Weekly Gas Market Report

AUSTRALIAN ENERGY REGULATOR

12 – 18 January 2014

Weekly summary

Average prices increased in all regions except Brisbane compared to the previous week. The largest increase of 22% was at the Adelaide hub as a result of a reduction in low priced capacity offered to the market.

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
12 Jan - 18 Jan 2014	3.91	4.36	5.11	4.67
% change from previous week	3	10	22	-6
13-14 financial YTD	3.96	4.18	4.52	5.36
% change from previous financial YTD	-11	-21	-13	-1

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)
12 Jan - 18 Jan 2014	3.91	-	354
% change from previous week	3	-	6
13-14 financial YTD	3.96	-	572
% change from previous financial YTD	-11	-	-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.

[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)
12 Jan - 18 Jan 2014	4.36	4.26	19.79	211	207
% change from previous week	10	13	17	4	6
13-14 financial YTD	4.18	4.03	11.74	243	238
% change from previous financial YTD	-21	-29	4	-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)
12 Jan - 18 Jan 2014	5.11	4.95	58.62	47	46
% change from previous week	22	18	640	-3	-8
13-14 financial YTD	4.52	4.54	16.56	70	71
% change from previous financial YTD	-13	-11	94	-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)
12 Jan - 18 Jan 2014	4.67	5.12	1.73	156	158
% change from previous week	-6	7	-23	6	9
13-14 financial YTD	5.36	5.44	1.62	147	147
% change from previous financial YTD	-1	1	-41	2	3

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 volumes in each state.

Significant Market Events or Issues this week

At the Adelaide hub MOS services payments of around $410 000 accrued during the week, most ($354 000) occurring between Monday and Thursday. These large payments, the largest of which was $132 000 on Tuesday 14 January, were due to counteracting MOS.

Throughout the week the capacity offered at less than $6/GJ by participants at the Adelaide hub reduced from around 79 TJ on Monday to 20 TJ by Friday (see figure 3.2(a)). This was mainly due to the three major participants AGL, EnergyAustralia, and Origin Energy shifting capacity from below $6/GJ to higher prices. This saw the price go from $4.56/GJ on Monday to $6.20/GJ on Friday.

Average daily Gas powered generation **(GPG)** usage increased in both South Australia and Victoria by around 160 TJ. This was due to high prices in the electricity market which was driven by high temperatures (above 40 degrees) in each state. The increase in GPG usage led to higher

demand in the Victorian gas market but did not reflect in an increase in Adelaide hub demand as GPGs are located outside the Adelaide hub.

On Thursday 16 January there was 16 TJ of gas scheduled on the Moomba to Adelaide pipeline **(MAP)** but none was allocated. This was caused by one participant reducing injections on MAP in line with lower demand and one participant renominating gas for delivery on the South East Australia Gas **(SEA Gas)** pipeline, perhaps because it was using MAP gas before the hub for generation instead (the change coincided with GPG output increasing above forecast levels on a day of high electricity demand in Adelaide).

On Friday 17 January, Adelaide had a record low volume of gas shipped to the hub. The scheduled volume was 31.3 TJ, exceeding the previous record minimum for a weekday by 5.8 TJ. This was largely influenced by a reduction in demand from Adelaide Brighton Cement, in addition to lower demand overall.

At times during the week the Roma to Brisbane pipeline had only 10.6 TJ (6 per cent) of spare pipeline capacity. This was mainly due to a 30 TJ reduction in pipeline capacity as a result of work being done to lower the pipeline at Sandy Creek.

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[2], and injection/withdrawal bids[3]. 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 1.1: Prices by schedule

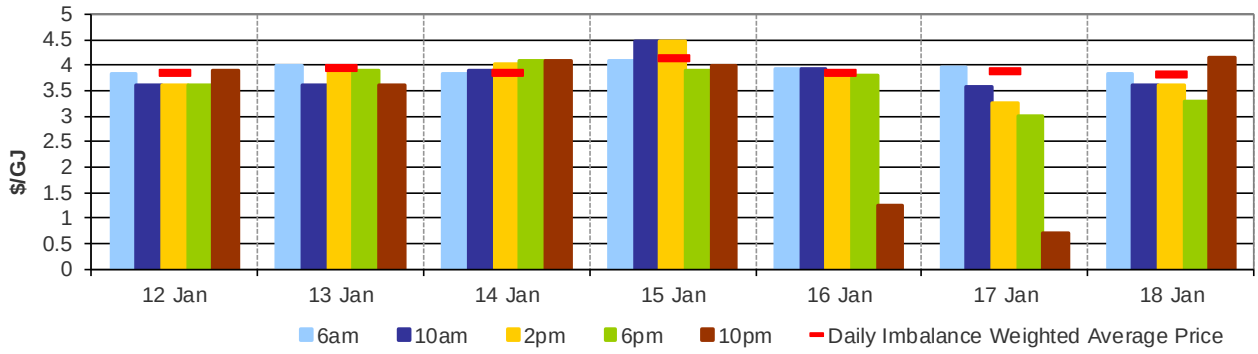
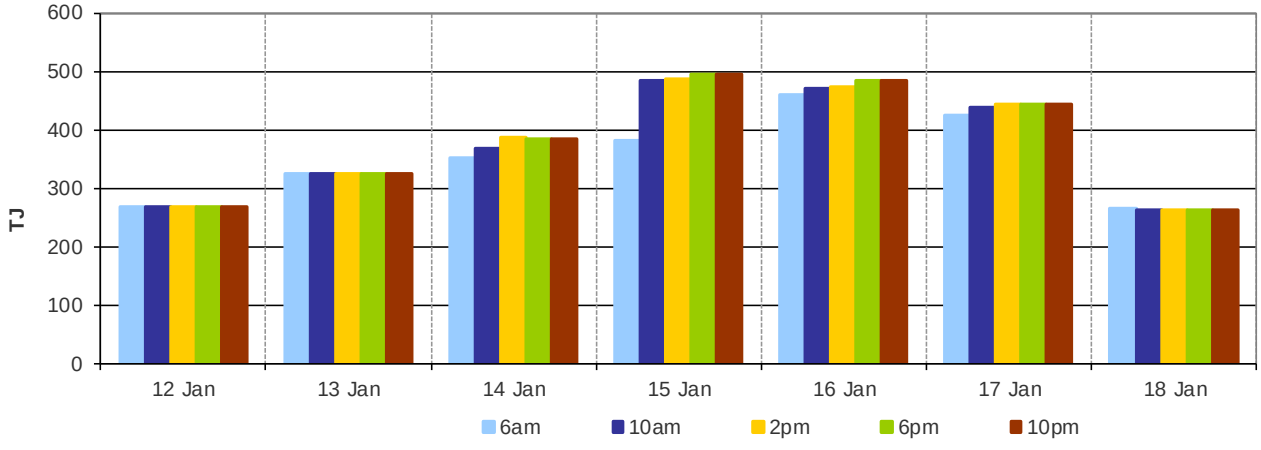


Figure 1.2: Demand forecasts



[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 1.3: Injection bids by price bands

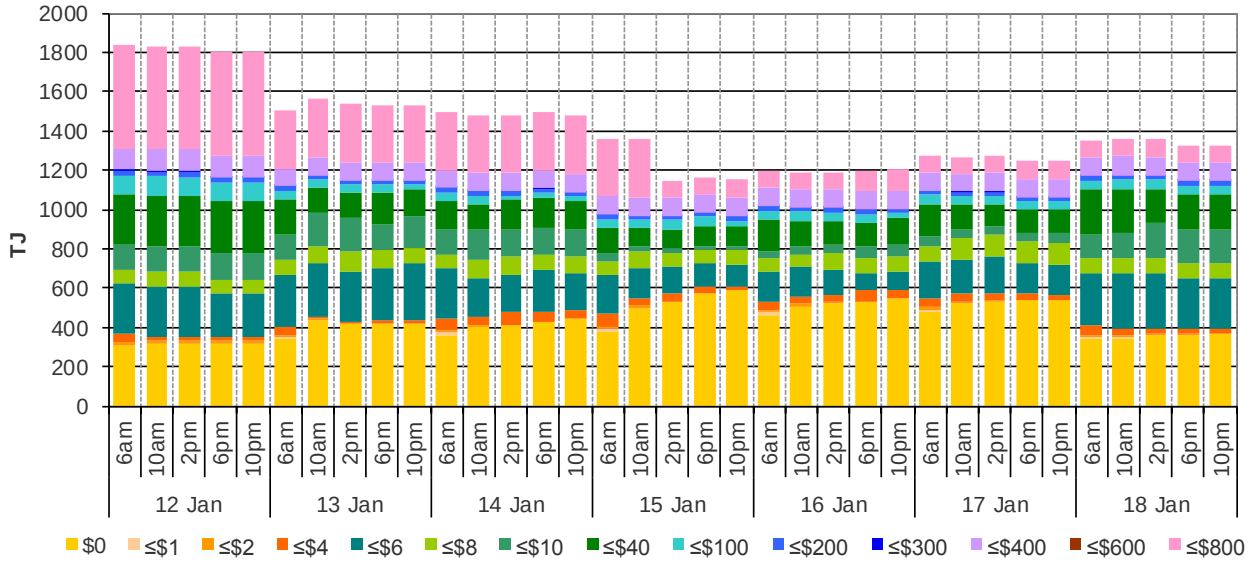


Figure 1.4: Withdrawal bids by price bands

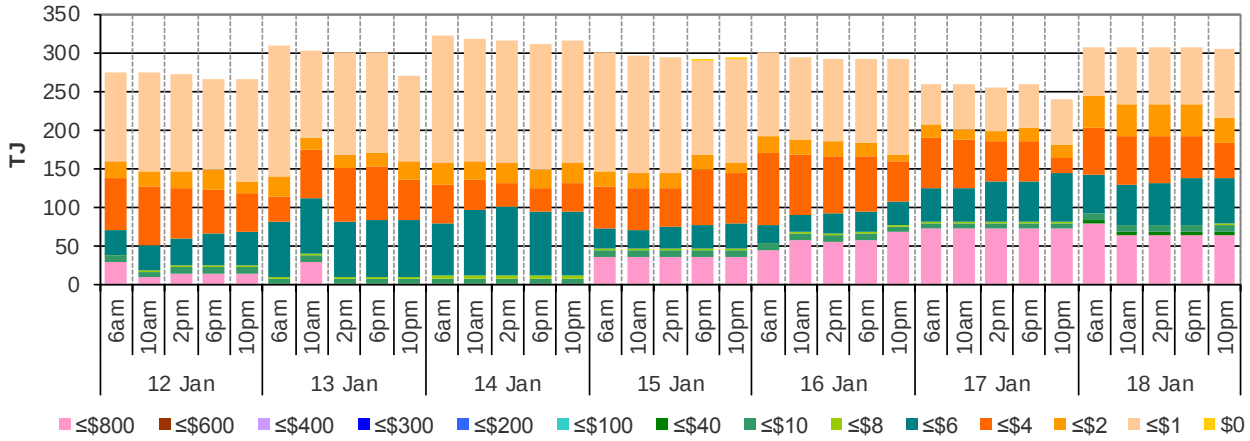
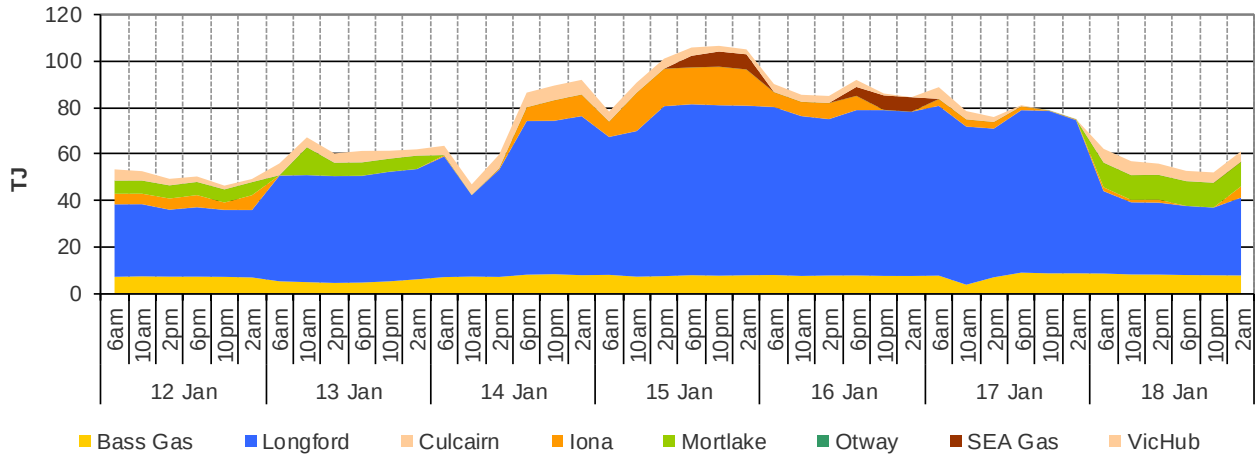


Figure 1.5: Metered Injections by System Injection Point



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.[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 2.1: SYD STTM daily ex ante and ex post prices and quantities

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price ($/GJ)	3.90	4.00	3.90	4.00	4.64	5.59	4.51
Ex ante quantity (TJ)	189	224	222	224	219	218	182
Ex post price ($/GJ)	3.71	3.71	3.71	3.90	5.00	5.59	4.20
Ex Post quantity (TJ)	187	212	215	220	222	222	172

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

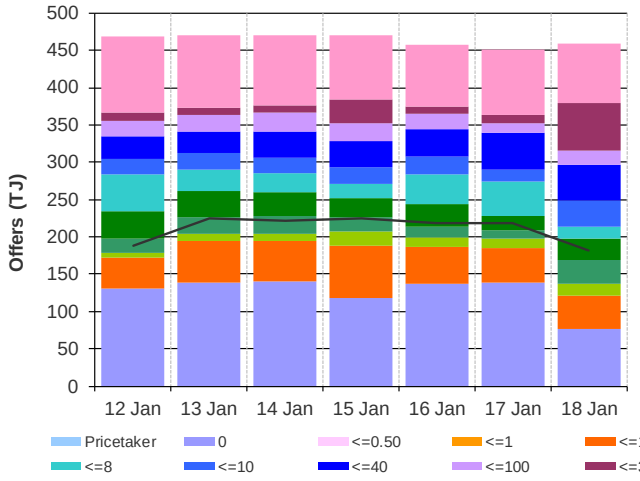
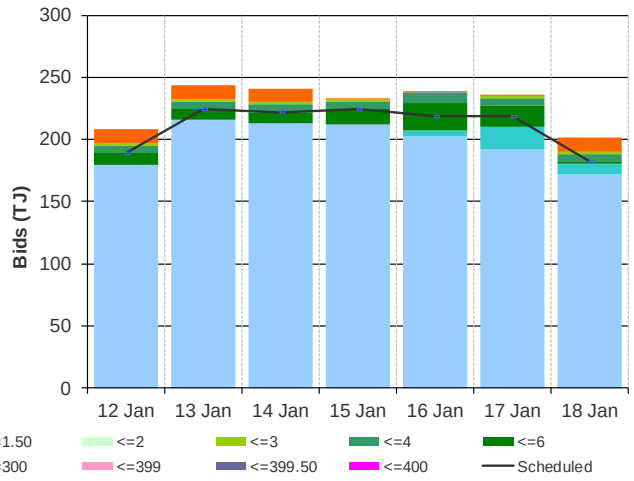


Figure 2.2 (b): Daily hub bids in price bands ($/GJ)



[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 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

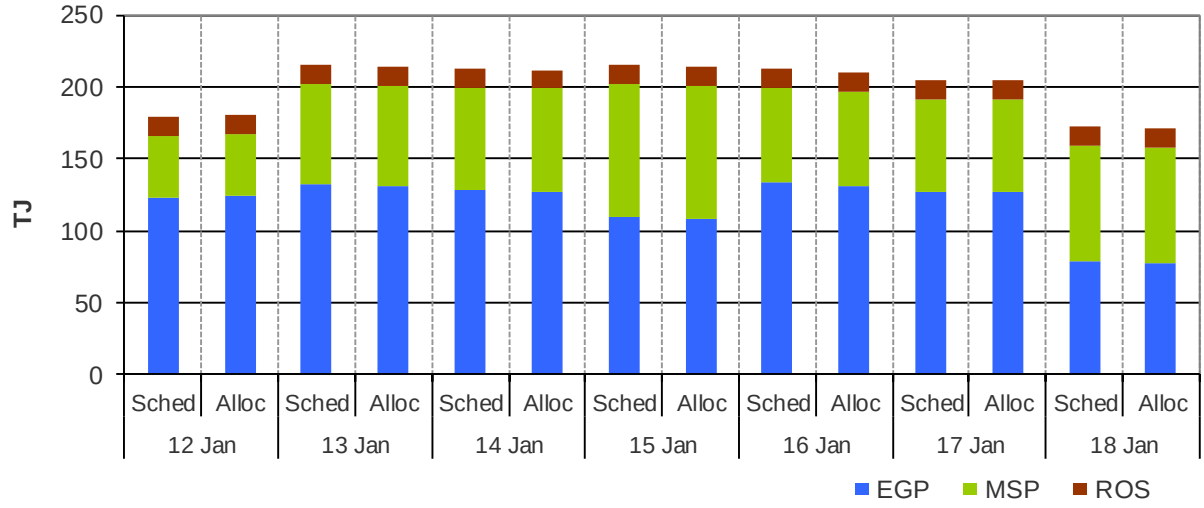


Figure 2.4 (a): SYD STTM MOS allocations (TJ)

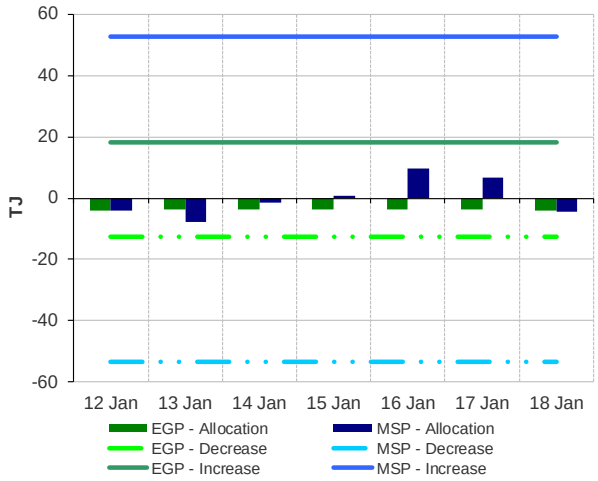
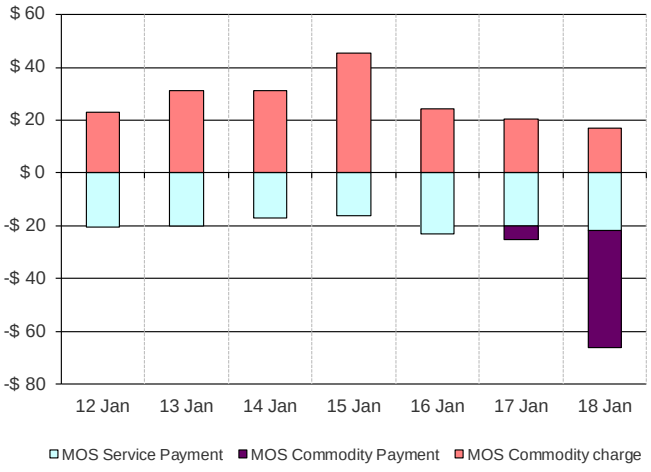


Figure 2.4 (b): Service payments and commodity payments/charges ($000)



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 ($/GJ)	4.12	4.56	5.00	5.80	6.01	6.20	4.09
Ex ante quantity (TJ)	39	55	58	57	60	31	30
Ex post price ($/GJ)	4.12	4.56	5.00	5.67	4.64	6.20	4.49
Ex Post quantity (TJ)	40	55	60	56	44	32	33

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

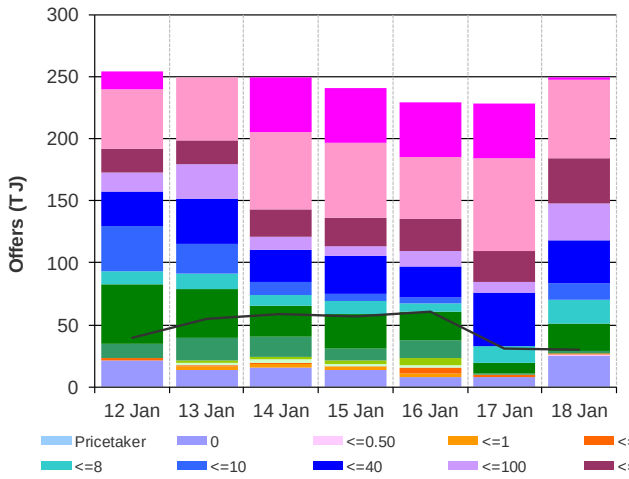


Figure 3.2 (b): Daily hub bids in price bands ($/GJ)

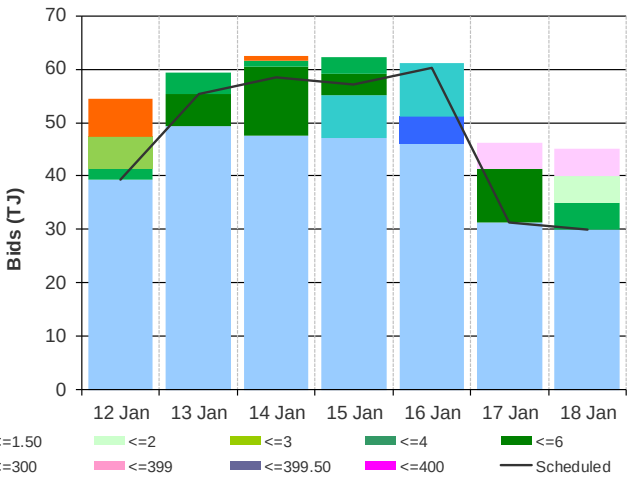


Figure 3.3: ADL net scheduled and allocated gas volumes (excluding MOS) by STTM facility

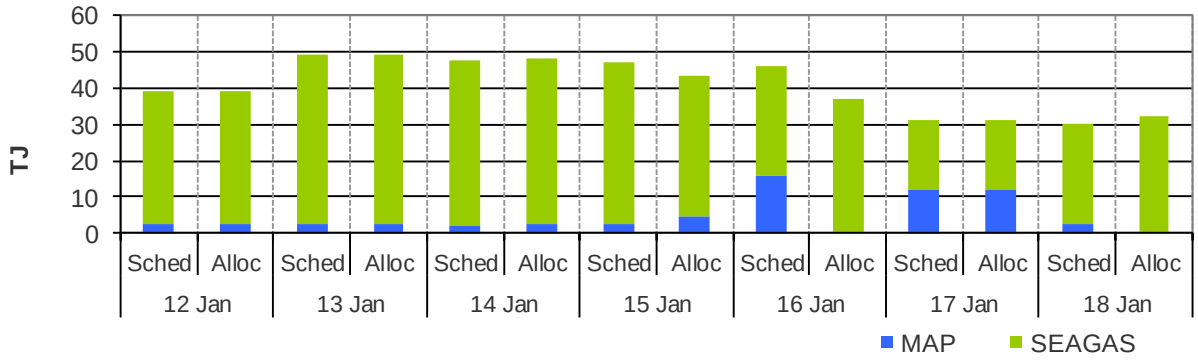


Figure 3.4 (a): ADL STTM MOS allocations (TJ)

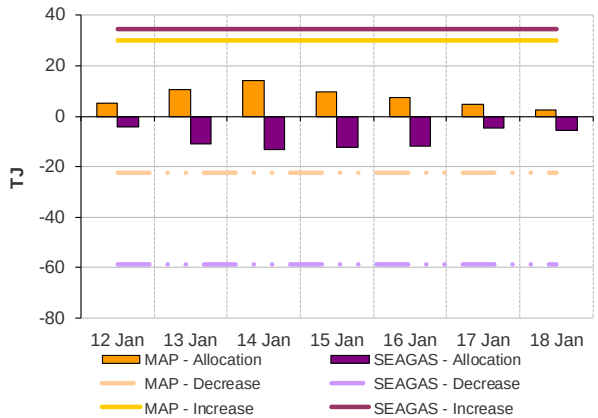
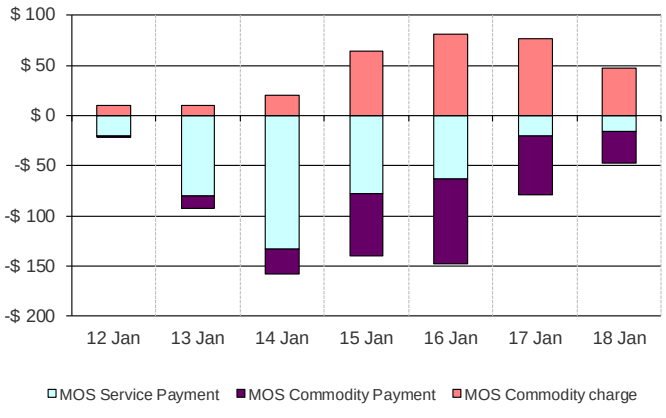


Figure 3.4 (b): Service payments and commodity payments/charges ($000)



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 ($/GJ)	3.88	4.58	4.25	5.48	5.05	4.90	4.58
Ex ante quantity (TJ)	143	156	153	160	167	165	150
Ex post price ($/GJ)	3.88	4.82	6.33	5.48	6.51	4.58	4.27
Ex Post quantity (TJ)	143	157	161	161	173	161	147

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

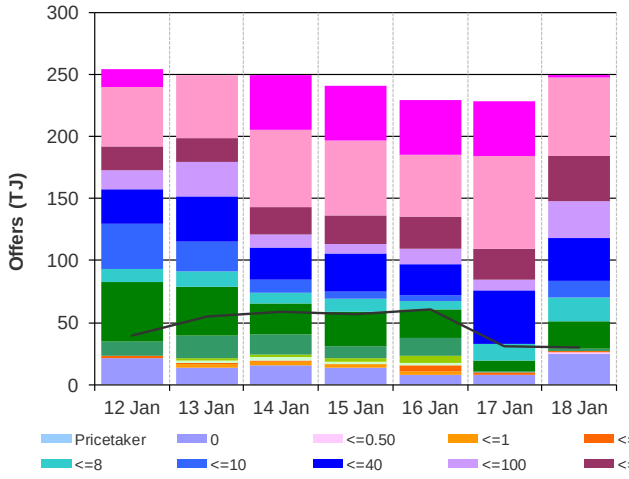


Figure 4.2 (b): Daily hub bids in price bands ($/GJ)

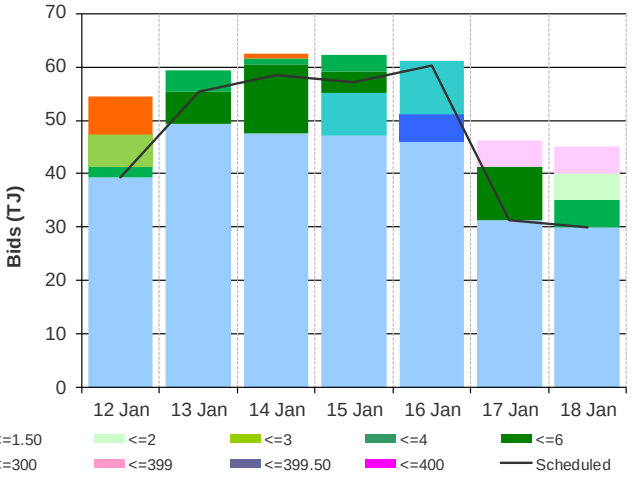


Figure 4.3: BRI net scheduled and allocated gas volumes (excluding MOS) by STTM facility

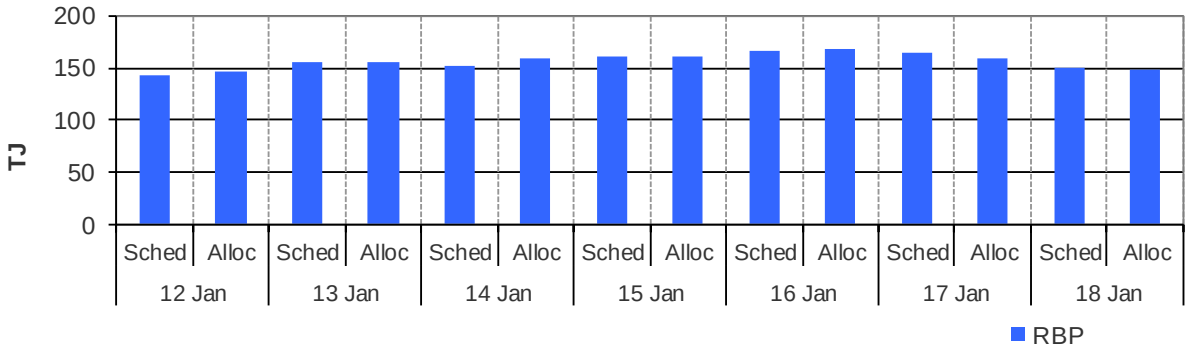


Figure 4.4 (a): BRI STTM MOS allocations (TJ)

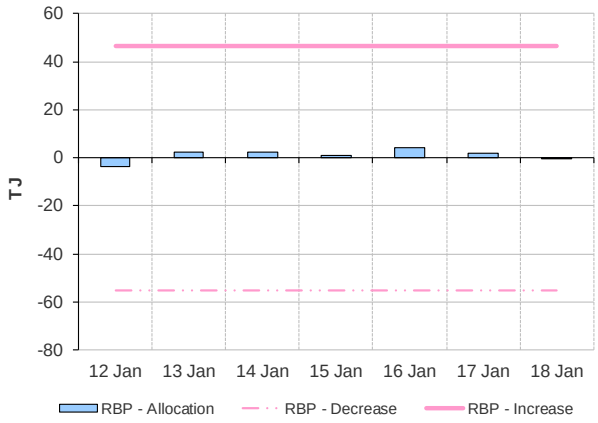
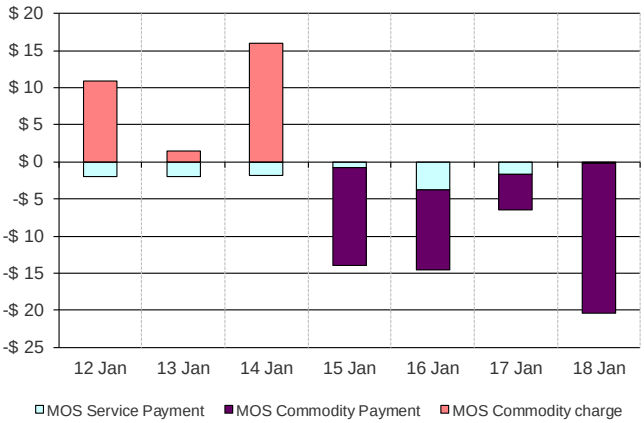


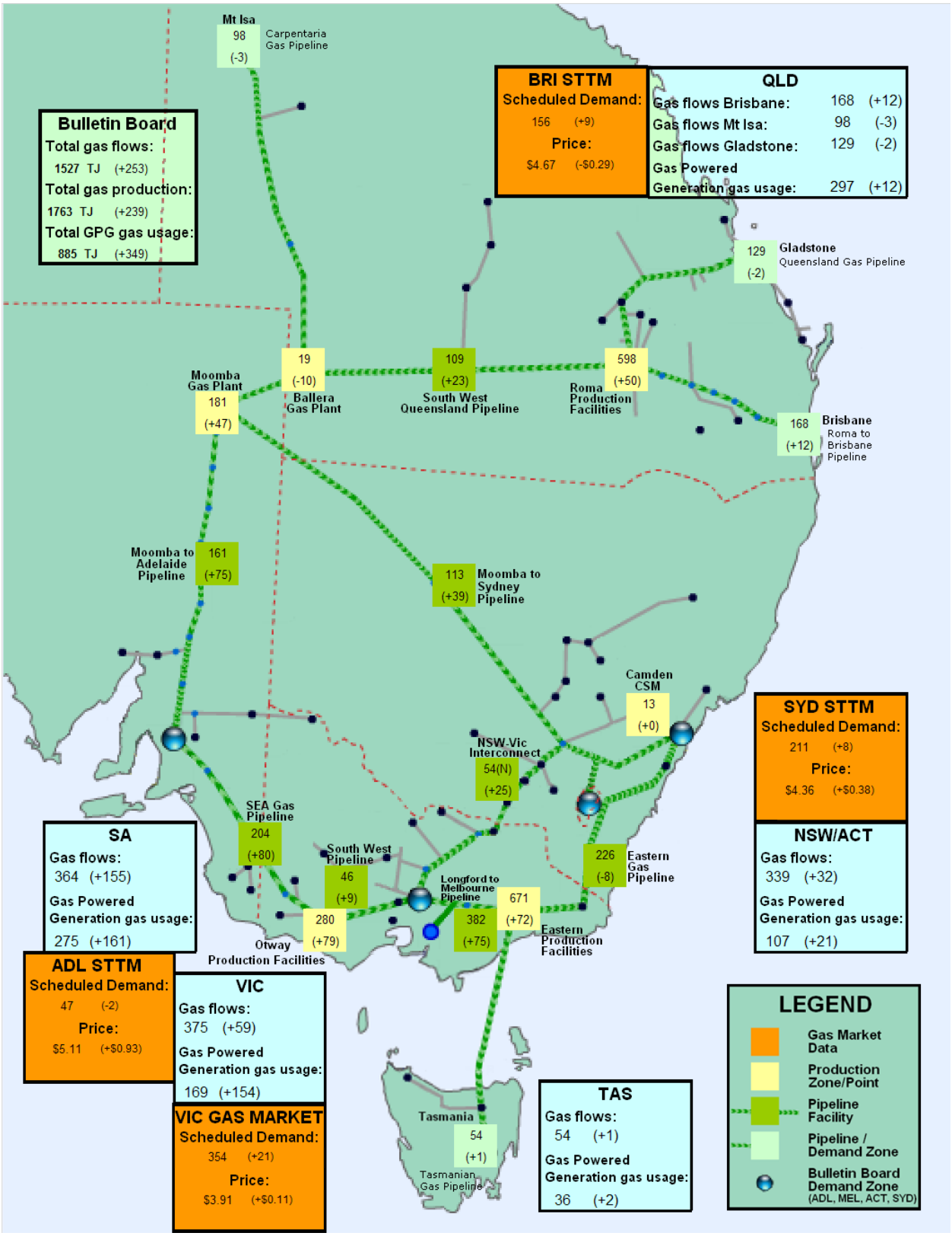
Figure 4.4 (b): Service payments and commodity payments/charges ($000)



5 National Gas Bulletin Board

Figure 5.1 shows average daily actual flows for the current week in the aqua boxes[7] 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)



[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.