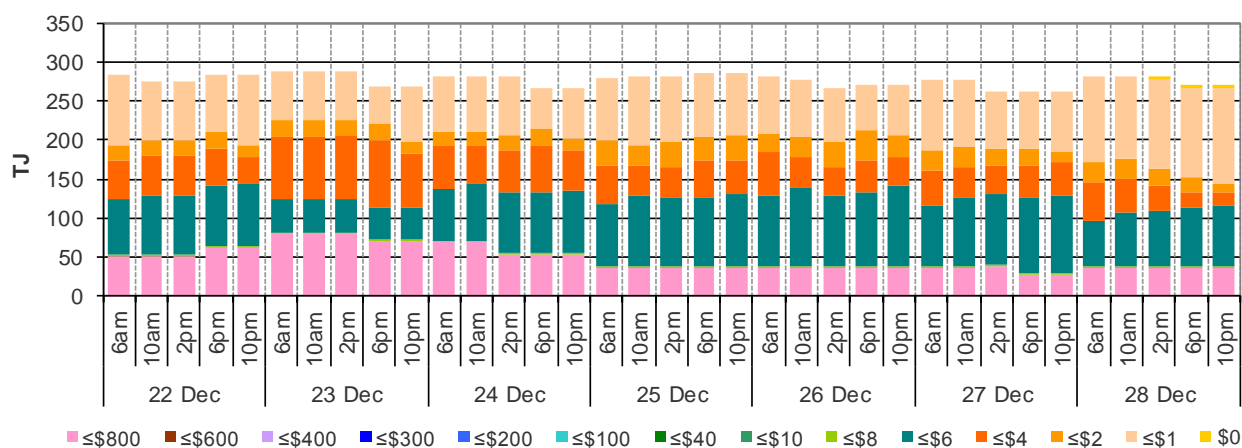
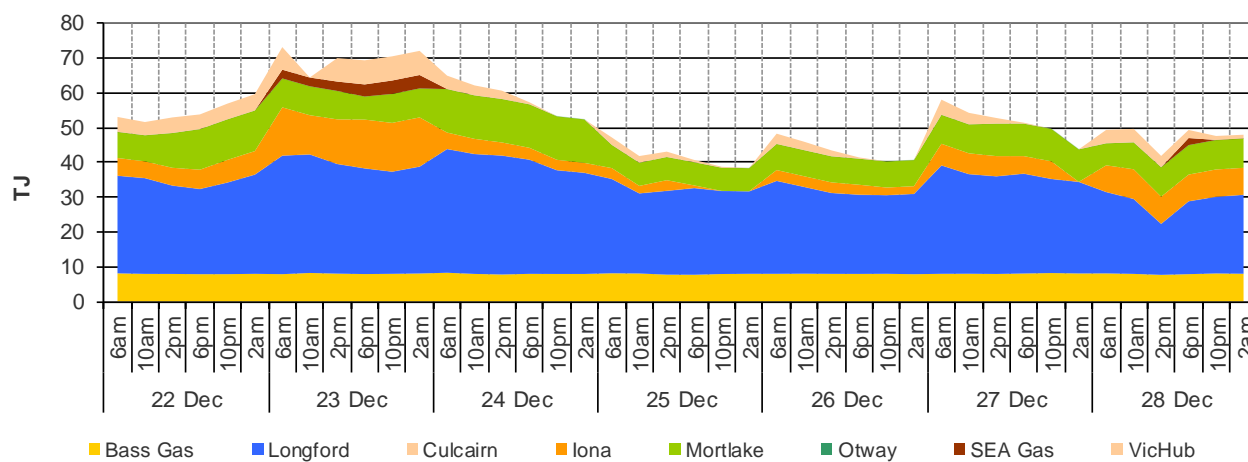


Figure 2.5: Metered Injections by System Injection Point



3 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.⁵ 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.⁶

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 3.1: SYD STTM daily ex ante and ex post prices and quantities

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	3.94	3.69	3.98	3.98	3.69	3.69	3.90
Ex ante quantity (TJ)	174	194	196	160	155	175	166
Ex post price (\$/GJ)	3.69	3.69	3.60	3.69	3.69	3.69	3.69
Ex Post quantity (TJ)	164	189	180	151	158	174	163

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

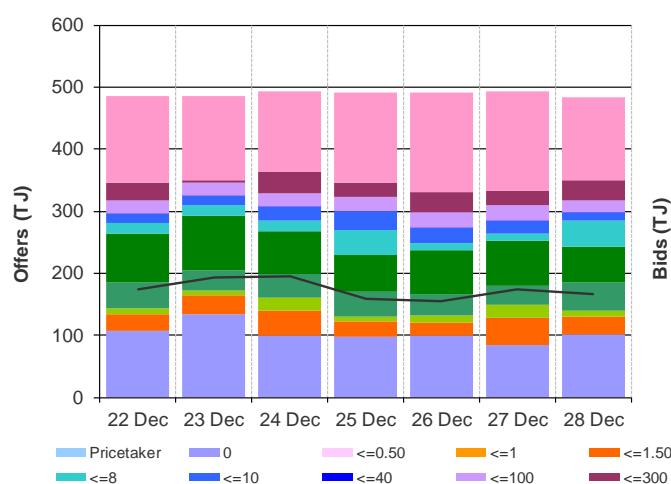
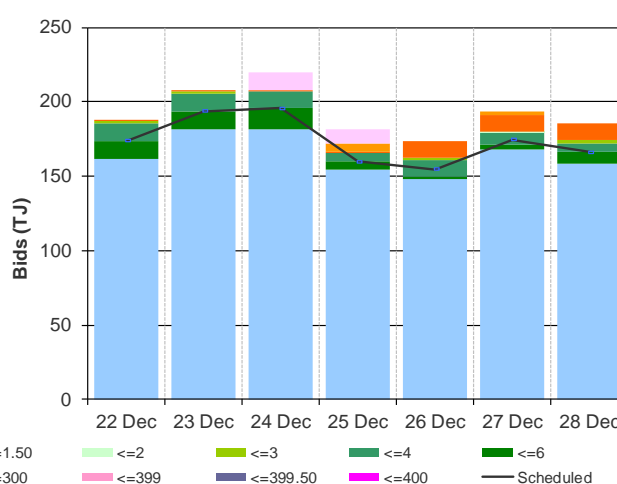


Figure 2.2(b): Daily hub bids in price bands (\$/GJ)



⁵ 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.

⁶ 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 3.3: SYD net scheduled and allocated gas volumes (excluding MOS) by STTM facility

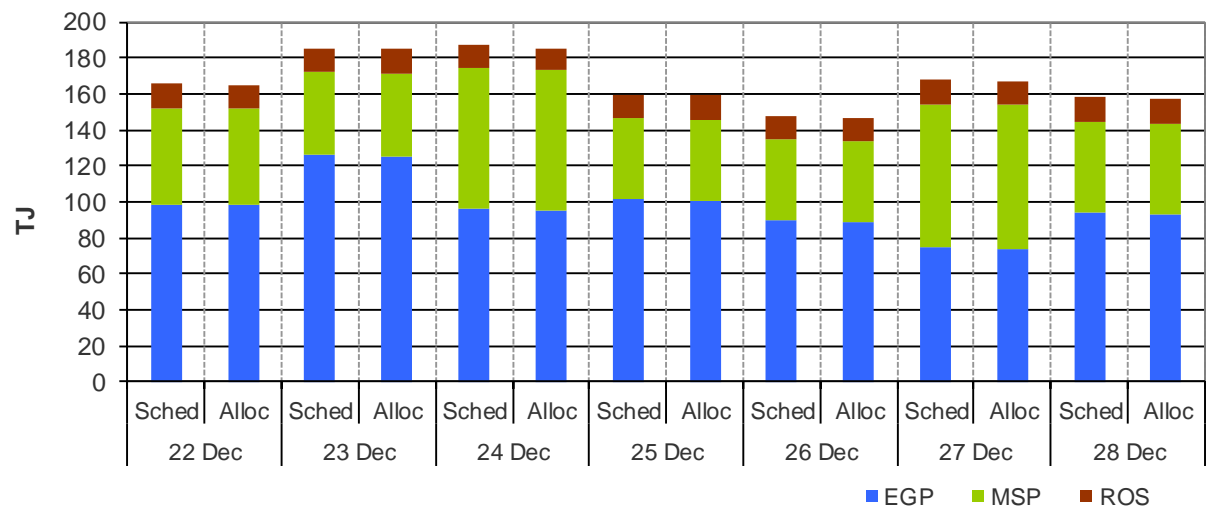


Figure 2.4 (a) SYD STTM MOS allocations (TJ)

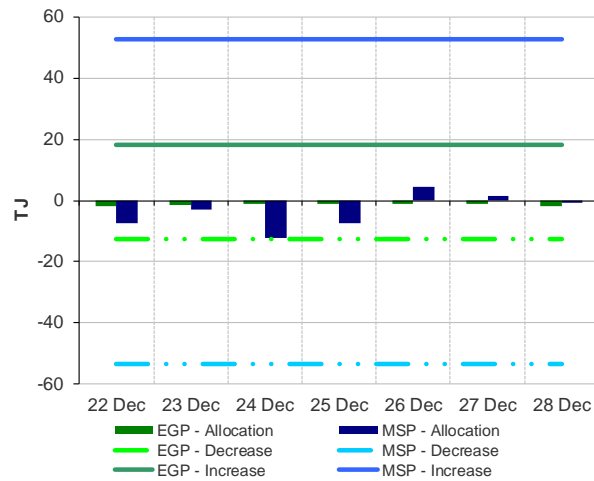
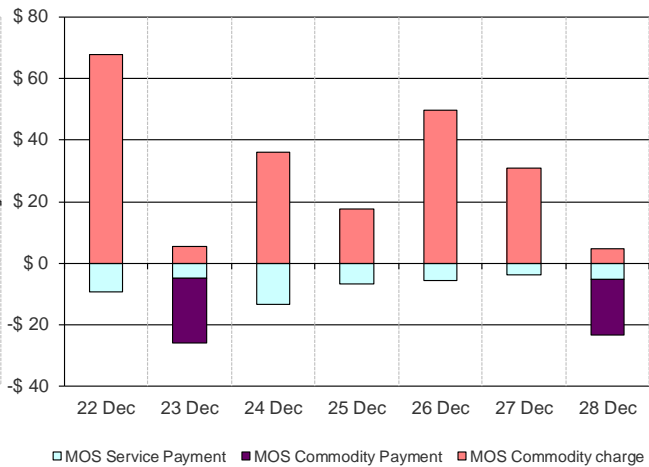


Figure 2.4 (b): Service payments and commodity payments/charges (\$000)



4 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 4.1: ADL STTM daily ex ante and ex post prices and quantities

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	0.00	3.93	4.10	4.15	4.10	4.14	4.14
Ex ante quantity (TJ)	49	63	54	47	49	51	45
Ex post price (\$/GJ)	0.00	3.93	4.10	4.15	4.14	4.14	4.15
Ex Post quantity (TJ)	49	61	53	47	50	53	46

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

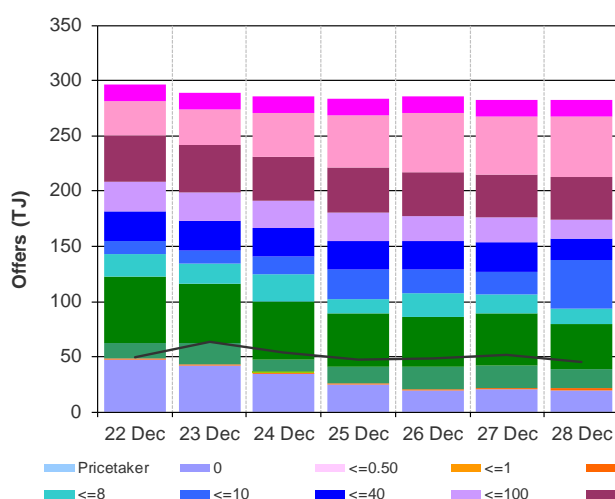


Figure 3.2(b): Daily hub bids in price bands (\$/GJ)

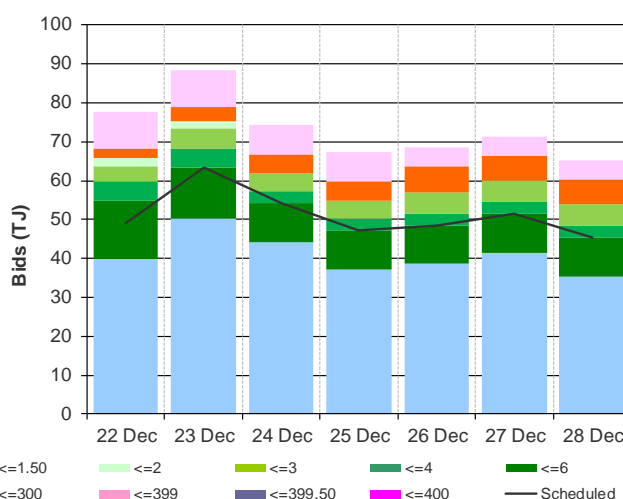


Figure 4.3: ADL net scheduled and allocated gas volumes (excluding MOS) by STTM facility

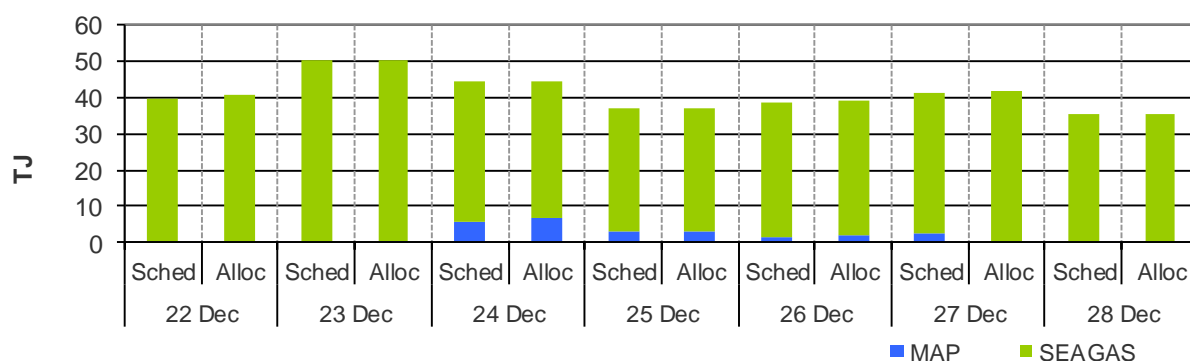


Figure 3.4 (a) ADL STTM MOS allocations (TJ)

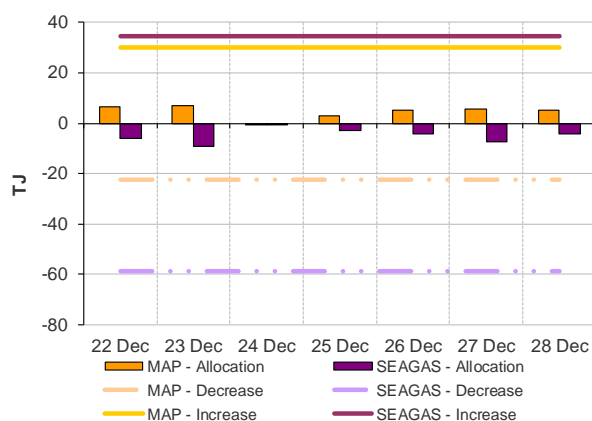
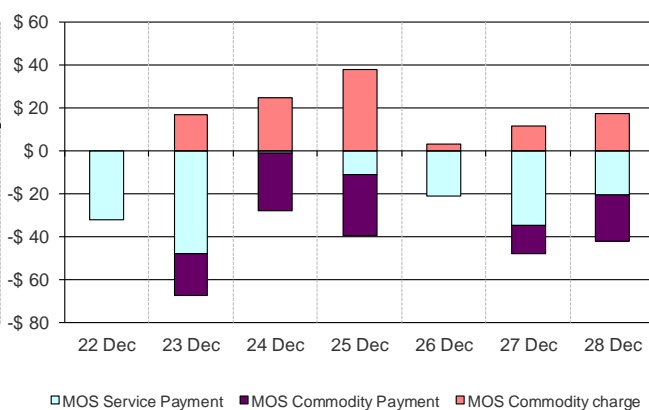


Figure 3.4 (b): Service payments and commodity payments/charges (\$000)



5 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 5.1: BRI STTM daily ex ante and ex post prices and quantities

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	5.00	5.79	5.80	4.53	4.26	4.26	4.51
Ex ante quantity (TJ)	121	126	126	115	115	119	116
Ex post price (\$/GJ)	5.05	5.79	4.52	4.26	4.26	4.53	5.79
Ex Post quantity (TJ)	129	127	117	110	114	132	131

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

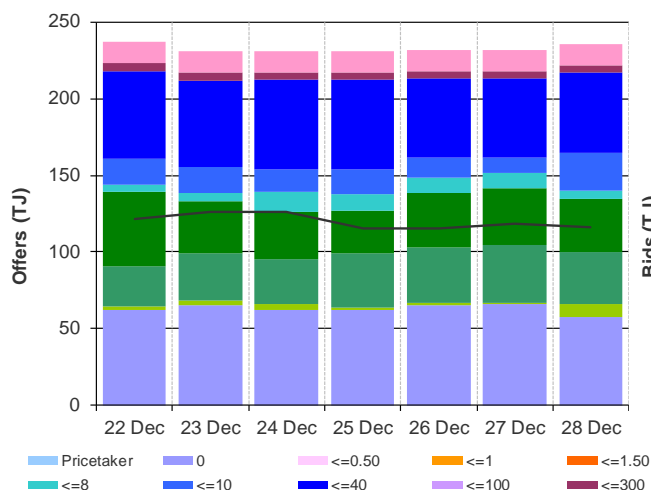


Figure 4.2(b): Daily hub bids in price bands (\$/GJ)

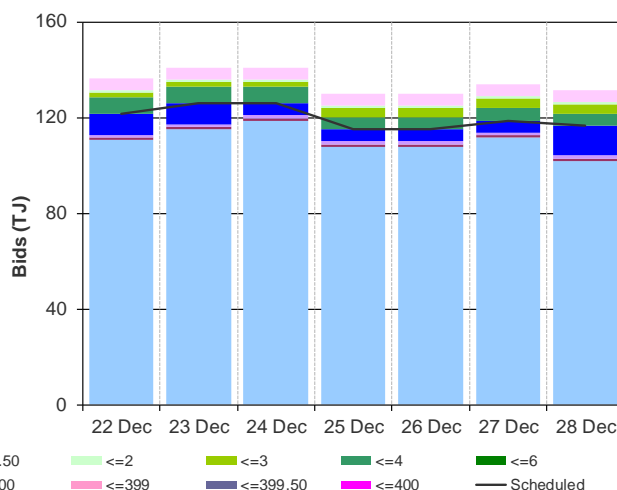


Figure 5.3: BRI net scheduled and allocated gas volumes (excluding MOS) by STTM facility

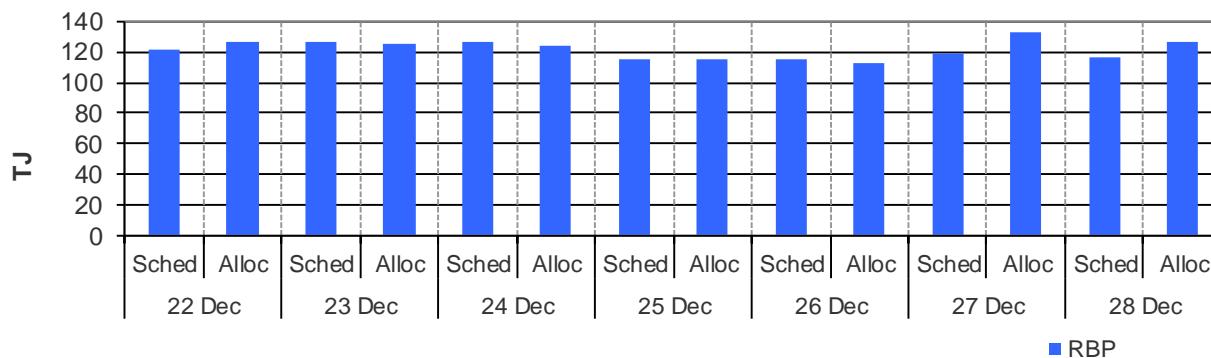


Figure 4.4 (a) BRI STTM MOS allocations (TJ)

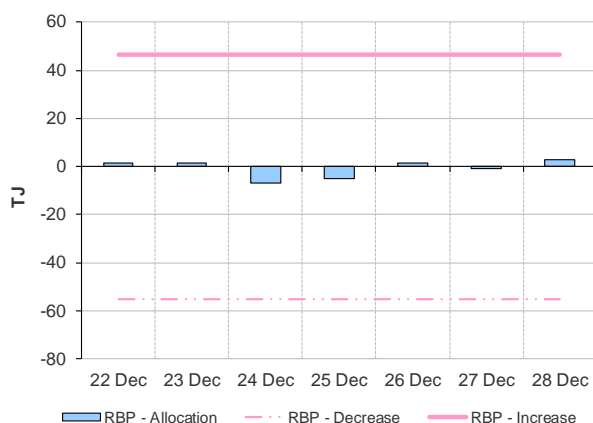
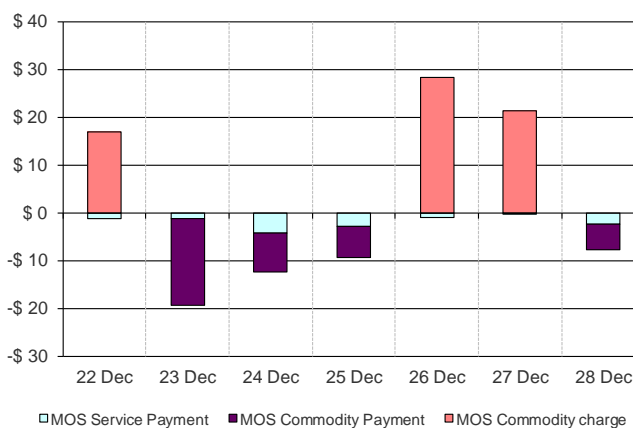


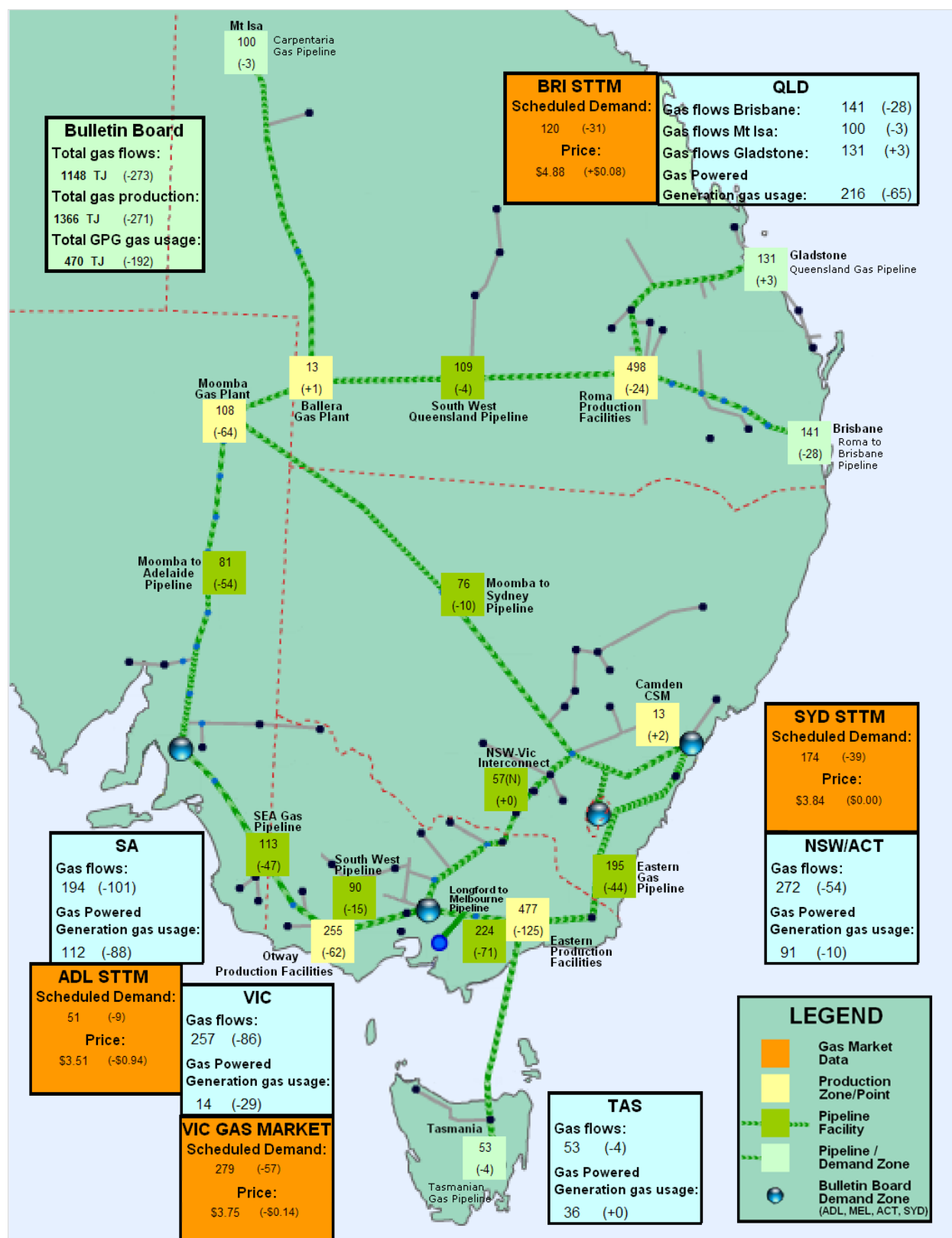
Figure 4.4 (b): Service payments and commodity payments/charges (\$000)



6 National Gas Bulletin Board

Figure 5.1 shows average daily actual flows for the current week in the aqua boxes⁷ 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 6.1: Gas market data (\$/GJ, TJ); Production, Consumption and Pipeline flows (TJ)



⁷ 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.