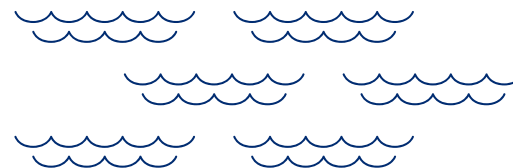
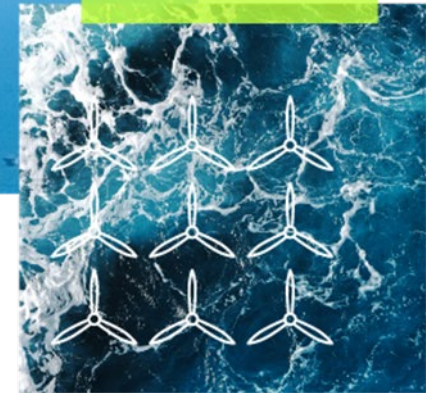


December 2024

Energy overview

Your monthly report featuring market updates
and weather review





Market Update: Power

Review

December's clean spark spread* out-turned at c.-£7/MWh, masking what was a highly volatile month, with individual days out-turning in a range from -£68/MWh to +£117/MWh. This was driven by weather, with periods of low wind in the UK contrasting with record wind output on 18 December, a record subsequently broken again on 21 December as unrestricted output exceeded 2.1GW.

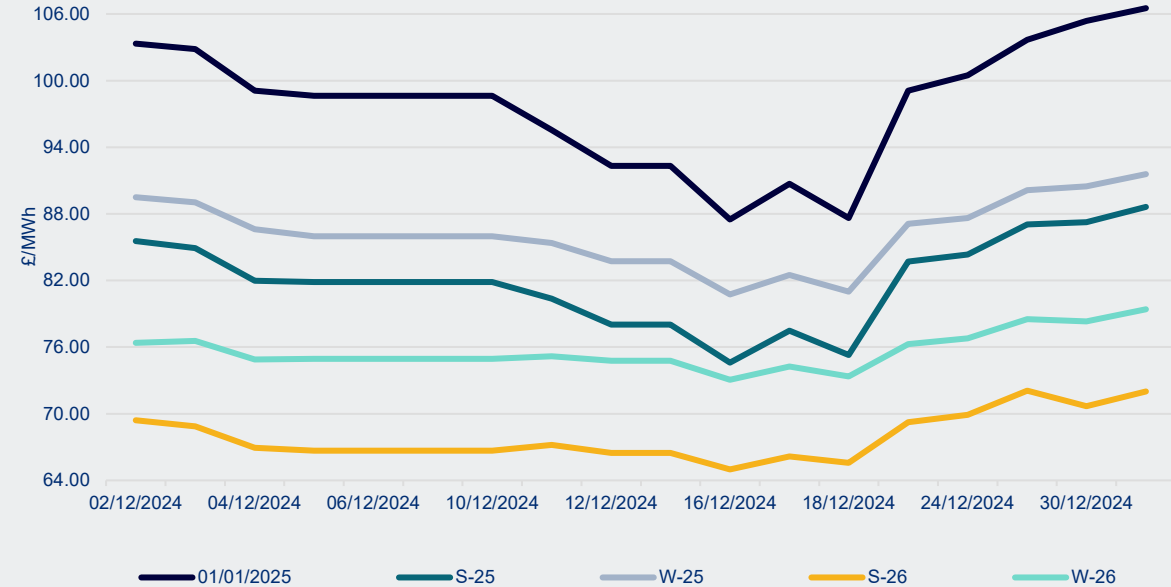
This highlights the ongoing shift of the UK's generation mix from fossil fuel sources to renewable. A study by energy think tank Ember revealed 2024 has seen the latter outstrip the former for the whole year for the first time, with solar, hydro and wind collectively producing 37% of the UK's power output compared to 35% from fossil fuels. Wind power accounted for 30% of the overall output.

Outlook

A return to a milder, unsettled weather pattern looks set to boost renewables output.

*Clean spark spread: the margin for gas-fired power plants accounting for the difference between power price, the cost generation and the necessary emissions allowances required to produce it.

Baseload Power



Power Bld (£/MWh)	1-Dec-24	31-Dec-24	Change	% Change	High	Low	Average
Jan-25	75.00	106.52	↑ 31.52	↑ 30%	106.52	87.49	97.83
Summer 25	85.55	88.63	↑ 3.07	↑ 3%	88.63	74.60	81.93
Winter 25	89.51	91.58	↑ 2.07	↑ 2%	91.58	80.75	86.28
Summer 26	69.40	71.99	↑ 2.59	↑ 4%	72.08	64.99	67.93
Winter 26	76.40	79.41	↑ 3.01	↑ 4%	79.41	73.06	75.69



Market Update: Gas

Review

Amid speculation of an 11th hour third-party-brokered deal, Ukraine refused to renew an agreement with Russia, expiring 31 December, to transit pipeline gas into Europe. This ended an agreement that had continued to see gas flow, even after Russia’s invasion of Ukraine in 2022. President Volodymyr Zelenskyy had briefly considered a proposal that would’ve seen payments to Russia withheld until the conflict ends, but this was rejected.

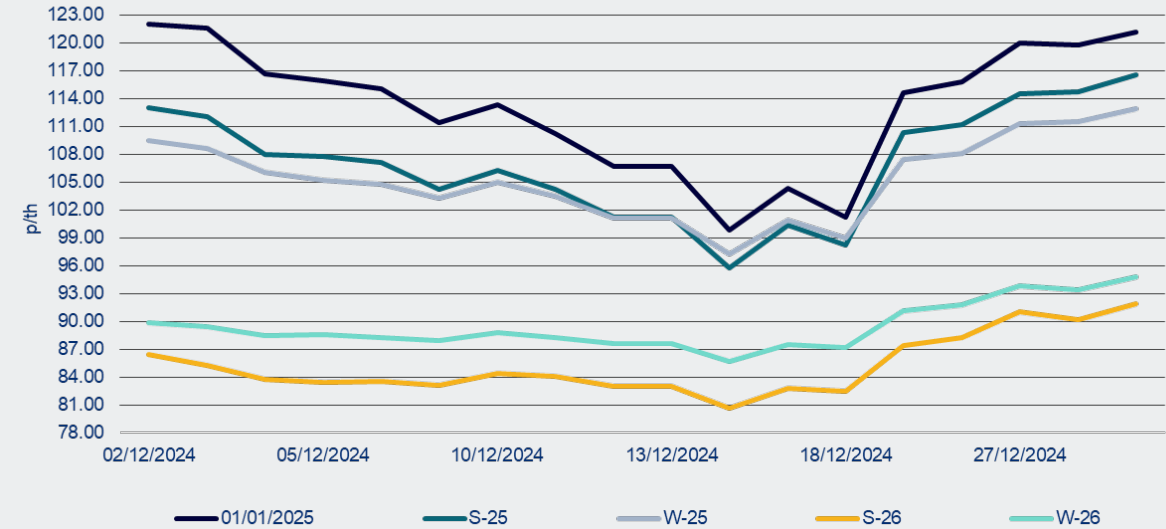
Despite the end to the agreement, Europe has not fully weaned itself off Russian gas, with liquified natural gas (LNG), primarily from the Yamal facility in Northern Siberia, still heading to Europe.

During December, in addition to the uncertainty around the renewal of the transit agreement, a decline in European storage levels contributed to a bullish and volatile picture. Cold weather, combined with low wind, increased gas heating demand; which in turn led to increased storage withdrawals. EU storage levels were 85% full at the start of the month, then by the turn of the year they had dropped to 72%. This equated to the fastest draw down in storage for seven years.

Outlook

An end to the recent cold spell across the UK and Northwest Europe looks set to see demand in gas for heating decrease.

NBP Gas



Gas NBP (p/th)	1-Dec-24	31-Dec-24	Change	% Change	High	Low	Average
Jan-25	121.96	121.17	↓ -0.79	↓ -1%	121.96	99.86	113.12
Summer 25	112.95	116.50	↑ 3.55	↑ 3%	116.50	95.70	107.02
Winter 25	109.50	112.90	↑ 3.40	↑ 3%	112.90	97.20	105.35
Summer 26	86.45	91.90	↑ 5.45	↑ 6%	91.90	80.70	85.29
Winter 26	89.90	94.80	↑ 4.90	↑ 5%	94.80	85.70	89.46



Market Update: Oil

Review

Crude oil prices ended the year down by around 4% year on year, compared to a 10% drop during 2023. This despite OPEC+ announcing that it would extend production cuts of 2.2m barrels/day into April 2025.

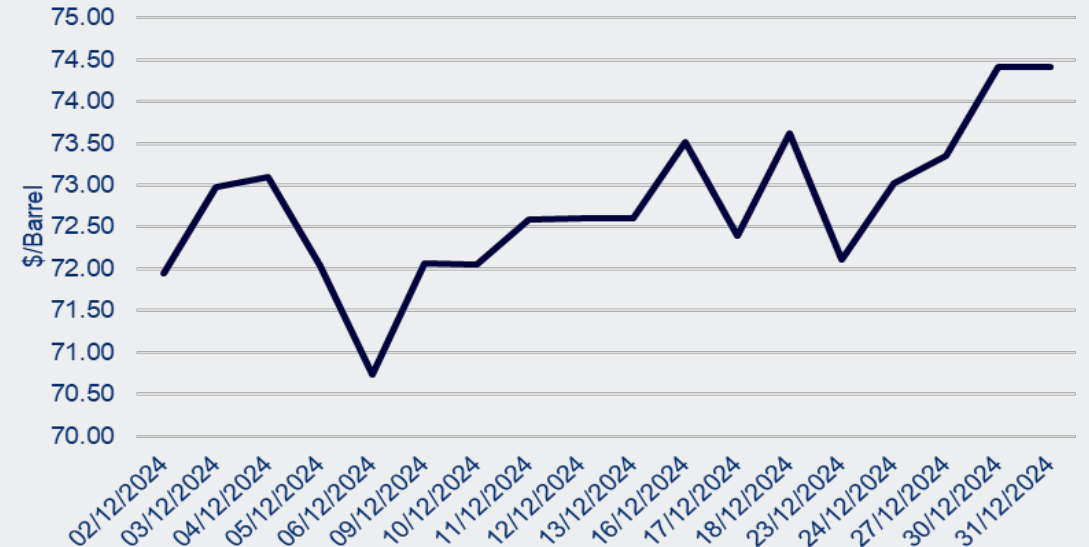
Despite the ongoing cuts, the International Energy Agency (IEA) anticipates that global oil supply will increase by 1.6m barrels/day, driven mainly by increasing non-OPEC+ volume, led by US shale, Brazilian and Guianan crude output.

With continued modest demand growth into 2025, particularly in China and India, the IEA estimates that there could be a market oversupply by Q2, with supply exceeding demand by as much as 950k barrels/day.

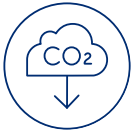
Outlook

Early trading days of 2025 have seen an end to the recent rally in crude prices. The market is anticipating potential policy changes from the incoming Trump administration.

Front Month Brent



Brent (\$/Barrel)	1-Dec-24	31-Dec-24	Change	% Change	High	Low	Average
Front Month	71.95	74.41	↑ 2.47	↑ 3%	74.41	70.74	72.75



Market Update: Carbon

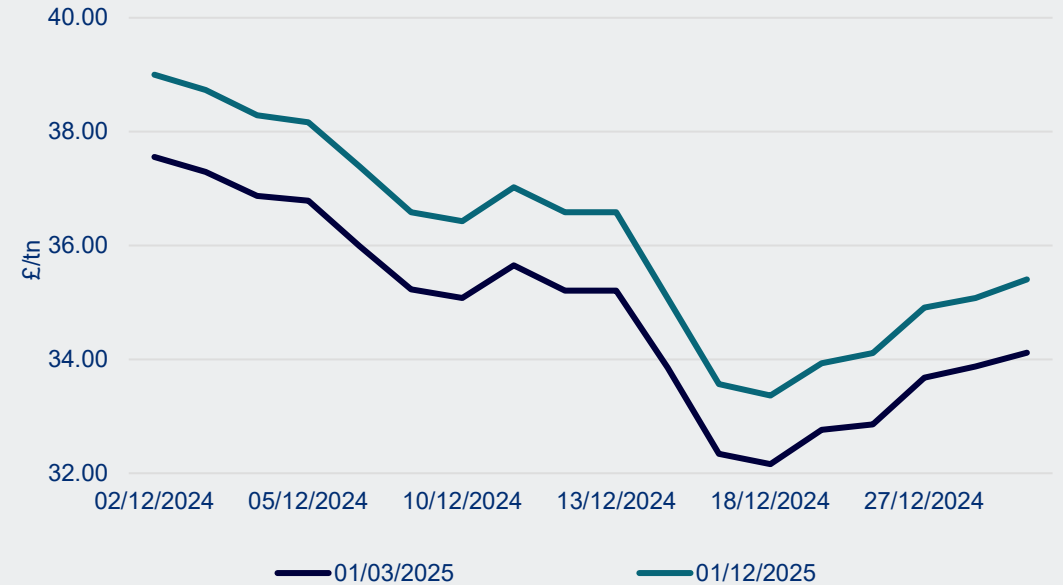
Review

The UK Government has published an update of two projected domestic emissions reductions comprising energy and greenhouse gasses covering 2023-32. The UK is on track to beat the targeted reductions for the period, and by 2050 emissions could fall by a quarter of current levels with the addition of further targeted emissions abatement policy.

Outlook

The market is awaiting results of a UK Government consultation covering the potential expansion of the UK Emissions Trading Scheme (ETS) to include the maritime sector, which has now closed. The proposed intention in expanding the scheme to cover non-pipeline transport of carbon dioxide (CO₂) is to encourage further investment in clean technologies.

Carbon UKA



Carbon (£/ton)	1-Dec-24	31-Dec-24	Change	% Change	High	Low	Average
Mar-25	37.55	34.12	-3.44	-10%	37.55	32.16	34.81
Dec-25	39.00	35.41	-3.59	-10%	39.00	33.37	36.12



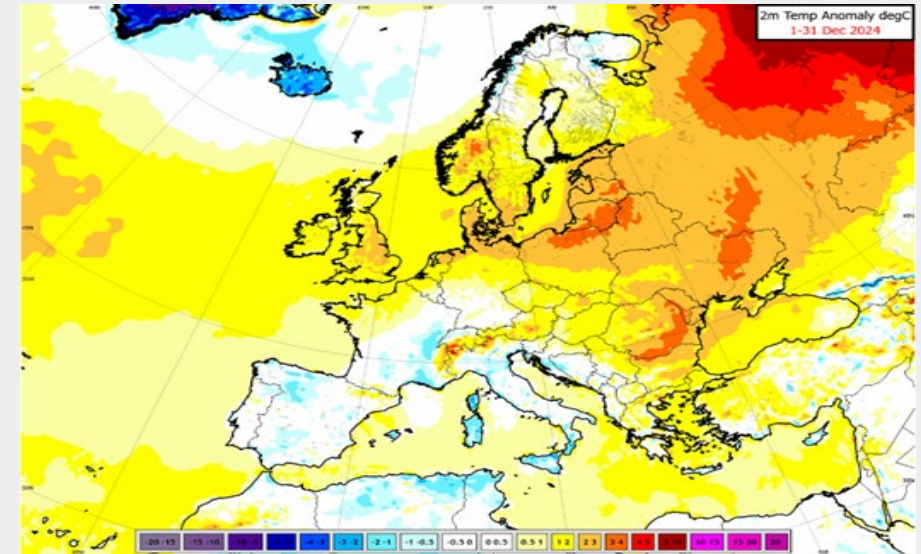
Weather review

Review

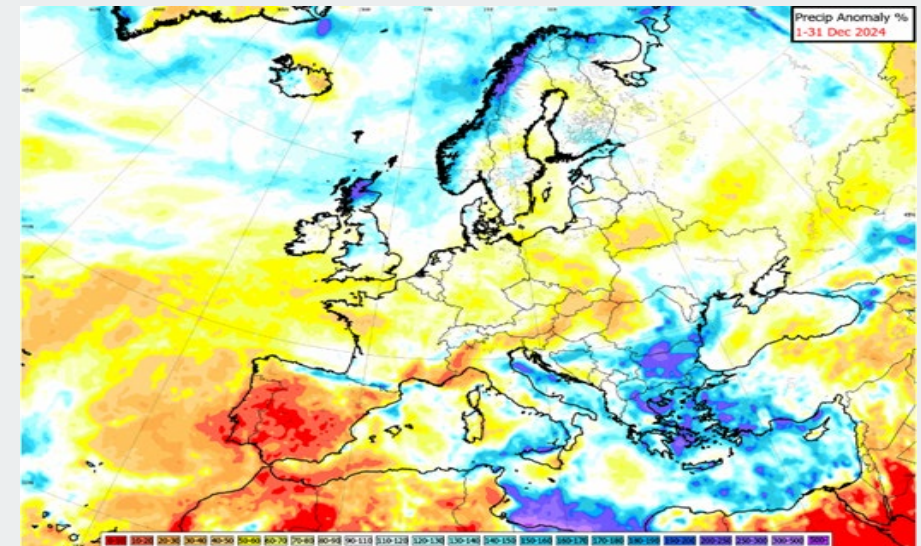
December was a warm month overall, with most days seeing above average temperatures for the UK. When compared to the 1991-2020 climatology, the month was 2C above average for the UK, making it the fifth warmest December on record. When looking more recently at the past 10 years, December was 0.9C above average. The only notably cold period came in the wake of Storm Darragh for the second week of the month, which saw six days of below average temperatures. The precipitation anomaly chart (below right) is somewhat misleading in Scotland, as it was an extremely wet month, but specifically only on three days: Storm Darragh (6th) and right at the end of the month (30th-31st). Those three days saw almost 60% of December’s normal monthly precipitation! The rest of the month, precipitation tended to be near-normal, so in addition to those extremely wet spells we saw a very wet month indeed (the 18th wettest December on record for Scotland).

Outlook

For January, early in the month we’re expecting some disruption to what’s otherwise expected to be a mild, unsettled Q1 for 2025. High pressure around northern Europe will mean colder temperatures and drier weather until around the 12th, then things should turn milder, wetter, and windier. The back half of January is looking generally warmer than normal with unsettled weather bringing the chance of winter storms. Prolonged cold air over the next fortnight in the United States, courtesy of Storm Blair, will help fuel an active jet stream across the Atlantic Ocean into late January, which will keep weather fronts frequent visitors to the British Isles. There are currently no strong signals for any long-lived cold or dry weather from mid-January through February, so the rest of the winter months are likely to be more unsettled, perhaps stormy, but not overly cold. Confidence is medium.



Temperature anomaly



Precipitation anomaly



Monthly Report – December 2024

Market Theme: Dunkelflaute

The lexicon of the energy markets conjures up many buzzwords, acronyms and technical terms. The current word appearing in many market commentaries and reports is a German word, **dunkelflaute**. Translated literally from the original language, this means “dark doldrum”.

In energy market terms, this is essentially a period characterised by higher demand coupled with very poor renewable generation. As installed renewable capacity increases across Northern Europe, prolonged periods of reduced sunlight and low wind during the winter months have a profound effect, as solar and wind make up an increasing share of the energy mix.

This presents energy system operators with a challenge to balance supply and demand. Where previously standby thermal (gas and coal) generation filled the gap, with the transition to cleaner grids, there’s a need to utilise new and innovative ways to balance the system, without the reliance on fossil fuel technology.

Battery storage, pumped storage and demand side response are existing solutions that will be scaled up to meet the challenge, but there are also new innovative solutions including hydrogen, and variable rate electricity consumer supply contracts may play a role.

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“Dunkelflaute”: Eng: “Dark doldrum”

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