

19 – 25 June 2022

Weekly Summary

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

Downstream wholesale gas market prices (marked M on the map below) increased in all four markets with Brisbane having the highest increase (percentage change from previous week shown on map).

At the Wallumbilla upstream supply production hubs (marked H), there was an increase in the average price at the WAL trading point. The map also includes National Electricity Market (NEM) prices to compare price trends across electricity and gas markets.



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

*The LNG netback price is the 14 June 2022 assessment for the front month forward LNG netback price assessed: <u>https://www.accc.gov.au/regulated-infrastructure/energy/gas-inquiry-2017-2025/lng-netback-price-series</u>

** NEM prices reflect the Administered Price Caps on prices (limiting prices to \$300/MWh) from 15 to 24th June covering 6 days in this week.

Domestic spot prices continued to exceed the LNG spot netback price this week.

Trading in the Wallumbilla gas supply hub included both shorter-term (343 TJ) and longerterm (396 TJ) deliveries for products at WAL. Whilst at SEQ trade was more concentrated around mid to long term (274 TJ) trades. Longer term trades at WAL included a 155 TJ (monthly) delivery across August and strip products¹ traded for delivery across periods ranging from 3 to 26 days over late-June to late-July. Longer term trades at SEQ similarly were for late-June to late-August across 39-day periods (see section 6).

Although dropping significantly from over 700 TJ per day the week before, for the fourth week in a row, average daily gas usage by GPGs exceeded 500 TJ per day. Most notably in Victoria, GPG usage halved from 186 TJ to 71 TJ. LNG export pipeline flows were lower this week also as the QCLNG outage continued (see figure 5.1).

The >\$7/GJ variation between D-2 and D-1 price threshold outlined in the <u>STTM Significant</u> <u>Price Variation Guideline</u> was exceeded on 7 occasions this week, all in the Sydney hub. The AER will investigate and publish a significant price variation report on the events. However, additional information on the Significant Price Variation breaches is set out in the <u>significant price variation</u> analysis below.

Long term statistics and explanatory material

The AER has published an <u>explanatory note</u> to assist with interpreting the data presented in its weekly gas market reports. The AER also publish a range of <u>longer term statistics</u> 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).

	Victoria		Sydney		Adelaide		Brisbane	
	Price	Demand	Price	Demand	Price	Demand	Price	Demand
19 Jun - 25 Jun 2022	38.24	848	42.54	339	39.43	69	40.05	90
% change from previous week	2	-9	8	-3	8	-5	15	2
21-22 financial YTD	14.25	553	14.71	255	15.20	55	14.79	85
% change from previous financial YTD	152	-2	140	0	135	-4	137	-20

Figure 1: Average daily prices and demand – all markets (\$/GJ, TJ)²

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

¹ Daily products chained together across multiple delivery days.

² Average daily quantities are displayed for each region. The weighted average daily imbalance price applies for Victoria.

Figure 2: Average prices and total quantity – Gas Supply Hubs (\$/GJ, TJ)³

	Moomba		South East	Queensland	Wallumbilla	
	Price	Quantity	Price	Quantity	Price	Quantity
19 Jun - 25 Jun 2022	39.00	15	24.26	363	33.03	739
% change from previous week	-	-	0	0	9	-28
21-22 financial YTD	10.16	297	16.39	5578	14.96	21692
% change from previous financial YTD	234	-12	169	-9	151	37

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
19 Jun - 25 Jun 2022	-	35.34	7.63	0.54
% change from previous week	-	-40	-39	-20
21-22 financial YTD		23.12	8.91	0.90
% change from previous financial YTD		16	16	-74

* 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.

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

	Moomba		South East (Queensland	Wallumbilla*	
	VWA price	Quantity	VWA price	Quantity	VWA price	Quantity
Balance of day	39.00	10.0	35.88	21.0	35.89	143.0
Daily	-	-	22.75	324.0	34.84	400.0
Day ahead	39.00	5.0	38.00	18.0	39.56	41.0
Weekly	-	-	-	-	-	-
Monthly	-	-	-	-	24.00	155.0
Total	39.00	15.0	24.26	363.0	33.03	739.0

Figure 5: Gas Supply Hub products total traded for the current week (\$/GJ, TJ)⁴

* 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	1536	937	1183	3656
Export Pipeline Flows	1636	956	434	3026
% change from previous week (pipeline flows)	3	0	-47	-10
21-22 financial YTD flows	1490	1050	1326	3866

* 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.

Detailed market analysis

Table 1: Key events this week

Date	Event	Market Affected	Description
19-25 Jun	High Shadow prices	Victoria	Multiple schedules on multiple days
19-25 Jun	High D-2 prices	Sydney	Prices around \$60 D-2, falling to around \$40 in ex ante schedules.

In addition, on 15th June the **National Electricity Market** was suspended by AEMO until 24 June.

⁴ Further information about new product trading locations in Victoria (Culcairn) and Sydney (Wilton) is available in section 6. Gas Supply Hub).

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 an administered price cap is in place for the DWGM and STTM, 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 DWGM, the shadow price would have to be less than \$40/GJ over a 7-day period.

There were nine shadow prices in the Victorian market near to \$800/GJ through the week, resulting in the cumulative price being \$11,634/GJ at the end of the week (25 June). This cumulative price is more than eight times higher than the threshold of \$1,440/GJ, below which the APC would be removed. Similar to previous weeks, offers at key injection points such as Iona were reduced in total volume while for volumes offered in, there were significantly less offers priced at \$100-775/GJ.

Sydney – Higher D-2 prices than D-1 prices

Following the APC ending on 14th June, more gas has been offered in to provisional (D-2) and ex ante (D-1) schedules as shown in Figure 7.



Figure 7: Sydney D-2 and D-1 supply offers (TJ, LHS) and prices (\$/GJ, RHS)⁵

Note: The current week, 19 - 25 June, is highlighted by the shaded bars. D-2 supply offers are shown on the left, with D-1 offers shown on the right. Ex ante (D-1) prices on the RHS axis over the administered price period (1 to 14 June) are non-capped shadow prices. Over the period of market administered settlement state (24 - 30 May) adjacent to the red line there was no ex ante pricing, rather prices were set in the market (prices not show).

This week the amount of gas offered in between \$40-\$60 per GJ in the ex ante schedule increased significantly.

⁵ Due to the administered pricing state implemented as a result of a major Retailer of Last Resort (RoLR) event being declared for the Sydney hub (following the suspension of Weston Energy from the STTM), ex ante schedules were not run for the 25-31 May gas days. Scheduled quantities on these days were determined ex post, based on participant supply nominations to facility operators, with ex ante and ex post prices set using a rolling 30-day average from 27 May.

Sydney – High MOS payment 19 June

On 19 June in the Sydney market, there was a daily MOS⁶ service payment of \$59,825. The decrease MOS requirement on the MSP was driven by over forecast demand inside the hub (21.9 TJ).

Significant Price Variation analysis

This week, the AER significant price variation reporting thresholds were triggered in the Sydney short term trading market (STTM). The Significant Price Variations listed below are generally caused by participants rebidding between schedules to buy or sell, or unexpected movements in supply and demand forecasts. Specifically, the D-1 price in the Sydney STTM deviated from the D-2 forecast price by more than \$7/GJ on a total of 7 occasions.

Table 2 provides a summary of the breaches. The schedule price variation is the difference between the D-1 ex ante price and the D-2 provisional price.

Table 2: Significant price variation threshold breaches – variation >\$7/GJbetween D-2 and D-1 price (change to \$14/GJ from 22 June)

Gas day	Market	D-2 provisional price (\$/GJ)	D-1 ex ante price (\$/GJ)	Schedule price variation (\$/GJ)	Threshold breach description
19-June	Sydney	60	45	-15	Supply offer bid
20-June	Sydney	60	43.67	-16.33	Supply offer bid
21-June	Sydney	60	42.9	-17.1	Supply offer bid
22-June	Sydney	60	42.99	-17.01	Supply offer bid
24-June	Sydney	55.22	39.99	-15.23	Supply offer bid

* SPV price variation reporting thresholds for the STTM were increased to \$14/GJ from 22 June 2022

For each breach, more detailed analysis is provided below. The AER will investigate and publish a further report on these events in or before September 2022. Our analysis below identifies drivers of these significant price variation events as a complement to this further reporting.

Significant Price Variation analysis

In the Sydney STTM hub, rebidding moved additional supply to prices below \$45/GJ in ex ante schedules across 19-25 June, reducing ex ante prices by \$9.32-17.10/GJ compared to D-2 provisional forecast prices. Provisional forecasts set D-2 prices at \$60/GJ across 19-22 June, reducing to \$55.22/GJ on 23-24 June, and 50.22/GJ on 25 June.⁷

⁶ MOS is an ancillary service providing balancing gas on a pipeline where there is a difference between scheduled/nominated supply/demand and actual delivered gas quantities.

⁷ D-2 provisional prices in Sydney remained stable around \$45-55/GJ until mid-July, with average ex ante prices set just under \$45/GJ.



Figure 8: Sydney provisional and ex ante bid and offer curves (19 June)

On 19 June in Sydney, there was a significant increase in supply offers being rebid into the \$40-45/GJ price range (over 56 TJ). This increased the total offers available below \$45/GJ in the ex ante schedule by around 47 TJ, with additional capacity added by exporter/producer (30 TJ), industrial (13 TJ) and trader (12 TJ) participants. The ex ante gas price reduced by \$15/GJ as a result.



Figure 9: Sydney provisional and ex ante bid and offer curves (20 June)

On 20 June in Sydney, there was a significant increase in supply offers being rebid into the \$35-50/GJ price range (95.8 TJ), with 25.8 TJ added at \$40-45/GJ. This increased the total offers available below \$45/GJ in the ex ante schedule by 80.7 TJ, with additional capacity added by GPG/gentailer (13 TJ), exporter/producer (30 TJ), industrial (22 TJ) and trader (16 TJ) participants. The ex ante gas price reduced by \$16.33/GJ as a result.



Figure 10: Sydney provisional and ex ante bid and offer curves (21 June)

On 21 June in Sydney, there was a significant increase in supply offers in all price bands below \$50/GJ. Rebidding added additional supply into the following price ranges: \$0-35/GJ (34.4 TJ), \$35-40/GJ (24.3 TJ), \$40-45/GJ (23.6 TJ) and \$45-50/GJ (23.8 TJ). This increased the total offers available below \$45/GJ in the ex ante schedule by 82.3 TJ, with additional capacity added by GPG/gentailer (25 TJ), exporter/producer (24 TJ) and trader (31 TJ) participants. The ex ante gas price reduced by \$17.10/GJ as a result.



Figure 11: Sydney provisional and ex ante bid and offer curves (22 June)

On 22 June in Sydney, there was a significant increase in supply offers being rebid into the \$40-45/GJ (39.3 TJ) and \$45-50/GJ (36 TJ) price ranges. This increased the total offers available below \$45/GJ in the ex ante schedule by 42.7 TJ, with additional capacity added by exporter/producer (18 TJ) and trader (26 TJ) participants. The ex ante gas price reduced by \$17.01/GJ as a result.



Figure 12: Sydney provisional and ex ante bid and offer curves (24 June)

On 24 June in Sydney, there was a significant increase in supply offers being rebid into the \$35-40/GJ (30.5 TJ)⁸, \$40-45/GJ (33.3 TJ) and \$45-50/GJ (35.8 TJ) price ranges. This increased the total offers available below \$40/GJ in the ex ante schedule by 34.7 TJ, with the majority of additional capacity added by exporter/producer (27 TJ) and trader (8 TJ) participants. The ex ante gas price reduced by \$15.23/GJ as a result.

⁸ Additional capacity offered at \$35-40/GJ was offset by reduced capacity offers priced at \$30-35/GJ (28.5 TJ).



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 price⁹ which is the schedule at which most gas is traded.

The main drivers¹⁰ 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 forecasts¹¹, 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)





⁹ 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.

¹⁰ 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.

¹¹ 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)









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.¹² 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 <u>user guide</u>.

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.¹³

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)	45.00	43.67	42.90	42.99	42.35	39.99	40.90
Ex ante quantity (TJ)	340	369	375	340	342	312	293
Ex post price (\$/GJ)	44.50	43.64	41.95	43.01	43.50	42.20	41.00
Ex post quantity (TJ)	323	366	368	344	357	343	299



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

¹² 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.

¹³ 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)¹⁴



¹⁴ 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)	37.02	40.11	38.76	40.00	40.30	40.43	39.40
Ex ante quantity (TJ)	62	72	73	71	70	73	65
Ex post price (\$/GJ)	37.02	42.00	37.51	42.60	40.00	36.50	38.06
Ex post quantity (TJ)	59	72	70	73	69	63	57









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 Standard St

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Ex ante price (\$/GJ)	37.49	38.49	44.12	38.02	41.90	40.90	39.43
Ex ante quantity (TJ)	81	93	93	90	95	92	84
Ex post price (\$/GJ)	37.24	39.71	44.12	38.02	42.20	39.43	38.92
Ex post quantity (TJ)	80	95	93	88	96	90	77









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 week¹⁵ from the Bulletin Board (changes from the previous week's average are shown in brackets). Average daily prices¹⁶ are provided for gas markets and gas supply hubs. Average daily quantities are provided for gas powered generation for each region.





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.

¹⁶ 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.

¹⁷ Net flows are shown for Bulletin Board facilities, as outlined in the <u>user guide</u>.

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).¹⁸

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 73 trades for 1117 TJ of gas at a volume weighted price of \$30.26/GJ. These consisted of 52 trades at WAL (739 TJ at \$33.03/GJ) and 18 trades at SEQ (363 TJ at \$24.26/GJ). There were 6 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.¹⁹



Figure 6.1: GSH traded quantities

¹⁸ Additional information on trading locations and available products is detailed in the <u>user guide</u>.

¹⁹ 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 unnominated 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 bidirectional pipelines;
- interruptible backhaul services; and
- stand-alone compression services.

This week, 16 participants took part in the DAA, winning 2001 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.²⁰



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

Australian Energy Regulator August 2022

²⁰ Additional information is available in the <u>user guide</u> to the AER gas weekly report.