Weekly Gas Market Report

AUSTRALIAN ENERGY REGULATOR

31 May – 6 June 2015

Weekly summary

Prices increased in all regions this week as an outage at Longford affected supply in Victoria. Average prices increased between 25 per cent (in Victoria) to 44 per cent (in Queensland).

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
31 May - 06 Jun 2015	5.19	6.06	5.47	3.83
% change from previous week	25	42	31	44
14-15 financial YTD	3.59	3.39	3.72	2.33
% change from previous financial YTD	-8	-16	-14	-50

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)
31 May - 06 Jun 2015	5.19	-	955
% change from previous week	25	-	31
14-15 financial YTD	3.59	-	534
% change from previous financial YTD	-8	-	4

* 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)
31 May - 06 Jun 2015	6.06	7.07	35.71	283	292
% change from previous week	42	57	17	9	10
14-15 financial YTD	3.39	3.42	15.44	239	239
% change from previous financial YTD	-16	-13	55	2	4

Figure 4: Adelaide STTM

	Ex ante price ($/GJ)	Ex post price ($/GJ)	MOS payments ($000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
31 May - 06 Jun 2015	5.47	5.31	7.43	85	85
% change from previous week	31	27	-51	14	14
14-15 financial YTD	3.72	3.66	12.86	62	62
% change from previous financial YTD	-14	-15	-9	-3	-3

Figure 5: Brisbane STTM

	Ex ante price ($/GJ)	Ex post price ($/GJ)	MOS payments ($000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
31 May - 06 Jun 2015	3.83	3.74	1.16	93	94
% change from previous week	44	63	13	-1	2
14-15 financial YTD	2.33	2.21	1.70	132	132
% change from previous financial YTD	-50	-54	10	-13	-14

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

Unplanned outage at Longford and higher prices in Victoria, Sydney and Adelaide

On Monday 1 June in Victoria, the Longford gas production facility tripped and constraints were applied to limit injection capacity to around 30 TJ/h from 6 pm. Additionally, unplanned maintenance on the Winchelsea Compressor Station constrained flows on the South West Pipeline for a few hours from 6 pm before it was returned to service, while further constraints were applied to the South West Pipeline due to system capacity limitations from 10 pm. LNG was injected in response to these events and ancillary payments of $3200 accrued during the last scheduling interval of the gas day.

There were high prices in the following days in Victoria[2] as the Longford production facility gradually returned to service. High demand due to cold weather also appeared to have contributed to higher prices. Between 1 and 4 June the temperature in Melbourne did not exceed 14 degrees and demand in Victoria was around 1 PJ or higher (reaching 1.174 PJ on 4 June).

The high prices in Victoria appeared to have had a flow on effect on prices in Sydney and Adelaide over the same period, with both regions sourcing additional gas from Moomba[3].

There were also AMBER[4] Linepack Capacity Adequacy (**LCA**) flags displayed on the Bulletin Board for the Moomba to Sydney Pipeline (**MSP**) for gas days 2, 3 and 4 June. The description provided indicated the Wilton STTM delivery point was constrained due to maintenance activities on the main pipeline.

On 2 June in Sydney, offers on the MSP were scheduled up to the capacity of the pipeline (193.8 TJ). This led to a capacity constraint price (**CCP**)[5] of $1.91/GJ and payments for 49.1 TJ of as available (non-firm) gas scheduled on the MSP.

[2] The daily imbalance price reached $7.03/GJ on 2 June.

[3] Additional deliveries on the Moomba to Sydney and Moomba to Adelaide pipelines also coincided with a significant increase in gas flowing from Queensland into South Australia on the South West Queensland Pipeline through the QSN Link.

[4] An AMBER flag indicates a likelihood of voluntary or contractual load shedding.

[5] The CCP forms part of a mechanism used to compensate shippers with firm transportation rights when two conditions are met. Firstly, quantities of firm gas are unscheduled because of a constraint and secondly non-firm or as available gas quantities are scheduled at a lower price (ahead of this firm gas). Compensation payments are made to shippers with firm haulage priority by shippers that were scheduled with a lower haulage priority on the constrained pipeline.

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[6], and injection/withdrawal bids. 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.[7]

Figure 1.1: Prices by schedule

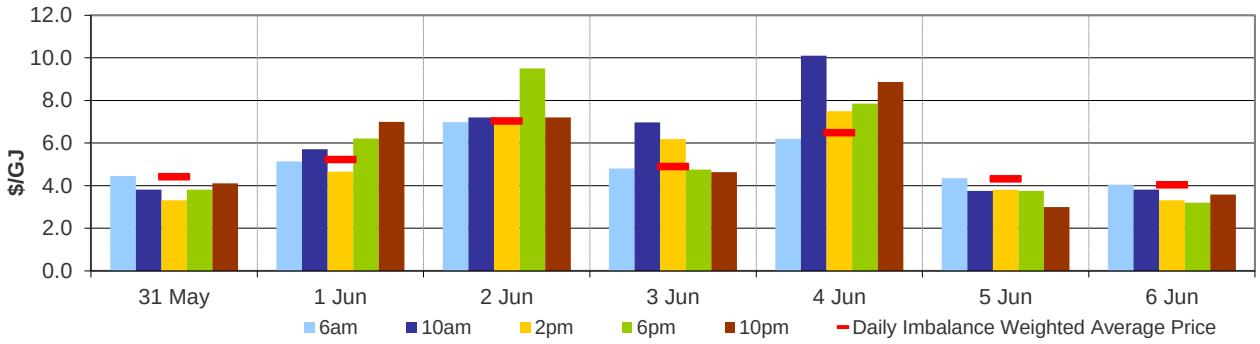
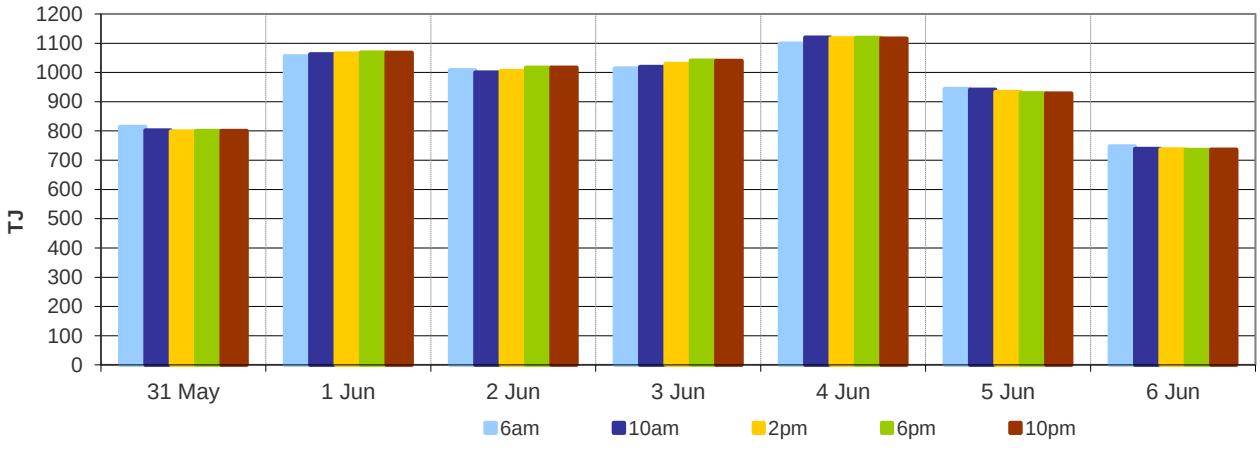


Figure 1.2: Demand forecasts



[6] 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.

[7] 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.

Figure 1.3: Injection bids by price bands

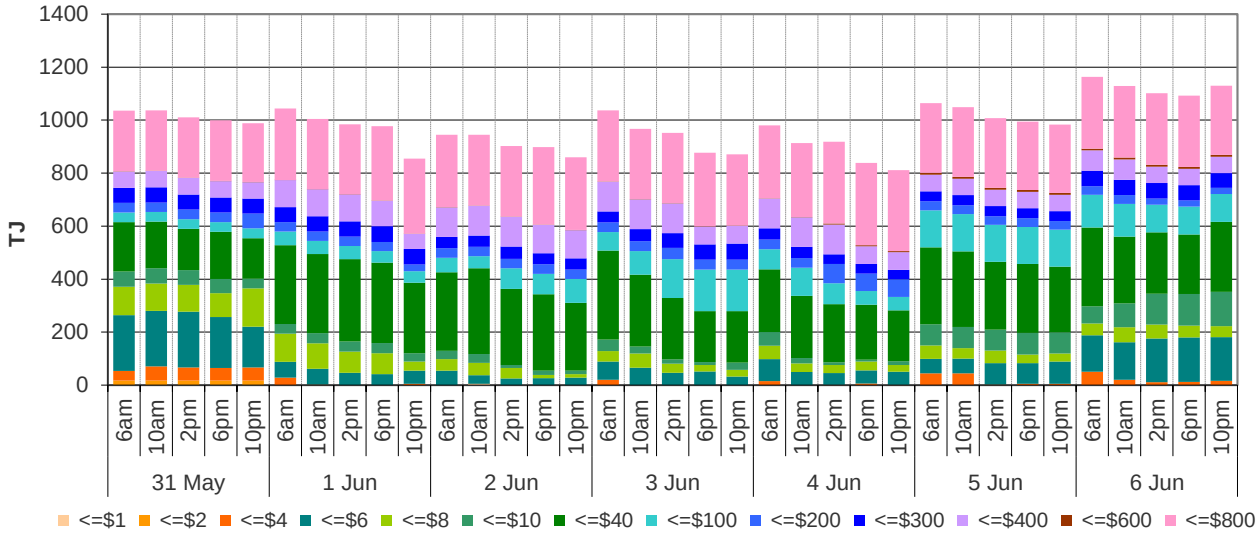


Figure 1.4: Withdrawal bids by price bands

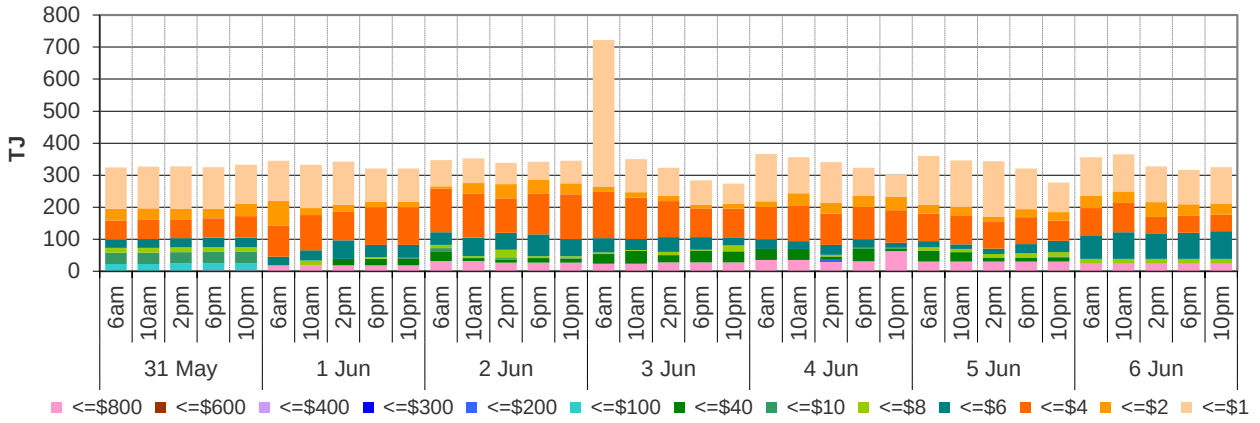
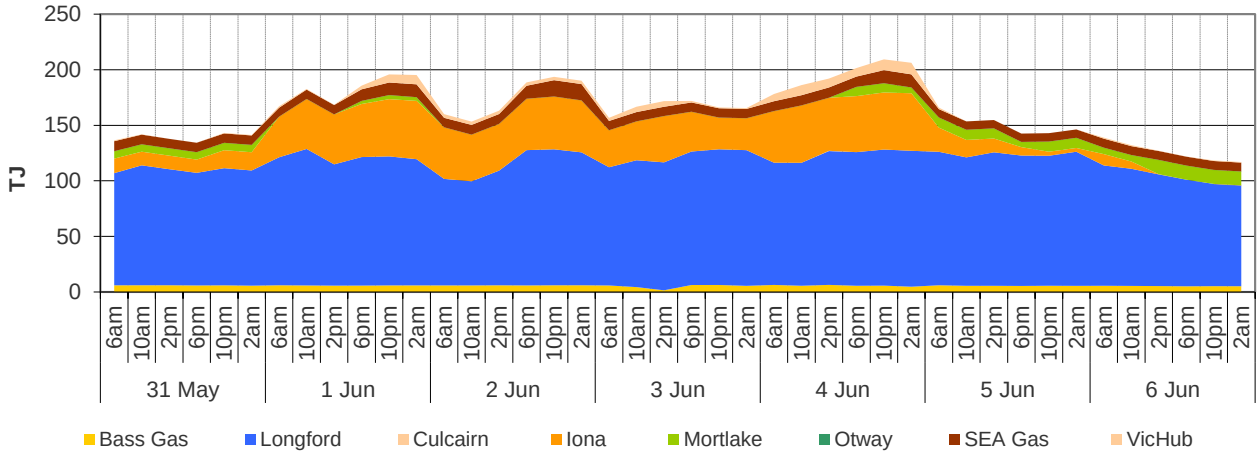


Figure 1.5: Metered Injections by System Injection Point



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 to inject or bids to withdraw gas traded through the hub.[8] 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.[9]

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 ($/GJ)	4.75	5.98	8.31	6.19	7.00	4.72	5.45
Ex ante quantity (TJ)	238	298	308	301	299	291	246
Ex post price ($/GJ)	5.32	6.20	10.00	7.42	8.30	6.39	5.89
Ex post quantity (TJ)	251	302	315	310	307	304	254

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

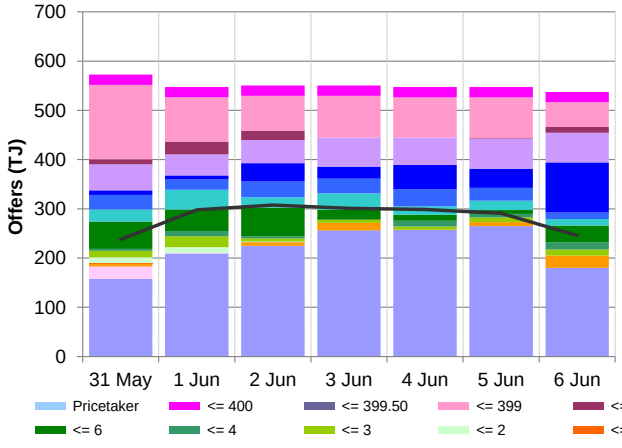
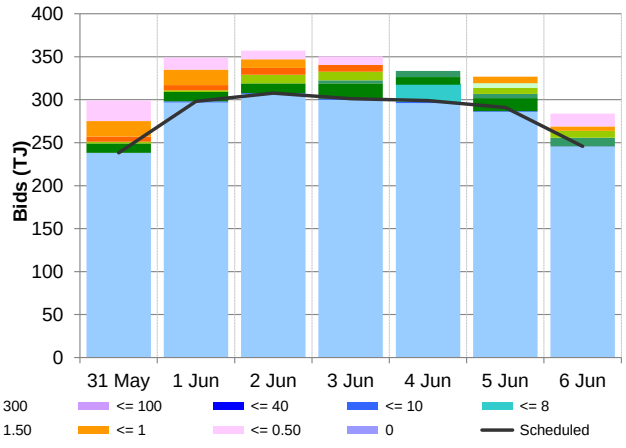


Figure 2.2 (b): Daily hub bids in price bands ($/GJ)



[8] 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.

[9] 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

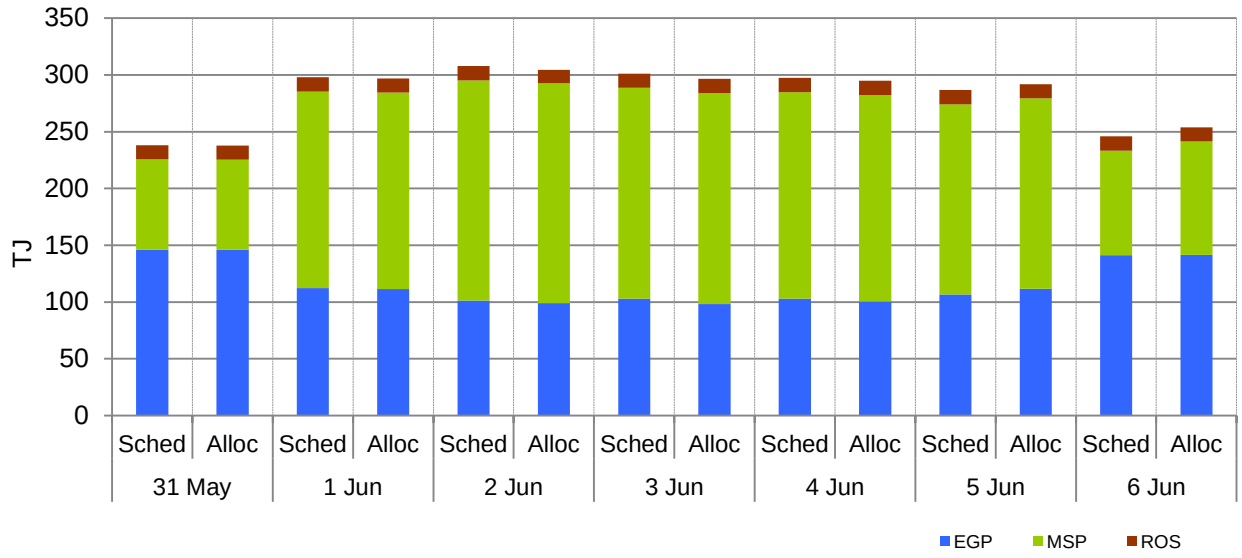


Figure 2.4 (a): SYD STTM MOS allocations (TJ)

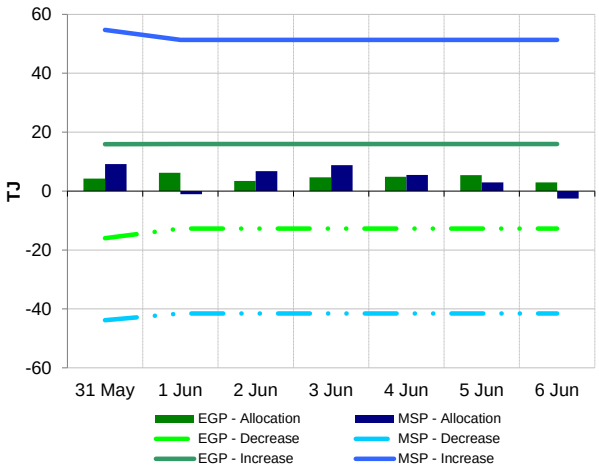
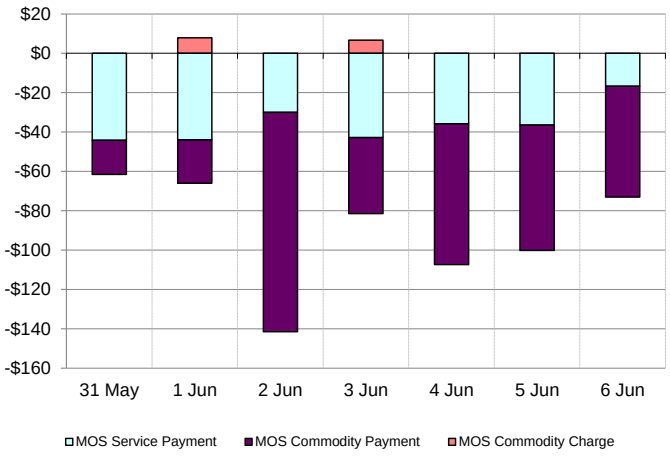


Figure 2.4 (b): Service payments and commodity payments/charges ($000)



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 ($/GJ)	4.49	5.08	5.06	5.60	7.00	6.06	5.00
Ex ante quantity (TJ)	72	95	96	92	87	84	71
Ex post price ($/GJ)	4.19	5.08	5.61	5.60	7.00	5.59	4.15
Ex post quantity (TJ)	71	96	103	92	87	81	66

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

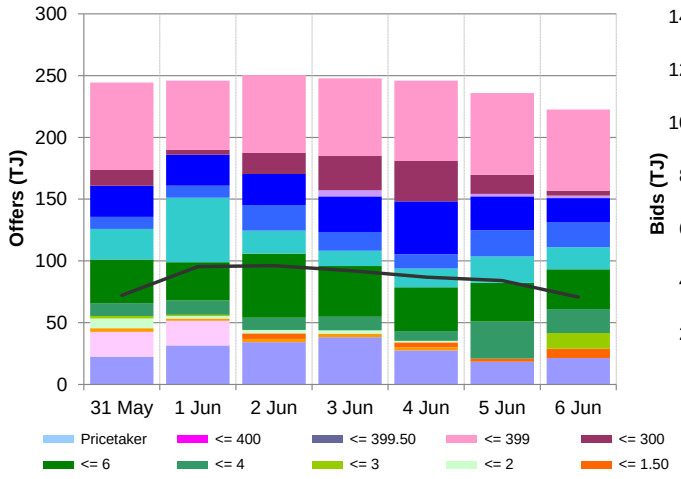


Figure 3.2 (b): Daily hub bids in price bands ($/GJ)

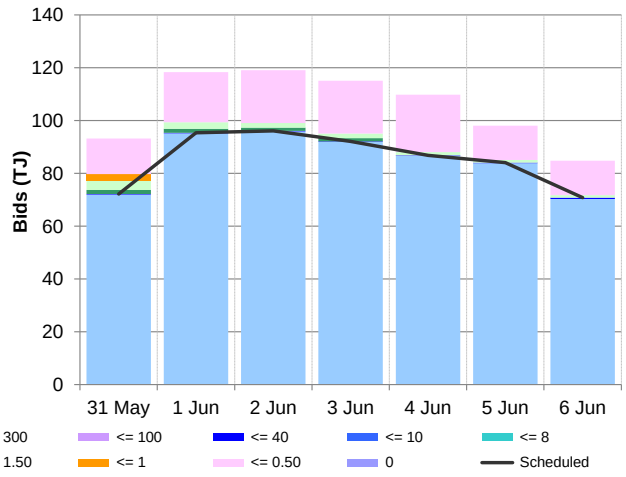


Figure 3.3: ADL net scheduled and allocated gas volumes (excluding MOS) by STTM facility

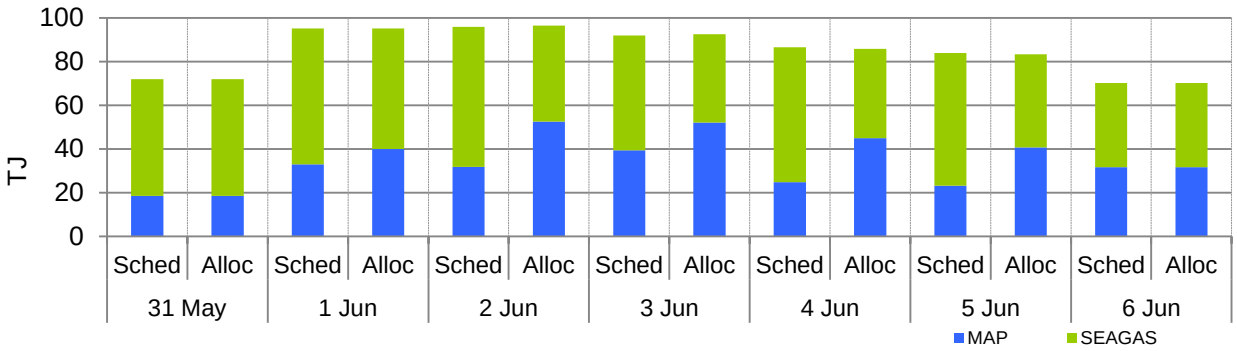


Figure 3.4 (a): ADL STTM MOS allocations (TJ)

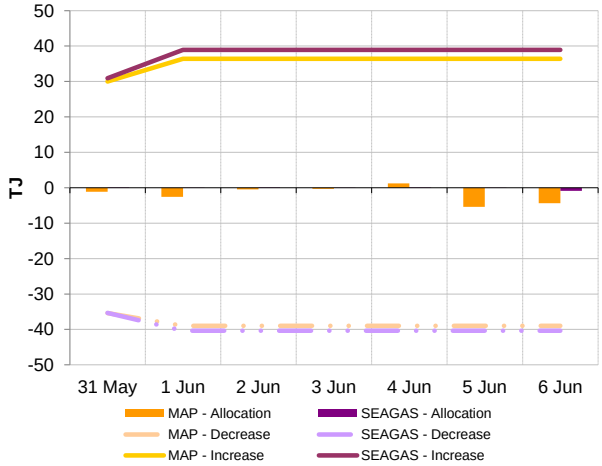
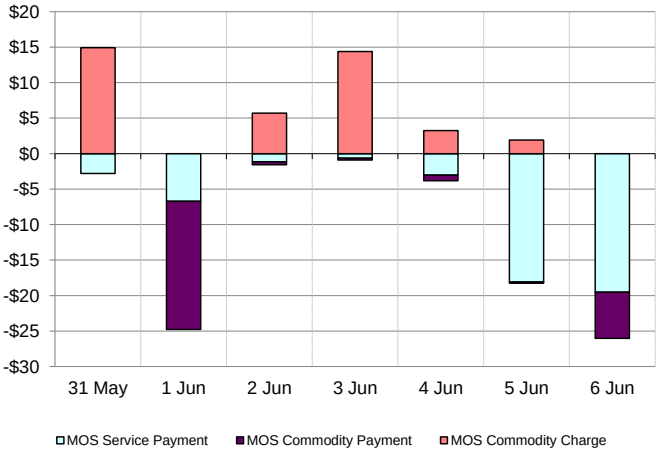


Figure 3.4 (b): Service payments and commodity payments/charges ($000)



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 ($/GJ)	3.51	3.51	4.60	4.65	3.60	3.52	3.39
Ex ante quantity (TJ)	79	97	100	100	100	94	85
Ex post price ($/GJ)	3.52	3.51	4.60	4.65	3.60	3.52	2.80
Ex post quantity (TJ)	79	97	101	102	101	95	82

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

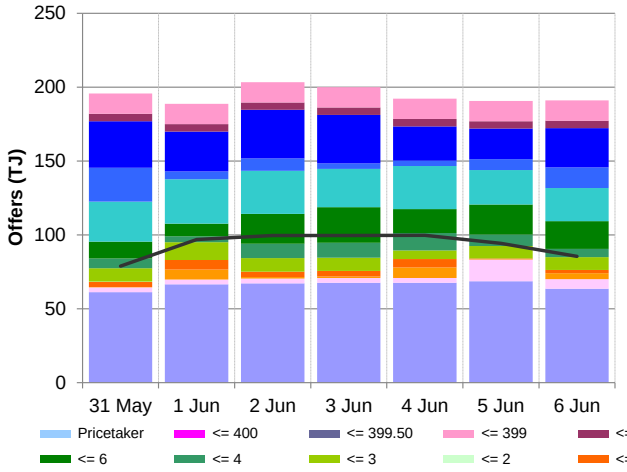


Figure 4.2 (b): Daily hub bids in price bands ($/GJ)

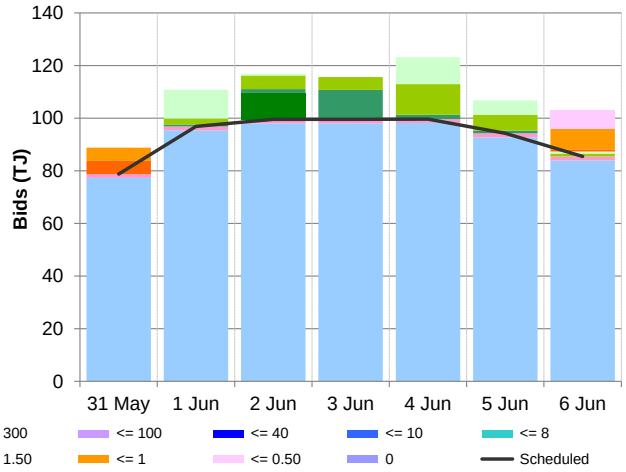


Figure 4.3: BRI net scheduled and allocated gas volumes (excluding MOS) by STTM facility

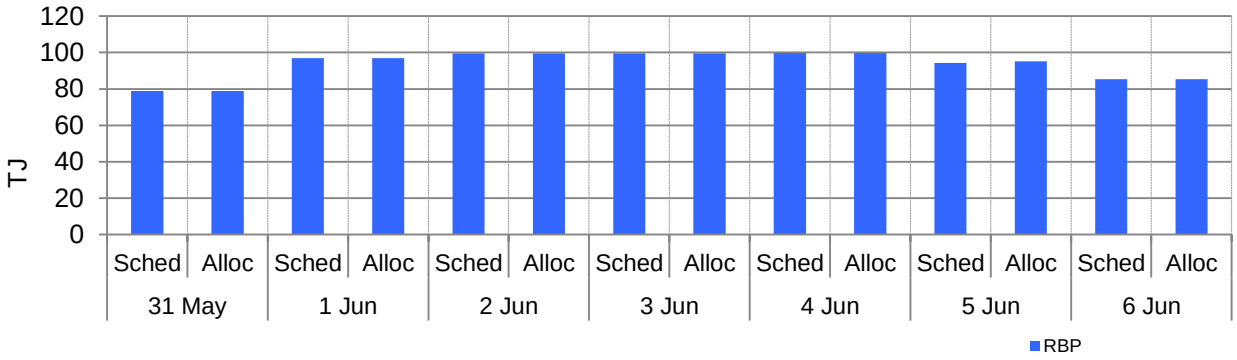


Figure 4.4 (a): BRI STTM MOS allocations (TJ)

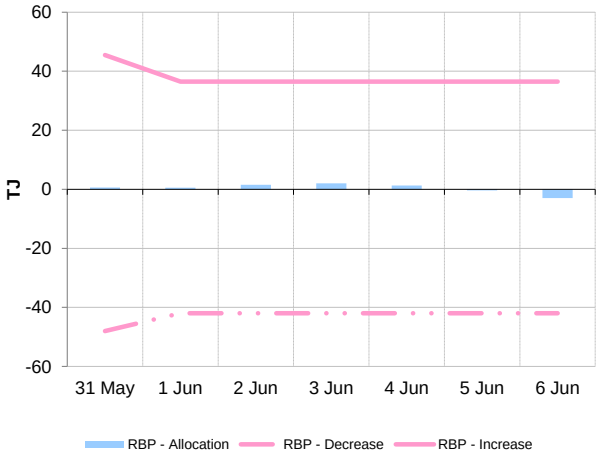
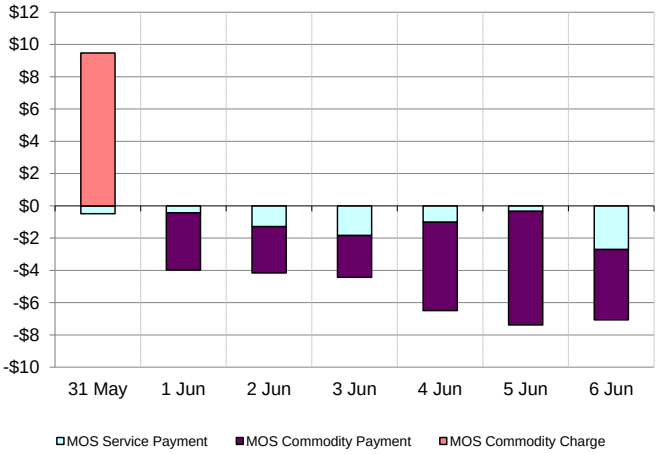


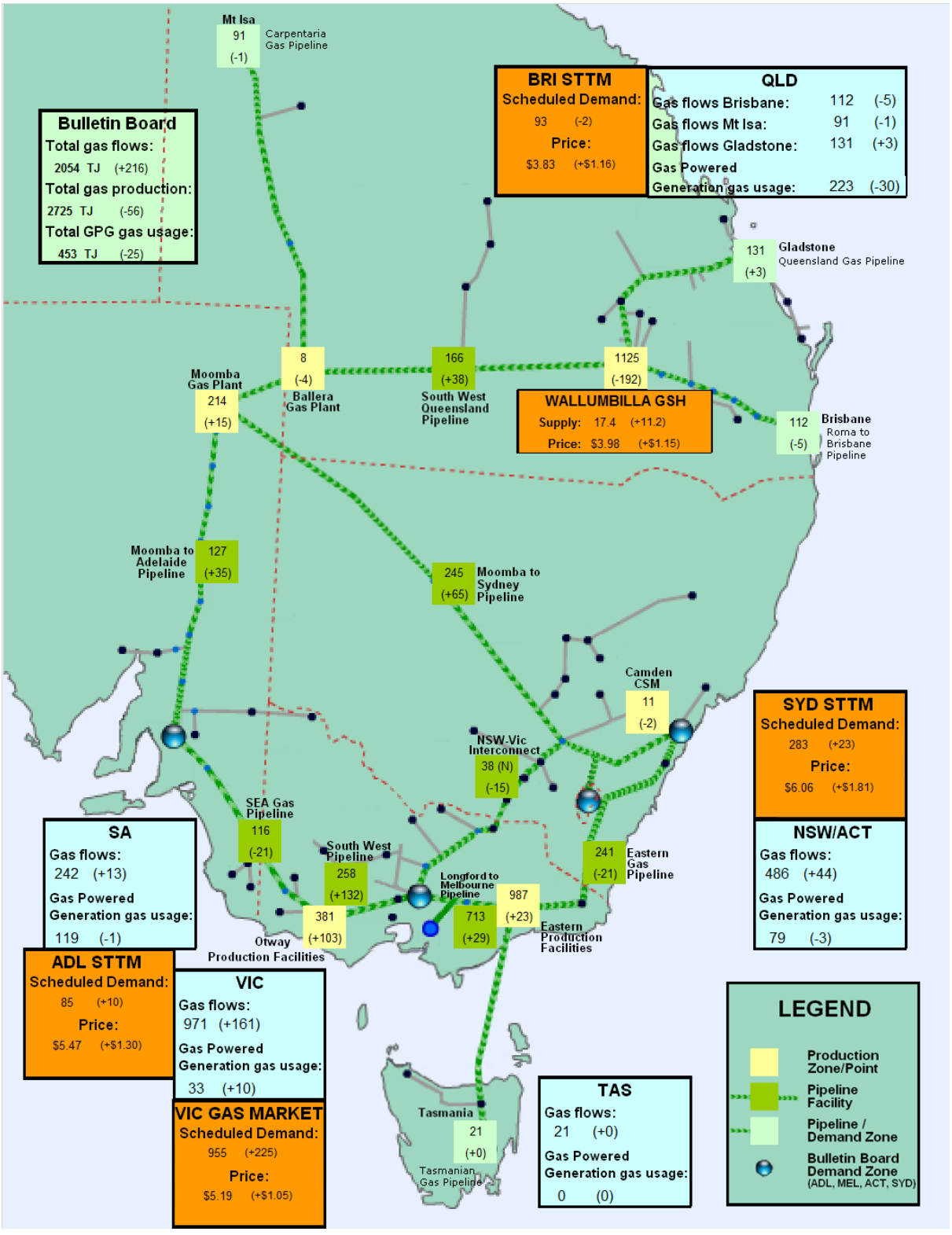
Figure 4.4 (b): Service payments and commodity payments/charges ($000)



5 National Gas Bulletin Board

Figure 5.1 shows average daily actual flows for the current week in the aqua boxes[10] 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[11] for each gas market are provided.

Figure 5.1: Gas market data ($/GJ, TJ); Production, Consumption and Pipeline flows (TJ)



[10] 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.

[11] Wallumbilla supply is the average daily volume of gas 'traded', while price is a volume weighted average.

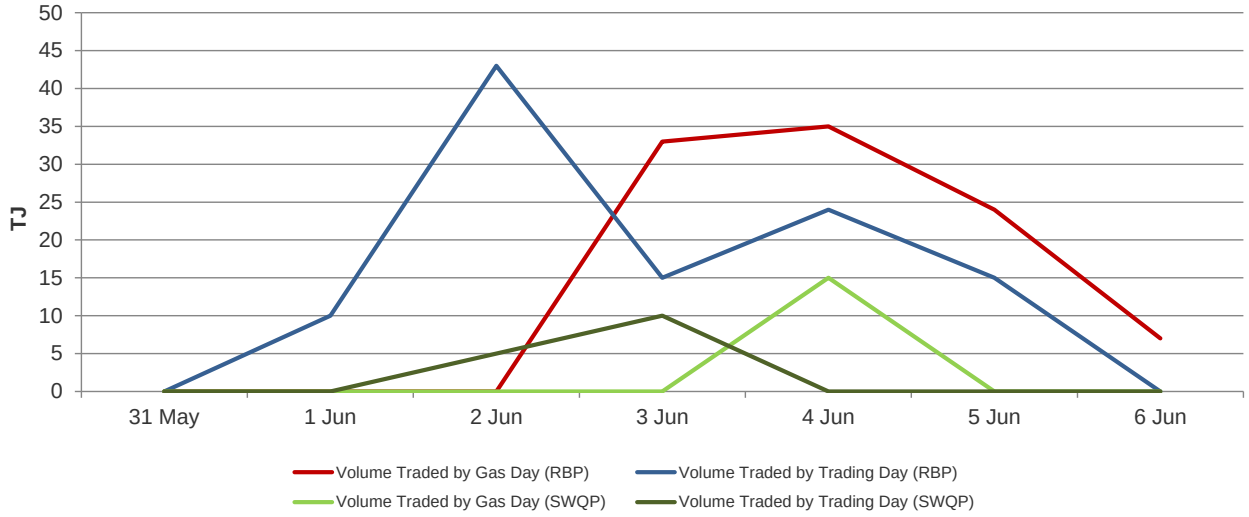
6 Gas Supply Hub

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[12] 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).

There were 19 trades this week for daily and day-ahead products on the RBP and SWQP at a volume weighted price of $3.98/GJ. The RBP saw 107 TJ of gas traded at a volume weighted price of $3.95/GJ, while the SWQP saw 15 TJ traded at a volume weighted price of $4.15/GJ.

Figure 6.1 shows volumes traded[13] on each gas day and trading day from 31 May to 6 June.

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



[12] 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.

[13] Volumes shown for weekly products include the 'daily' volume for each relevant 'gas day', and the 'weekly' volume for each relevant 'trading day'.