





MARKET SUMMARY REPORT

Electricity and Gas - October 2023

Shell Energy Retail Pty Ltd ABN 87 126 175 460

Introduction and Further Reading

This report provides information on wholesale price trends for all regions within the National Electricity Market (NEM), the Western Australia Energy Market (WEM), the East Coast Wholesale Gas Market and environmental scheme certificates. Wholesale gas price trends reference the ICAP Gas Forward Price Curve Data, published under permission by ICAP Energy.

Please note that all electricity prices are presented as a \$ per megawatt-hour (MWh) price and all certificate prices as a \$ per certificate price.

You can obtain the latest pricing information for the spot and contract markets on a daily basis from the "Market" section of the Shell Energy Customer Portal.

Tasmanian contract prices are the non-regulated prices published by Hydro Tasmania on a weekly basis. All NEM spot prices are published by the Australian Energy Market Operator (AEMO). NEM contract prices are sourced from the ASX.

Further information can be found at the locations noted below:

Tasmanian energy market - a comprehensive weekly report is published by the Office of the Tasmanian Energy Regulator which can be found here.

Western Australia Energy Market - AEMO publishes a detailed market report which can be found here.

NEM Spot Market - AEMO publish a range of detailed information which can be found here.

Environmental Certificates - information about environmental certificates can be found here.

Large-scale Generation Certificates (LGCs) – information about LGCs can be found here. You can also refer to our Energy Education video on LGCs.

Small-scale Technology Certificates (STCs) – information about the STC program can be found here. You can also refer to our Energy Education video on STCs.

Victorian Energy Efficiency Certificates (VEECs) – information about the VEEC program can be found here. You can also refer to our Energy Education video on VEECs.

Energy Saving Certificates (ESCs) – information about the ESC program can be found here. You can also refer to our Energy Education video on ESCs.

Contract Market

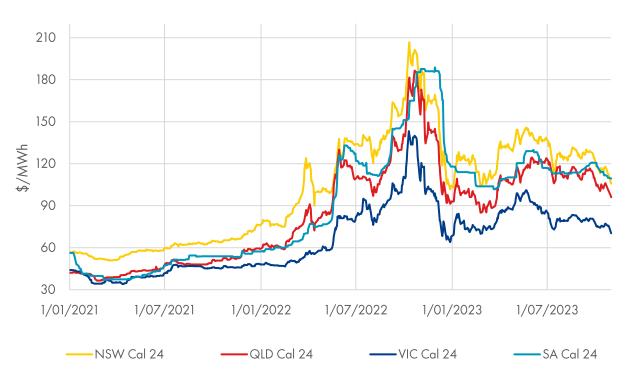
Calendar Year 2024 (CY24)

Calendar Year (2024) swap contracts in October saw continued declines across all states, this time including South Australia (SA). This was primarily driven by persistently low spot outcomes. In the lead up to the start of each quarter, market participants were expecting Q1, Q2 and Q3 to have high average spot outcomes, similar to the levels seen in 2022. However, as commodity prices came off, year-on-year demand decreased by at least 5% in each state. Renewable energy output (particularly from rooftop solar) grew substantially due to increased year-on-year capacity and very favourable solar conditions (in contrast to the higher, La Nina-driven, cloud coverage). As a result, spot prices in each quarter this year were much lower than expected. Spot outcomes in Q4 have followed this pattern, with solar periods in most states consistently settling at negative prices and thermal plant outages having minimally sustained impacts on prices, which has seen market participants continue to lower their price expectations for the coming year.

October 2023

State	Previous Close	Period Low	Period High	Closing Price
QLD	110.04	96.00	106.11	96.00
NSW	123.90	105.81	119.40	105.81
VIC	78.82	70.34	77.17	70.34
SA	120.61	109.43	120.61	109.43
TAS	73.56	68.73	71.46	71.46

CY24 Flat



Source: ASX data

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Contract Market

Calendar Year 2025 (CY25)

Calendar Year 2025 (CY25) swap contracts saw dynamics similar to those in CY24 play out. These contracts have not moved as much as CY24 in recent history due to lower market liquidity and retail demand.

October 2023

State	Previous Close	Period Low	Period High	Closing Price
QLD	101.69	93.67	99.01	93.67
NSW	125.40	114.39	122.45	114.39
VIC	73.20	68.72	72.18	68.72
SA	114.43	111.04	114.67	111.14
TAS	70.44	67.53	68.78	68.78

CY25 Flat



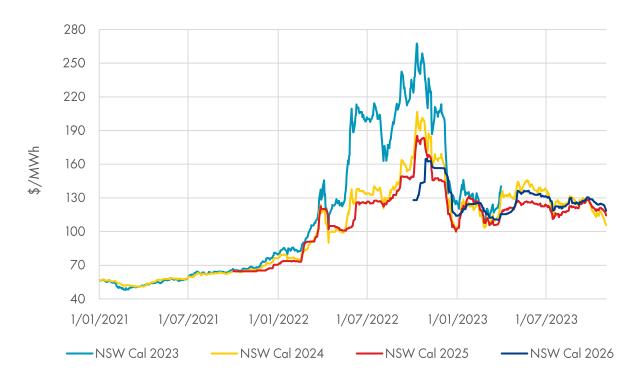
Source: ASX data

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Contract Market - QLD Calendar Years Flat



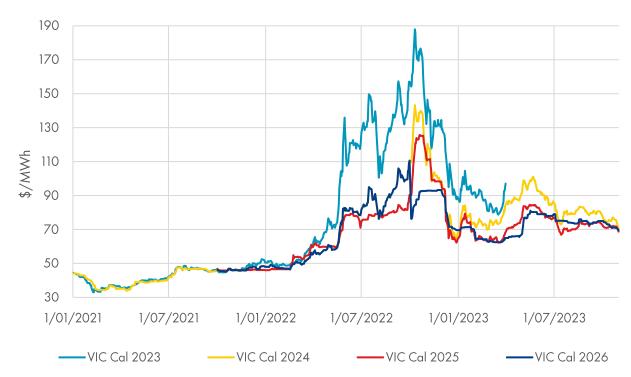
Contract Market - NSW Calendar Years Flat



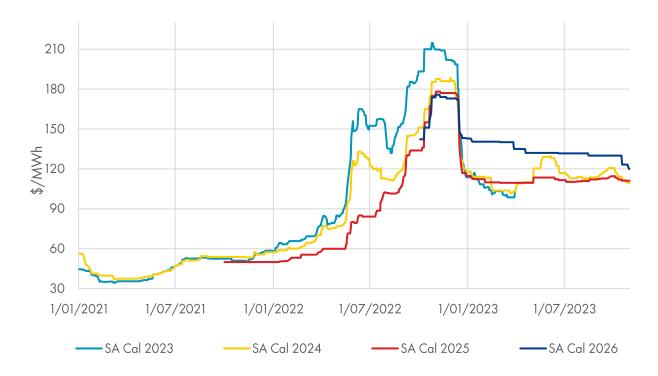
Source: ASX data

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Contract Market - VIC Calendar Years Flat



Contract Market - SA Calendar Years Flat



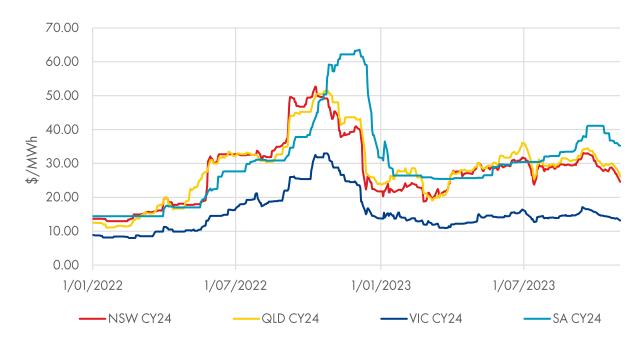
Source: ASX data

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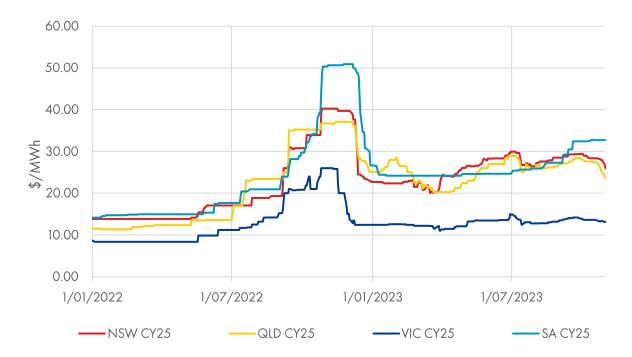
Cap Contract Market

Cap contracts across all states continued to decline month-on-month, in line with bearish spot outcomes. There have been minimal cap payouts seen this quarter despite periods of tight supply-demand conditions due to low renewable output, thermal outages, or temperature driven demand.

Calendar Year 2024 (CY24)



Calendar Year 2025 (CY25)



Source: ASX data

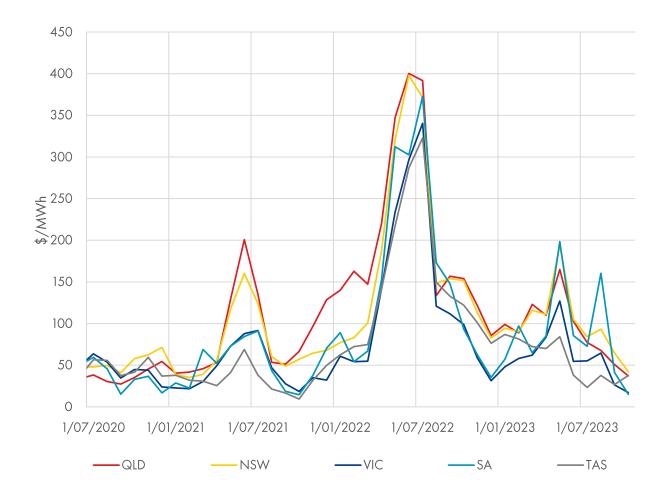
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Spot Prices: National Electricity Market

October has seen both the minimum and maximum demand records broken. For example, Queensland recorded a new October monthly demand record on 23 October, reaching 8,359 MW, which is 115 MW up on the previous record. On the other hand, these high demand events were overshadowed by the persistently low grid demand due to high rooftop PV and lower priced generation from higher large-scale renewable output. Record high rooftop PV and very high, large-scale renewable output saw NEM demand at a record low of 11,009 MW at 1:30pm on Sunday 29 October 2023. Interestingly, very low demand during solar hours led to curtailment of some large-scale renewable plants, as there simply wasn't enough demand to consume the abundance of power supply.

October 2023

State	Average Spot Price	Max 5 Min Spot Price	5 Min Intervals at \$1,000 or Above	5 Min Intervals at \$0 or Below
QLD	37.05	14,928.01	3	2,942
NSW	42.08	2,054.00	1	1,705
VIC	17.19	299.50	0	2,727
SA	15.12	1,822.27	1	3,211
TAS	37.66	450.42	0	402



Source: NEM Spot Market - AEMO

Western Australia Energy Market

WEM Short-term Electricity Market (STEM) and Real-time Energy Market

October was the first month of the new 5-minute dispatch and 30-minute trading settlement which replaced the Balancing Market mechanism. Day-ahead bidding in the Short-term Electricity Market (STEM) remains largely unchanged under these reforms, whereby energy consumers and suppliers settle their anticipated day-ahead energy consumption/generation using STEM pricing.

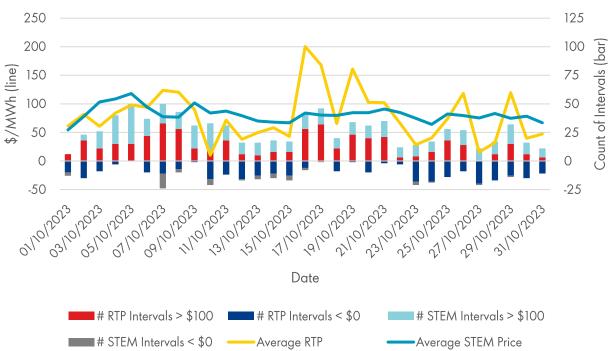
The WEM's new dispatch and settlement regime is similar to the NEM's 30-minute settlement region (30MS) that was retired on 1 October 2021. This means that generators bid into the market on a five-minute basis which is then used by AEMO to determine the five-minute dispatch price, known as the Market Clearing Price (MCP). A half-hourly Reference Trading Price (RTP) is calculated by averaging six MCP intervals. RTP is then used by AEMO to financially settle users (large retailers and industrial consumers) and suppliers (generators) against deviations to their net contract position.

The STEM average flat price increased by 28% to \$81.80, and the average peak price increased by 4% to \$86.25. The average flat RTP was \$79.48 and average peak RTP was \$118.16.

The STEM experienced 404 intervals above \$100 (compared to six last month), and 45 intervals below \$0 (compared to three last month). The real-time market experienced 421 intervals above \$100, and 319 intervals below \$0.

The switch over to the new system led to volatile price outcomes as participants learned how to navigate the new regime and more generators running merchant this period. Accordingly, price spikes occurred at more random times of day compared to the pre-reform market, including mid-morning and early afternoon. Price pressures also came from a few days in the month where temperatures were high or wind generation dropped off drastically, causing prices to cap. Further, approximately one gigawatt worth of capacity (most of which was thermal generation) was offline due to planned and unplanned outages.





Source: Western Australia Energy Market - AEMO

Emission Schemes

Large-scale generation certificate (LGC) spot contracts closed at \$49.00. This was \$2.75 lower than last month's close of \$51.75. The LGC compliance year (CY) saw the near-term and longer-term diverge, with near-terms decreasing and longer-terms increasing against their September closes.

- CY23 closed \$3.00 lower at \$49.75;
- CY24 closed \$3.25 lower at \$49.75;
- CY25 closed \$0.05 higher at \$46.25;
- CY26 closed \$1.50 lower at \$38.00;
- CY27 closed \$4.00 higher at \$32.50;
- CY28 closed \$5.50 higher at \$27.50; and
- CY29 closed \$5.00 higher at \$21.00.

Victorian Energy Efficiency Certificate (VEEC) spot contracts closed at \$85.80, which was \$0.30 higher than last month's close of \$85.50. VEEC quarterly vintages closed between \$85.90 and \$86.25. Retail buying remained constant while certificate creation continued to lag, averaging 72,000 per week which was under the 2023 weekly average of 105,000 and the 2022 weekly average of 160,000.

Energy Savings Certificates (ESC) spot contracts closed at \$26.00, \$1.00 lower than last month's close of \$27.00. ESC quarterly vintages closed between \$26.25 and \$27.50. High certificate creation continued with retail demand somewhat retreating. Creation this month averaged 142,000 certificates per week, compared to the 2023 weekly average of 160,000 and the 2022 weekly average of 80,000 per week.

Small-scale Technology Certificates (STC) spot contracts closed at \$39.85, \$0.05 higher than last month's close of \$39.80. STC quarterly vintages closed between \$39.75 and \$39.85. The Clearing House remained in deficit at approximately one million certificates by the end of the month after the Q3 compliance surrender mid-month. The deficit in the Clearing House was not as large as previous surrender months this year. The Q4 2023 compliance surrender in mid-Feb 2024 covers the remaining 15% of yearly STC compliance obligations of liable entities.

Gas Forward Market

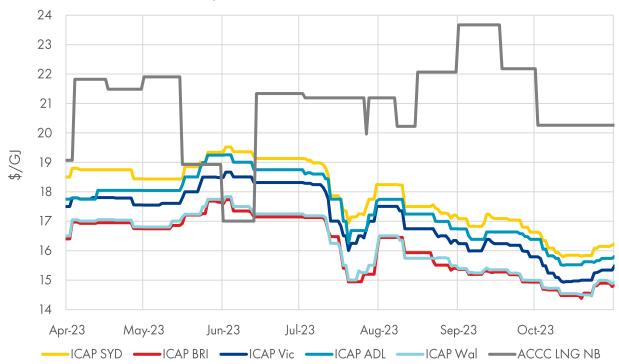
Calendar Year 2024 (CY24)

All domestic forward contracts for Calendar Year 2024 (CY24) decreased for the fourth consecutive month. The Victoria forward price fell to below \$15.00/GJ during the month, marking the lowest level this year, before retracing to close the month at \$15.34/GJ. The ACCC LNG netback (NB) forward price remained above \$20.00/GJ, representing a widening spread between international spot LNG prices and the Victorian domestic market of more than \$4/GJ. Calendar Year 2024 forward market liquidity remains low following the commencement of the Mandatory Gas Code of Conduct on 11 July and the end of the transitional period in early September.

October 2023, \$/GJ

Market	Period Low	Period High	Opening Price	Closing Price	Monthly Change	Monthly Change (%)
ICAP Brisbane	\$14.38	\$14.94	\$14.94	\$14.78	-\$0.15	-1.0%
ICAP Sydney	\$15.80	\$16.63	\$16.63	\$16.18	-\$0.45	-2.7%
ICAP Adelaide	\$15.50	\$16.39	\$16.39	\$15.74	-\$0.65	-3.9%
ICAP Victoria	\$14.93	\$15.79	\$15.79	\$15.34	-\$0.45	-2.8%
ICAP Wallumbilla	\$14.46	\$15.00	\$14.94	\$14.88	-\$0.05	-0.4%
accc lng nb	\$20.27	\$22.18	\$22.18	\$20.27	-\$1.92	-8.7%

CY24 Flat Calendar Year | 1 April 2023 to date



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Source: ICAP Energy Gas Forward Price Curve Data, ACCC historical and forward short-term LNG netback price (https://www.accc.gov.au/regulated-infrastructure/energy/gas-inquiry-2017-25/lng-netback-price-series)

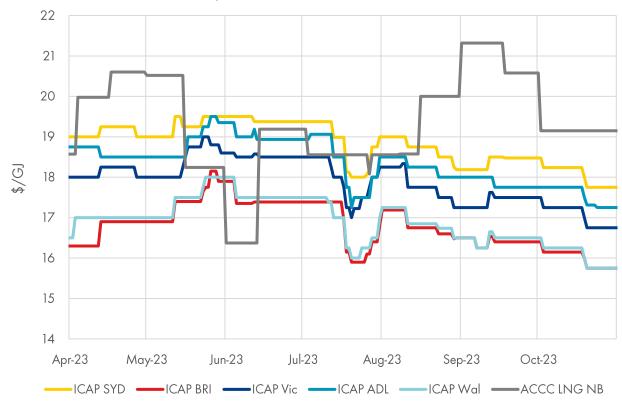
Calendar Year 2025 (CY25)

Domestic forward contracts for Calendar Year 2025 (CY25) also fell over the month, the Victoria forward price closing at \$16.75. This represents a widening premium of the CY25 Victoria contract to the CY24 Victorian contract of greater than \$1.40/GJ. The ACCC LNG netback forward price declined, ending the month at \$19.19/GJ for the calendar year. For the CY25 contract, the spread between the Sydney and Wallumbilla markets is \$2.00/GJ, reflecting transportation costs for gas delivered to Sydney. The Calendar Year 2025 forward markets continue to be affected by reduced liquidity.

October 2023, \$/GJ

Market	Period Low	Period High	Opening Price	Closing Price	Monthly Change	Monthly Change (%)
ICAP Brisbane	\$15.75	\$16.40	\$16.40	\$15.75	-\$0.65	-4.0%
ICAP Sydney	\$17.75	\$18.48	\$18.48	\$17.75	-\$0.73	-3.9%
ICAP Adelaide	\$17.25	\$17.75	\$17.75	\$17.25	-\$0.50	-2.8%
ICAP Victoria	\$16.75	\$17.50	\$17.50	\$16.75	-\$0.75	-4.3%
ICAP Wallumbilla	\$15.75	\$16.50	\$16.50	\$15.75	-\$0.75	4.5%
ACCC LNG NB	\$19.15	\$20.58	\$20.58	\$19.15	-\$1.43	-6.9%

CY25 Flat Calendar Year | 1 April 2023 to date



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Source: ICAP Energy Gas Forward Price Curve Data, ACCC historical and forward short-term LNG netback price (https://www.accc.gov.au/regulated-infrastructure/energy/gas-inquiry-2017-25/lng-netback-price-series)

Spot Prices: East Coast Gas Market

Spot prices traded between \$4.42/GJ and \$12.18/GJ for the month of October. The Victorian Declared Wholesale Gas Market (DWGM) average 6am price more than doubled over the month, reaching a maximum of \$11.50/GJ, with a return to spot market volatility after a relatively benign end to winter. There was also an increased price differential observed between markets, caused by pipeline constraints and maintenance. On average, the Adelaide market traded \$1.07/GJ higher than the Victorian market.

October 2023, \$/GJ

Market	Average Spot Price	Minimum Spot Price	Maximum Spot Price
Brisbane STTM ¹	\$9.64	\$5.62	\$11.81
Sydney STTM	\$9.33	\$5.10	\$11.90
Adelaide STTM	\$9.92	\$6.52	\$12.18
Victorian DWGM ² 6am	\$8.85	\$4.42	\$11.50

¹STTM = Short Term Trading Market, ²DWGM = Declared Wholesale Gas Market. The STTM and DWGM markets represent the daily balancing markets administered by AEMO, which primarily serve to balance wholesale supply with end consumer demand.

Gas Spot Prices | 1 April 2023 to date



Source: AEMO MarketData



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You can view the Shell Cautionary Note on our website at:

https://www.shell.com/investors/disclaimer-and-cautionary-note.html

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