

20 – 26 June 2021

Weekly Summary

Average prices increased above \$10/GJ in all markets this week, continuing an upward trend in market prices from the start of May. While demand was up in Adelaide by 10%, demand in Brisbane dropped 10%, with Sydney and Victoria also falling slightly from the previous week. The most notable trend however was the relative decrease in northern gas prices, sitting at levels comparable to Victoria, which has until recently been well below STTM prices. Sydney and Adelaide saw daily prices rising to around \$13-15/GJ for most of the week.

Export pipeline flows reduced further this week, down 241 TJ/day following QCLNG planned maintenance commencing from mid-June alongside slight reductions from the other exporters over the week.

GPG gas usage was significantly lower this week, decreasing across all mainland regions from quite high levels over the past fortnight. The largest decline occurred in Queensland, with RBP auction activity related to GPG routes dropping off from quite high levels over previous weeks. Lower GPG also coincided with Callide returning units to service from last week, with another unit back online from 22 June. In South Australia, daily gas generation remained relatively high during periods of low wind output, particularly for 19-21 June.

DAA participation remained strong with 1800 TJ of capacity won this week. Routes to move gas north on the SWQP and MSP reduced, with more capacity won on routes delivering to Wilton (Sydney) on the MSP.

Actual gas flows south increased markedly, with a significant increase in gas deliveries into South Australia on the QSN link from 21 June and more gas flowing west from Wallumbilla as Queensland gas prices reduced. Additional supply on the MSP from Moomba was the main driver, with flows around 270-300 TJ over 21-23 June.

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) for the current week, and demand levels, compared to historical averages. Regions shown include 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**).

Figure 1: Average daily prices and demand – all markets (\$/GJ, TJ)¹

	Victoria		Sydney		Adelaide		Brisbane	
	Price	Demand	Price	Demand	Price	Demand	Price	Demand
20 Jun - 26 Jun 2021	10.87	1034	12.83	310	13.64	80	11.32	115
% change from previous week	15	-2	16	-3	19	10	-3	-10
20-21 financial YTD	5.65	563	6.14	255	6.48	57	6.27	106
% change from previous financial YTD	-14	-3	-6	5	-9	0	8	16

Figure 2 sets out price and demand information for the voluntary Wallumbilla and Moomba Gas Supply Hubs (**GSH**).

Figure 2: Average prices and total quantity – Gas supply hub (\$/GJ, TJ)²

	Moomba		South East Queensland		Wallumbilla	
	Price	Quantity	Price	Quantity	Price	Quantity
20 Jun - 26 Jun 2021	-	-	11.27	120	10.42	483
% change from previous week	-	-	7	-8	-2	226
20-21 financial YTD	3.04	338	6.17	6676	5.98	16588
% change from previous financial YTD	-55	-37	8	-14	-2	9

¹ Average daily quantities are displayed for each region. The weighted average daily imbalance price applies for Victoria.

² The prices shown for the GSH in Moomba, South East Queensland and Wallumbilla are volume weighted average (VWA) prices for all products traded across the period. The total quantity contributing to the weighted price is displayed for these GSH. Reported values for Moomba are the aggregate of trades on the Moomba to Adelaide Pipeline (MAP) and the Moomba to Sydney Pipeline (MSP). Historic trades for RBP and SWQP are grouped under WAL, (including in-pipe trades on the RBP).

Figure 3 illustrates the daily prices in each gas market, as defined in figures 1 and 2.

Figure 3: Daily gas market prices (\$/GJ)

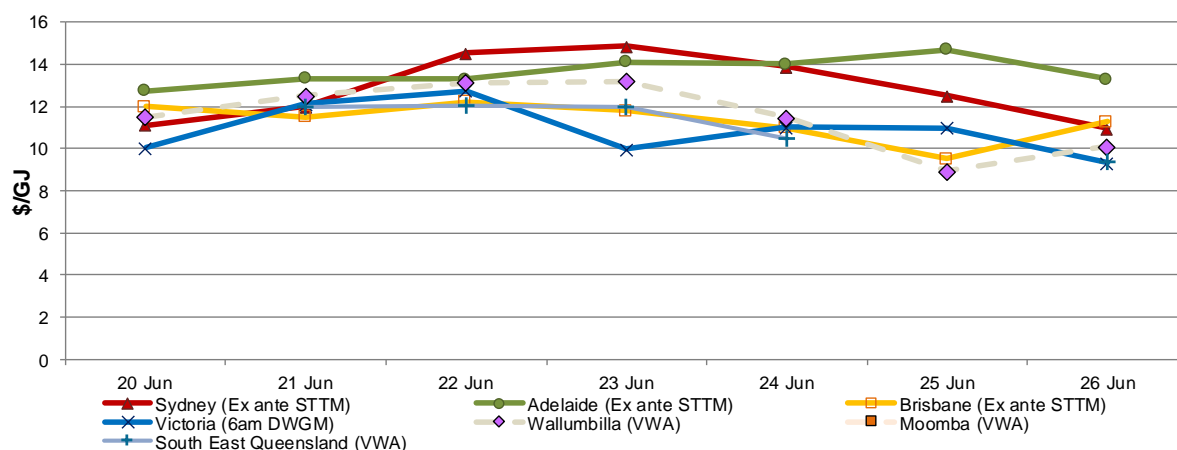


Figure 4 compares average ancillary market payments (VGM) and balancing gas service payments (STTM) against historical averages.

Figure 4: Average daily ancillary payments (\$000)

	Victoria Ancillary Payments*	Sydney MOS	Adelaide MOS	Brisbane MOS
20 Jun - 26 Jun 2021	-	26.50	4.63	0.83
% change from previous week	-	-16	-53	-46
20-21 financial YTD		19.93	7.67	3.51
% change from previous financial YTD		-5	80	120

* Ancillary payments reflect the compensation costs for any additional injections offered at a price higher than the market price. Note: only positive ancillary payments, reflecting system constraints will be shown here.

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

Figure 5 shows the quantity and volume weighted prices of products traded in the Gas Supply Hub locations at Moomba, South East Queensland and Wallumbilla.

Figure 5: Gas supply hub products total traded for the current week (\$/GJ, TJ)³

	Moomba		South East Queensland		Wallumbilla*	
	VWA price	Quantity	VWA price	Quantity	VWA price	Quantity
Balance of day	-	-	11.45	41.0	12.17	195.5
Daily	-	-	11.27	50.0	10.42	36.0
Day ahead	-	-	11.02	29.0	10.97	65.0
Weekly	-	-	-	-	-	-
Monthly	-	-	-	-	8.38	186.0
Total	-	-	11.27	120.0	10.42	482.5

* includes non-netted (off-market) trades.

Figure 6 shows Bulletin Board pipeline flows for the three LNG export pipeline facilities and the production output at related production facilities in the Roma region.

Figure 6: Average daily LNG export pipeline and production flows (TJ)*

	APLNG	GLNG	QCLNG	Total
Production	1513	996	1419	3928
Export Pipeline Flows	1510	1171	640	3322
% change from previous week (pipeline flows)	-4	-2	-19	-7
20-21 financial YTD Flows	1470	1003	1298	3771

* Production quantities represent flows from facilities operated by APLNG, Santos and QGC. Gas from individual facilities may also supply the domestic market, other LNG projects or storage facilities.

³ Further information about new product trading locations in Victoria (Culcairn) and Sydney (Wilton) is available in section 6. Gas Supply Hub).

Detailed market analysis

Gas market prices

With the price increases in Sydney and Adelaide reaching \$13-\$15/GJ, and Brisbane steady or falling, the northern prices reduced below southern prices on average for June. In Victoria, unplanned facility outages impacted supply across the week, however prices increased prior to the outages commencing. The highest prices on 21 and 22 June coincided with high demand, forecast above 1.2 PJ and 1.1 PJ respectively (figure 1.2).⁴

In Sydney, demand was up around 335 TJ over 21-23 June coinciding with higher prices.⁵ Higher levels of MSP supply to the hub were also complimented by 20-30 TJ of daily supply from Newcastle over the same period.

Upstream demand for gas generation was relatively high in Adelaide as the week commenced due to low wind output. GPG levels dropped from 22 June, but prices continued to increase over the week with GPG gradually ramping back up. Increases to industrial demand forecasts drove higher network demand later in the week. Prices reached a high of \$14.70/GJ on Friday.⁶

Supply outages in Victoria

On 21 June, supply reduced from the Longford production facility in Victoria due to the trip of an offshore platform.⁷ This triggered a forecast pressure breach at the Dandenong and Sale City Gates, leading to AEMO issuing a notice of a threat to system security, with a potential requirement of an additional 40 TJ of supply being required from Dandenong LNG, VicHub and/or TasHub injection points. Out-of-merit-order injections were not required on the day due to lower than forecast demand and an increase in Longford output, resulting in no market impact from the outage.

21 June was a day of high GPG demand in Victoria. Cold weather following an overnight minimum temperature of 4 degrees in Melbourne also drove high residential demand for gas heating. Following the unplanned outage at Longford, the facility was constrained to 701 TJ for the gas day from the 2 pm scheduling interval (a 30 TJ supply reduction). A threat to system security notice was subsequently issued at 2.48 pm, leading to VicHub and TasHub connection points being constrained to profile net injections for the 6 pm and 10 pm scheduling intervals. While net injections were profiled to increase in order to avoid pressure breaches, this did not commence until 8 pm. Longford notified AEMO just prior to 9 pm of a further 60 TJ reduction from previous supply restrictions, reducing daily supply to 634 TJ, however higher production output and lower than expected demand over the day into the

⁴ Daily imbalance prices were \$12.37/GJ and \$12.59/GJ for the 21 and 22 June gas days respectively. On 21 June, schedule price increases occurred following the beginning of day schedule (\$14.50/GJ at 10 am, \$17/GJ at 2 pm and \$13.48 at 6 pm) with AEMO applying overrides (21 TJ at 10 am and 25 TJ at 2 pm) following actual demand tracking higher than forecast across the first scheduling interval. Subsequent measurements revealed actual demand had tracked lower than the 10 am and 2 pm schedule forecasts, however the additional linepack from increased injections helped avoid the need for market intervention in subsequent schedules.

⁵ There was a significant drop in cheaper capacity being offered into the ex ante schedules by exporter/producers from 22 June, particularly on the EGP following an outage at Longford on 21 June. Demand forecasts were 19.5 TJ and 39.4 TJ higher than D-2 provisional schedules on 22 and 23 June respectively (this was a contributing factor to higher price forecasts mid-week, with a change in the trend of reduced ex ante prices that have been occurring in recent weeks). The ex ante price exceeded the D-2 provisional forecast on 23 June, only the 2nd instance this June. This coincided with backhaul bids being cleared, comprising 31.7 TJ of the 39.4 TJ increase in ex ante demand. The majority of this was related to backhaul bids submitted at \$20/GJ or higher on the EGP in the D-1 schedule (26 TJ).

⁶ The higher ex ante price on 25 June was also influenced by rebidding of capacity to higher price bands.

⁷ Just after midday, AEMO was notified of the offshore platform trip affecting supply to Longford.

evening peak mitigated the requirement for market intervention.⁸ The threat to system security was cancelled prior to 10 pm.

On the afternoon of 22 June, an industry conference was convened by AEMO for participants in the Victorian DWGM, and Adelaide and Sydney STTMs, to advise of an unplanned outage affecting the Iona underground storage facility. A short-notice urgent repair was scheduled to commence from midday on 24 June to isolate a section of pipeline affected by a gas leak resulting from corrosion. The plant was taken offline and returned to service prior to the following gas day (see figure 1.5).⁹

Capacity reduction on the Roma to Brisbane Pipeline

Capacity on the Roma to Brisbane Pipeline reduced to 128.3 TJ/day from 24 June (down from 185 TJ) due to planned maintenance commencing on the Dalby compressor station. Actual flows on the pipeline reduced to 110 TJ from 140 TJ the day prior.

⁸ Demand overrides of 21TJ and 35 TJ were applied to the 10am and 2pm scheduling intervals respectively, due to differences in AEMO and market participant forecast demand levels. This assisted in offsetting the need for additional supply later in the day. An ad-hoc schedule was developed to manage the Longford outage, but it was not utilised. Longford ramped up from 2 pm and was supplying well above forecast by the 10 pm scheduling interval.

⁹ A cancelled outage on the Mortlake to Heywood 500 kV transmission line in the National Electricity Market assisted in reducing gas powered generation requirements in Victoria and South Australia while the temporary pipeline repairs took place at Iona. The Iona storage facility was taken offline while the affected section of pipeline was removed, with blind flanges welded on both ends to seal the leaking segment. Subsequent repairs at the facility were later scheduled to take place from 26 June – 2 July, however this outage window was extended to 8 July (on 2 July) and then to 31 July (on 5 July).

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. The imbalance weighted price on a gas day tends towards the 6 am price¹⁰ which is the schedule at which most gas is traded.

The main drivers¹¹ of price are demand forecasts and bids to inject or withdraw gas from the market. Figures 1.1 to 1.4 below show the daily prices, demand forecasts¹², and injection/withdrawal bids for each of the five pricing schedules. 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 injection bids cleared through the market.

Ancillary payments for gas injected above the market price are shown above in figure 3.

Figure 1.1: Prices by schedule (\$/GJ)

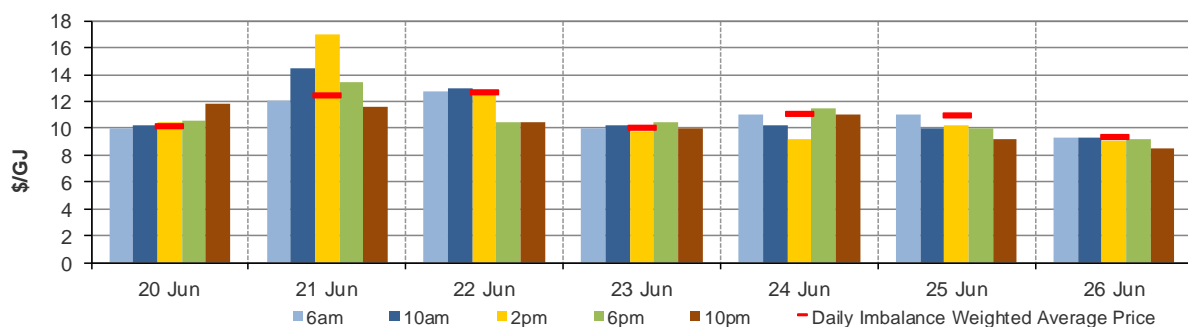
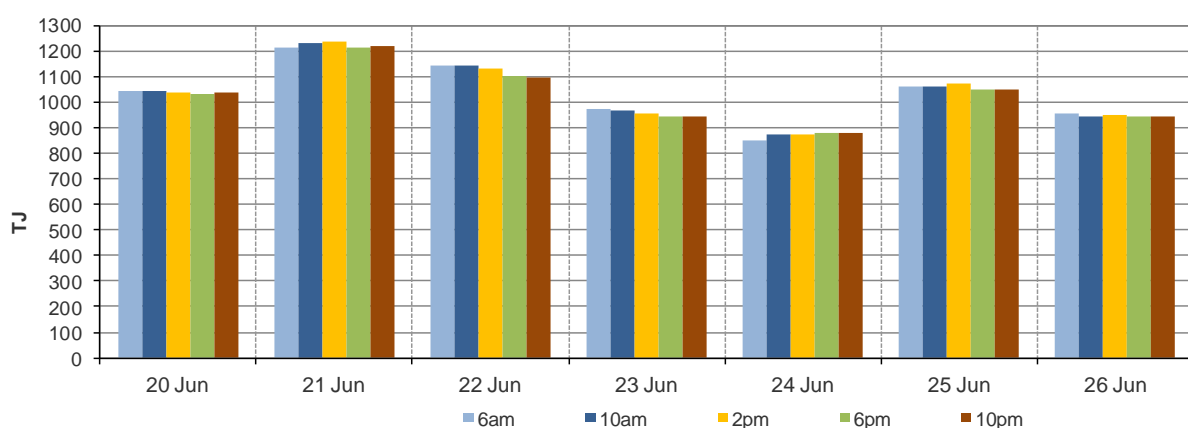


Figure 1.2: Demand forecasts (TJ)



¹⁰ Prices for subsequent schedules are applied only to the differences in scheduled quantities (imbalances) to calculate the weighted price. The 6 am price applies to the entire scheduled quantity in the initial schedule.

¹¹ 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.

¹² These are Market Participants' aggregate demand forecasts adjusted for any override as applied by AEMO from time to time. These forecasts must be scheduled and cannot respond to price like withdrawal bids.

Figure 1.3: Injection bids by price bands (TJ)

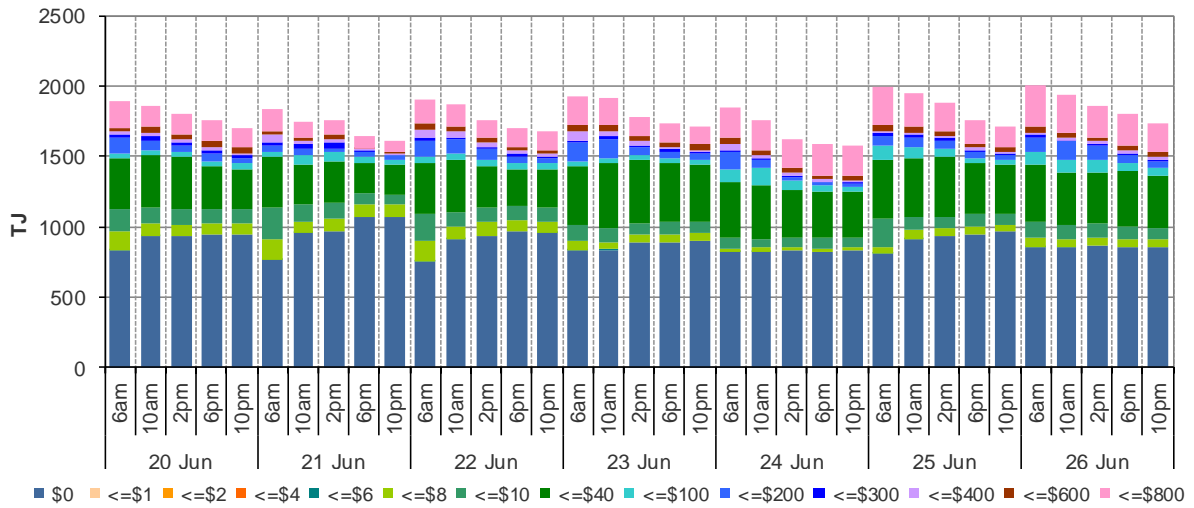


Figure 1.4: Withdrawal bids by price bands (TJ)

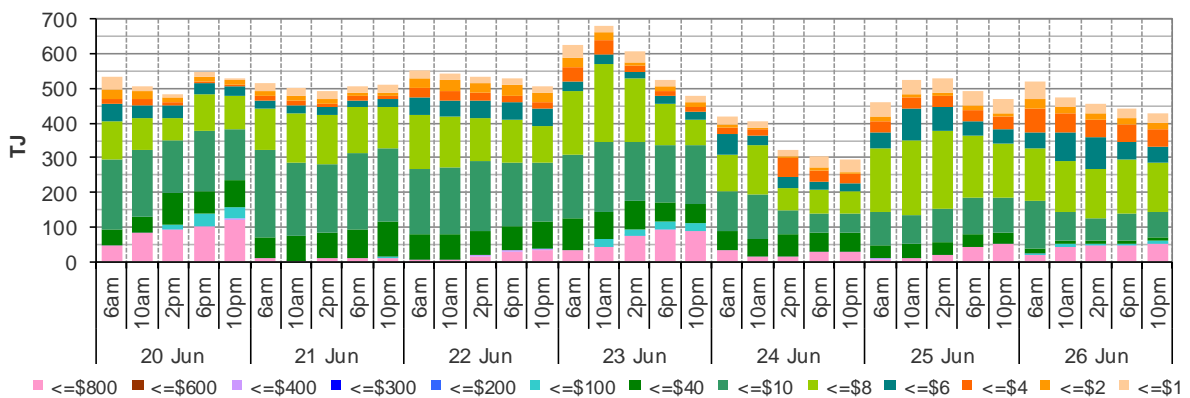
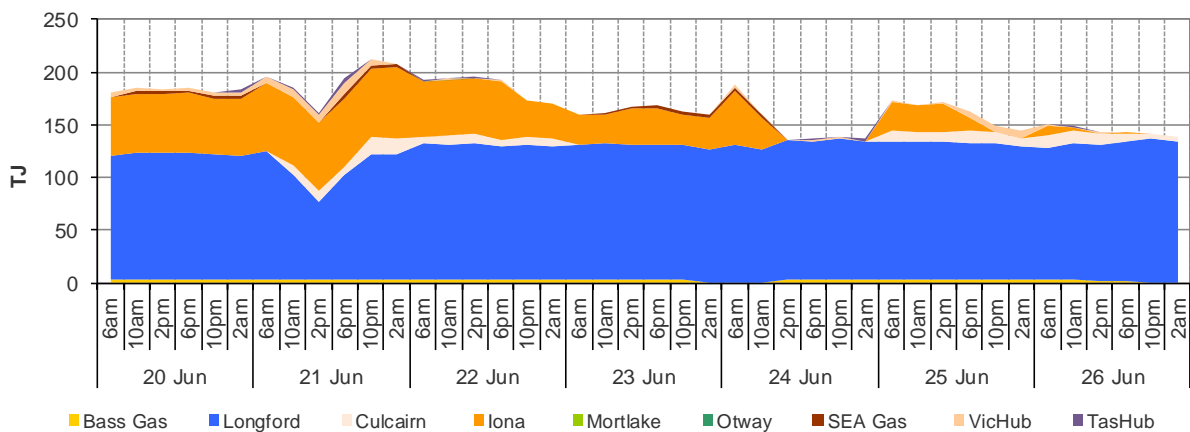


Figure 1.5: Metered Injections by System Injection Point (TJ)



Note that in figure 1.5, the last 8-hour schedule from 10 pm has been separated into two 4-hour blocks to provide a consistent comparison with earlier scheduled injection volumes.

2. Sydney STTM

In each STTM hub, a daily gas price is calculated before the gas day (the ex ante price) and after the gas day (the ex post price). The main drivers of these prices are participant demand forecasts, and offers to inject or bids to withdraw gas traded at the hub.¹³ Divergences in ex ante and ex post prices for a gas day may occur due to differences in scheduled (forecast) and allocated (actual) quantities. Pipeline acronyms are defined in the [user guide](#).

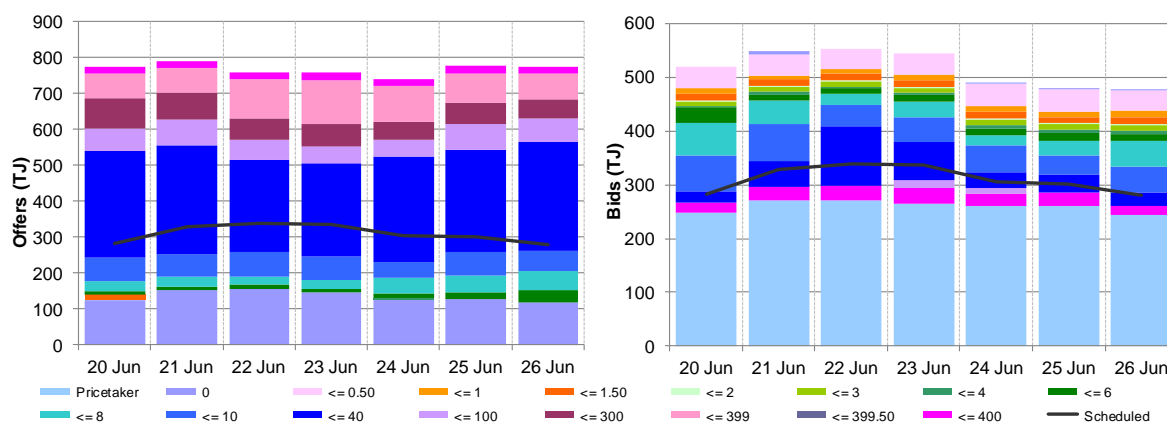
Market Operator Service balancing gas (MOS) payments arise because the amount of gas nominated on pipelines for delivery on a gas day will either exceed or fall short, by some amount, of the amount of gas consumed in the hub. In such circumstances, MOS payments are made to participants for providing a service to park gas on a pipeline or to loan gas from a pipeline to the hub.¹⁴

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 to supply the hub, 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)	11.09	12.00	14.51	14.85	13.88	12.50	10.95
Ex ante quantity (TJ)	283	328	338	337	305	301	280
Ex post price (\$/GJ)	11.99	12.50	14.53	14.61	13.88	12.49	10.49
Ex post quantity (TJ)	307	346	342	333	300	294	274

Figure 2.2: SYD daily hub offers and daily hub bids in price bands (\$/GJ)



¹³ 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.

¹⁴ 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 hub supply (excluding MOS)

Figure 2.3 shows the daily scheduled and allocated quantities sorted by facility for Sydney this week. For a more detailed description of this figure, please refer to the user guide.

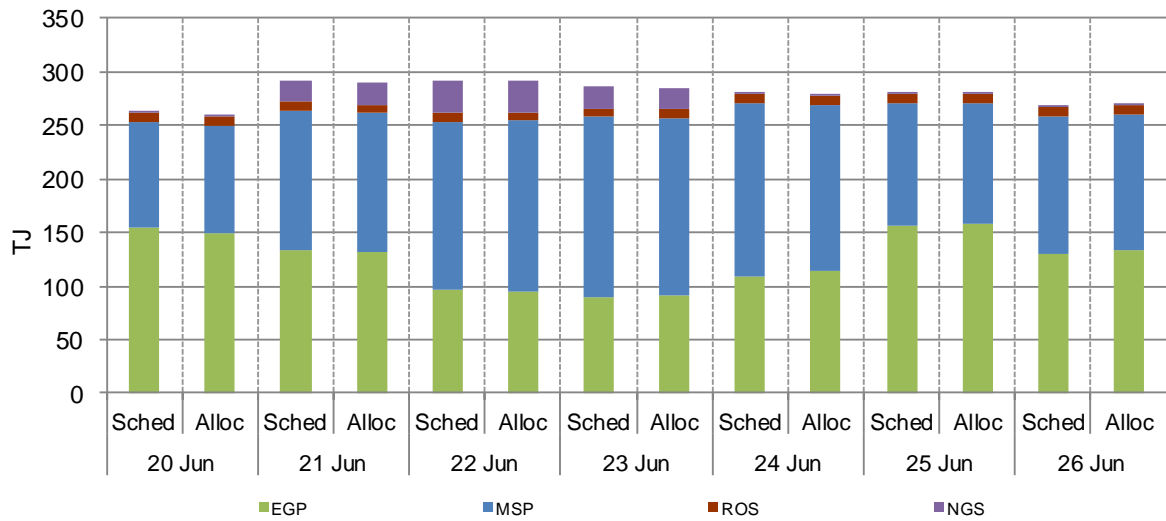
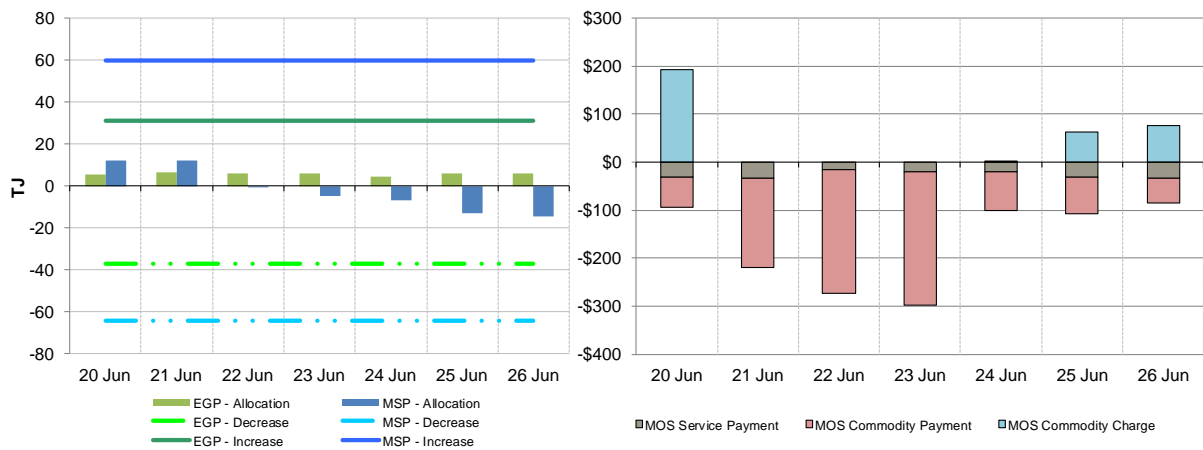


Figure 2.4: SYD MOS allocations (TJ), service payments and commodity payments/charges (\$000)¹⁵



¹⁵ The commodity cost of MOS illustrated on the right of the figure represents the commodity quantity at the D+2 ex ante price. Commodity payments and charges for a given gas day relate to quantities traded two days earlier. That is, the commodity cost for services provided on Sunday will appear in the chart for Tuesday, when the D+2 price is set. In contrast, service payments are shown alongside the day they occurred.

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)	12.74	13.31	13.30	14.10	14.00	14.70	13.30
Ex ante quantity (TJ)	70	80	82	79	86	88	77
Ex post price (\$/GJ)	12.50	13.31	13.28	14.21	14.00	14.08	12.85
Ex post quantity (TJ)	66	79	79	82	84	85	74

Figure 3.2: ADL daily hub offers and daily hub bids in price bands (\$/GJ)

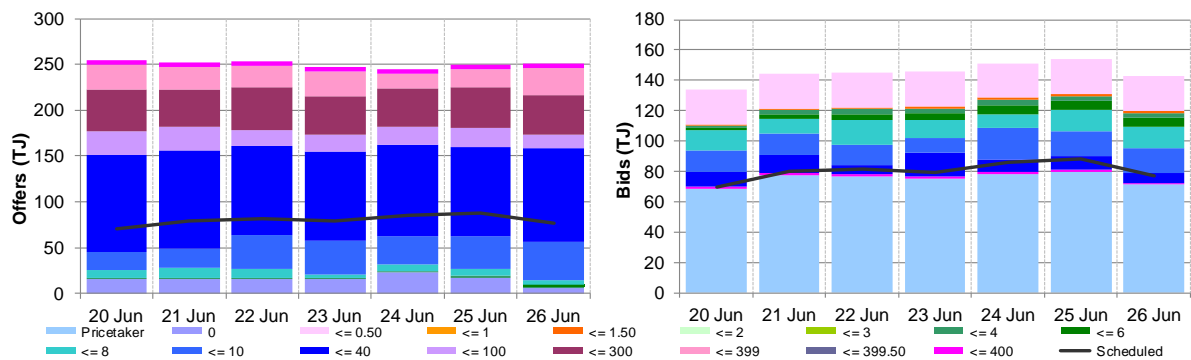


Figure 3.3: ADL net scheduled and allocated gas hub supply (excluding MOS)

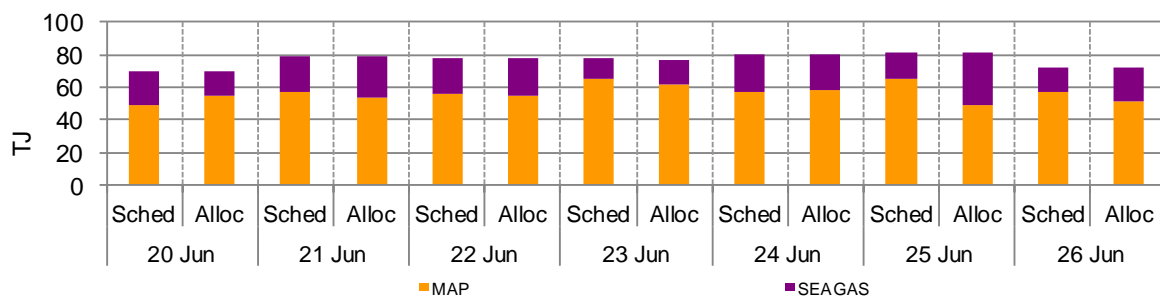
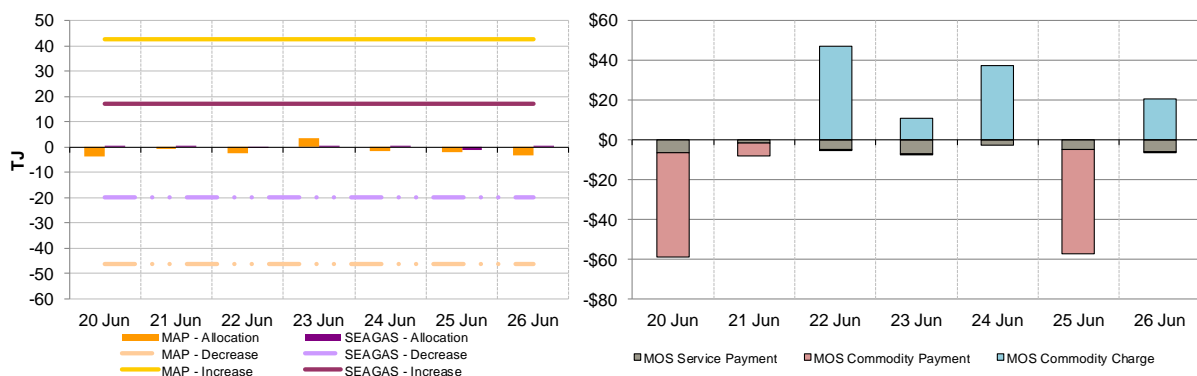


Figure 3.4: ADL MOS allocations (TJ), service payments and commodity payments/charges (\$000)



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)	11.97	11.50	12.21	11.80	10.99	9.50	11.26
Ex ante quantity (TJ)	114	132	134	132	107	97	87
Ex post price (\$/GJ)	11.23	11.50	11.97	11.99	11.25	9.49	10.90
Ex post quantity (TJ)	110	132	130	135	110	94	85

Figure 4.2: BRI daily hub offers and daily hub bids in price bands (\$/GJ)

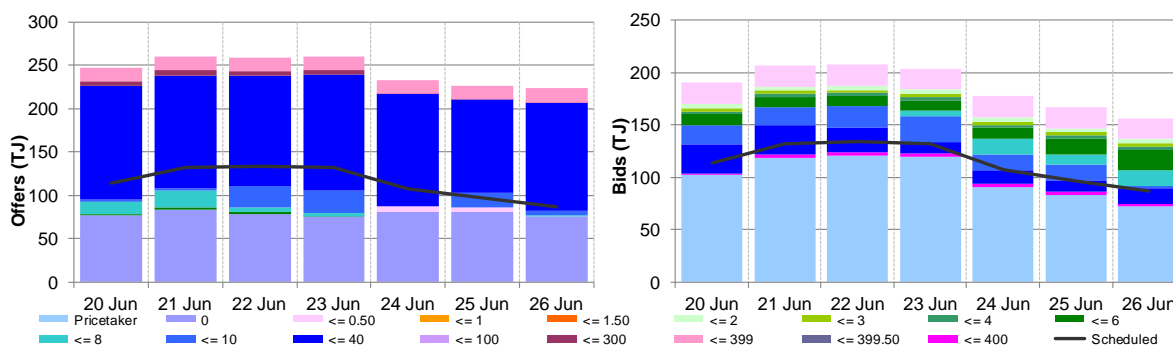


Figure 4.3: BRI net scheduled and allocated gas hub supply (excluding MOS)

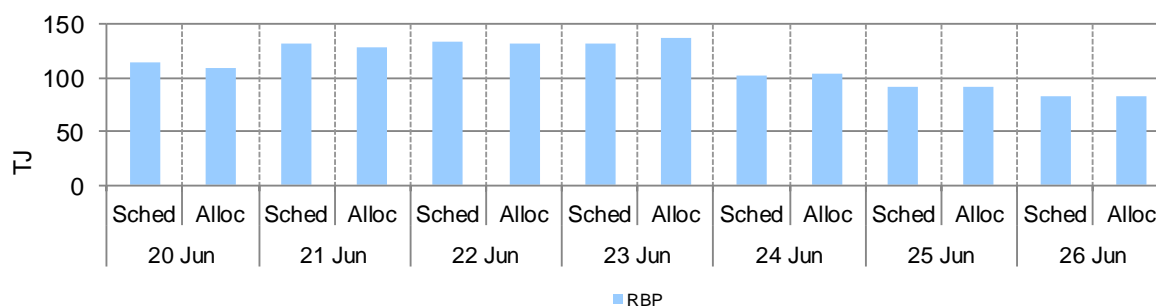
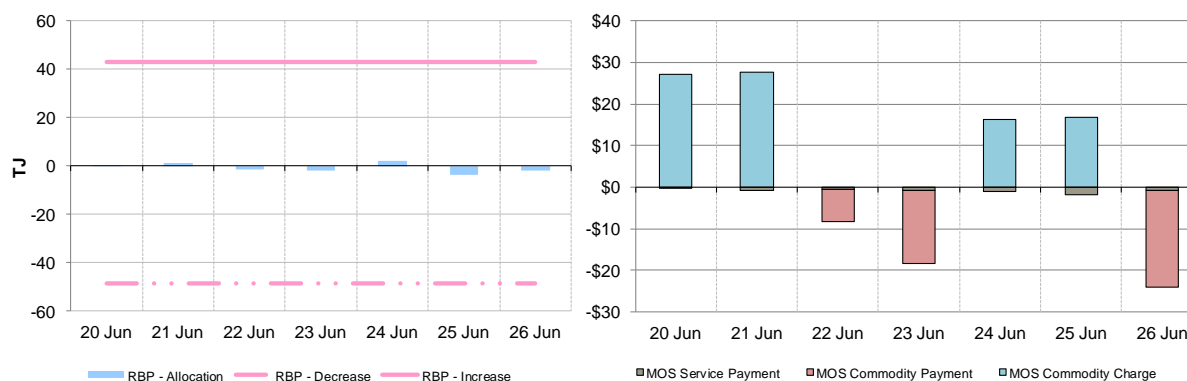


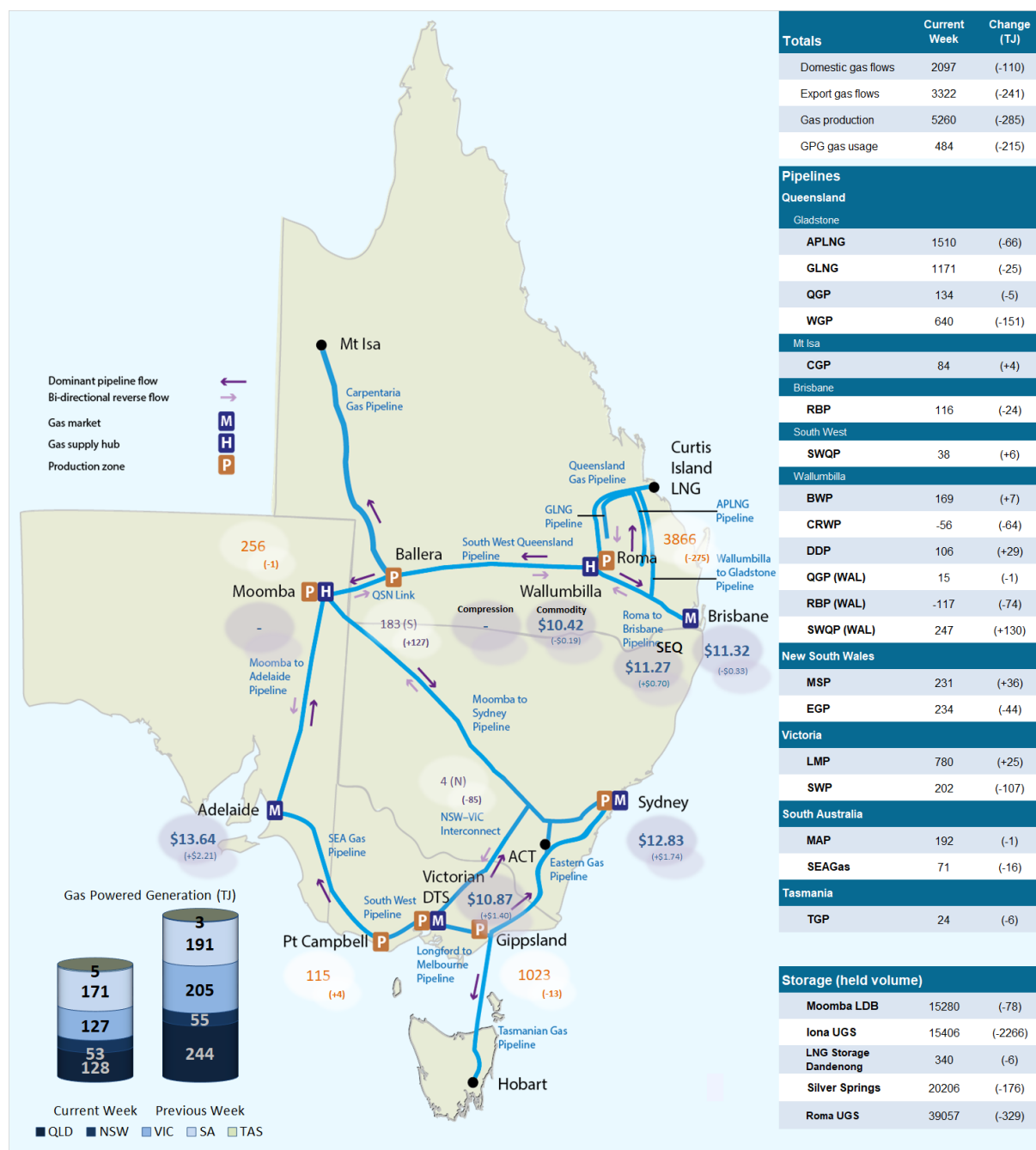
Figure 4.4: BRI MOS allocations (TJ), service payments and commodity payments/charges (\$000)



5. National Gas Bulletin Board

Figure 5.1 shows average daily actual flows for the current week¹⁶ from the Bulletin Board (changes from the previous week's average are shown in brackets). Average daily prices¹⁷ are provided for gas markets and gas supply hubs. Average daily quantities are provided for gas powered generation for each region.

Figure 5.1: Gas market data (\$/GJ, TJ); Bulletin Board flows (TJ)¹⁸



¹⁶ Domestic gas flows are calculated as the total of: SA = MAP + SEAGAS; VIC = SWP + LMP + (flows towards Victoria on the 'NSW-VIC interconnect'); NSW/ACT = EGP + MSP; TAS = TGP; QLD (Brisbane) = RBP; QLD (Mt Isa) = CGP; and QLD (Gladstone) = QGP.

¹⁷ Export gas flows are calculated as the total of: the APLNG pipeline; the GLNG pipeline; and the Wallumbilla to Gladstone pipeline.

¹⁸ GPG volumes may include gas usage that does not show up on Bulletin Board pipeline flows.

¹⁷ GSH supply is the average daily volume of gas 'traded', while price is a volume weighted average. Optional hub services (for compression and redirection) are shown separately from commodity trades.

¹⁸ Net flows are shown for Bulletin Board facilities, as outlined in the [user guide](#).

6. Gas Supply Hub

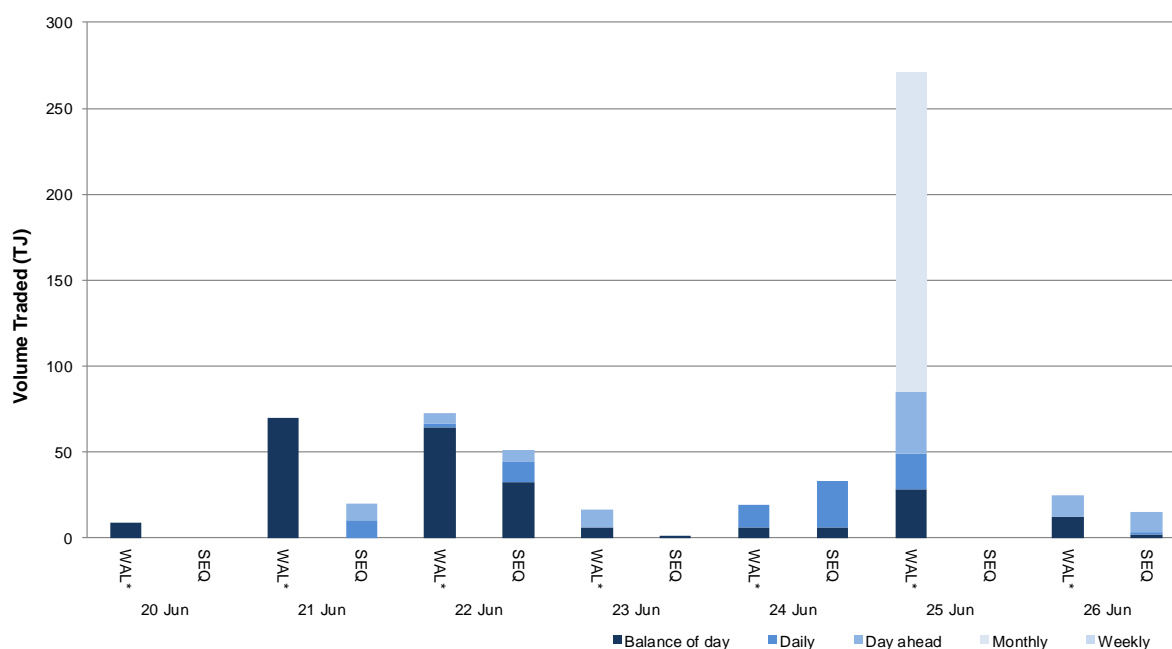
The gas supply hub was established at Wallumbilla in March 2014 to facilitate the voluntary trading of gas between participants, with products listed for sale and purchase at delivery points on three major connecting pipelines. There are separate products for each trading location and delivery period (daily, day-ahead, balance-of-day, weekly and monthly products).¹⁹

The Moomba hub commenced operation from June 2016 to further facilitate trading on the **MAP** and **MSP**, with trading between the two hubs on the SWQP via a spread product (representing the price differential between the hubs). From October 2016, the addition of a Wallumbilla Compression Product was introduced to facilitate the supply hub's transition from three different trading locations into one. From March 2017, Wallumbilla transitioned into an optional hub services model, replacing the three trading locations (QGP, SWQP and RBP) with a single product at Wallumbilla (**WAL**) and an in-pipe RBP trading location at South East Queensland (**SEQ**). On 28 January 2021, trading locations at Wilton (Sydney) and Culcairn (Victoria) were introduced.

This week there were 76 trades for 602.5 TJ of gas at a volume weighted price of \$10.59/GJ. These consisted of 50 trades at WAL (482.5 TJ at \$10.42/GJ) and 26 trades at SEQ (120 TJ at \$11.27/GJ). There were 9 spread trades this week between SEQ and WAL.

Figure 6.1 shows the quantity of gas traded by product type for each trading day on pipeline trading locations in the Wallumbilla and Moomba Gas Supply Hubs.²⁰

Figure 6.1: GSH traded quantities



¹⁹ Additional information on trading locations and available products is detailed in the [user guide](#).

²⁰ Non-netted (off-market) trades, allowing the selection of specific delivery point at a trading location, are included with other Wallumbilla trades (WAL*). Non-netted trades at Moomba are shown separately (MOO) from MAP and MSP.

7. Day Ahead Auction

The DAA is a centralised auction platform providing the release of contracted but un-nominated transportation capacity on designated pipelines and compression facilities across eastern Australia. The auction, enables transportation facility users to procure residual capacity on a day-ahead basis after nomination cut-off, with a zero reserve price and compressor fuel provided.

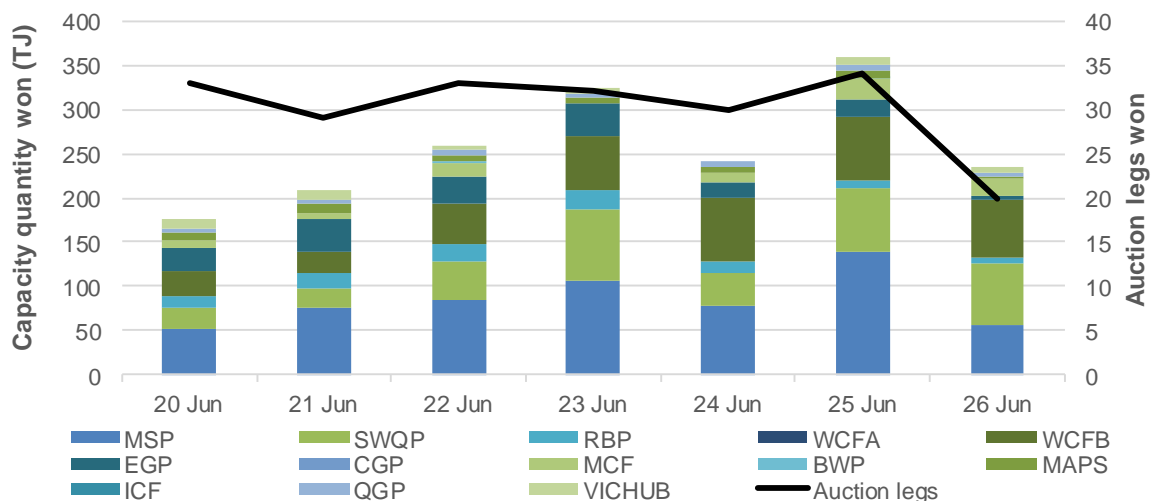
Participants may bid in to the DAA in order to procure the following services:

- park services;
- forward haul pipeline services with products offered in both directions on bi-directional pipelines;
- interruptible backhaul services; and
- stand-alone compression services.

This week, 16 participants took part in the DAA, winning 1800 TJ of capacity across 10 different facilities.

Figure 7.1 shows the quantities of gas and auction legs won through the DAA by gas date, with gas deliverable up to the level of capacity procured. Auction legs reflect each individual facility transaction.²¹

Figure 7.1: DAA traded quantities and auction legs won



Australian Energy Regulator
July 2021

²¹ Additional information is available in the [user guide](#) to the AER gas weekly report.