Gas Market Report

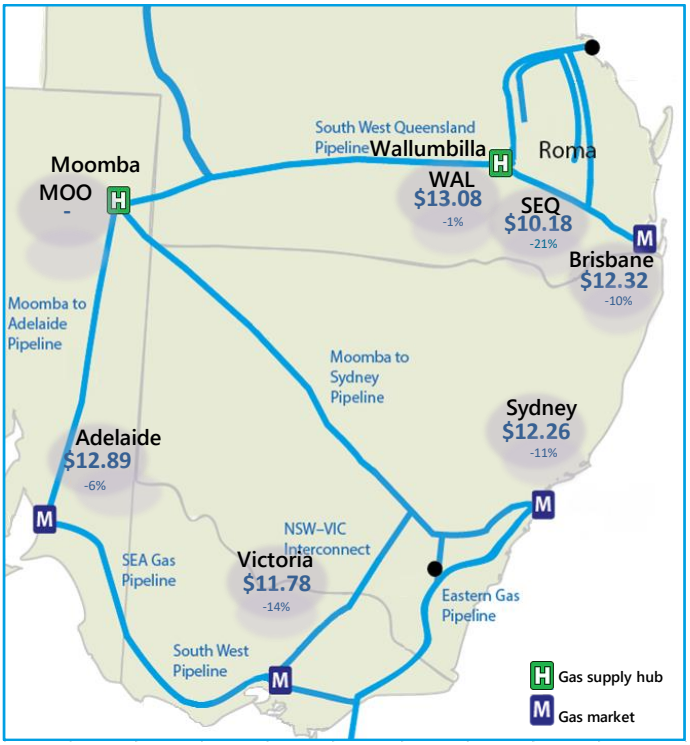
AUSTRALIAN ENERGY REGULATOR

21 – 27 November 2021

Weekly Summary

Downstream wholesale gas market prices (marked M on the map below) fell this week, with the strongest decreases in Victoria and Sydney. Average prices fell in all four markets (percentage change from previous week shown on map) due to decreased demand.

Prices at the upstream supply production hubs (marked H) also decreased at Wallumbilla (WAL and SEQ trading points).



Trading in the Wallumbilla gas supply hub was concentrated around shorter-term products at SEQ and WAL.[1] 186 TJ of the gas traded through strip (daily) products was associated with deliveries across the first half of December.

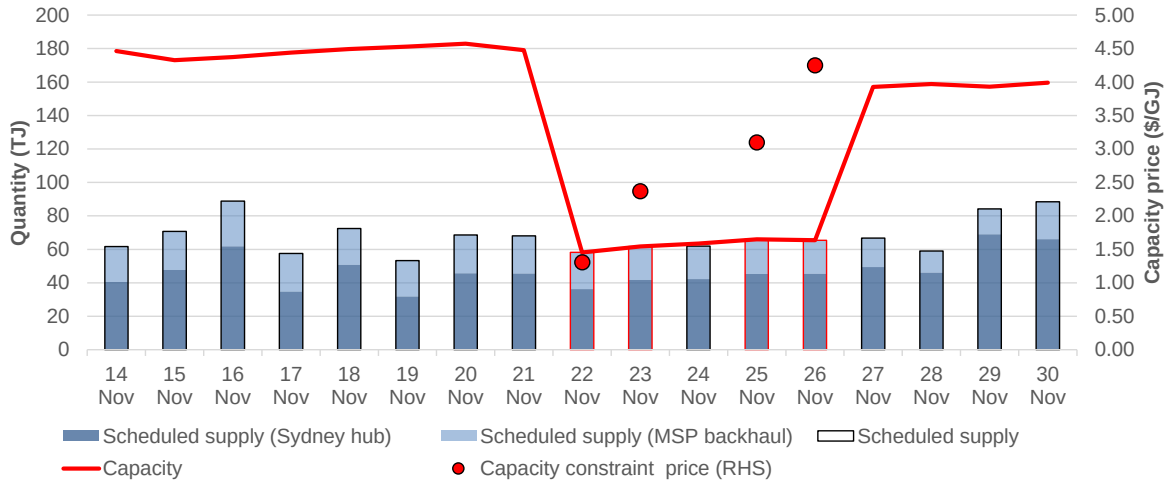
Mainland gas powered generation decreased slightly this week, driven by a reduction in South Australia.

LNG export pipeline flows reduced this week but remained above 4000 TJ/day on average (see more detailed map and table at figure 5.1).

[1] The South East Queensland (SEQ) trading point in the Wallumbilla (WAL) Gas Supply Hub (GSH) supplies gas to an in-pipe notional delivery point on the Roma to Brisbane Pipeline (RBP), located in close proximity to a number of large production facilities in the Roma region. The WAL product location covers the remaining gas deliveries between the South West Queensland Pipeline (SWQP), Roma to Brisbane Pipeline (RBP), Queensland Gas Pipeline (QGP) and other interconnected pipelines in Queensland.

Capacity constraints pushed up prices on the Moomba to Sydney Pipeline (MSP). Capacity prices of $1.31/GJ, $2.37/GJ, $3.10/GJ and $4.25/GJ were set in the ex ante schedule on the MSP on 22, 23, 25 and 26 November respectively (see figure below).[2] This resulted from the forecast capacity on the MSP for delivery into the Wilton delivery point falling to around 60 TJ.[3] The cost affected 48 TJ of as-available supply.[4] The constraint increased the ex ante price by up to $1.25/GJ on 26 November (compared to an unconstrained market position).[5] A further description of market outcomes on these days is provided below in the 'detailed analysis' section (p. 5).

Summary figure: Moomba to Sydney Pipeline (MSP) capacity constraint prices (CCPs)



In the Sydney STTM on 23 and 24 November, the ex post price increased by $1.48/GJ and $1.05/GJ respectively. This was due to higher supply requirements linked to increased backhaul renominations (close to 20 TJ on both days).

In the Brisbane STTM on 26 November, the ex post price decreased by $1.09/GJ due to a 10 TJ reduction in demand (and supply), largely from a combination of lower industrial and generation requirements.

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)**.

[2] Pipeline capacity prices represent the difference between the last cleared gas offer price on the MSP (at the scheduled capacity limit of 58-66 TJ) and the price of the additional gas scheduled out-of-merit-order on the EGP to set the ex ante market price. The price represents the amount of compensation that is paid by participants with gas scheduled on as available trading rights, paid to shippers with firm haulage rights that did not have their gas scheduled on the day due to the capacity constraint.

[3] Capacity reduced from around 180 TJ across the preceding gas days.

[4] Figure 8 provides a breakdown of as available supply over the 4 gas days and associated costs of the capacity constraints.

[5] Unconstrained ex ante prices would have been set at the following levels: 22 November ($11.60/GJ), 23 November ($11.70), 25 November ($11.95/GJ), 26 November ($12/GJ).

Figure 1: Average daily prices and demand – all markets ($/GJ, TJ)[6]

	Victoria		Sydney		Adelaide		Brisbane	
	Price	Demand	Price	Demand	Price	Demand	Price	Demand
21 Nov - 27 Nov 2021	11.78	369	12.26	207	12.89	50	12.32	86
% change from previous week	-14	-28	-11	-5	-6	-1	-10	0
21-22 financial YTD	9.89	681	10.72	261	10.95	64	10.44	93
% change from previous financial YTD	105	2	120	-2	97	-2	117	-8

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 Hubs ($/GJ, TJ)[7]

	Moomba		South East Queensland		Wallumbilla	
	Price	Quantity	Price	Quantity	Price	Quantity
21 Nov - 27 Nov 2021	-	-	10.18	68	13.08	432
% change from previous week	-	-	-21	11	-1	167
21-22 financial YTD	8.29	241	10.65	1987	10.53	7177
% change from previous financial YTD	187	-26	155	-10	142	20

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

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

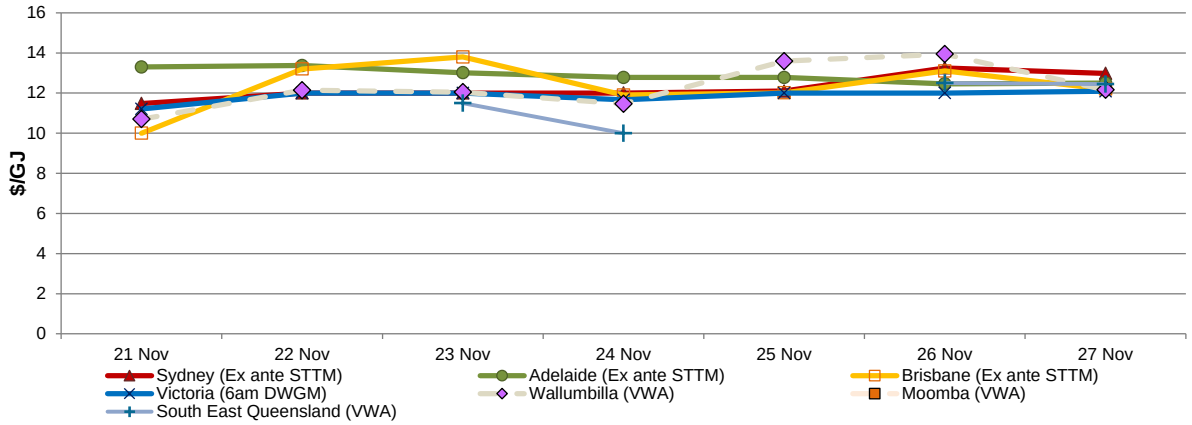


Figure 4 compares average ancillary market payments (for the VGM) and balancing gas service payments (STTM) against historical averages.

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

[7] 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 4: Average daily ancillary payments ($000)

	Victoria Ancillary Payments*	Sydney MOS	Adelaide MOS	Brisbane MOS
21 Nov - 27 Nov 2021	-	10.83	4.81	1.68
% change from previous week	-	-30	-74	170
21-22 financial YTD		24.31	5.98	0.78
% change from previous financial YTD		11	-35	-89

* 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)[8]

	Moomba		South East Queensland		Wallumbilla*	
	VWA price	Quantity	VWA price	Quantity	VWA price	Quantity
Balance of day	-	-	11.99	6.0	12.86	99.0
Daily	-	-	-	-	13.81	230.0
Day ahead	-	-	-	-	12.24	41.0
Weekly	-	-	-	-	-	-
Monthly	-	-	10.00	62.0	11.25	62.0
Total	**-**	**-**	**10.18**	**68.0**	**13.08**	**432.0**

* 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	1572	937	1675	4184
Export Pipeline Flows	1566	1100	1363	4029
% change from previous week (pipeline flows)	7	-3	-5	0
21-22 financial YTD flows	1402	1132	1326	3860

* 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.

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

Detailed market analysis

Market conditions settled but prices remain high

Settled market conditions saw decreased prices this week, however prices continue to remain high. Elevated Victorian demand levels over the past fortnight decreased this week, leading to prices easing slightly across the markets.[9]

Reduced supply availability at Longford continued across the week, with forecast capacity increasing somewhat from 1 December (above 700 TJ). While interstate flows north from Victoria increased from last week, this did not drive a significant increase in supply requirements from Iona (see figure 1.5).[10]

Capacity constraints on the Moomba to Sydney Pipeline (MSP)

In the Short Term Trading Market (STTM), when a pipeline reaches capacity so that no additional gas can be scheduled, participants that provide 'as-available' supply are required to financially compensate higher priority 'firm' contracted shippers whose offered gas is not scheduled.

In these situations a 'capacity constraint price' (CCP) is calculated based on the difference between the price of the last scheduled offer on the constrained facility (the 'pipeline price') and additional gas sourced at a higher price to meet market demand (the 'ex ante price').[11]

Supply capacity into the Sydney STTM on the Moomba to Sydney Pipeline reduced during planned maintenance from around 180 TJ to 66 TJ or lower from 22 to 26 November, leading to capacity prices affecting shippers on the pipeline over 4 gas days.[12] Capacity prices were set across most provisional schedules on the affected days, with lower capacity forecast across all gas day schedules (D-3, D-2 and D-1)[13].

Ex ante prices over the period were generally below provisional forecasts[14], however changes in ex ante schedules led to higher capacity prices on the pipeline from 23 November (see figure 7).[15]

Daily capacity costs ranged from around $17,400 to $39,700 on the affected days (see figure 8).

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[9] A number of factors have been influencing higher prices across the markets recently, including elevated Victorian demand (caused by cold weather driving unprecedented November demand) alongside constrained supply at Longford (including unplanned issues during planned maintenance), and increased gas generation requirements in Queensland (refer to previous weekly report).

[10] Flows north via Culcairn on the Victoria-NSW interconnect (VNI) increased from 298 TJ last week to 627 TJ this week. VNI flows have been elevated since late August despite the decrease last week, coinciding with elevated levels of export demand (refer to the 31 October to 6 November gas weekly report).

Recent high demand in Victoria and reduced production levels at Longford have led to higher usage of gas storage being supplied from Iona, while storage levels remain low.

[11] As-available supply in the STTM includes all non-firm priority gas, including gas supply backed by auction services. The total capacity revenue on an STTM facility is calculated by the capacity price multiplied by the lesser of the quantity of as-available gas scheduled and the quantity of firm gas offered but not scheduled, net of MOS allocations.

[12] Reduced STTM supply capacity coincided with planned maintenance at the Bulla Park Compressor Station reported on the Bulletin Board, which lowered forecast pipeline delivery capacity from Moomba to Wilton down by 60 TJ over 22-26 November.

[13] D-3 refers to the provisional schedule forecast 3 days ahead of the gas day (D), with D-2 forecast 2 days ahead, and the ex ante schedule (D-1) representing the majority of the payments and charges applicable on an individual gas day. Other charges also apply following ex post (D+1) allocations after the gas day, generally applying to the difference between scheduled and actual supply and demand quantities.

[14] The D-3 forecast for the 25 November gas day was an exception, where the provisional prices was lower and no provisional capacity price was set.

[15] Capacity constraints prevented backhaul bid quantities on the MSP from being scheduled in merit order on 22 November (5 TJ), 23 November (3.4 TJ) and 26 November (4.7 TJ).

Figure 7 shows provisional forecast and ex ante capacity limits (TJ) on the Moomba to Sydney Pipeline (MSP). The figure also shows the capacity constraint price (CCP) and market price (Price) on gas days affected by capacity constraints across the provisional and ex ante schedules.

Figure 7: MSP capacity (TJ), constraint and market prices ($/GJ)

	Provisional (D-3)			Provisional (D-2)			Ex ante (D-1)		
	Capacity	CCP	Price	Capacity	CCP	Price	Capacity	CCP	Price
22 Nov	61.8	1.50	13.50	57.7	2.66	14.65	**58.2**	**1.31**	**12.00**
23 Nov	62.8	0.45	13.45	64.1	0.50	13.50	**61.7**	**2.37**	**12.00**
24 Nov	65.9	1.70	14.20	63.4	3.60	13.40	**63.4**		**12.00**
25 Nov	66.1		11.10	66.0	0.98	12.98	**66.1**	**3.10**	**12.10**
26 Nov	64.7	1.45	13.45	65.4	3.27	13.45	**65.4**	**4.25**	**13.25**

Figure 8 shows as available (non-firm) gas supply on the Moomba to Sydney Pipeline (MSP) subject to capacity charges.[16] Firm contracted shippers are compensated by participants shipping on as available contracts at the pipeline capacity price.

Figure 8: As available gas allocations and capacity payments

	Capacity price ($/GJ)	As available allocation (TJ)	Capacity payments
22 November	1.31	16.47	$21,575.70
23 November	2.3738	16.60	$39,405.08
25 November	3.1	5.64	$17,484.00
26 November	4.2456	9.36	$39,738.82

[16] Capacity charges and payments can only occur on constrained pipelines. On a constrained pipeline, shippers using as-available haulage make a capacity payment based on the gas that they actually flow on the gas day. On the same constrained pipeline, shippers using firm haulage receive capacity payments based on the amount of gas that was offered into the ex ante market but which did not actually flow.

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[17] which is the schedule at which most gas is traded.

The main drivers[18] 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[19], 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)

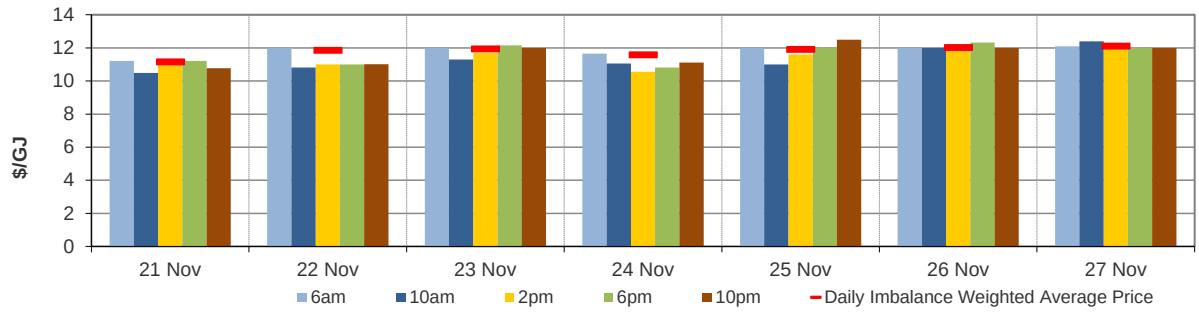
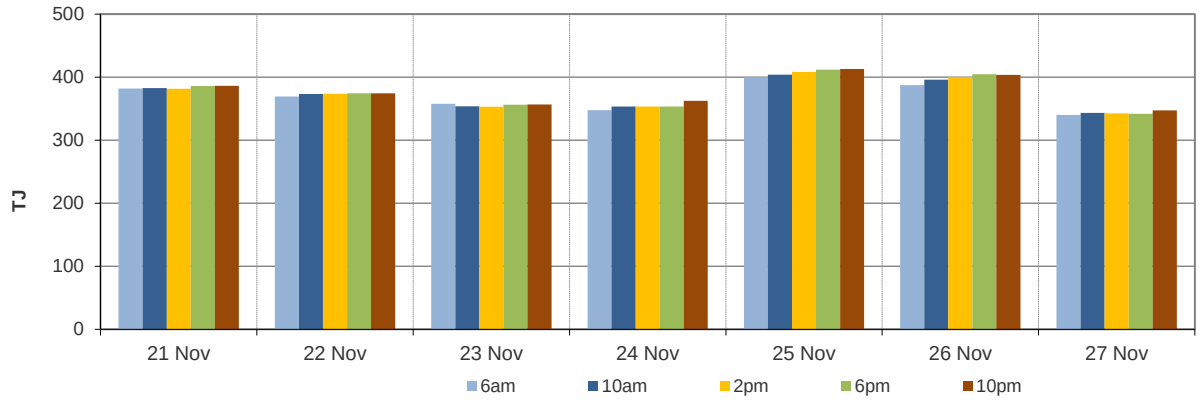


Figure 1.2: Demand forecasts (TJ)



[17] 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.
[18] 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.
[19] 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)

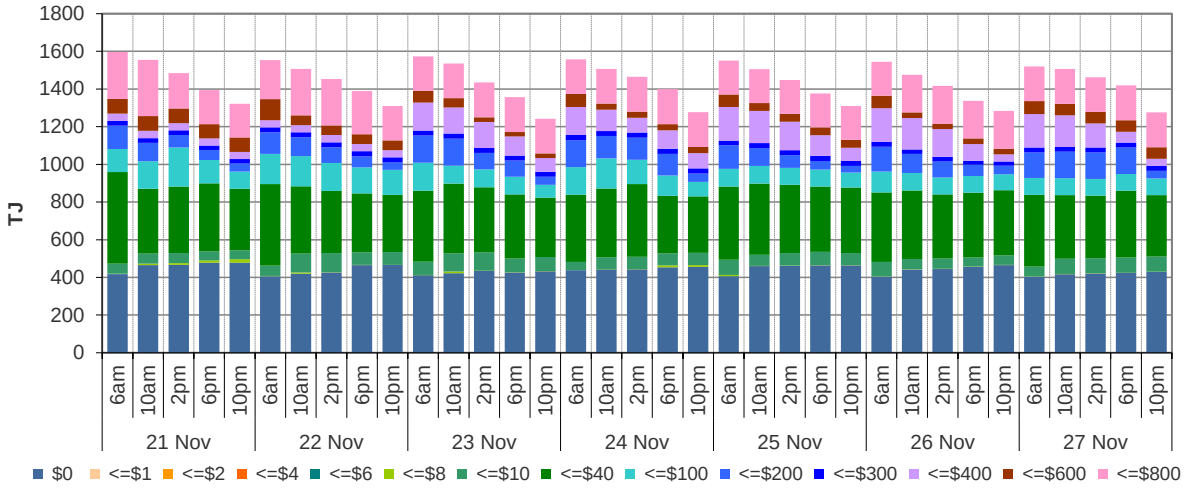


Figure 1.4: Withdrawal bids by price bands (TJ)

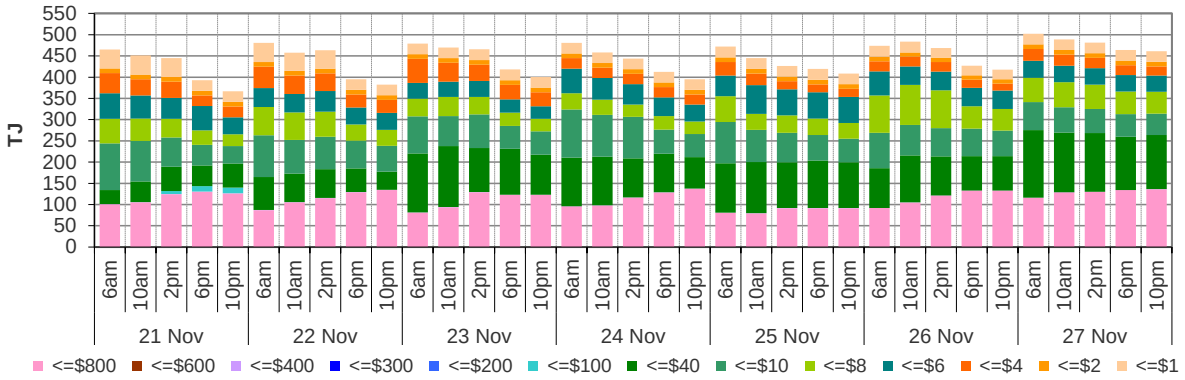
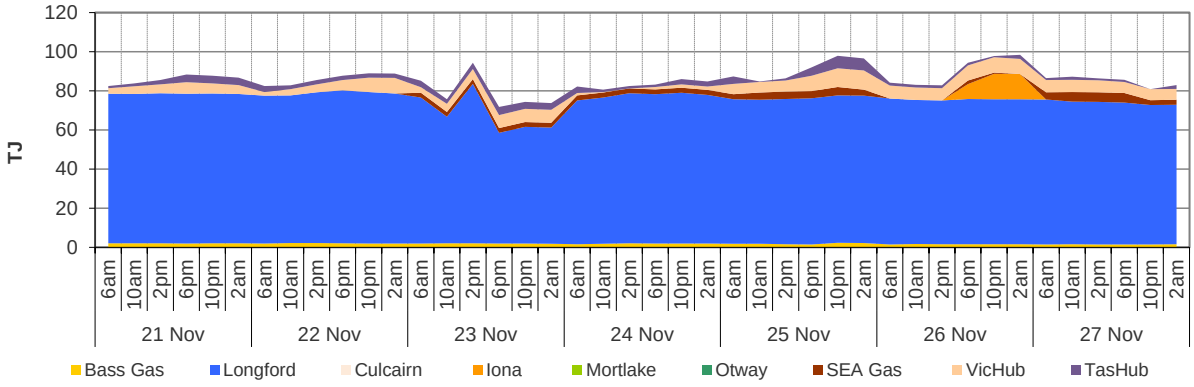


Figure 1.5: Metered Injections by System Injection Point (TJ)



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.[20] 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.

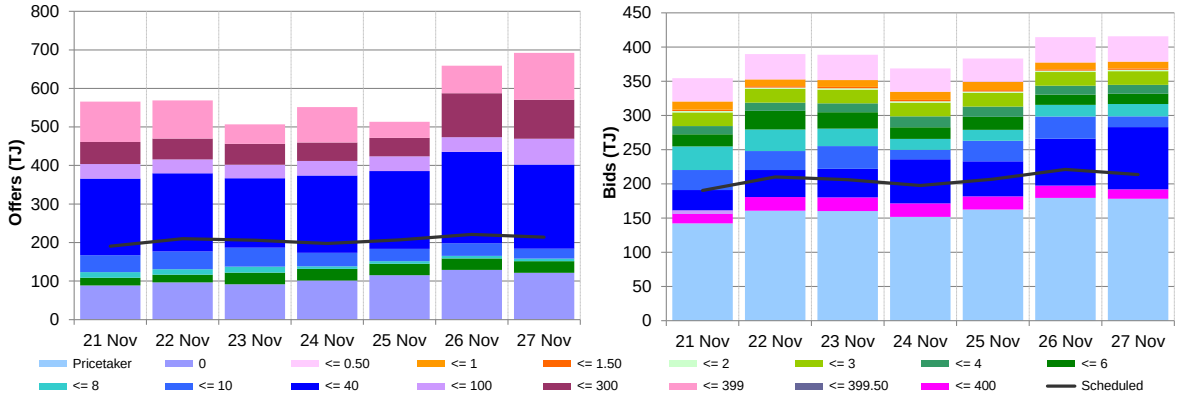
Market Operator Service balancing gas (MOS) payments arise because the amount of gas nominated on pipelines for delivery on a gas day will either exceed or fall short, by some amount, of the amount of gas consumed in the hub. In such circumstances, MOS payments are made to participants for providing a service to park gas on a pipeline or to loan gas from a pipeline to the hub.[21]

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 ($/GJ)	11.48	12.00	12.00	12.00	12.10	13.25	12.98
Ex ante quantity (TJ)	191	210	206	198	207	221	214
Ex post price ($/GJ)	12.00	12.68	13.48	13.05	12.50	13.95	13.45
Ex post quantity (TJ)	215	216	224	216	218	231	234

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



[20] 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.

[21] 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.

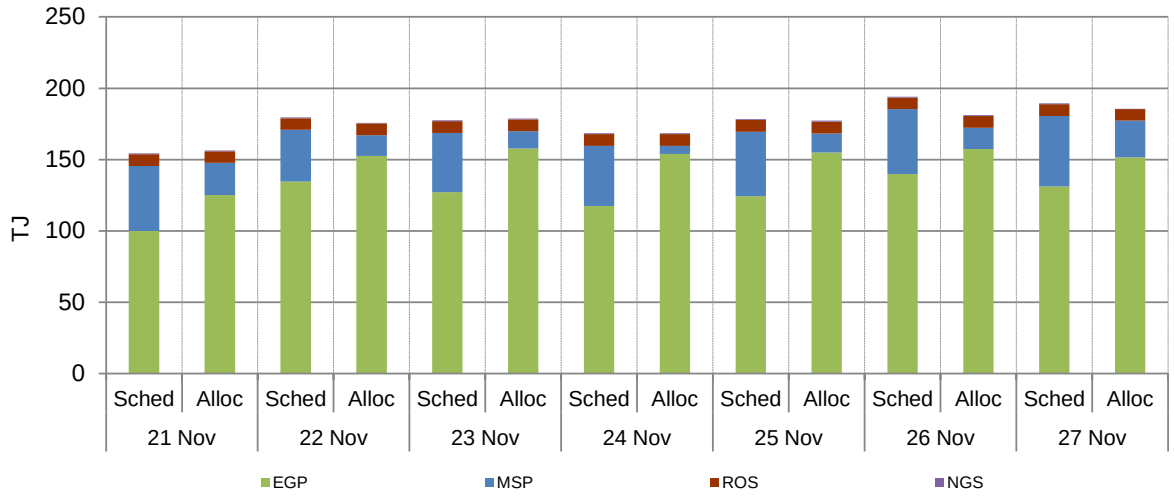
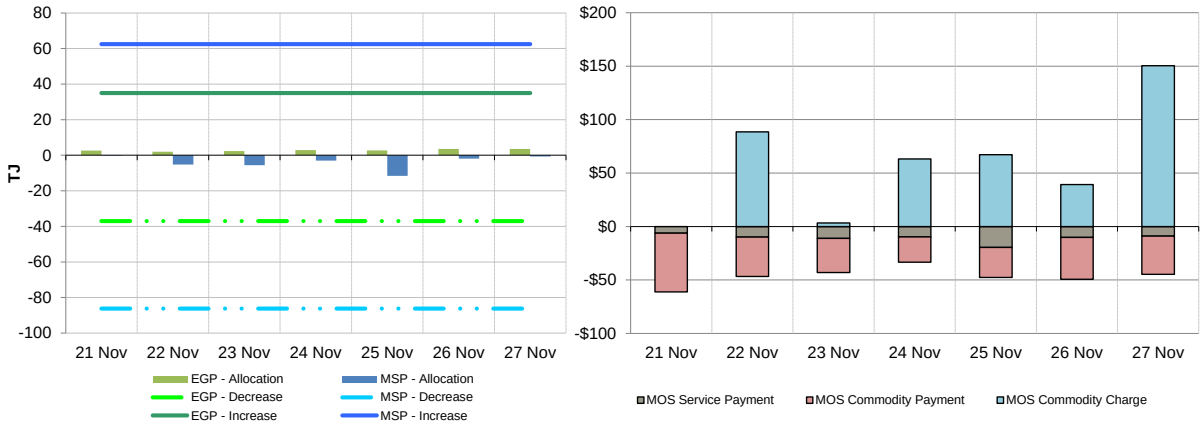


Figure 2.4: SYD MOS allocations (TJ), service payments and commodity payments/charges ($000)[22]



[22] 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 ($/GJ)	13.30	13.37	13.01	12.78	12.78	12.46	12.50
Ex ante quantity (TJ)	44	51	51	51	55	54	43
Ex post price ($/GJ)	13.69	13.31	12.80	12.64	12.80	12.20	12.24
Ex post quantity (TJ)	45	49	50	49	57	51	42

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

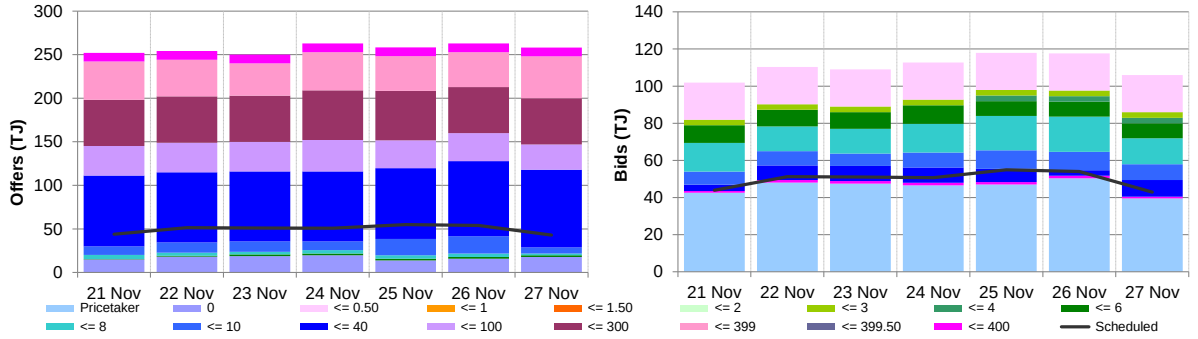


Figure 3.3: ADL net scheduled and allocated gas hub supply (excluding MOS)

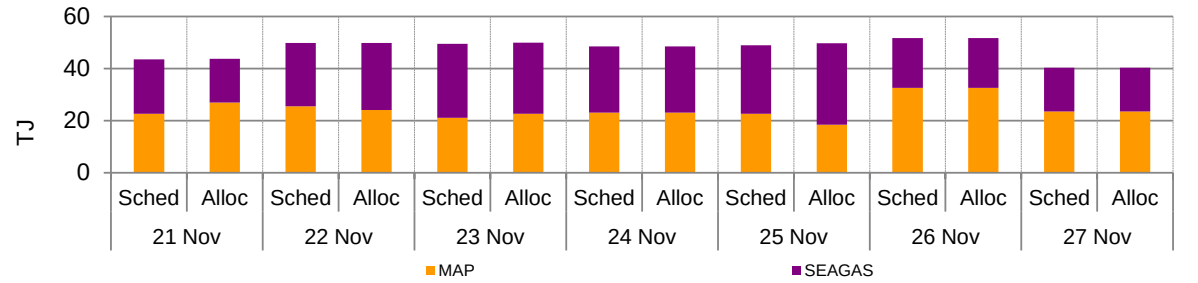
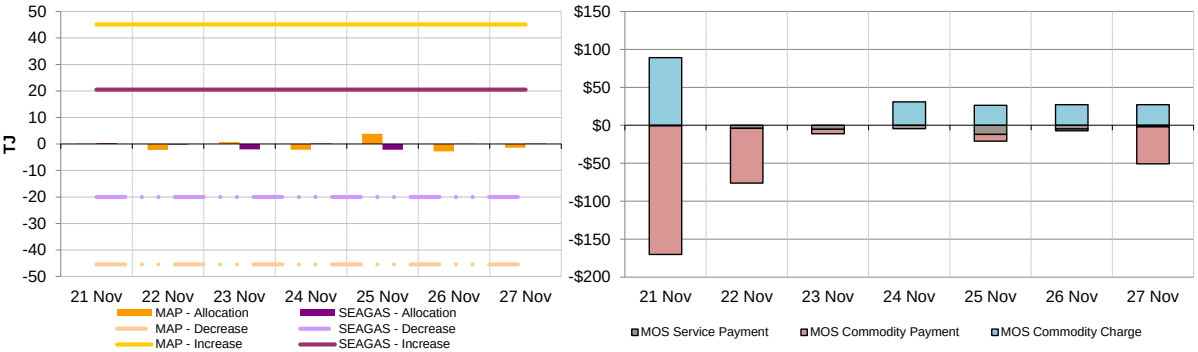


Figure 3.4: ADL MOS allocations (TJ), service payments and commodity payments/charges ($000)



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 ($/GJ)	10.00	13.20	13.80	11.90	12.01	13.10	12.20
Ex ante quantity (TJ)	51	81	92	100	103	105	74
Ex post price ($/GJ)	10.74	12.49	13.74	11.90	12.01	12.01	12.22
Ex post quantity (TJ)	54	74	90	97	103	96	76

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

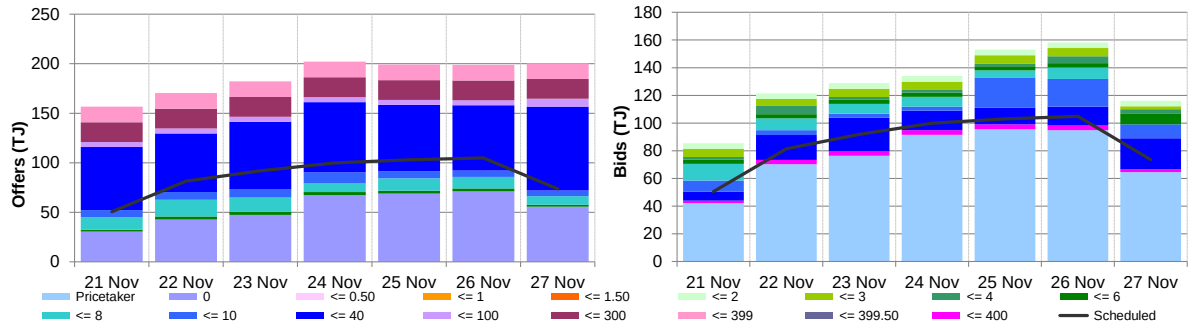


Figure 4.3: BRI net scheduled and allocated gas hub supply (excluding MOS)

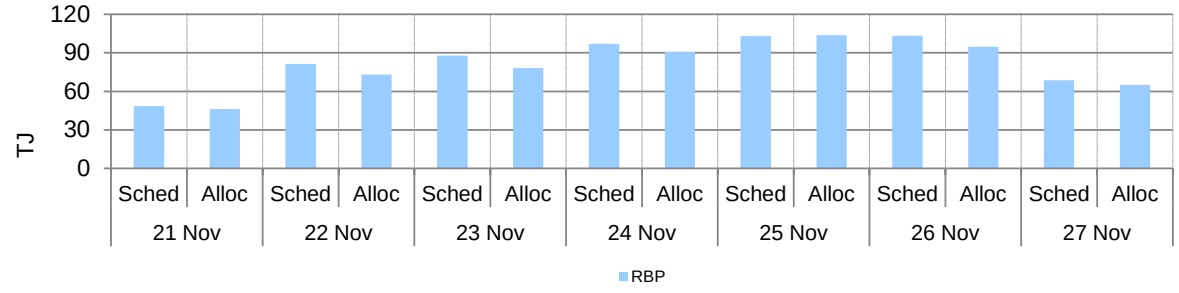
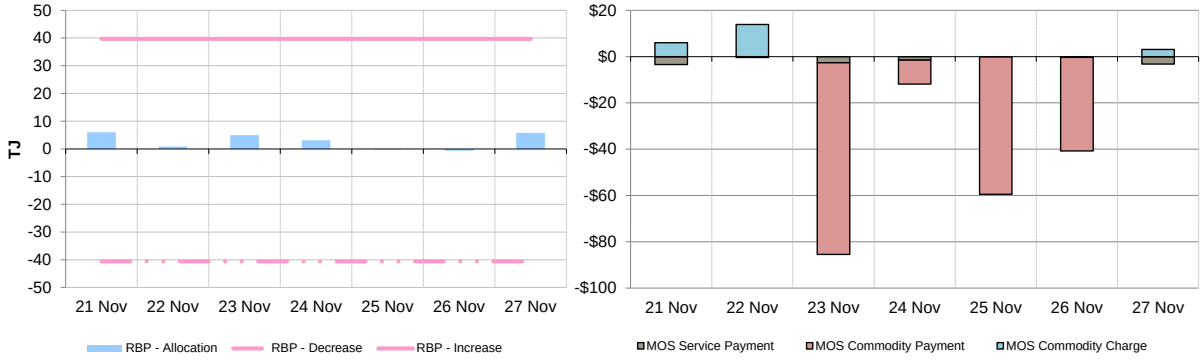


Figure 4.4: BRI MOS allocations (TJ), service payments and commodity payments/charges ($000)



5. National Gas Bulletin Board

Figure 5.1 shows average daily actual flows for the current week[23] from the Bulletin Board (changes from the previous week's average are shown in brackets). Average daily prices[24] 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)[25]

Totals	Current Week	Change (TJ)
Domestic gas flows	1239	(-146)
Export gas flows	4029	(-2)
Gas production	5171	(-117)
GPG gas usage	169	(-8)
Pipelines		
Queensland		
Gladstone		
APLNG	1566	(+101)
GLNG	1100	(-31)
QGP	138	(+3)
WGP	1363	(-72)
Mt Isa		
CGP	88	(+5)
Brisbane		
RBP	85	(-5)
South West		
SWQP	68	(+4)
Wallumbilla		
BWP	73	(-20)
CRWP	100	(+12)
DDP	61	(-19)
QGP (WAL)	26	(-1)
RBP (WAL)	-1	(+2)
SWQP (WAL)	-123	(-65)
New South Wales		
MSP	60	(-1)
EGP	225	(-4)
Victoria		
LMP	500	(+25)
SWP	-26	(-156)
South Australia		
MAP	79	(-19)
SEAGas	56	(0)
Tasmania		
TGP	33	(+7)

Storage (held volume)		
Moomba LDB	13693	(-56)
Iona UGS	10172	(-70)
LNG Storage Dandenong	233	(-2)
Silver Springs	17385	(-68)
Roma UGS	31352	(-281)

23 **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.

24 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.

25 Net flows are shown for Bulletin Board facilities, as outlined in the user guide.

6. Gas Supply Hub

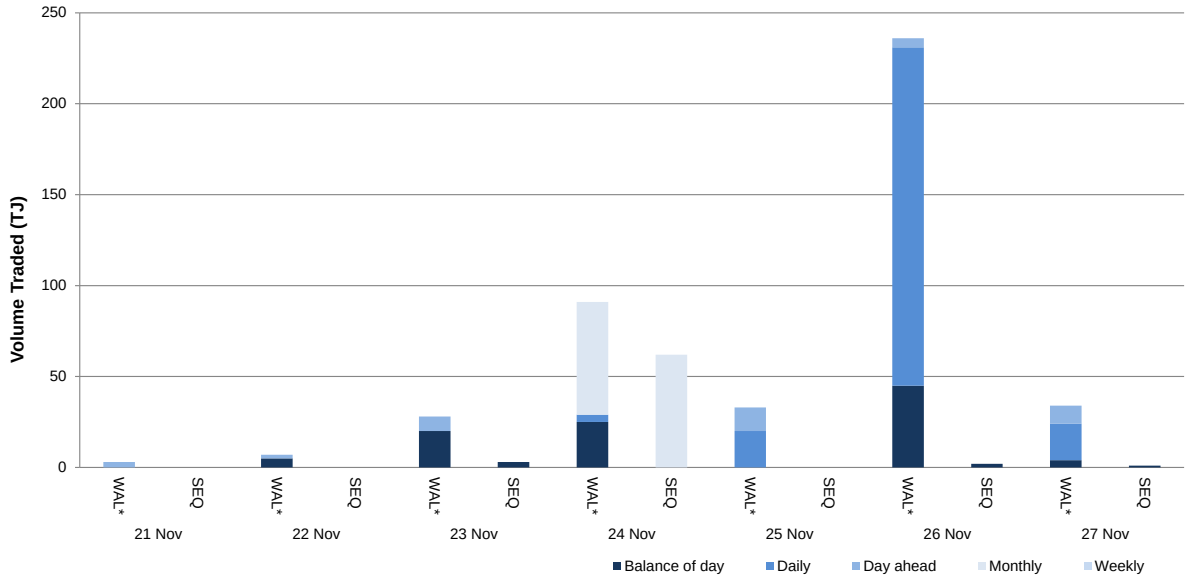
The gas supply hub was established at Wallumbilla in March 2014 to facilitate the voluntary trading of gas between participants, with products listed for sale and purchase at delivery points on three major connecting pipelines. There are separate products for each trading location and delivery period (daily, day-ahead, balance-of-day, weekly and monthly products).[26]

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 37 trades for 500 TJ of gas at a volume weighted price of $12.68/GJ. These consisted of 32 trades at WAL (432 TJ at $13.08/GJ) and 5 trades at SEQ (68 TJ at $10.18/GJ).

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.[27]

Figure 6.1: GSH traded quantities



26 Additional information on trading locations and available products is detailed in the user guide.

27 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.

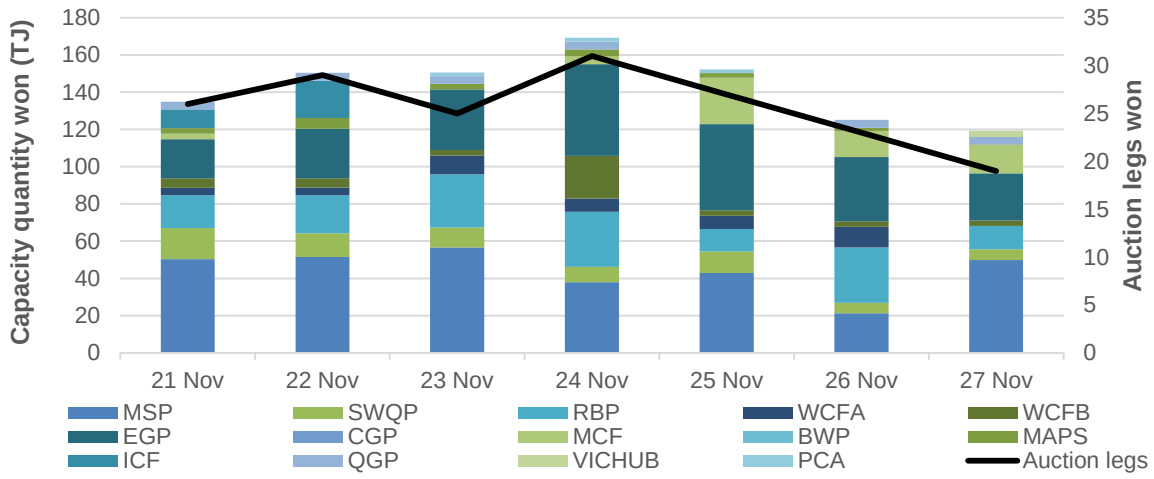
Participants may bid in to the DAA in order to procure the following services:

- 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, 14 participants took part in the DAA, winning 1001 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.[28]

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



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[28] Additional information is available in the user guide to the AER gas weekly report.