ENERGYQUEST

FACT SHEET

Spot and contract markets and prices

Key points

- The east coast gas market can broadly be split into the short-term spot market and the longer-term contract market.
- Larger gas users (eg manufacturers, industrials) generally purchase wholesale gas direct from gas producers under longer-term contracts that specify price and delivery terms. Around 90% of gas in the east coast market is sold under contract.
- Smaller gas users (eg households, small businesses) typically purchase gas from retailers, and retailers in turn either purchase gas from producers under contract or are producers in their own right. The wholesale price is a fraction of the retail price of gas which includes a retail mark up and other costs.
- There are also short-term spot markets for gas that account for around 10% of the east coast gas market. Spot prices can vary significantly over short periods and are correlated with electricity prices. For example, the significant spot gas price rise in the winter of 2022 was due to high electricity prices.
- Spot and contract prices have fallen substantially in the past 12 months.
- Pipeline transportation costs are in addition to spot and contract prices and can represent a significant percentage of the total cost of gas for users.
- We suggest this fact sheet be read in conjunction with the accompanying ***Key factors that influence east coast gas prices*** fact sheet.

Summary

The east coast gas market can broadly be split into the short-term spot market and longer-term contract market.

Around 90% of gas in the east coast market is sold under longer-term contracts.[1] ACCC data indicates that contract price offers have fallen by around 45% in the most recent six-month reporting period.[2]

On the east coast, spot markets generally refer to the two gas supply hubs - one in Victoria and the other at Wallumbilla, Queensland - and three smaller short term trading markets at Brisbane, Sydney and Adelaide. Gas spot market prices are correlated with electricity prices as gas tends to provide the marginal source of supply during periods of high demand for electricity. This means that high demand for and/or low supply of electricity drives up the spot gas price.

The wholesale gas price is a fraction of the retail price of gas. The retail price consists of the wholesale price plus pipeline tariffs, network, storage, and other costs, and a retailer margin.

Pipeline transportation costs generally increase with distance. This means that gas users in southern states that purchase gas from Queensland will incur increased transportation costs relative to Queensland gas users purchasing the same gas.

Spot market and price

East coast spot gas prices vary with changes in daily demand, which can be significant particularly in southern states due to variable weather as gas is used for heating and electricity is used for heating and cooling. Since at least January 2018, there has been a correlation between state electricity and spot gas prices. This correlation is strongest in NSW (at 93%) and weakest in Victoria (at 76%).

[1] Department of Climate Change, Energy, the Environment and Water, 'Fact sheet: Design of the Gas Market Code', July 2023

[2] ACCC, 'Gas Inquiry 2017-2030 Interim update on east coast gas market, December 2023', 15 December 2023

The relationship between gas and electricity prices was evident in the winter of 2022 when low output from renewables and coal fired power generation led to a large increase in the spot gas price due to very high demand for gas for power generation. As the electricity shortfall eased, spot gas prices started to fall from peaks of around $40/GJ in 2022 to around $10.31/GJ for the gas supply hubs in the December 2023 quarter.

Electricity price futures therefore provide an indication of a possible gas price floor and a table showing price futures is provided in the Attachment. Charts showing how east coast electricity and gas prices generally move in tandem are also included in the Attachment.

Contract market and price

Contract prices are commercially sensitive and typically not reported for individual contracts, however the ACCC publishes market wide data that indicates price offers have fallen substantially in the past six months. The ACCC reports that the volume-weighted average price of producer offers made between February and August 2023 for 2024 supply was $14.60/GJ which was a 45% decrease from the previous six months.[3]

Gas contract terms can vary significantly. The contract price will depend on a range of factors such as the cost and availability of alternative energy sources, the length of the contract, and whether the buyer seeks flexible deliveries or is willing to 'take or pay' (i.e. pay for a certain volume whether or not it is taken).

Retailer margins

Gas retailers, like all retailers, add a margin to the cost of their sales.

As an example, AGL, one of the major retailers, indicates in its 2023 annual report that wholesale gas was purchased at an average $8.00/GJ, additional transport and other costs were $7.90/GJ, and the retail margin was $5.90/GJ which sums to a total average retail price of $20.80/GJ.[4]

Pipeline tariffs

In general, higher pipeline tariffs are charged for longer distances. Tariffs can account for a significant percentage of the total cost of gas for users. For example, at current rates it costs an additional $2.77/GJ to move gas from Queensland to Melbourne.

Tariffs may also be set in accordance with pipeline specific factors, for example foundational customers may receive lower rates and pipelines close to capacity may charge higher rates. Further detail on pipeline tariff rates is included in the Attachment.

[3] Ibid

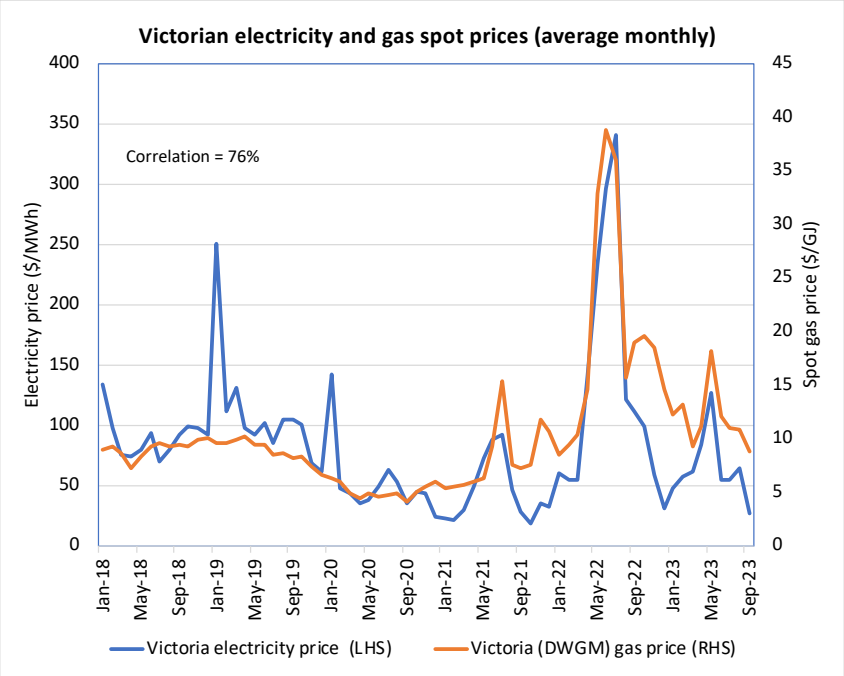
[4] AGL, '2023 Annual Report', 10 August 2023

Attachment - supporting information

Spot market and price

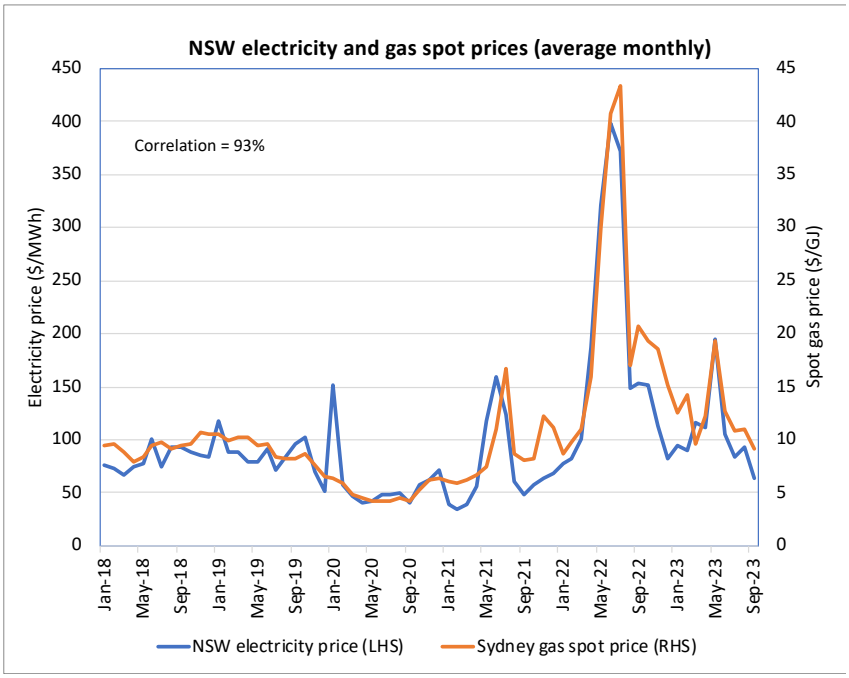
Figure 1 shows the relationship between the Victorian electricity and gas spot prices, and Figure 2 shows the same for NSW. As can be seen in these charts, the significant gas price rise in the winter of 2022 was strongly correlated with rising electricity prices. This happened when relatively low supply from renewables and coal fired power generation over this period led to significantly increased demand for gas for power generation.

Figure 1 Victorian electricity and gas spot prices



Source: AEMO, EnergyQuest analysis

Figure 2 NSW electricity and gas spot prices



Source: AEMO, EnergyQuest analysis

Electricity prices

There is a correlation between electricity prices and gas spot prices in all east coast markets. Given the impact of electricity prices on gas, the NEM futures market gives an indication of the possible future gas price floor, assuming that the marginal electricity generator is gas-fired power generation. Electricity futures by state are shown in Table 1 below.

Table 1 Electricity futures prices by state

Period	NSW		Victoria		Queensland		South Australia	
	$/MWh	$/GJ	$/MWh	$/GJ	$/MWh	$/GJ	$/MWh	$/GJ
2023 Q4	121	11.02	67	6.16	121	11.07	140	12.81
2024 Q1	151	13.77	90	8.23	169	15.44	191	17.49
2024 Q2	149	13.64	100	9.15	121	11.10	234	21.39
2024 Q3	146	13.38	97	8.88	115	10.53	223	20.44
2024 Q4	105	9.57	57	5.17	91	8.29	125	11.46
2025 Q1	126	11.54	72	6.59	118	10.82	182	16.65
2025 Q2	128	11.75	89	8.13	94	8.59	174	15.89
2025 Q3	135	12.36	91	8.33	93	8.54	158	14.46
2025 Q4	106	9.70	55	5.02	82	7.51	96	8.76
2026 Q1	132	12.06	75	6.86	109	10.01	146	13.36
2026 Q2	137	12.54	89	8.12	87	7.94	145	13.27
2026 Q3	139	12.67	91	8.30	90	8.26	149	13.60
2026 Q4	118	10.82	62	5.63	86	7.86	105	9.60
2027 Q1	120	10.98	71	6.52	94	8.57	134	12.23

Note: Assumes a heating value of 10.93 GJ/MWh[5]
Source: AEMO 2023 IASR Assumptions Workbook

Pipeline tariffs

Table 1 shows indicative tariffs for east coast gas pipelines.

Table 2 Indicative gas pipeline tariffs, October 2023

Code	Pipeline	Owner	$/GJ (excl GST)	Details
	East coast integrated pipelines			
AGP	Amadeus	APA	$0.36	Reference tariff for firm bidirectional service
BWP	Berwyndale to Wallumbilla	APA	$0.28	Current firm contract tariff, foundation shipper arrangements
CGP	Carpentaria	APA	$1.42	Reference service Ballera to delivery points north on CGP, incl compression
CGP	Carpentaria - NGP	APA	$0.18	North from the NGP receipt point
CGP	Carpentaria - NGP	APA	$0.61	South from NGP receipt point to Phospate Hill offttake
CGP	Carpentaria - NGP	APA	$1.24	South from Phospate Hill offttake to Ballera
CRP	Central Ranges (Dubbo to Tamworth)	APA	$4.23	Contracts transportation service
CWP	Central West pipeline (Marsden to Dubbo)	APA	$4.22	Reference service
CWP	Central West pipeline (Marsden to CRP)	APA	$2.98	Throughput delivery to CRP
DDP	Darling Downs - firm north/south	Jemena	$0.15	$/GJ/day, firm Southern service, firm Northern service
DDP	Darling Downs - firm east/west	Jemena	$0.25	$/GJ/day, firm Western service, firm Eastern service
EGP	Longford- Sydney - northward flow	Jemena	$1.49	Current tariff, firm forward haulage service, Area 3
EGP	Sydney - Longford - southward flow	Jemena	$0.20	Firm backhaul haulage service, Area 3 to Area 1
MAP	Moomba - Adelaide	Epic Energy	$0.83	Published tariff inflated by CPI
MSP	Moomba - Sydney/Culcairn	APA	$1.30	Published tariff inflates by CPI
NGP	Northern (Tennant Creek to Mt Isa)	Jemena	$2.60	Firm forward haulage, including nitrogen removal[1]
QGP	Queensland Gas Pipeline - firm	Jemena	$1.16	Firm gas transportation service GJ/d
QGP	Queensland Gas Pipeline - backhaul	Jemena	$0.67	As available backhaul service GJ/d
RBP	Roma - Brisbane	APA	$0.64	Reference tariff for firm bidirectional service
PCA	SEA Gas - westward	APA/REST	$0.95	Firm haulage in East-West direction $/GJ/day; min 10 Tj/d for 5 years
PCA	SEA Gas - eastward	APA/REST	$0.56	As available swap in West-East direction $/GJ
SESA	South East South Australia	APA	$0.20	Tariff based on current firm contract tariff which is the foundation shipper for the pipeline
SWQP	South West Qld - Eastward	APA	$1.66	Including compression
SWQP	South West Qld - Westward	APA	$1.54	Including compression
	TGP transfer service	Jemena	$0.09	Compression service to TGP
TGP	Tasmanian Gas Pipeline	Palisade	$2.70	ACCC standing price 1 July 2018, adjusted by CPI
VTS	Victorian Transmission System:			
VTS	Culcairn to Metro Melbourne	APA	$0.47	
VTS	Port Campbell to Metro Melbourne	APA	$0.49	Effective delivered transmission charges for customers consuming more than 10 TJ/year or 10 GJ/hour. 80% load factor, D tariff.
VTS	Port Campbell to West Gippsland	APA	$0.52	
VTS	Port Campbell to Interconnect	APA	$0.96	
VTS	Longford to Western	APA	$1.12	
WGP	Wallumbilla - Gladstone	APA	$1.31	Current firm contract tariff, foundation shipper arrangements

Note: APA offers a multi-asset tariff to move gas from Wallumbilla to Culcairn at $2.30/GJ

Source: APA, Jemena, Epic Energy, ERAWA, EnergyQuest

[5]AEMO, '2023 Forecasting Assumptions Workbook' for a new build open cycle gas turbine', accessed 8 October 2023