

## 10 – 16 July 2022

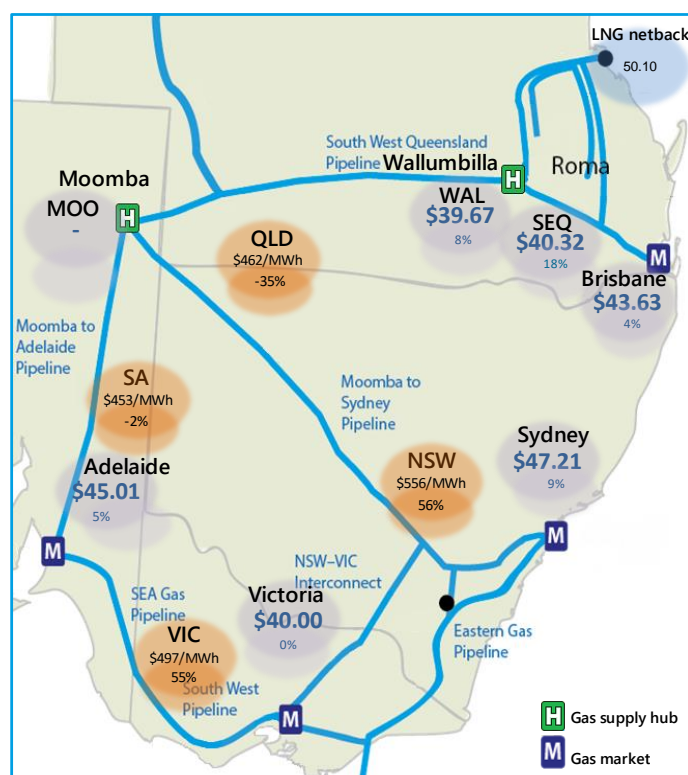
### Weekly Summary

The Administered Price Cap (APC) continued to cap prices at \$40/GJ in the Victorian market this week.

Downstream wholesale gas market prices (marked M on the map below) increased in the Adelaide, Brisbane and Sydney markets (percentage change from previous week shown on map). Prices in these three markets started the week below \$45/GJ before jumping to above \$50/GJ by the end of the week. Current prices in these three markets are similar to the LNG netback price of \$50.10/GJ assessed on 15 July.

At the Wallumbilla upstream supply hub (marked H), the average price increased at the WAL trading point and more significantly at the SEQ trading point. The map also includes National Electricity Market (NEM) prices for comparison across gas and electricity markets.

#### Map: Gas Market Prices, LNG netback price (\$/GJ), NEM prices (\$/MWh)



Note: The LNG netback price is the 15 July 2022 assessment for the front month forward LNG netback price assessed: <https://www.accc.gov.au/regulated-infrastructure/energy/gas-inquiry-2017-2025/lng-netback-price-series>

The prices on the map for SEQ, WAL and MOO reflect only trades day ahead, to highlight price differentials between market and arbitrage opportunities.

Trading in the Wallumbilla gas supply hub was concentrated around shorter-term deliveries for products at SEQ (103 TJ) and WAL (369 TJ) this week (see section 6). Longer-term

trades also occurred at both locations with 63 TJ traded at SEQ for weekly deliveries over July and 86 TJ at WAL for short delivery periods over July and August. Strip deliveries over mid-October to mid-November also occurred at SEQ (24 TJ) and WAL (72 TJ).

Mainland gas powered generation increased in New South Wales, Victoria and South Australia. Average daily gas usage by GPGs continued to exceed 500 TJ per day for the seventh week in a row.

LNG export pipeline flows were lower this week (see more detailed map and table at figure 5.1).

## 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 (or Victorian Gas Market - VGM) 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)<sup>1</sup>**

	Victoria		Sydney		Adelaide		Brisbane	
	Price	Demand	Price	Demand	Price	Demand	Price	Demand
10 Jul - 16 Jul 2022	40.00	1041	47.21	363	45.01	74	43.63	90
% change from previous week	0	4	9	7	5	-4	4	-1
22-23 financial YTD	40.00	1012	44.96	349	43.77	75	42.67	90
% change from previous financial YTD	122	4	136	13	131	-3	180	-4

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

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

**Figure 2: Average prices and total quantity – Gas Supply Hubs (\$/GJ, TJ)<sup>2</sup>**

	Moomba		South East Queensland		Wallumbilla	
	Price	Quantity	Price	Quantity	Price	Quantity
10 Jul - 16 Jul 2022	-	-	40.32	190	39.67	541
% change from previous week	-	-	18	3067	8	63
22-23 financial YTD	2.28	5	39.64	206	35.87	1428
% change from previous financial YTD	-88	0	220	-62	160	21

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

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

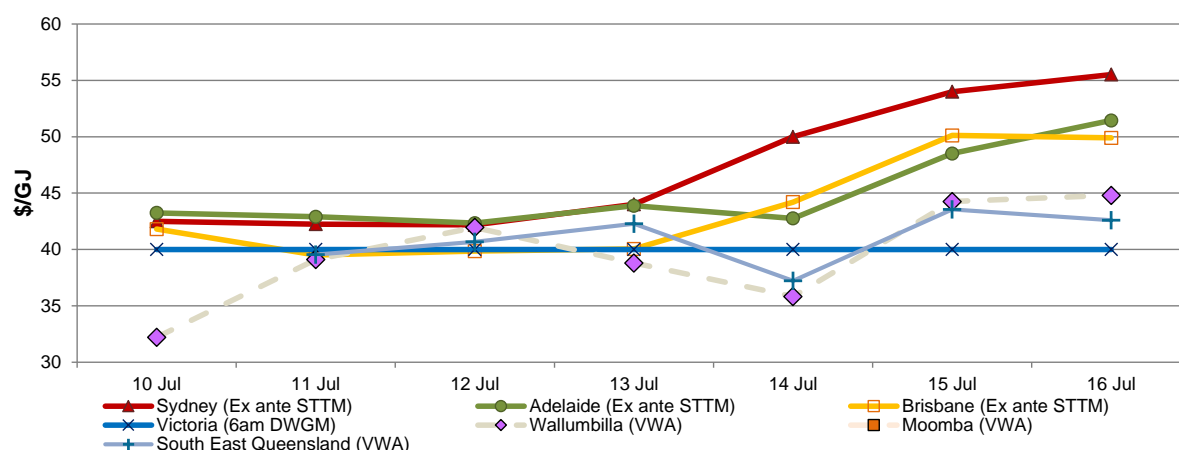


Figure 4 compares average ancillary market payments (for the VGM) and balancing gas service payments (STTM) against historical averages.

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

	Victoria Ancillary Payments*	Sydney MOS	Adelaide MOS	Brisbane MOS
10 Jul - 16 Jul 2022	-	35.46	15.09	1.31
% change from previous week	-	-14	2	12
22-23 financial YTD		37.62	14.20	1.29
% change from previous financial YTD		39	307	71

\* 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.

<sup>2</sup> 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).

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)<sup>3</sup>**

	Moomba		South East Queensland		Wallumbilla*	
	VWA price	Quantity	VWA price	Quantity	VWA price	Quantity
<b>Balance of day</b>	-	-	41.13	27.0	42.72	114.0
<b>Daily</b>	-	-	39.70	125.0	37.73	319.0
<b>Day ahead</b>	-	-	44.60	10.0	42.52	94.0
<b>Weekly</b>	-	-	40.78	28.0	40.00	14.0
<b>Monthly</b>	-	-	-	-	-	-
<b>Total</b>	-	-	<b>40.32</b>	<b>190.0</b>	<b>39.67</b>	<b>541.0</b>

\* 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	1455	833	1652	3939
Export Pipeline Flows	1457	1032	761	3251
% change from previous week (pipeline flows)	-6	3	-5	-3
22-23 financial YTD flows	1528	1014	743	3285

\* 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.

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

## Detailed market analysis

**Table 1: Key events this week**

Date	Event	Market Affected	Description
10 - 16 Jul	Administered Price Cap (APC) continues High Shadow prices	Victoria	Multiple schedules of high shadow prices leading to cumulative pricing threshold (CPT) continuing to be exceeded through week
10 – 16 Jul	QCLNG ½ - 1 LNG train outage continues reducing export flows	East Coast (Supply)	Creates greater available domestic supply if production maintained
11 Jul – 30 Sep (or until AEMO removes TTSS)	Threat to System Security	Victoria	Reduction in Iona supply capacity and the risk of supply shortfalls due to Iona inventory depletion this winter.
14 Jul	Threat to System Security	Victoria	AEMO notice critical at 3:43 PM – ended on 15 Jul at 5:26 AM. Insufficient supply to meet demand across the gas day and achieve the end-of-day linepack target.

### ***Victorian Administered Price Cap continues – Multiple High Shadow Prices***

The price in the Victorian market continued to be capped at \$40/GJ this week as a result of high cumulative prices leading to the application of an Administered Price Cap (APC).

When APCs are in place, a scheduled price continues to be calculated based on participant's offers and bids. The scheduled price also known as the shadow price reveals the price where the market would have cleared but for the price cap.

Shadow prices are used in the calculation of the 7-day cumulative price. For example, for a price cap to be lifted in the declared wholesale gas market (**DWGM**), the shadow price would have to be less than \$40/GJ over a 7-day period.

The cumulative price at the end of the week (16 July) of \$17,891/GJ was significantly higher than the threshold of \$1,440/GJ. There were twenty-two \$800/GJ shadow prices in the Victorian market through the beginning of this week, which drove the high cumulative price calculation. From 13 July to 15 July, each of the five schedules on each gas day had an \$800/GJ shadow price.

### ***Notices of Threat to System Security in Victoria on 11 July and 14 July***

There were two Threat to System Security (TTSS) events this week in the Victorian market.

#### **11 July – Storage inventory depletion at Iona**

On the afternoon of 11 July, AEMO issued a notice of a TTSS event for the DWGM. This was a result of storage inventory depletion at the Iona storage facility and the subsequent risk of a supply shortfall. AEMO noted that the Iona storage inventory has reduced at an average daily rate of 277 TJ/day since 26 June 2022. At this rate of decline, AEMO projected

that inventory would reduce to 6 PJ by 31 July which will increase the risk of gas curtailment during peak demand days and high gas-powered generation demand.

AEMO has requested market participants to cease purchasing gas from the DWGM via controllable withdrawals from the DTS without corresponding gas supply scheduled for injection into the DTS.

This threat to system security will continue until 30 September 2022 or until a time that AEMO otherwise considers that the threat to gas supply caused by Iona storage inventory depletion has subsided.

#### 14 July – Insufficient offers to meet forecast demand

AEMO issued a critical notice of TTSS for the DWGM for gas day 14 July. This critical TTSS was due to insufficient available offers to meet total forecast demand at the 2 pm schedule. There was a 15 TJ shortfall in offers to cover uncontrollable demand and maintain the end-of-day linepack target. This TTSS ended at 5:26 am on 15 July.

#### ***QCLNG continues ½ - 1 LNG train outage***

QCLNG continued its ½ - 1 LNG train outage which started on 16 June and is expected to end next week on 18 July 2022.<sup>4</sup> Pipeline flows on the Wallumbilla Gladstone Pipeline connected to the LNG facility at Curtis Island decreased slightly to average 761 TJ per day this week.

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<sup>4</sup> Australian Energy Market Operator, [LNG Maintenance – QCLNG Update](#), June 2022.

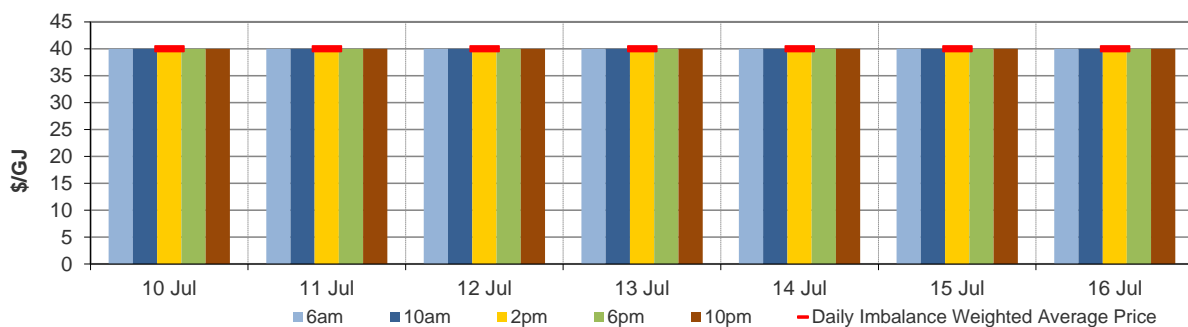
## 1. Victorian Declared Wholesale Market

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 price<sup>5</sup> which is the schedule at which most gas is traded.

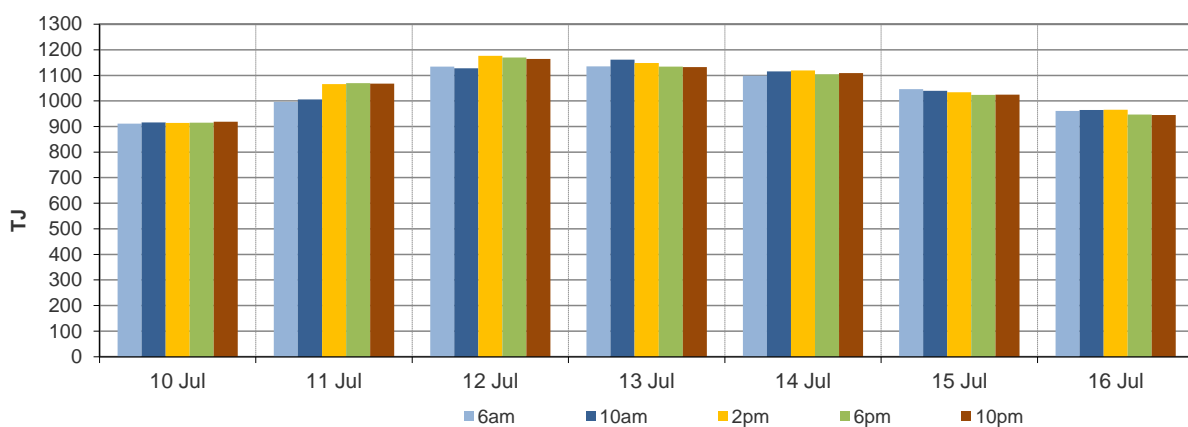
The main drivers<sup>6</sup> of price are demand forecasts and bids to inject or withdraw gas from the market. Figures 1.1 to 1.4 below show the daily prices, demand forecasts<sup>7</sup>, and injection/withdrawal bids for each of the five pricing schedules. Figure 1.5 provides information on which system 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 4.

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



**Figure 1.2: Demand forecasts (TJ)**

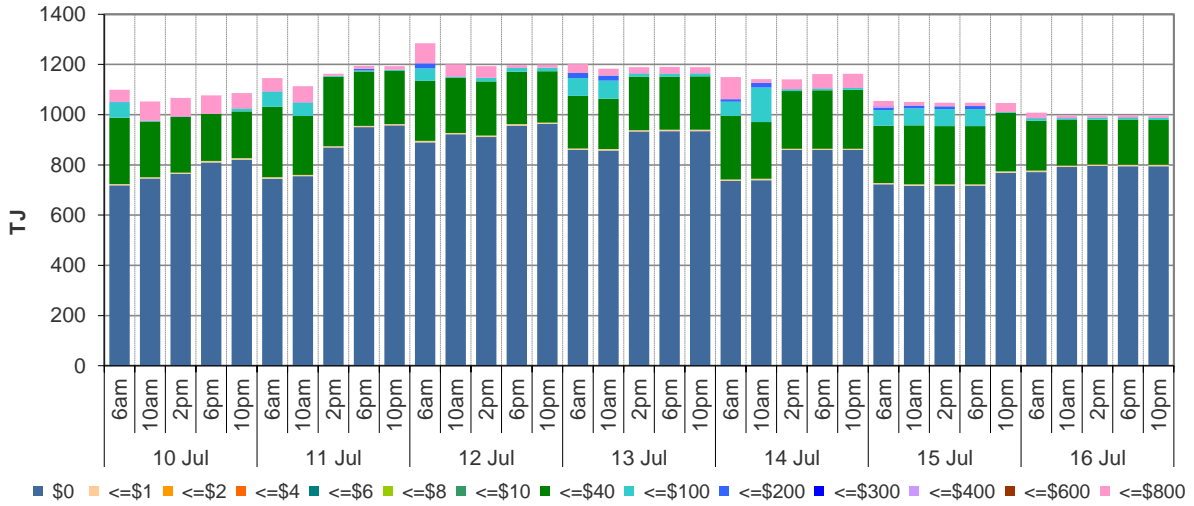


<sup>5</sup> Prices for subsequent schedules are applied only to the differences in scheduled quantities (imbalances) to calculate the weighted price. The 6 am price applies to the entire scheduled quantity in the initial schedule.

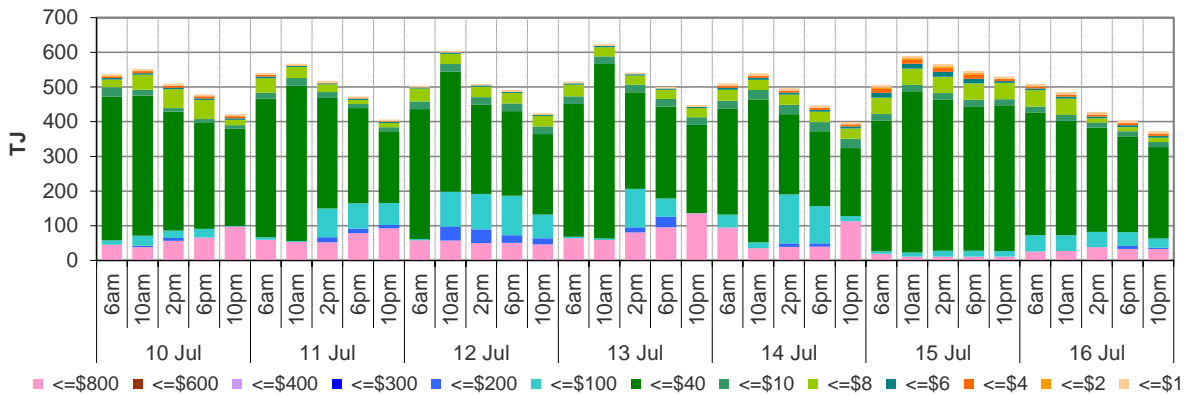
<sup>6</sup> The price might also be affected by transmission or production (contractual) constraints limiting how much gas can be delivered from a locale or System Injection Point (SIP) from time to time.

<sup>7</sup> 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.

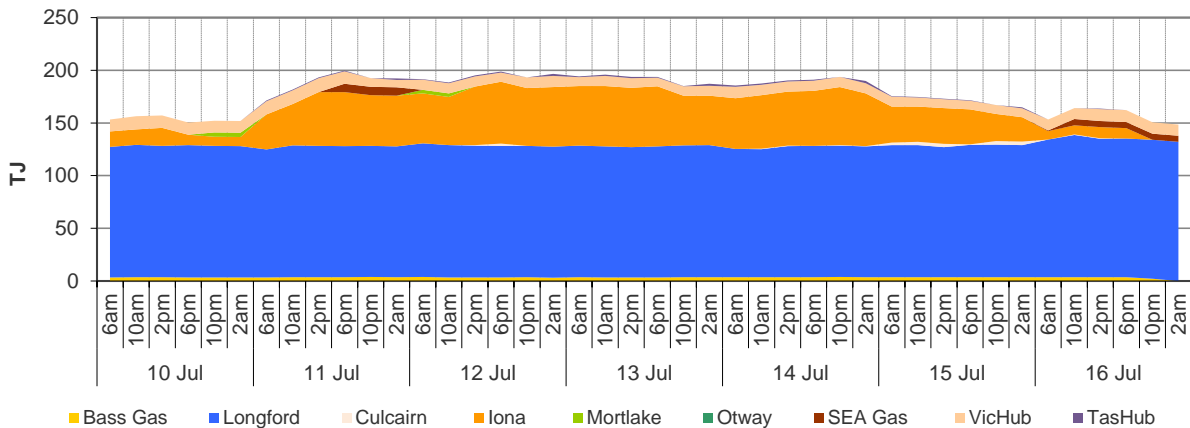
**Figure 1.3: Injection bids by price bands (TJ)**



**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.<sup>8</sup> 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](#).

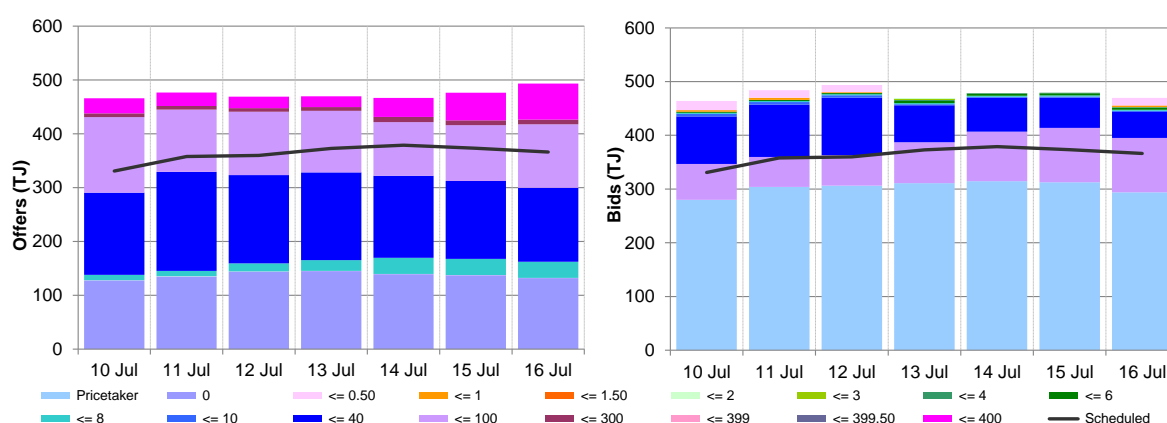
Market Operator Service balancing gas (MOS) payments arise because the amount of gas nominated on pipelines for delivery on a gas day will either exceed or fall short, by some amount, of the amount of gas consumed in the hub. In such circumstances, MOS payments are made to participants for providing a service to park gas on a pipeline or to loan gas from a pipeline to the hub.<sup>9</sup>

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)	42.50	42.25	42.18	44.01	50.00	54.00	55.52
Ex ante quantity (TJ)	331	358	360	373	379	373	366
Ex post price (\$/GJ)	42.89	42.41	42.41	44.01	51.86	53.90	53.82
Ex post quantity (TJ)	338	369	364	376	391	371	359

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

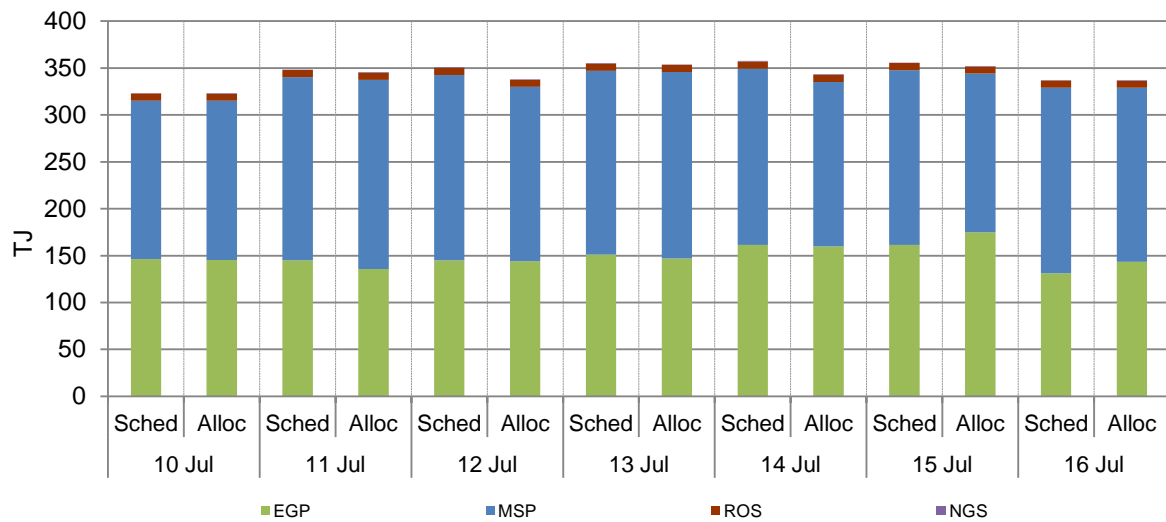


<sup>8</sup> The main driver of the amount of gas scheduled on a gas day is the 'price-taker' bid, which is forecast hub demand that cannot respond to price and which must be delivered, regardless of the price.

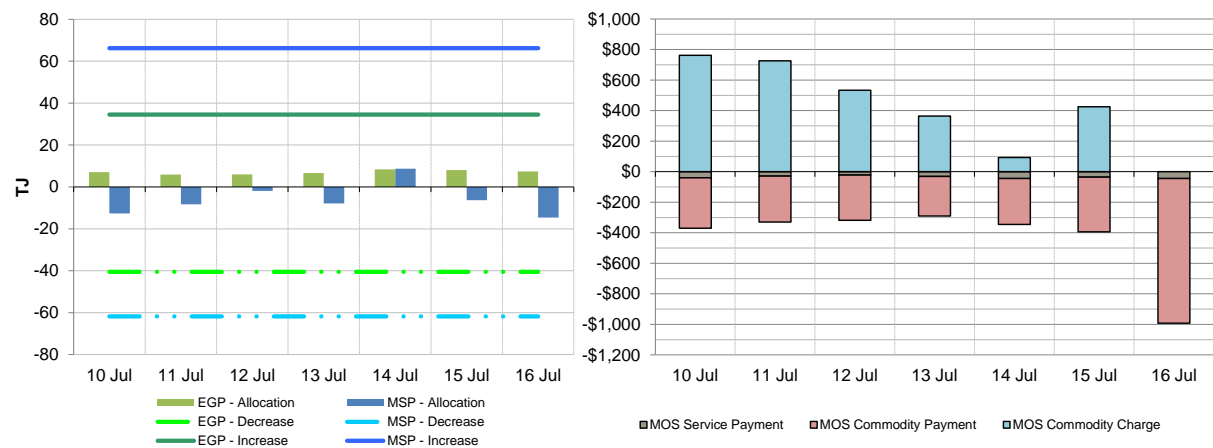
<sup>9</sup> MOS service payments involve a payment for a MOS increase service when the actual quantity delivered exceeds final gas nominations for delivery to a hub, and a payment for a MOS decrease service when the actual quantity delivered is less than final nominations. As well as a MOS 'service' 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)<sup>10</sup>**



<sup>10</sup> 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.

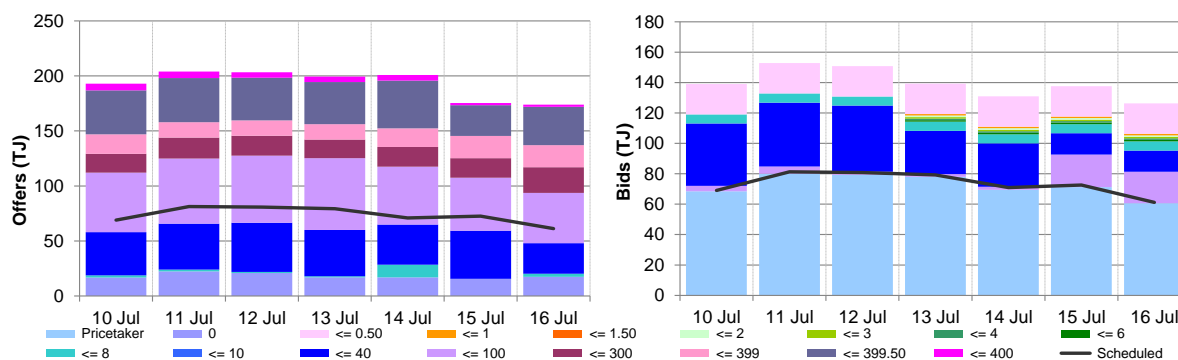
### 3. Adelaide STTM

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.

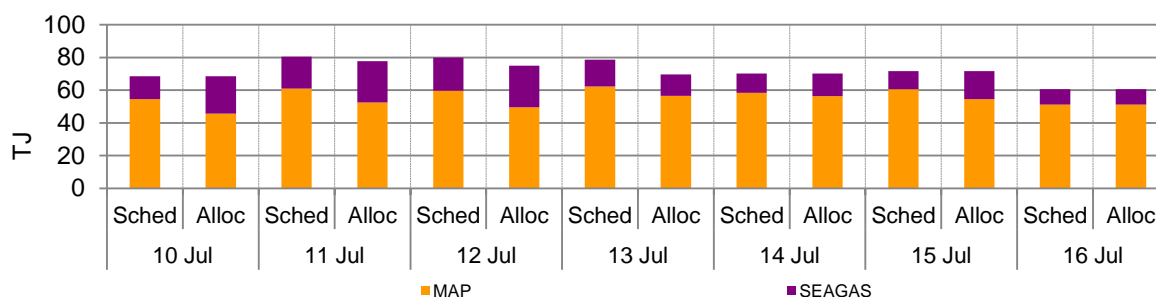
**Figure 3.1: ADL STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	43.24	42.90	42.33	43.88	42.75	48.51	51.44
Ex ante quantity (TJ)	69	81	81	79	71	73	61
Ex post price (\$/GJ)	43.75	43.24	42.20	43.44	42.75	47.20	46.00
Ex post quantity (TJ)	75	85	80	75	70	71	59

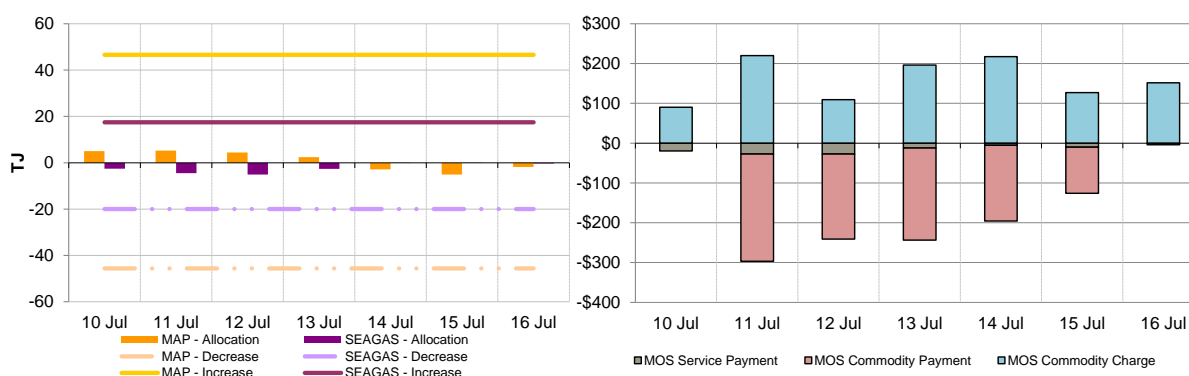
**Figure 3.2: ADL daily hub offers and bids in price bands (\$/GJ)**



**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)**



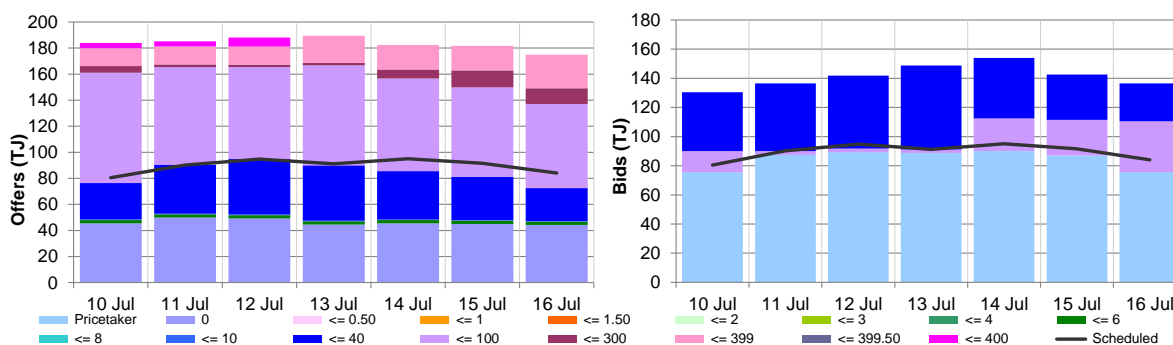
## 4. Brisbane STTM

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.

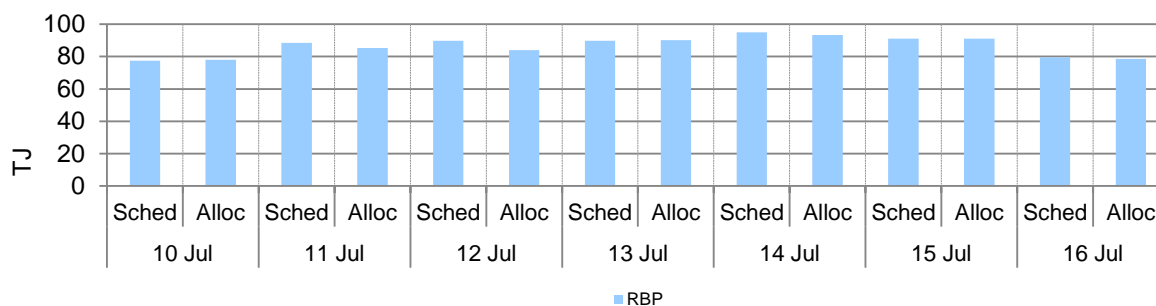
**Figure 4.1: BRI STTM daily ex ante and ex post prices and quantities**

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	41.80	39.50	39.85	40.05	44.20	50.11	49.90
Ex ante quantity (TJ)	80	90	95	91	95	92	84
Ex post price (\$/GJ)	41.80	38.00	39.50	40.05	44.01	50.11	49.90
Ex post quantity (TJ)	79	85	88	91	94	88	80

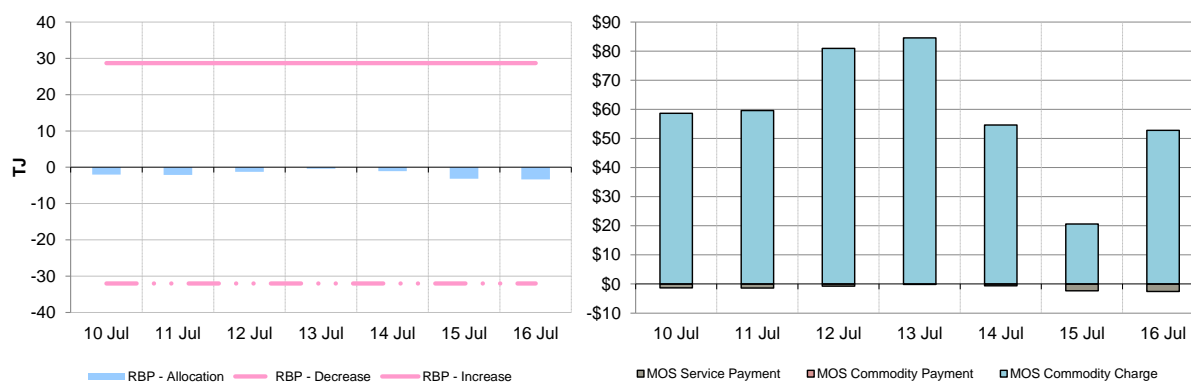
**Figure 4.2: BRI daily hub offers bids in price bands (\$/GJ)**



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



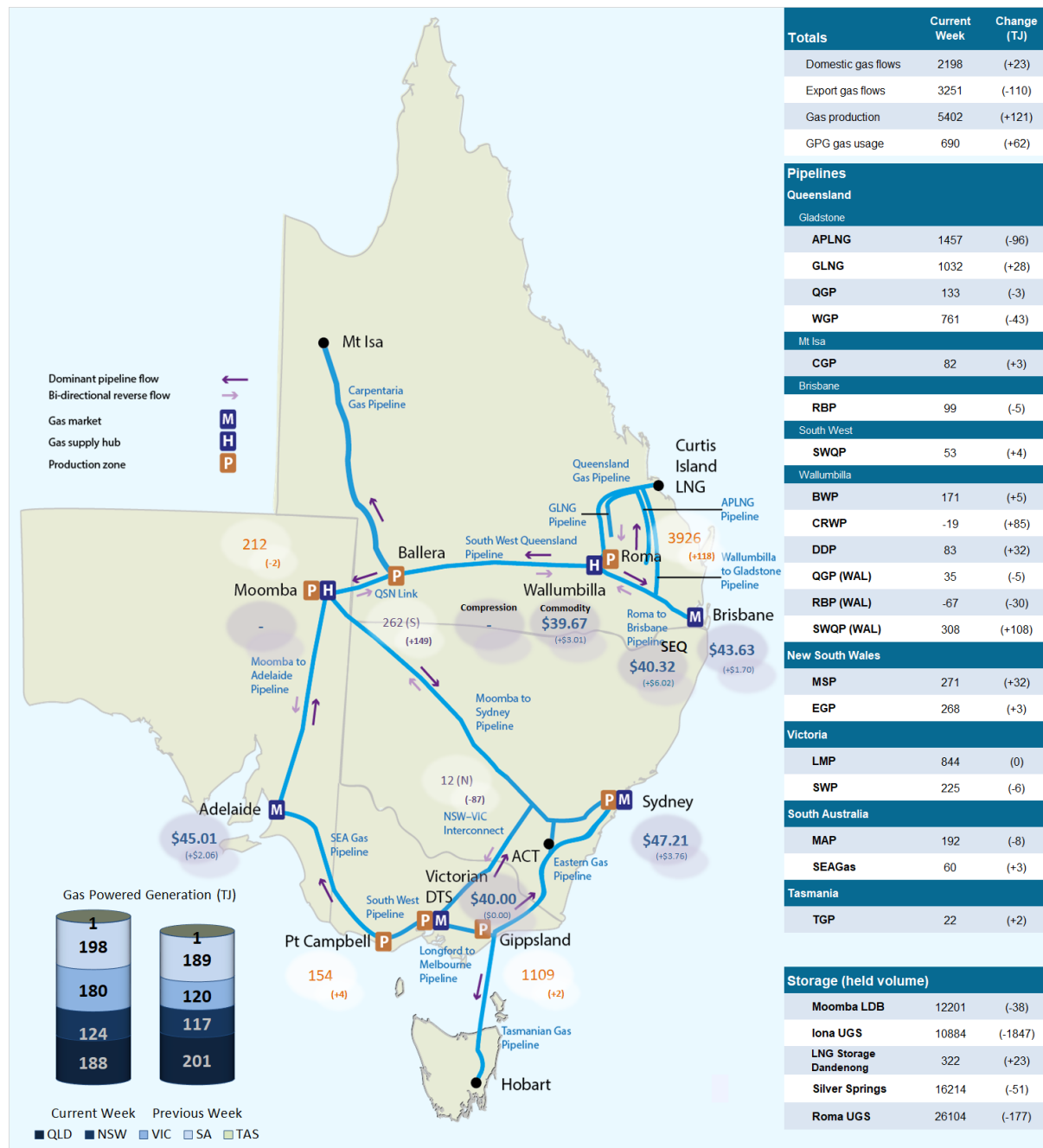
**Figure 4.4: BRI MOS allocations (TJ), service payments and commodity payments/charges (\$000)**



## 5. National Gas Bulletin Board

Figure 5.1 shows average daily actual flows for the current week<sup>11</sup> from the Bulletin Board (changes from the previous week's average are shown in brackets). Average daily prices<sup>12</sup> 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/day); Bulletin Board flows (TJ/day)<sup>13</sup>



<sup>11</sup> 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.

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

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

<sup>12</sup> 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.

<sup>13</sup> Net flows are shown for Bulletin Board facilities, as outlined in the [user guide](#).

## 6. Gas Supply Hub

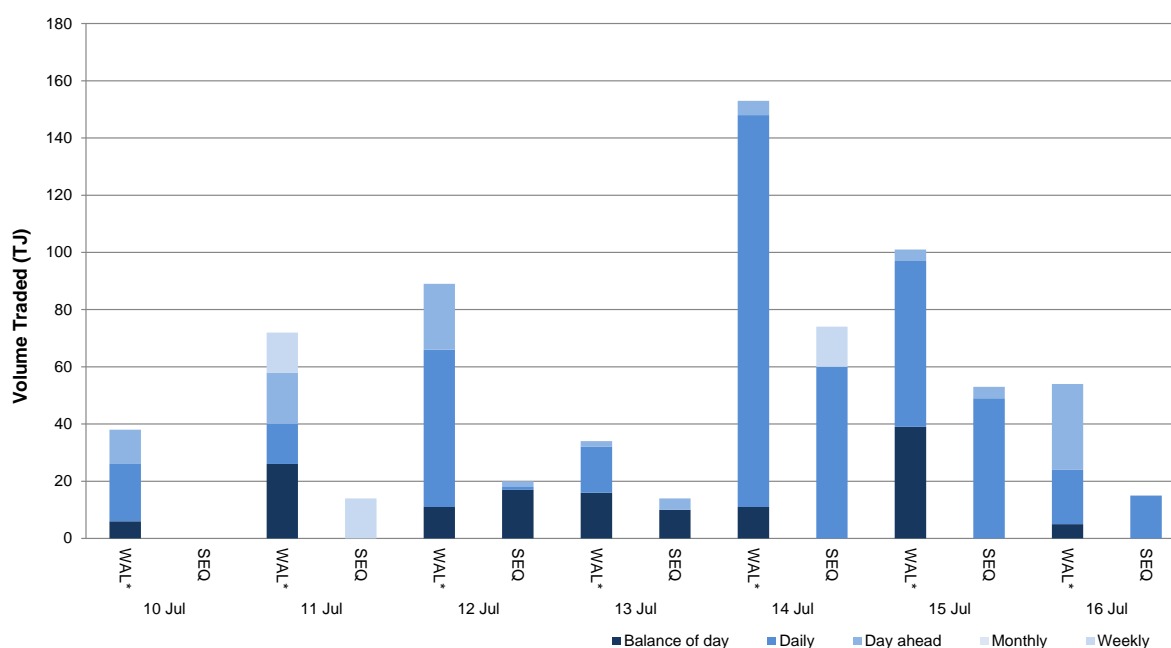
The gas supply hub was established at Wallumbilla in March 2014 to facilitate the voluntary trading of gas between participants, with products listed for sale and purchase at delivery points on three major connecting pipelines. There are separate products for each trading location and delivery period (daily, day-ahead, balance-of-day, weekly and monthly products).<sup>14</sup>

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 86 trades for 731 TJ of gas at a volume weighted price of \$39.84/GJ. These consisted of 62 trades at WAL (541 TJ at \$39.67/GJ) and 24 trades at SEQ (190 TJ at \$40.32/GJ). There were 5 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.<sup>15</sup>

**Figure 6.1: GSH traded quantities**



<sup>14</sup> Additional information on trading locations and available products is detailed in the [user guide](#).

<sup>15</sup> 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.

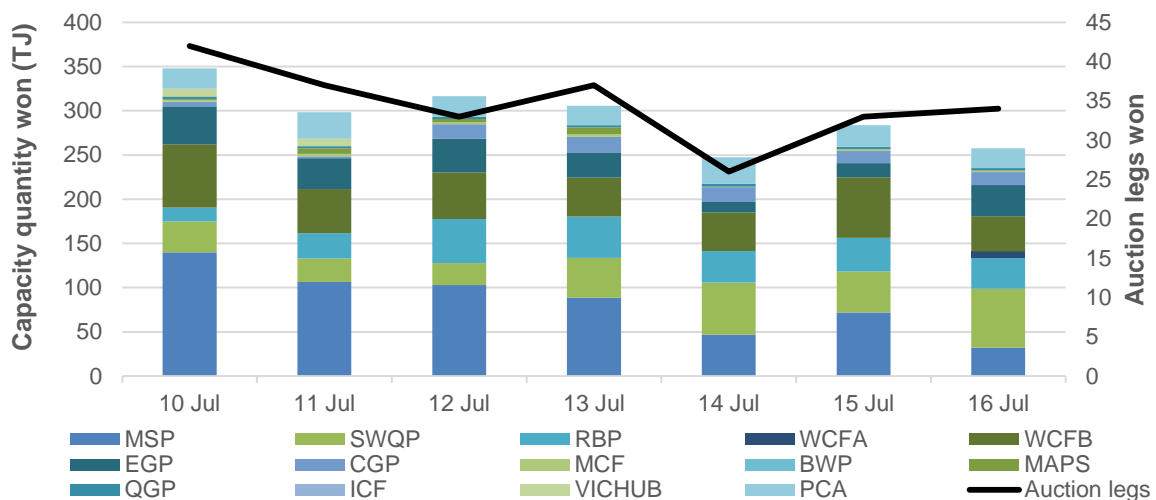
Participants may bid in to the DAA in order to procure the following services:

- 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, 17 participants took part in the DAA, winning 2057 TJ of capacity across 12 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.<sup>16</sup>

**Figure 7.1: DAA traded quantities (TJ) and auction legs won**



Australian Energy Regulator  
September 2022

<sup>16</sup> Additional information is available in the [user guide](#) to the AER gas weekly report.