Weekly Gas Market Report

AUSTRALIAN ENERGY REGULATOR

5–11 May 2013

Weekly summary

Average daily prices in all markets were similar to the previous week.

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
05 May - 11 May 2013	4.57	5.38	4.90	5.79
% change from previous week	0	11	-1	13
12-13 financial YTD	4.48	5.14	5.06	5.79
% change from previous financial YTD	46	64	38	79

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)
05 May - 11 May 2013	4.57	-	532
% change from previous week	0	-	-11
12-13 financial YTD	4.48	-	527
% change from previous financial YTD	46	-	-1

* 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)
05 May - 11 May 2013	5.38	5.24	11.74	239	237
% change from previous week	11	9	10	2	3
12-13 financial YTD	5.14	5.35	10.78	236	235
% change from previous financial YTD	64	85	-71	4	5

Figure 4: Adelaide STTM

	Ex ante price ($/GJ)	Ex post price ($/GJ)	MOS payments ($000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
05 May - 11 May 2013	4.90	4.73	43.13	65	62
% change from previous week	-1	2	32	10	12
12-13 financial YTD	5.06	4.99	9.61	66	64
% change from previous financial YTD	38	38	-8	0	-1

Figure 5: Brisbane STTM

	Ex ante price ($/GJ)	Ex post price ($/GJ)	MOS payments ($000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
05 May - 11 May 2013	5.79	6.56	1.95	137	140
% change from previous week	13	7	26	21	22
12-13 financial YTD	5.79	5.77	2.37	144	143

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

Low gas flows on the Moomba to Adelaide Pipeline

Figure 3.3 shows the ex ante scheduled and allocated gas volumes into the Adelaide STTM. It illustrates the large difference in gas flows on the SEAGas pipeline relative to the Moomba to Adelaide pipeline (MAP). Previous reports have noted that low flows on the MAP as a result of low amounts of competitive gas offers on the MAP often correlate with counteracting MOS, (see the 3–9 February 2013 Gas Weekly). This week was no different. On every day this week there was counteracting MOS in Adelaide (where increase MOS on the MAP is balanced out by similar quantities of decrease MOS on SEAGas).

Low amounts of competitive gas offers on the MAP have also resulted in the increasing occurrence of pipeline flow direction constraint (PFDC) prices. PFDC prices of $0.19/GJ and $0.06/GJ occurred for the 5 and 11 May Adelaide gas days respectively. For 5 May, through the PFDC mechanism, AGL had 1850 GJ cleared out of merit order to facilitate economic trade with Origin, who submitted a 5 TJ backhaul bid on the MAP and accordingly was paid, in addition to the ex ante price, the PFDC price for this volume. Similarly, for the 11 May gas day, through the

PFDC mechanism AGL had 2553 GJ cleared out of merit order to facilitate economic trade with Origin, who again submitted a 5 TJ backhaul bid on the MAP.

Increasing demand in the Brisbane STTM

Figure 4.2(a) and (b) shows the Brisbane STTM ex ante quantity increased significantly over the first five days of the week. Further analysis indicates the main contributor to this was Stanwell Corporation who started the week with no gas usage and then ramped up production through the week for its generating unit(s) which operate on gas sourced from the STTM. Other participants had fluctuating offers and bids throughout the week; however their contribution to Brisbane's demand profile was less significant than Stanwell's.

Decreasing gas flows from Victoria to Tasmania

Figure 5.1 shows a decrease in average daily gas flows from Victoria to Tasmania by 23 GJ. The figure also shows that the amount of gas used for electricity generation in Tasmania fell by 21 TJ as Tamar Valley power station reduced output.

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

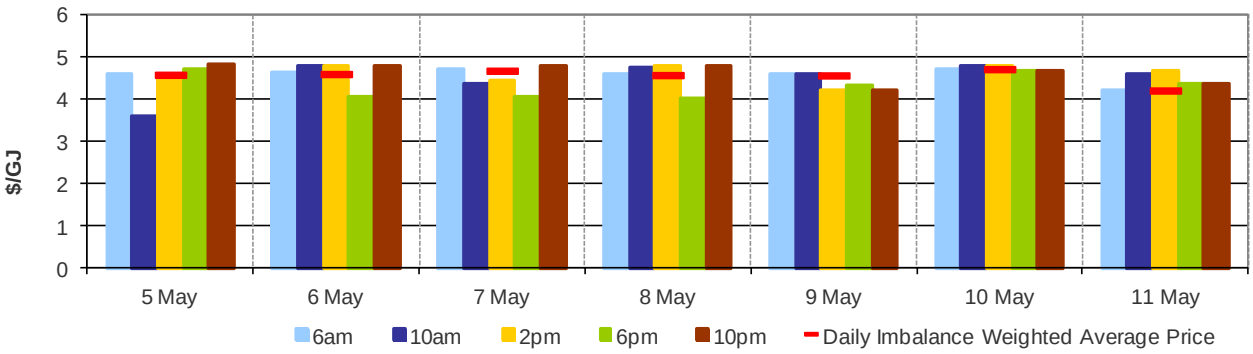
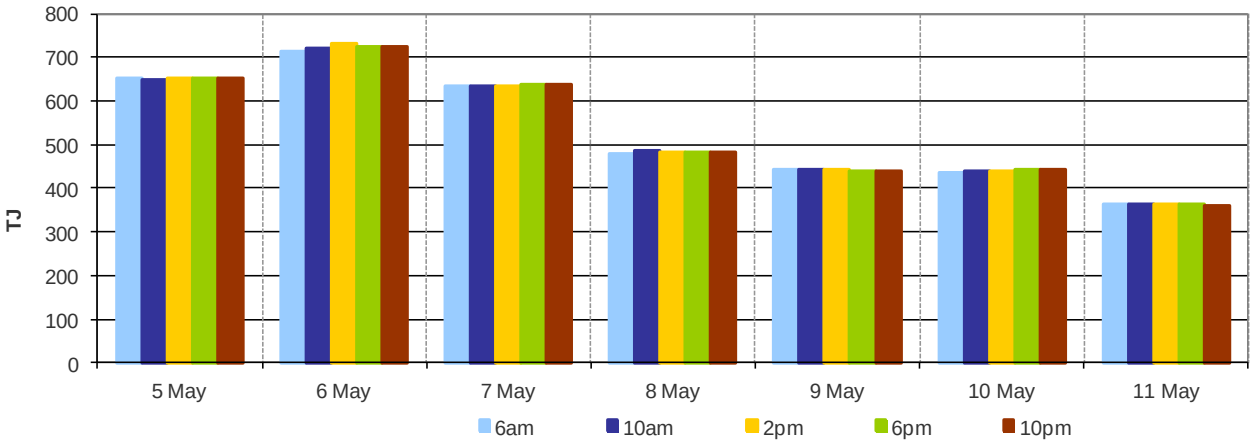


Figure 1.2: Demand forecasts



[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

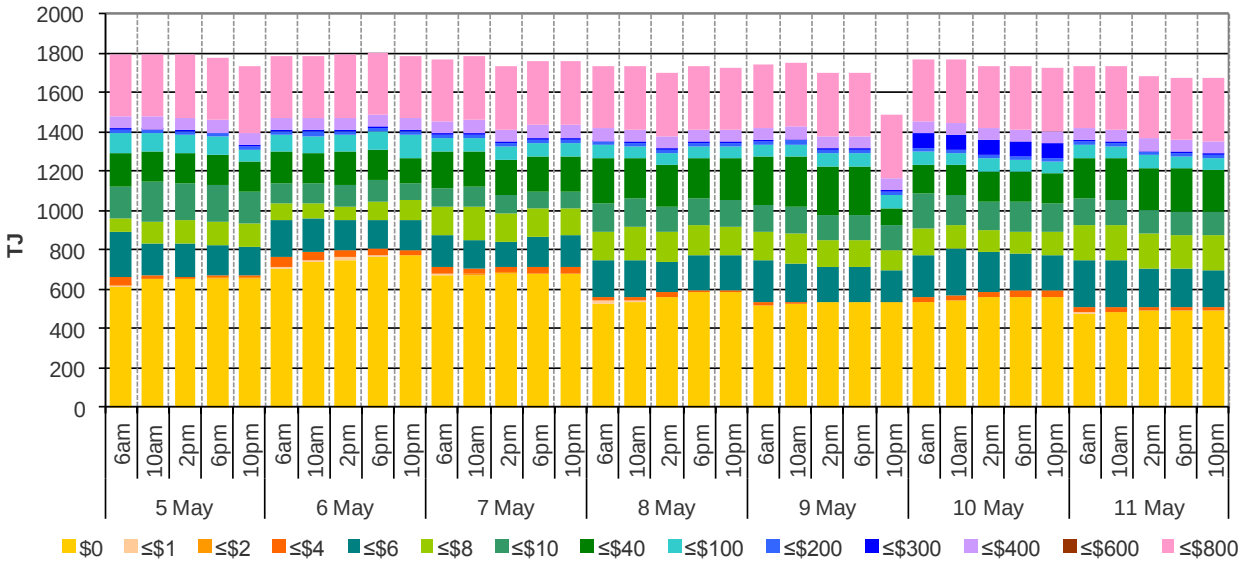


Figure 1.4: Withdrawal bids by price bands

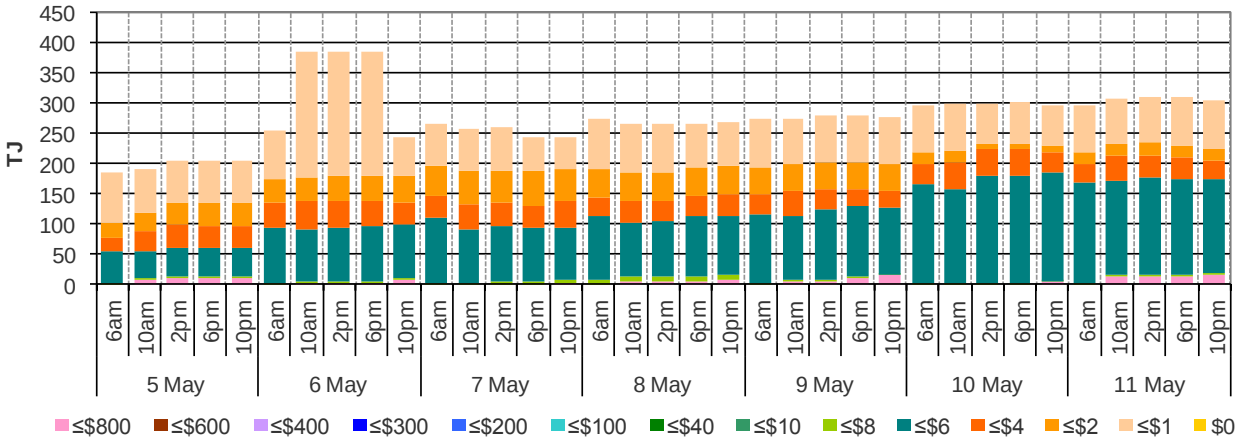
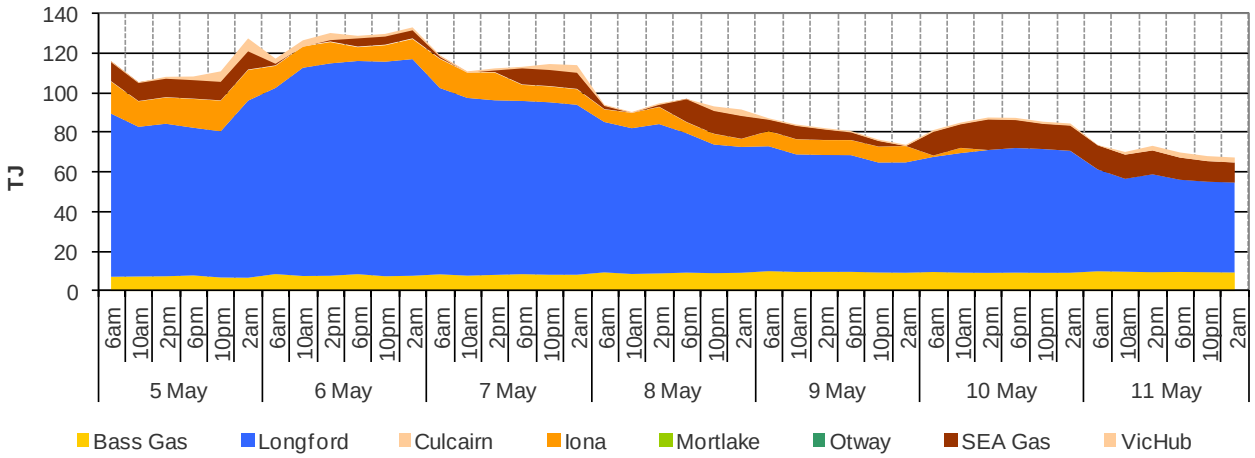


Figure 1.5: Metered Injections by System Injection Point



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 ($/GJ)	5.15	5.15	5.56	5.15	5.56	5.56	5.56
Ex ante quantity (TJ)	220	251	248	245	257	245	207
Ex post price ($/GJ)	5.00	5.15	5.56	5.56	5.15	5.15	5.15
Ex Post quantity (TJ)	208	248	259	256	251	235	201

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

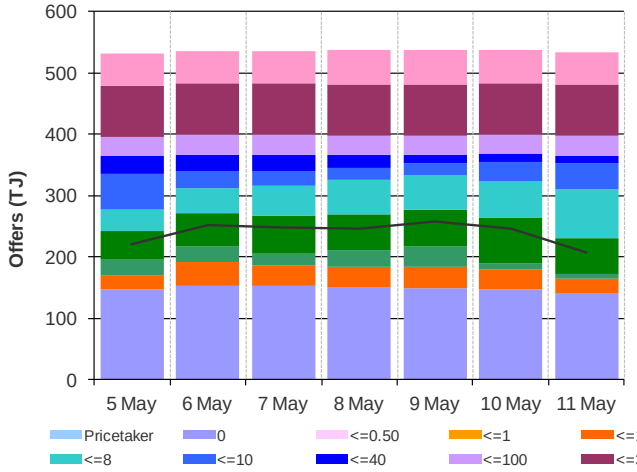
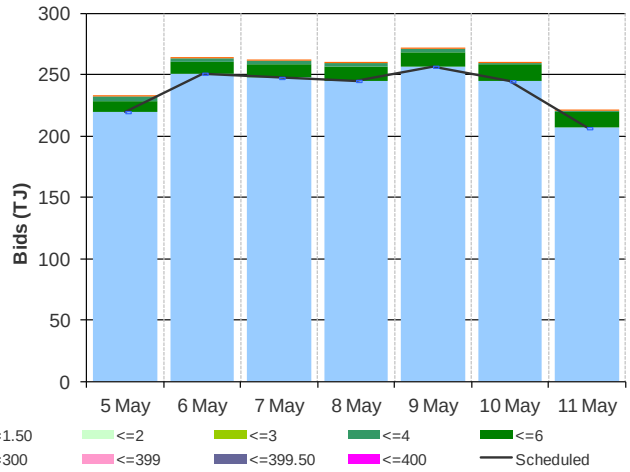


Figure 2.2(b): Daily hub bids in price bands ($/GJ)



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

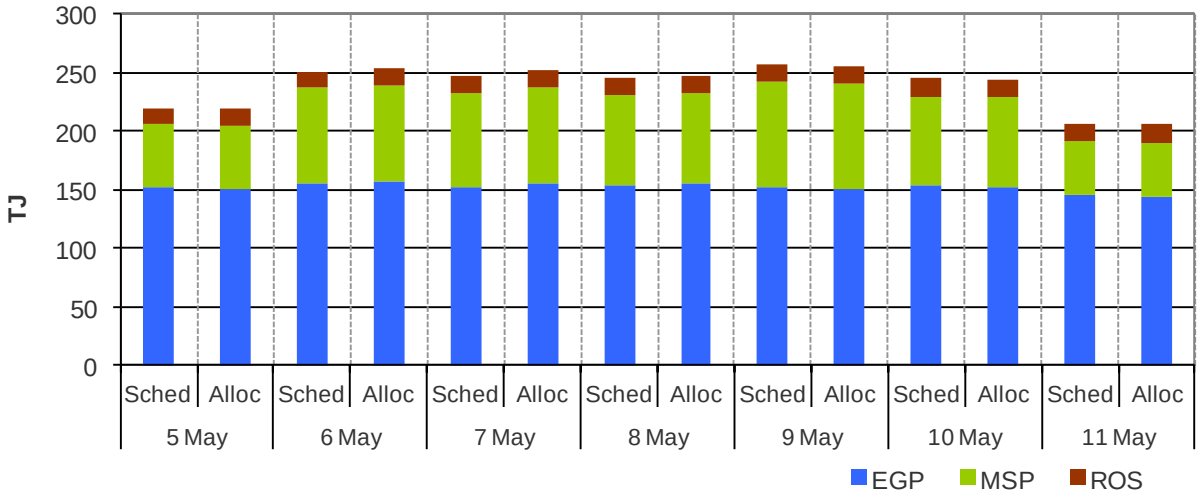


Figure 2.4 (a) SYD STTM MOS allocations (TJ)

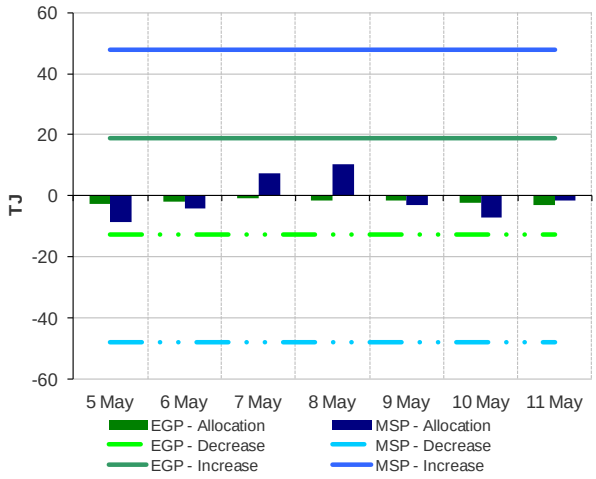
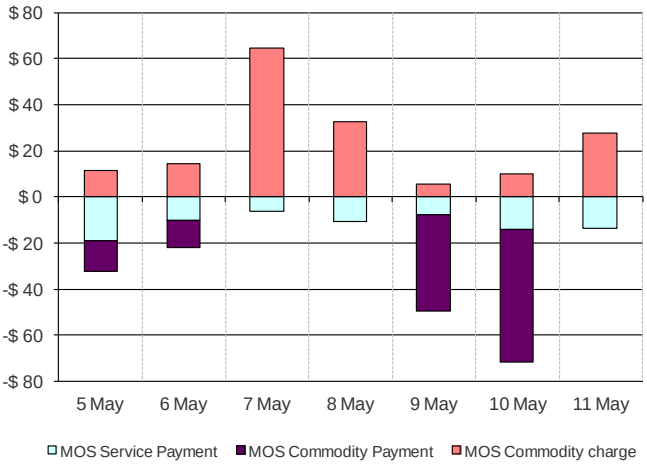


Figure 2.4 (b): Service payments and commodity payments/charges ($000)



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 ($/GJ)	4.75	4.94	4.94	4.94	4.94	4.94	4.88
Ex ante quantity (TJ)	54	68	68	71	72	67	57
Ex post price ($/GJ)	3.60	4.92	4.92	4.92	4.89	4.94	4.91
Ex Post quantity (TJ)	50	62	63	66	67	67	60

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

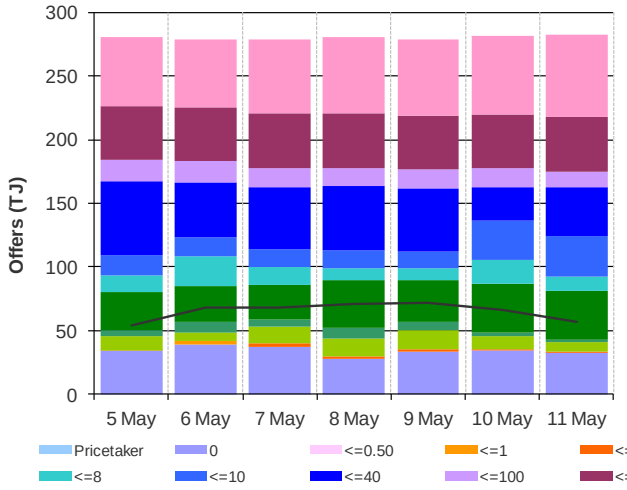


Figure 3.2(b): Daily hub bids in price bands ($/GJ)

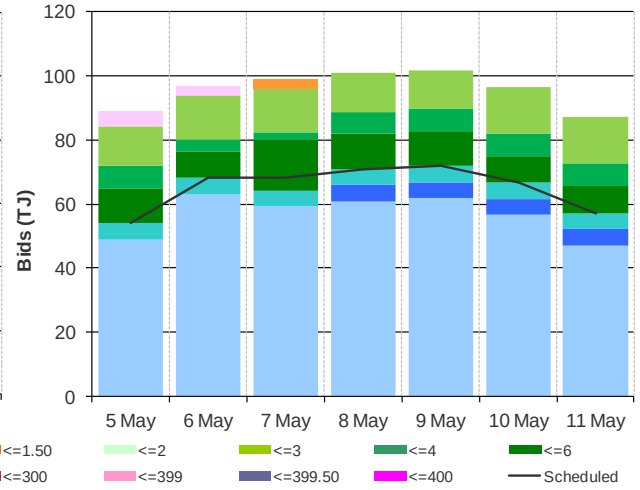


Figure 3.3: ADL STTM ex ante scheduled and allocated gas volumes by STTM facility

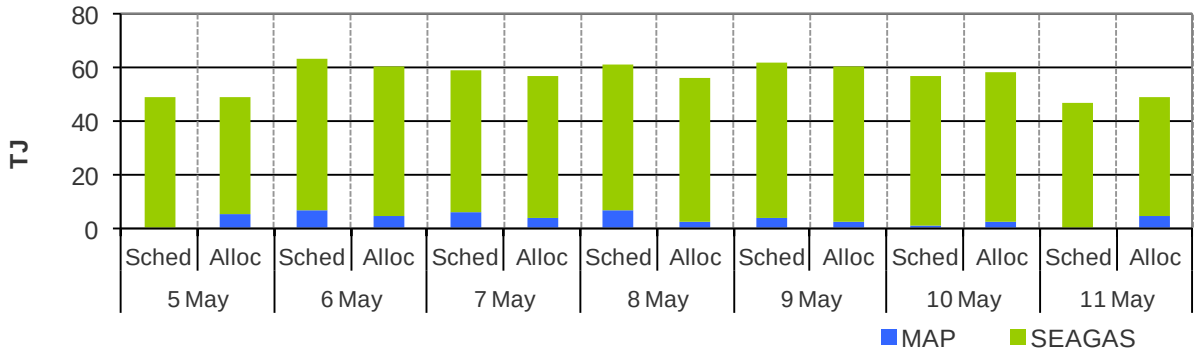


Figure 3.4 (a) ADL STTM MOS allocations (TJ)

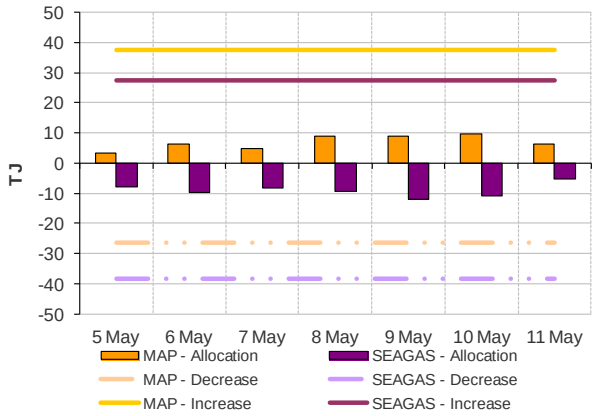
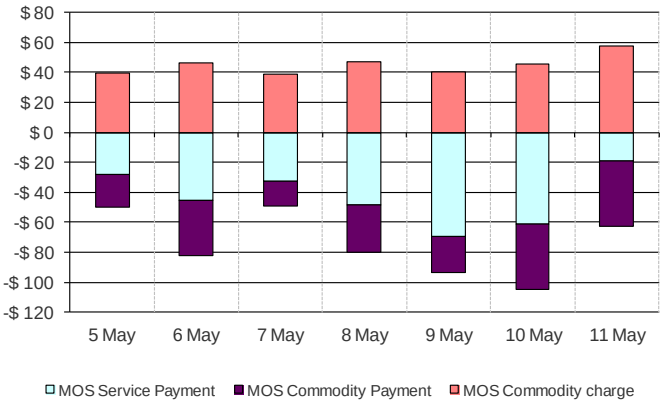


Figure 3.4 (b): Service payments and commodity payments/charges ($000)



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 ($/GJ)	4.40	5.39	6.40	6.40	5.73	5.73	6.45
Ex ante quantity (TJ)	102	119	138	155	161	150	133
Ex post price ($/GJ)	5.37	6.40	7.99	5.70	5.73	7.20	7.50
Ex Post quantity (TJ)	105	123	143	155	162	154	136

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

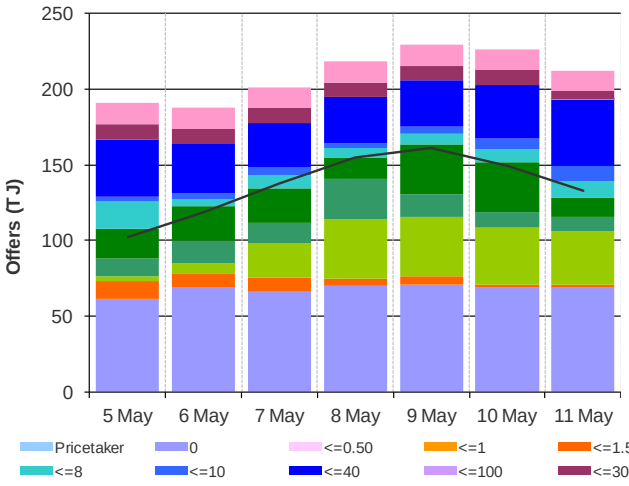


Figure 4.2(b): Daily hub bids in price bands ($/GJ)

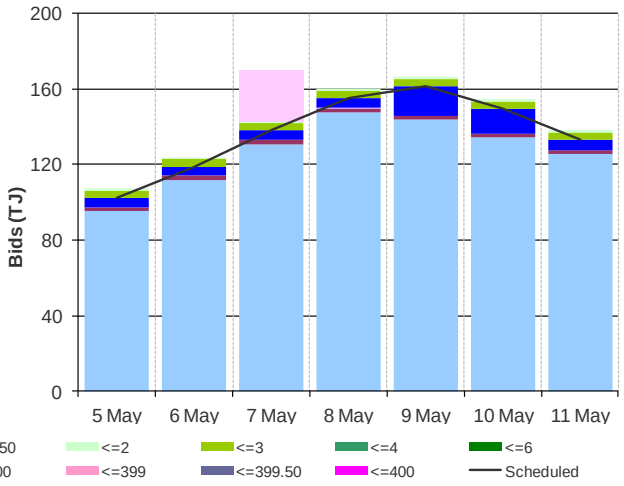


Figure 4.3: BRI STTM ex ante scheduled and allocated gas volumes by STTM facility

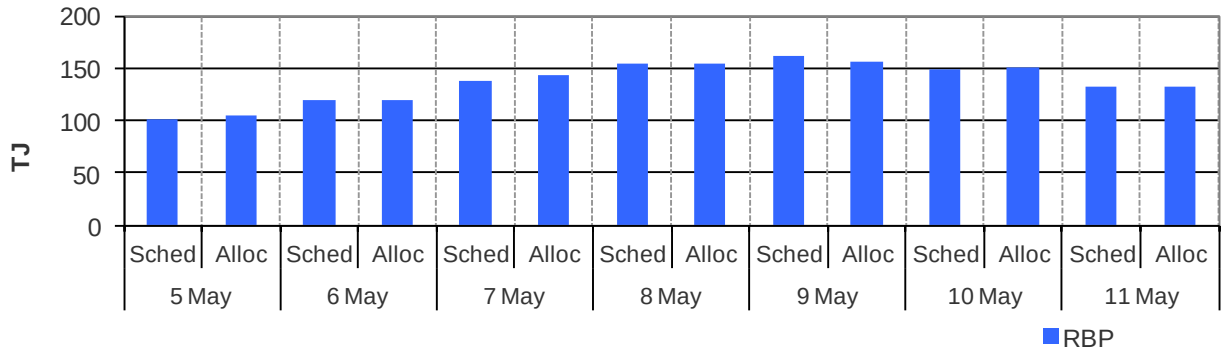


Figure 4.4 (a) BRI STTM MOS allocations (TJ)

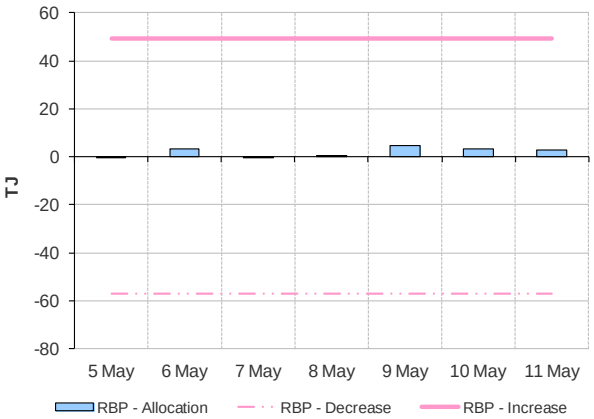
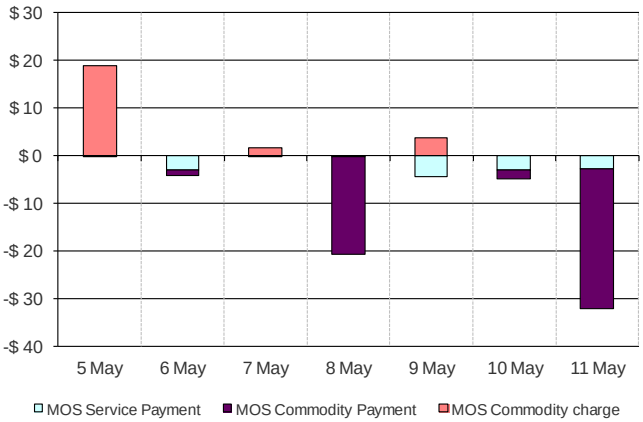


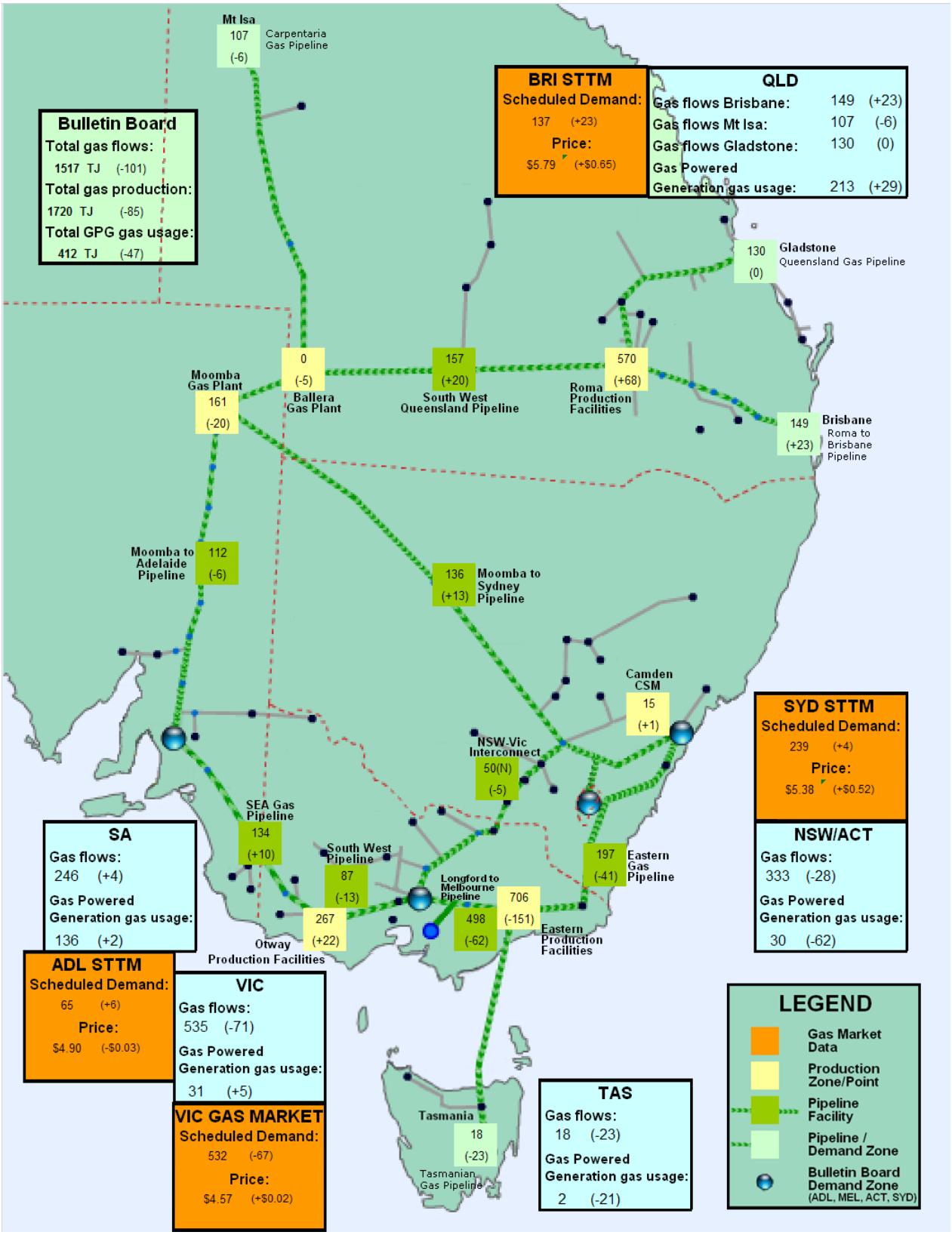
Figure 4.4 (b): Service payments and commodity payments/charges ($000)



5 National Gas Bulletin Board

Figure 5.1 shows average daily actual flows for the current week in the aqua boxes[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.