

12 – 18 October 2014

Weekly summary

The average price increased in each region from \$0.15/GJ in Adelaide to around \$0.50/GJ in Sydney. The large increase in Brisbane related to the high ex ante price on 17 October of \$29.90/GJ, with prices on other days in the weekly only averaging 0.2 cents higher than the record low average weekly price set during the previous week.

In the Gas Supply Hub there were new record minimum prices for gas trades, a \$1.20/GJ price on the SWQP and a \$0.70/GJ price on the RBP.

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 Oct - 18 Oct 2014	3.70	3.36	3.10	4.96
% change from previous week	10	17	5	517
14-15 financial YTD	3.63	3.73	3.71	2.35
% change from previous financial YTD	-10	-15	-24	-59

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 Oct - 18 Oct 2014	3.70	-	552
% change from previous week	10	-	27
14-15 financial YTD	3.63	-	746
% change from previous financial YTD	-10	-	4

* Note: only positive ancillary payments, reflecting system constraints will be shown here.

More detailed analysis on the VGM is provided in section 1.

¹ The weighted average daily imbalance price applies for Victoria.

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)
12 Oct - 18 Oct 2014	3.36	3.42	13.05	249	254
% change from previous week	17	18	27	17	18
14-15 financial YTD	3.73	3.78	17.58	274	277
% change from previous financial YTD	-15	-10	38	2	5

Figure 4: Adelaide STTM

	Ex ante price (\$/GJ)	Ex post price (\$/GJ)	MOS payments (\$000)	Ex ante quantity (TJ)	Ex post quantity (TJ)
12 Oct - 18 Oct 2014	3.10	3.27	10.31	54	58
% change from previous week	5	21	-19	20	35
14-15 financial YTD	3.71	3.65	14.37	79	78
% change from previous financial YTD	-24	-26	-30	-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)
12 Oct - 18 Oct 2014	4.96	0.59	1.10	156	153
% change from previous week	517	-29	28	-9	-12
14-15 financial YTD	2.35	2.05	1.15	161	160
% change from previous financial YTD	-59	-65	-33	10	10

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

The period of low prices continued in Brisbane this week before increasing to just under \$30/GJ on Friday and then falling to zero the following day (subsequent to a reduction in facility hub capacity on the pipeline). Friday's high ex ante price led to a significant increase in the capacity cost for the MOS gas delivered two days prior (see figure 4.4(b)).

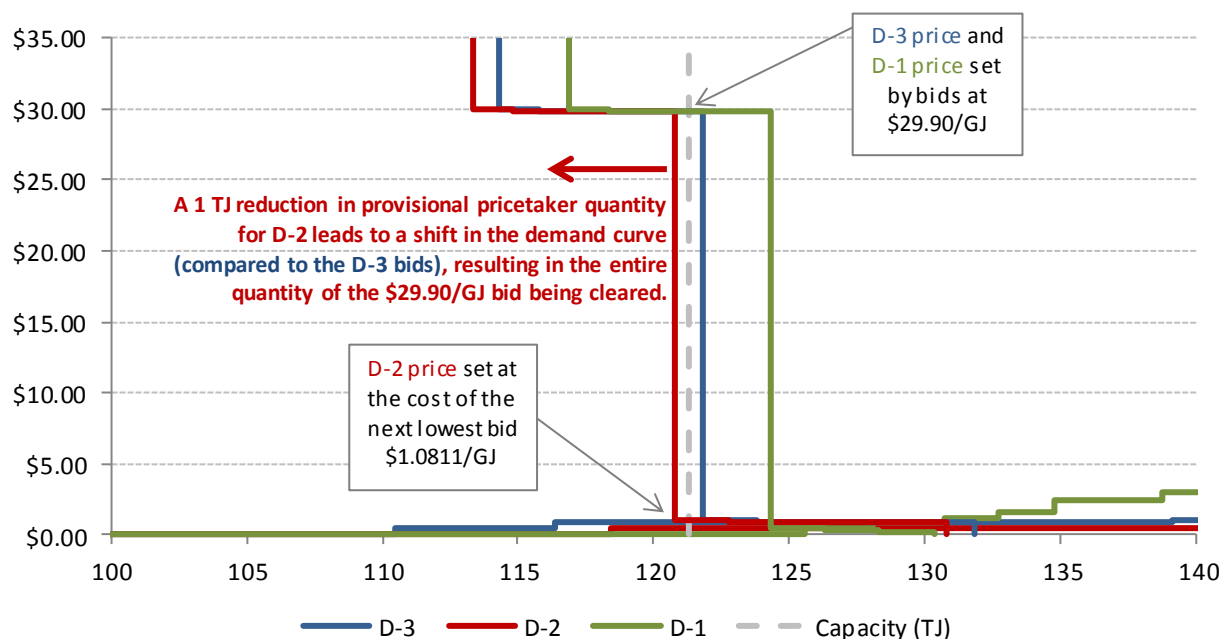
Significant Price Event - Brisbane STTM hub 17 October 2014

Under Rule 498 of the National Gas Rules (**Gas Rules**), the AER is required to identify and report on any significant price variations (**SPVs**) in the Short Term Trading Market (**STTM**).

On Friday 17 October, Brisbane experienced an ex ante price of \$29.90/GJ due to in part constrained pipeline capacity on the Roma to Brisbane Pipeline (**RBP**). This also generated capacity constraint prices (**CCPs**)² on the day which did not affect market outcomes due to the lack of non-firm gas supply scheduled for the gas day.

Capacity on RBP was reduced from 186 TJ to 121.3 TJ for compressor maintenance, leading to uncontrollable demand levels only around 10 TJ below the capacity limit.³ This saw a steep bid demand curve at the margin of the capacity limit. For the gas day we saw highly variable prices in line with relatively small changes in forecast and actual demand as shown in figures 6 and 7 below.

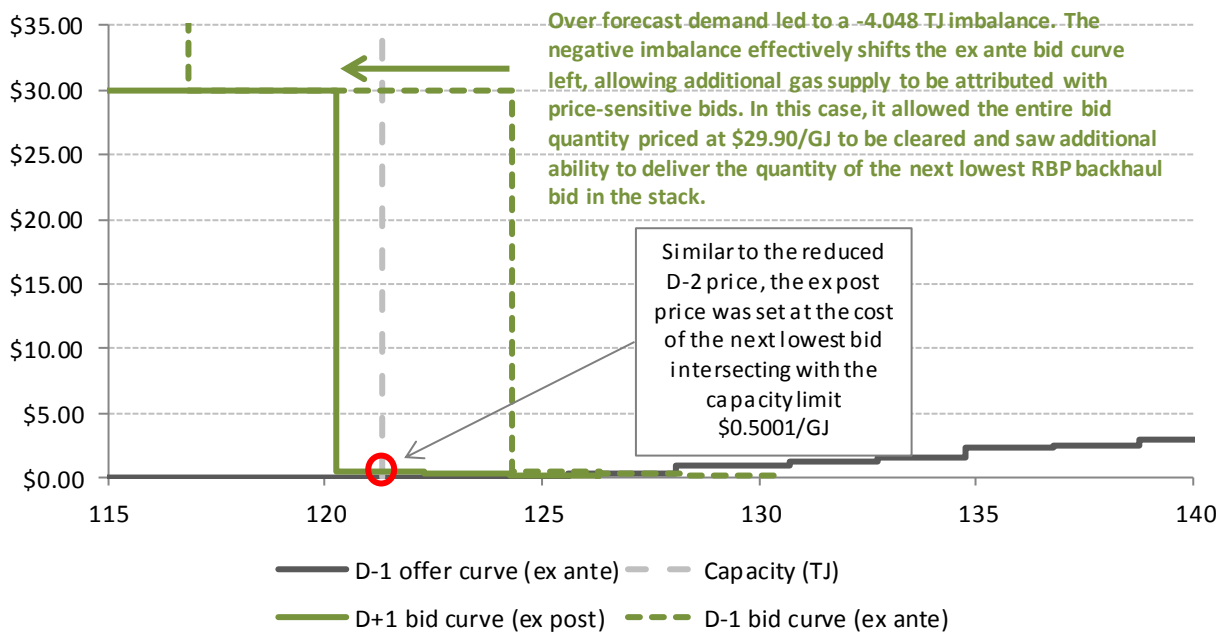
Figure 6: Brisbane STTM



² 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 (ahead of this firm gas).

³ Stanwell took Swanbank E power station offline during the maintenance period, significantly reducing a potential requirement for involuntary curtailment.

Figure 7: Brisbane STTM

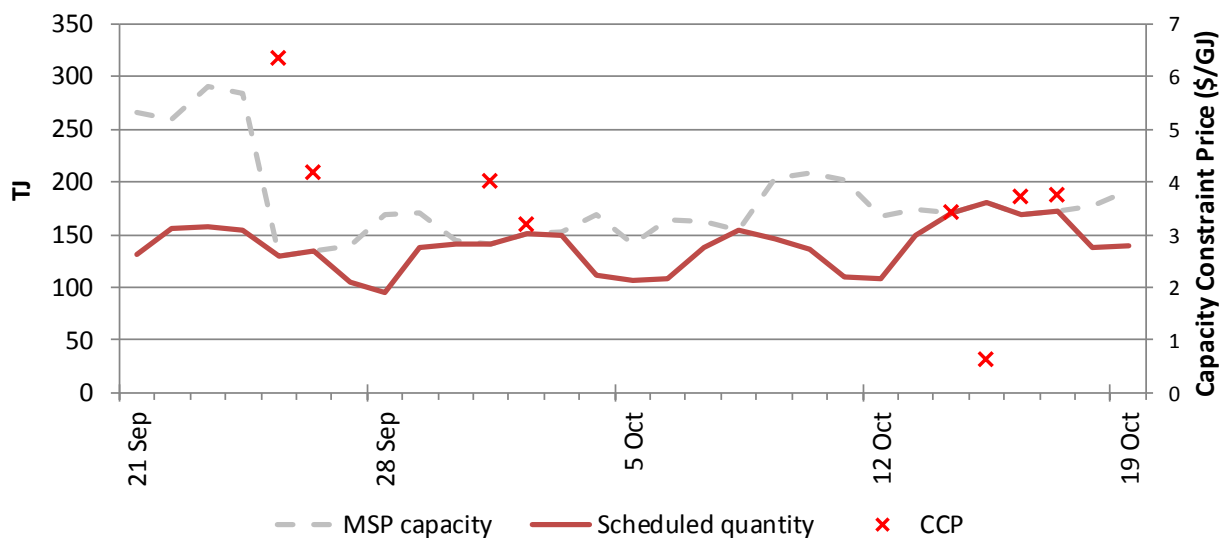


The changes in prices constituted a SPV event in accordance with the [Significant Price Variation Guideline](#) published by the AER under rule 498(2) of the Gas Rules. The AER will publish a separate report on this event after making further inquiries with participants, including ascertaining whether trading activity was in accordance with the Gas Rules.

Capacity Constraint Prices (CCPs) on the Moomba to Sydney Pipeline (MSP)

After a reduction in capacity on MSP from late-September, the pipeline has experienced a number of capacity constraint prices (see figure 8 below). There were four CCPs during the current week, with three of these days set at the same level as the ex ante price in the hub due to all scheduled gas on MSP being offered at the floor price. The constrained capacity did not have a significant impact on the hub price⁴.

Figure 8: Moomba to Sydney Pipeline reduced capacity and capacity constraint prices



⁴ The unconstrained price on 16 and 17 October would have been identical to the constrained ex ante prices, with around a 20 to 40 cent per GJ difference on the other two days.

Detailed Market Figures

12 – 18 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 forecasts⁵, and injection/withdrawal bids.⁶ 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

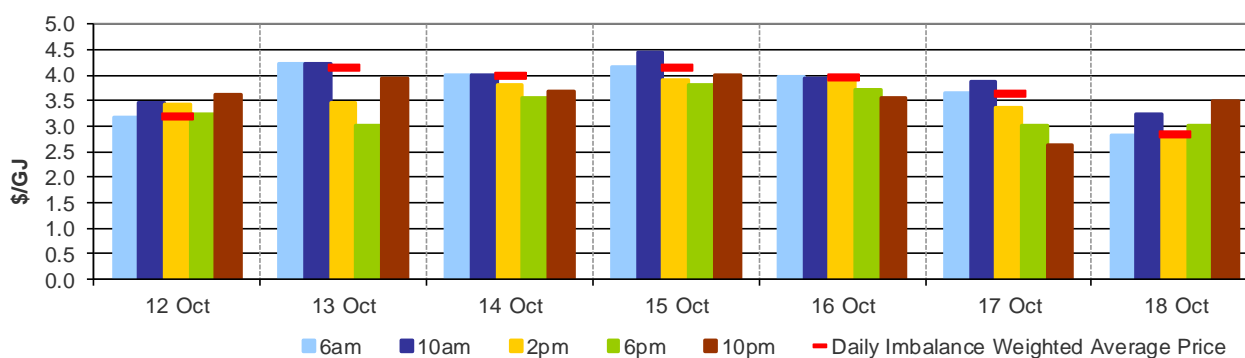
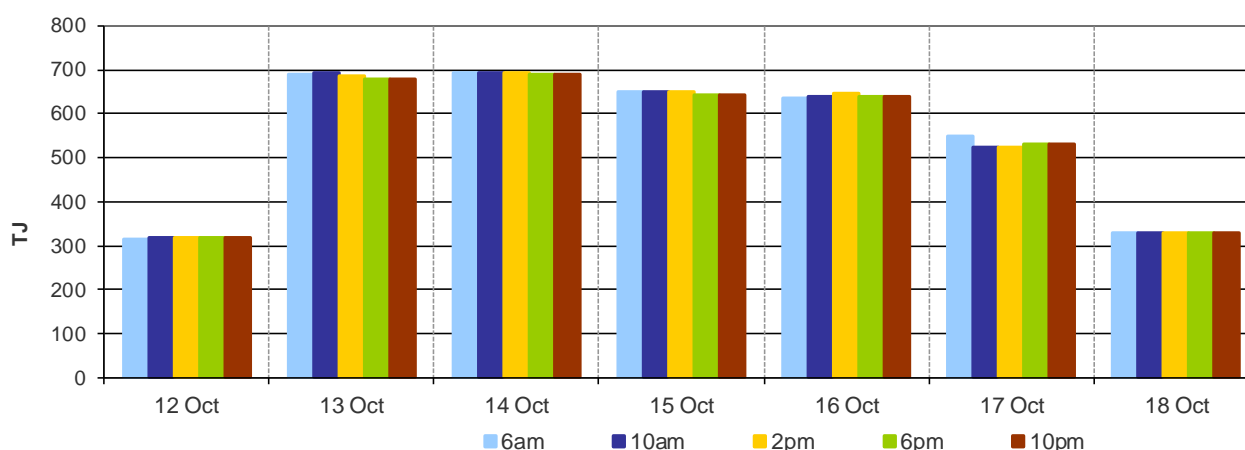


Figure 1.2: Demand forecasts



⁵ 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.

⁶ 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.

⁷ 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

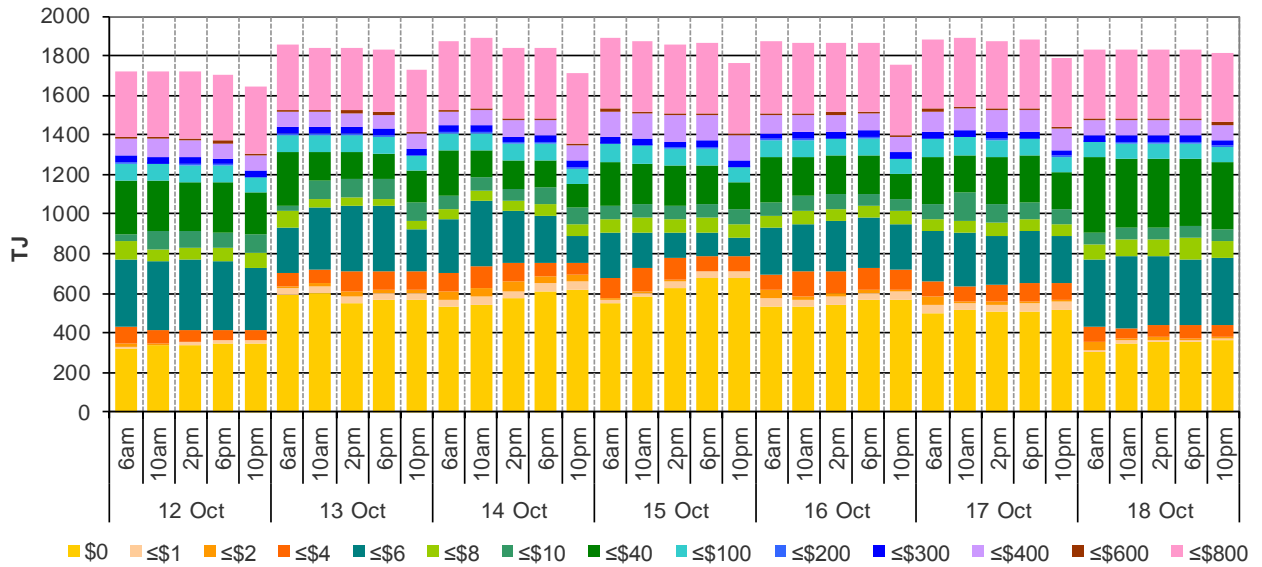


Figure 1.4: Withdrawal bids by price bands

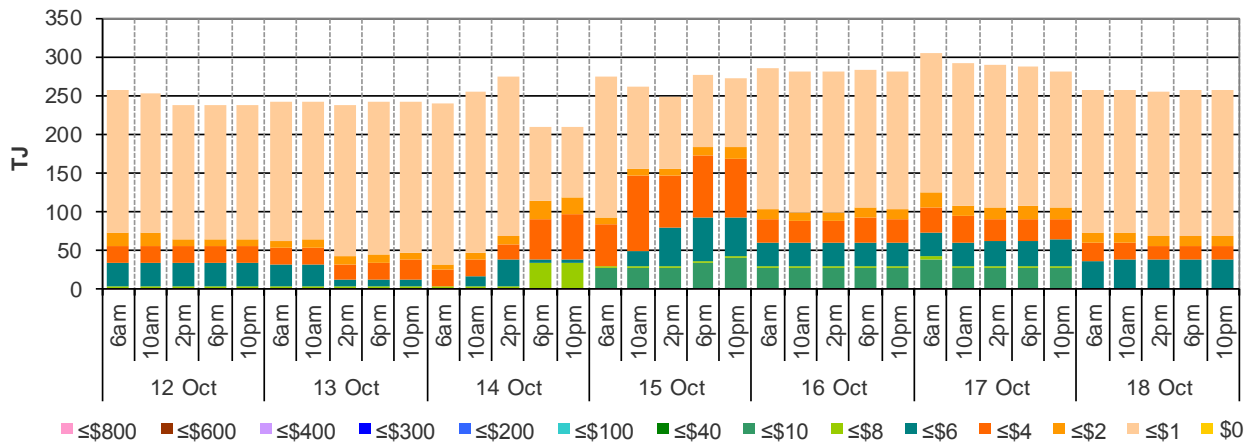
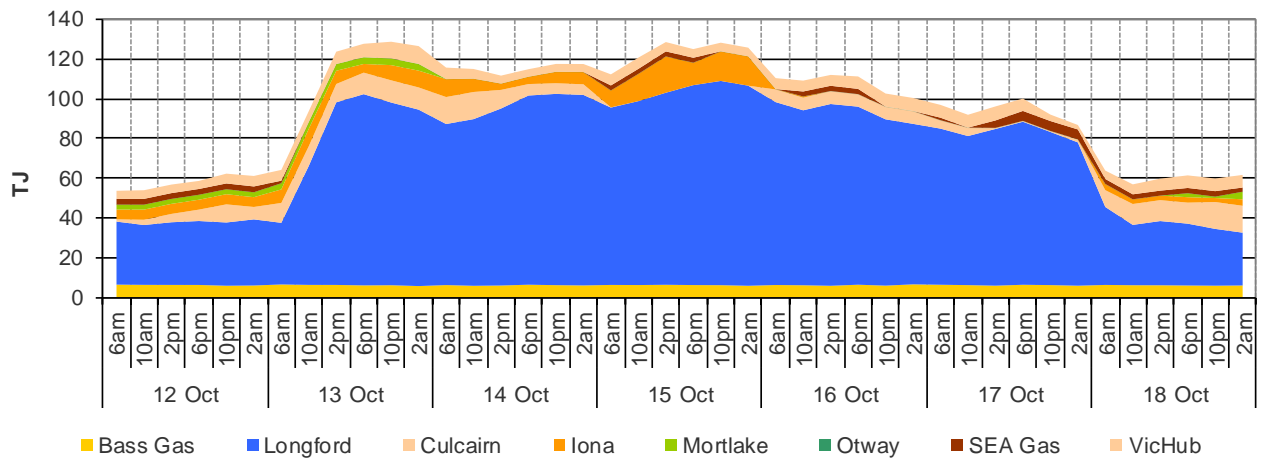


Figure 1.5: Metered Injections by System Injection Point



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.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)	2.98	2.99	3.40	3.60	3.72	3.74	3.10
Ex ante quantity (TJ)	188	233	282	281	268	271	224
Ex post price (\$/GJ)	2.99	2.99	2.99	4.10	3.95	3.74	3.20
Ex post quantity (TJ)	192	238	270	297	277	272	233

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

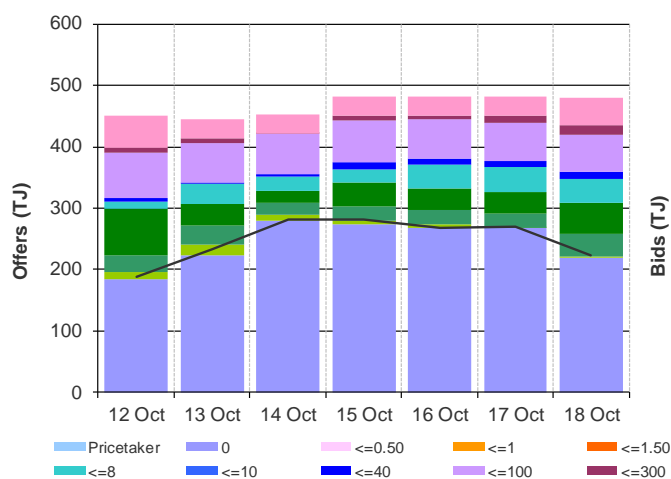
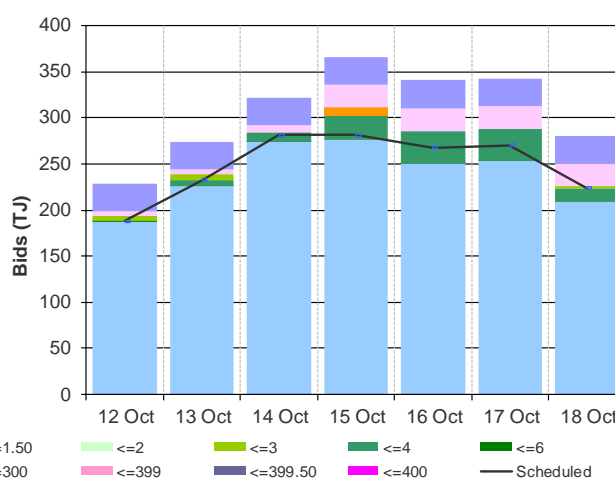


Figure 2.2 (b): Daily hub bids in price bands (\$/GJ)



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

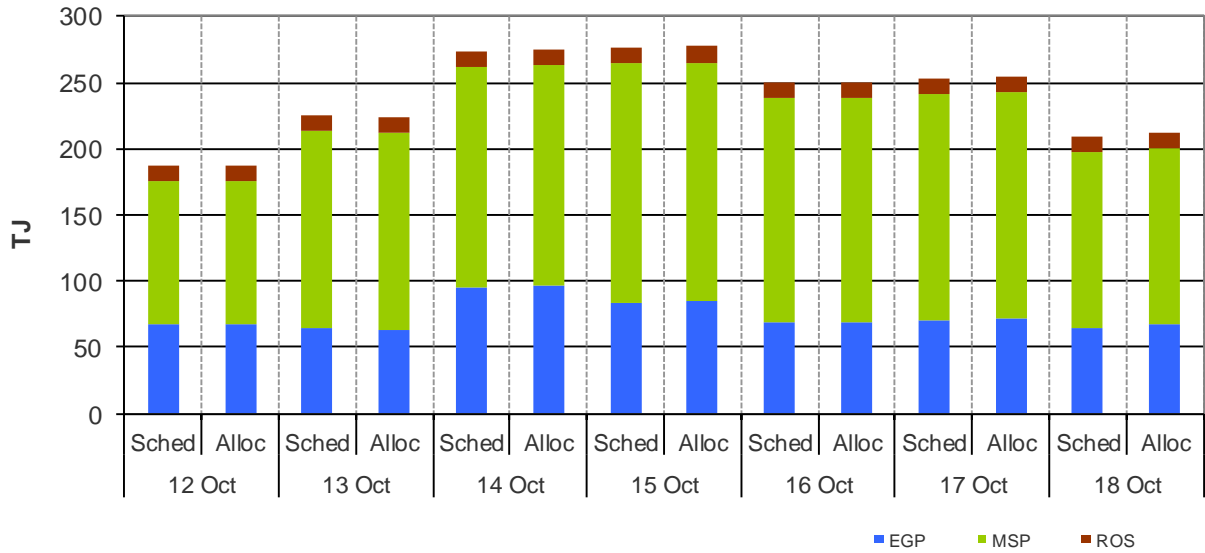


Figure 2.4 (a): SYD STTM MOS allocations (TJ)

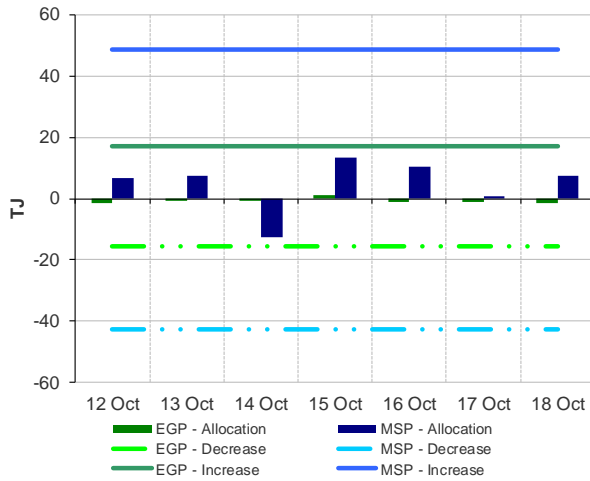
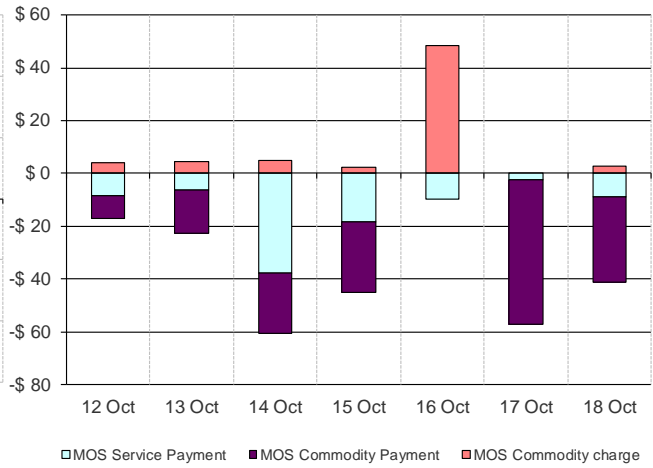


Figure 2.4 (b): Service payments and commodity payments/charges (\$000)



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)	2.93	2.97	2.97	3.30	3.29	3.13	3.13
Ex ante quantity (TJ)	35	51	61	72	63	52	44
Ex post price (\$/GJ)	3.20	3.18	3.17	3.17	3.73	3.30	3.13
Ex post quantity (TJ)	43	58	63	67	70	58	44

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

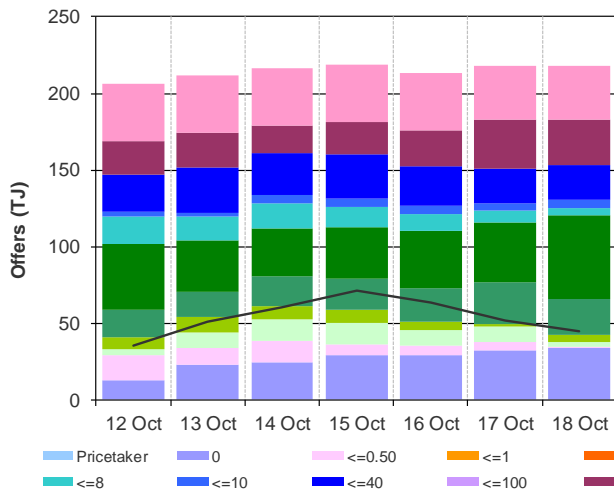


Figure 3.2 (b): Daily hub bids in price bands (\$/GJ)

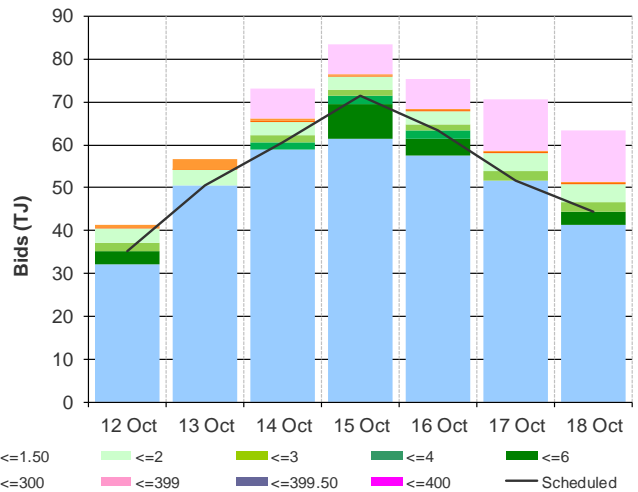


Figure 3.3: ADL net scheduled and allocated gas volumes (excluding MOS) by STTM facility

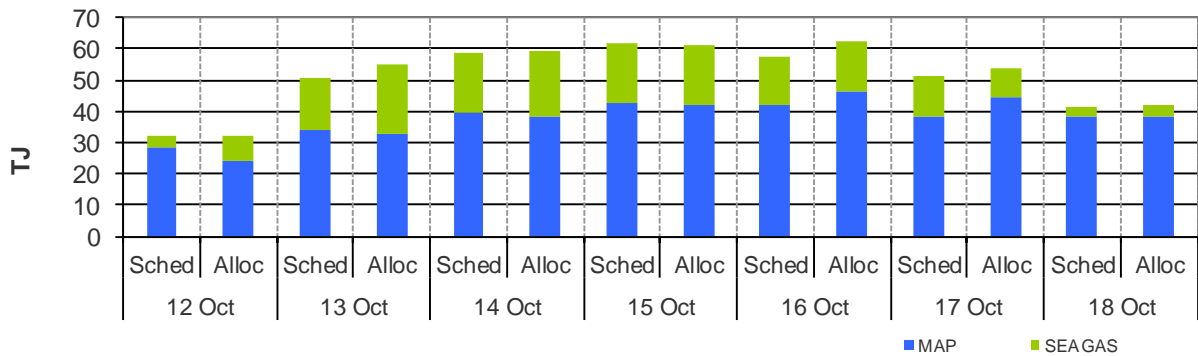


Figure 3.4 (a): ADL STTM MOS allocations (TJ)

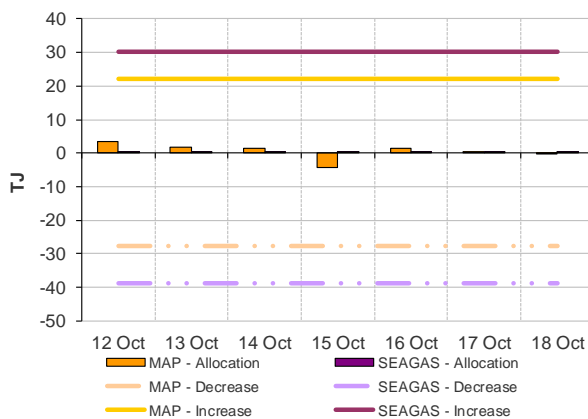
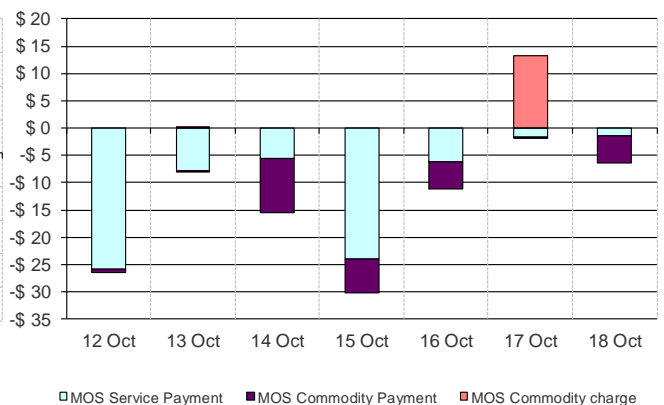


Figure 3.4 (b): Service payments and commodity payments/charges (\$000)



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)	0.44	2.10	0.95	0.95	0.40	29.90	0.00
Ex ante quantity (TJ)	163	173	174	182	172	121	108
Ex post price (\$/GJ)	0.41	0.93	0.95	0.95	0.40	0.50	0.00
Ex post quantity (TJ)	162	167	174	175	170	117	106

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

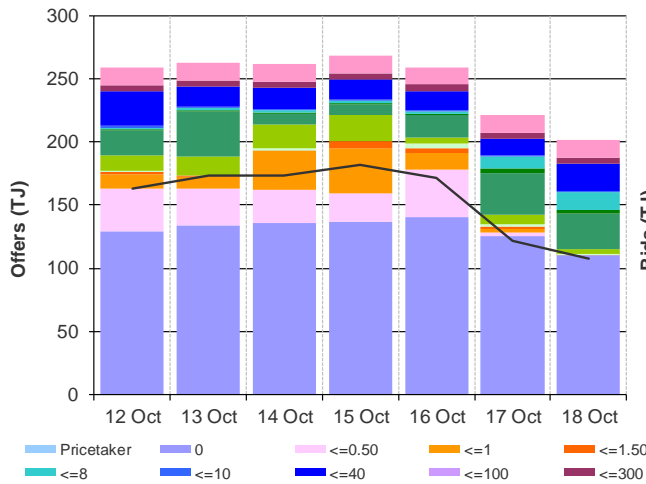


Figure 4.2 (b): Daily hub bids in price bands (\$/GJ)

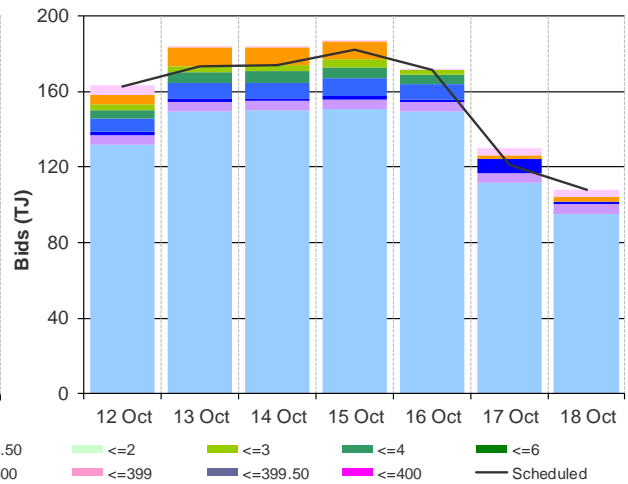


Figure 4.3: BRI net scheduled and allocated gas volumes (excluding MOS) by STTM facility

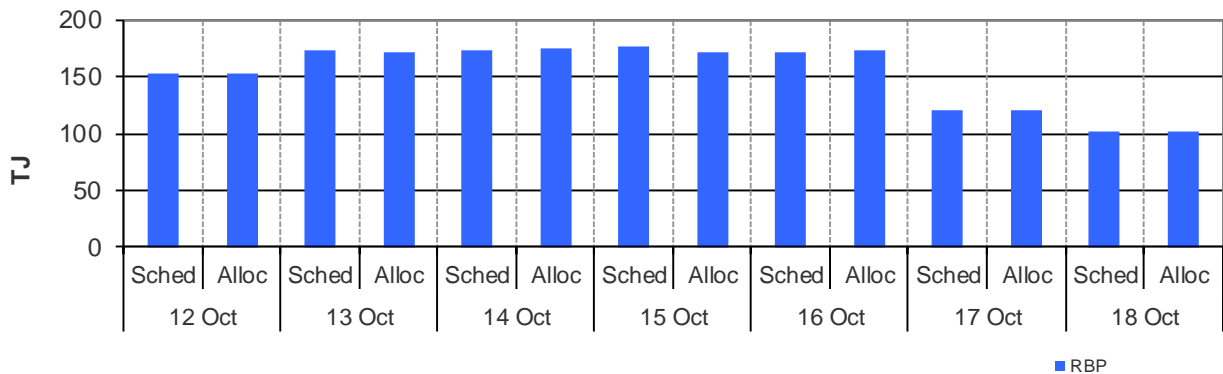


Figure 4.4 (a): BRI STTM MOS allocations (TJ)

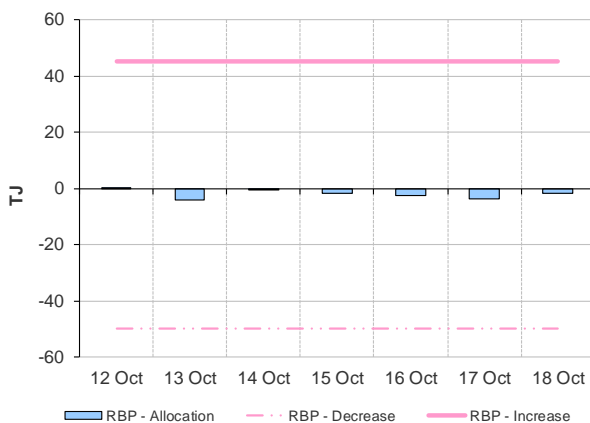
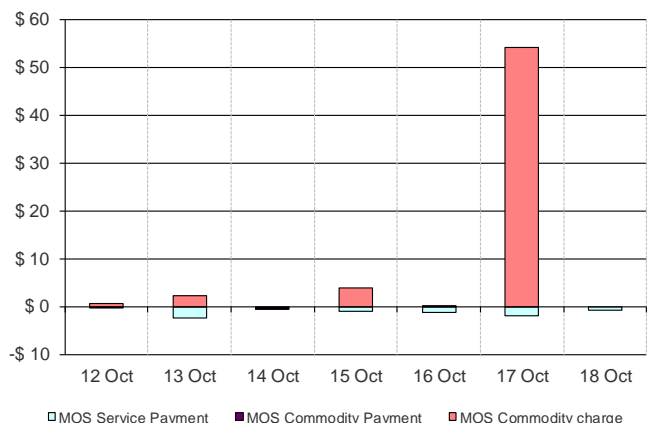


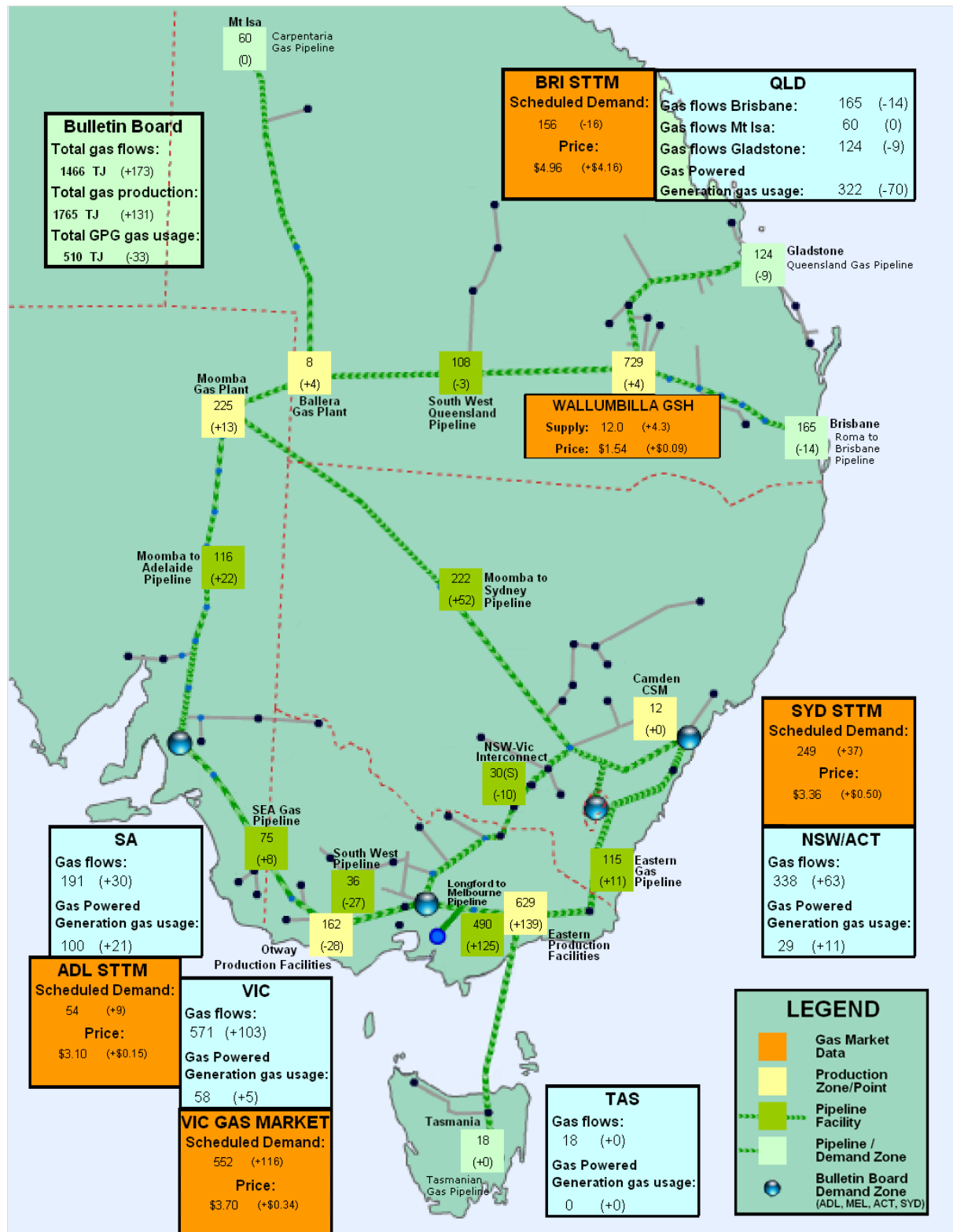
Figure 4.4 (b): Service payments and commodity payments/charges (\$000)



5 National Gas Bulletin Board

Figure 5.1 shows average daily actual flows for the current week in the aqua boxes¹⁰ 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 prices¹¹ 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.

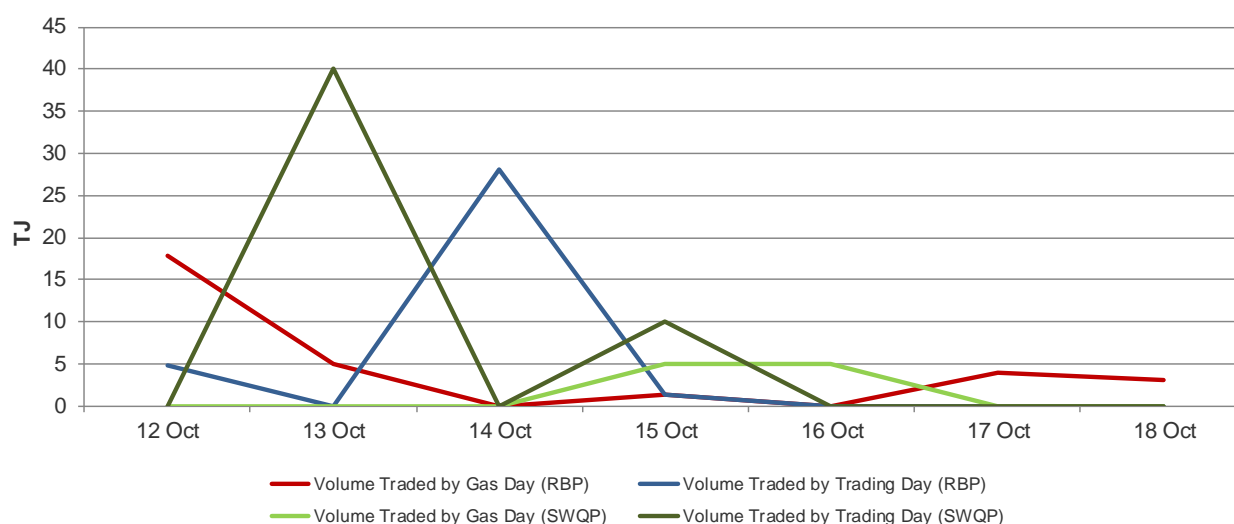
6 Gas Supply Hub

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 market¹² 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).

The volume traded increased this week to 84.2 TJ over 11 trades, with 50 TJ traded on SWQP and 34.2 TJ traded on RBP. Despite a decrease in the total number of trades compared to last week, the 11 traded products included two weekly product trades that contributed significantly to these quantities on both pipelines. The volume weighted price of the RBP trades was \$1.31/GJ, just higher than the previous minimum price of \$1.30/GJ recorded for the RBP in the supply hub. The volume weighted price of trades on the SWQP was \$1.70/GJ, equal to the previous minimum price set on the pipeline. Both pipelines set new records for the minimum price of matched gas trades, falling to \$1.20/GJ on the SWQP and down to \$0.70/GJ on the RBP.

Figure 6.1 shows volumes traded¹³ on each gas day and trading day from 12 to 18 October.

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’.