

Energy Market Insights

Twice Monthly Independent Market Analysis

ELECTRICITY

FRONT ANNUAL SLUMPS 16% TO NEW LOW



Blustery conditions, mounting imports and rising nuclear capacity have all helped to pull UK power prices lower over the past couple of weeks as the market has resumed downward momentum after a brief pause. Gas, EU carbon and coal values have also been descending, adding downside impetus to electricity periods. The front three Baseload Annuals have all slipped below £70/MWh for the first time – after spiking above £75/MWh at the start of the month during a short-lived uptrend – and are now eyeing £60/MWh. At the time of writing April '24 Annual power was around £63/MWh, having fallen 16% since the end of January. October '24 and April '25 Annuals have dipped by about 13% to £65/MWh and £66/MWh, respectively.

UK electricity supplies have been boosted by the end of maintenance at the Torness and Heysham 2 nuclear plants – although four other reactors remain offline – boosting output from the nuclear fleet by 27% compared to the latter half of January. Wind generation has declined by 10% after elevated output during the previous fortnight, although – with production averaging more than 10 GW – the contribution from wind has still been robust, accounting for about third of overall power used so far this month. In addition, net imports have leapt above 3 GW on average – despite restrictions on the North Sea Link with Norway – an increase of almost 40%, adding a further buffer.

The return of some nuclear capacity and the expected resumption of operations at other reactors later this month have helped near term periods to drop. UK power months out to August '24 have edged below £60/MWh in recent days and March '24 – the front month – has dived 17% during February and had moved to £57/MWh at the time of writing. It has been a similar story for the front quarter – Q2 '24 – which has lost 14% over the same timeframe.

On the Continent the German year-ahead – a key benchmark – has touched lows last seen more than two years' ago, driven largely by weakness in wholesale gas and carbon prices. A 7% hike in output from German wind and solar plants has also helped to pressure the market and year-ahead power is now just under EUR 72/MWh, shedding 12% since the end of January. The same French period has lost a similar proportion and has been changing hands a little over EUR 71/MWh.


Elsewhere coal prices for delivery into northwest Europe have reached eight-month lows as robust stocks in the region and subdued demand have helped to weigh on the value of the fuel. Month-ahead coal has slipped 6% in the past fortnight to move below \$92/tonne currently.

Meanwhile net short positions on the EU carbon market have reportedly reached an all-time high in a sign that traders are expecting further downside in the emissions' sector. EUAs are currently around EUR 57/TCO_{2e} after stumbling 11% lower this month. In contrast UK emissions values are up fractionally from the end of last month – although prices remain substantially below EU levels – at about £35/TCO_{2e}.

UK Annual power prices (six-month view)




ELECTRICITY: OUTLOOK

 SSE has said that operations at the 1.2 GW Dogger Bank A offshore wind farm – which will become the world’s largest when all three 1.2 GW sections have been completed – are not expected until next year. Originally the first portion of Dogger Bank was set to be commissioned this spring, but adverse weather has led to delays.



OIL PRICES

Oil prices see marginal gains on back of increasing global demand


 The EU has agreed on draft legislation that will force member states to consider non-price criteria – including the ability to deliver a project fully and on time, sustainability, resilience, and cyber security – through auctions for new renewable capacity. The Net-Zero Industry Act (NZIA) may push governments to apply the criteria to at least 30% of capacity auctioned each year, or 6 GW. The European Commission will define the criteria through a separate set of rules.

UK energy regulator Ofgem has launched an investigating into several wind farm operators following claims that they exaggerated generation forecasts, which has allegedly led to the overpayment of more than £50 million for output curtailments on very windy days.

WIND

Wind has supplied around one third of UK electricity demand this month.



 UK wind farms are expected to deliver nearly 10 GW on average through the remainder of February, according to a forecast from National Grid’s Elexon balancing platform.



UK REACTORS

2 UK reactors have come back online helping to increase domestic supply

KEY POWER INDICATORS:

Long-term UK (£/MWh)				Short-term UK (£/MWh)				European power (£/MWh)			
Apr '24 Annual	chg	Oct '24 Annual	chg	Month-ahead	chg	Day-ahead index:	chg	Germany Cal '24	chg	France Cal '24	chg
64.88	-10.13	66.63	-8.63	58.90	-10.11	62.46	-4.47	72.65	-9.22	72.38	-7.38

KEY OTHER INDICATORS:

Coal (\$/MT) '24	chg	Oil (Brent) \$/bbl	chg	UKA '23 (£/TCO2)	chg	EUA '23 (€/TCO2)	chg	EUA '24 (€/TCO2)	chg	EUA '25 (€/TCO2)	chg
91.25	-4.50	82.60	0.73	36.20	1.42	57.95	-6.42	60.07	-6.44	62.47	-6.30

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GAS

MILD OUTLOOK LEADS TO DOWNWARD SPIRAL



Mild conditions suppressing gas demand, relatively full EU storage and robust LNG supplies have all helped to push UK gas periods downwards during the opening half of February. Wholesale gas values had been supported in the opening few days of the month by indications that another cold snap was on the way, leading April '24 Annual gas to peak above 81 p/th. Revisions to those forecasts have eased concerns – above average temperatures are now mostly expected until late March – and drained risk from the market. April '24 Annual gas has been sliding towards 69 p/th, shedding 16% since the end of January. October '24 and April '25 Annuals have dived 13-15% in the last two weeks to 72 p/th and 73 p/th, respectively.

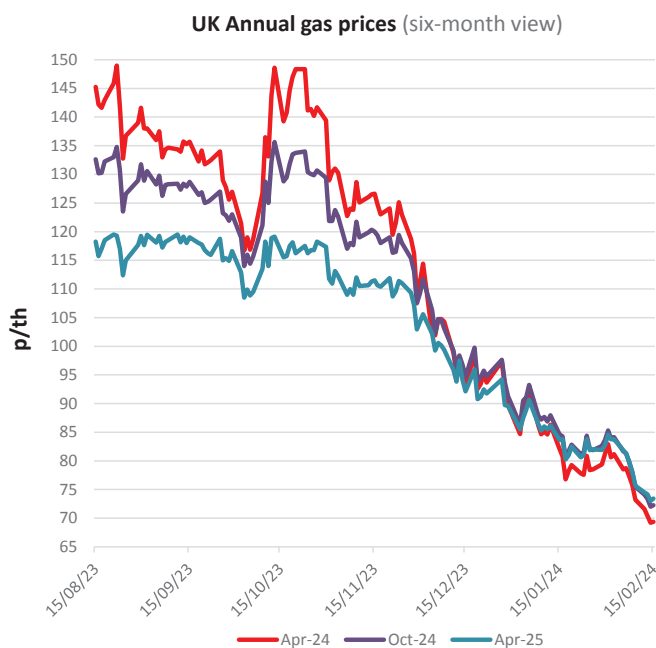
It has been a warm start to February with UK gas demand falling 16% to an average of 230 million cubic metres (mcm) – almost 20% below the seasonal average – which has heaped pressure on the short-term market. Next-day gas has fallen below 60 p/th, crashing nearly 20%. The export torrent has slowed to a trickle this year, which has also helped to suppress UK gas use as outflows to the Continent have reached a paltry 58 mcm in 2024, compared to more than 600 mcm in the final month of 2023 alone.

With temperatures and renewable supply rising on mainland Europe – as well as a steady influx of LNG cargoes – there has not been the need for gas from the UK this year. As demand on the Continent has waned storage withdrawals have slumped by more than a third and EU sites are, once again, better stocked than last year. EU storage is currently just over 66% full – according to Gas Infrastructure Europe – compared to 51% on average at this point over the last five years. This has heaped pressure on periods covering the remainder of the winter – March '24 Dutch gas has dived 18% in February – as well as the front summer (due to expectations of limited storage injection demand over the second and third quarters). Further afield southeast Asian LNG prices have fallen below \$9/MMBtu for the first time since April 2021 in a sign that gas market weakness is not just confined to Europe.

Back in the UK, monthly and quarterly values have been tracking lower through the opening fortnight of February. March '24 gas is now just below 61 p/th – down 18% this month – while Q2 '24 has been changing hands slightly

above 61 p/th, dropping nearly a fifth since the end of January. Interestingly July and August '24 are currently more expensive than months closer in, although this relationship is likely to reverse in time.

Elsewhere oil suppliers have continued to shun the Red Sea as conflict involving Houthi militants has scared away maritime traffic. This has served to maintain North Sea crude above the \$80/bbl mark – \$83/bbl at the time of writing – although uninspiring economic growth in the face of persistently high inflation has prevented oil prices from rallying too significantly. The International Energy Agency reported a sharp drop in global oil demand growth in the final quarter of 2023 – underpinned by China – while predicting the pace of expansion this year will be 1.2 million barrels per day, almost 50% below the increase in 2023.



GAS: OUTLOOK


 Planned maintenance will restrict UK gas imports from Norway through the St Fergus and SEGAL pipeline networks from late March.

through Ukraine, down 15% compared to 2022 and 50% below 2021 levels, ENTSOG data showed.



ENERGY PRICES

Energy prices continue to drop to lows not seen since before Russia's invasion of Ukraine.


 US-based LNG supplier Venture Global has secured storage and regasification capacity at the UK Isle of Grain terminal for 16 years starting in 2029, through an auction that took place in September last year. Venture Global started exports from the Louisiana-based Calcasieu Pass facility last year and aims to start operations at Plaquemines LNG – also in Louisiana – in 2024. The company is involved in the development of another two plants – including the giant Calcasieu Pass 2 – although a pause to the permitting process has cast doubt on whether these facilities will go ahead.

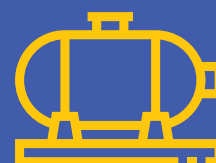
EU energy commissioner Kadri Simson has told the European Parliament that there is no need to renew the Russian gas transit contract through Ukraine after the existing agreement expires at the end of this year. Simson said the countries still receiving gas via this route – Austria, Italy and Slovakia – could source volumes elsewhere. Last year about 13.6 billion cubic metres (bcm) of Russian gas was delivered into Europe



GAS DEMAND

Warmer than normal temperatures in February has seen UK gas demand drop by 16%

 The German Stade LNG terminal will come online by the end of Q1, while Wilhelmshaven 2 is now expected to be operational in Q2, according to the developer of both facilities. Originally imports at both sites were expected to start at the end of last year.



GAS STORAGE

EU gas storage at 66%, compared with 51% in February 2023

KEY GAS INDICATORS:

Long-term UK (p/th):				Short-term UK (p/th):				European gas (€/MWh):		Crude Oil:	
Apr '24 Annual	chg	Oct '24 Annual	chg	Month-ahead index:	chg	Day-ahead index:	chg	TTF 2024:	chg	Oil (Brent) \$/bbl:	chg
69.38	-13.54	72.25	-13.06	62.30	-12.52	60.38	-13.12	28.63	-4.70	82.60	0.73

All changes (chg) are compared to last report

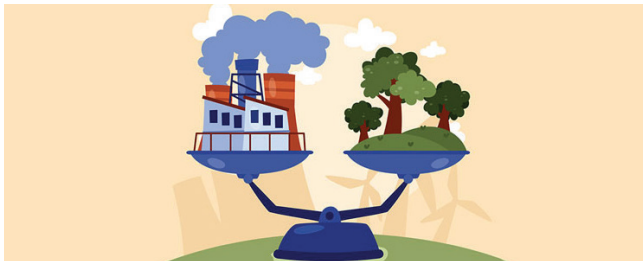
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Carbon Intensity Metrics: Understanding the Environmental Impact Beyond Numbers

Author: Denisa Ogoyi of Boxfish

As the importance of creating and implementing firm, net-zero carbon roadmaps grows, governments see sustainability reporting as a crucial instrument to achieve these environmental goals. Sustainability reporting represents a way of disclosing key information related to an organisation's impacts on the environment, society, and governance (ESG), along with the steps taken to improve these impacts. To assess and communicate organizations' environmental impact in relation to its operational output, carbon intensity metrics play a pivotal role. These metrics go beyond conventional resources and extend to factors such as staff, customers, and third-party stakeholders, helping organizations to measure their sustainability performance more accurately. Generally, if the organization decides to embark on the path of decarbonization, achieving lower intensity signifies a more efficient and sustainable operation.



What are Carbon Intensity Metrics?

Carbon intensity metrics, also known as carbon intensity ratios, are units that usually help to quantify emissions produced per specified unit or business metric. These metrics make it easier to compare emissions efficiency, regardless of an organization's size, and help to identify organizations which are taking steps to reduce their greenhouse gas (GHG) emissions. This approach aligns with the broader goal of not just minimizing overall emissions but also ensuring that environmental impact is proportionally reduced in relation to increase production or scale. Setting carbon intensity targets, as part of total emissions goals, provides a strategic framework for achieving a greener and more sustainable future.

The most common intensity metrics used for sustainability reporting, are kilograms of carbon dioxide equivalent per annual revenue in millions ($\text{kgCO}_2\text{e}/\text{£M}$), kilograms of carbon dioxide equivalent per full-time employee headcount ($\text{kgCO}_2\text{e}/\text{FTE}$) and kilograms of carbon dioxide per square meter (kgCO_2/m^2). While organisations have flexibility in developing their own intensity metrics,

it's important to prioritize simplicity for straightforward comparisons with metrics from other sectors.

5 Key Benefits Unveiled by Adopting Carbon Intensity Metrics

1. Regulatory Compliance

To demonstrate the commitment to meet legal requirements, intensity metrics greatly assist organizations in ensuring compliance with environmental regulations and standards, e.g. companies complying with Streamline Energy and Carbon Reporting (SECR) must include at least one intensity ratio in their reports.

2. Benchmarking

Intensity metrics help organizations see where they stand in terms of sustainability performance when comparing with peers and competitors, or when tracking changes over time within the organization. These metrics can be analysed from the group level to the site level (or equivalent), enabling a more detailed analysis. Using intensity-based league tables is a powerful way to recognize and promote positive behaviours in the organization.

3. Identification of Hotspot Areas

Intensity metrics help entities determine progress towards emission reduction goals, and to identify approaches for targeted improvements which often come hand in hand with innovations within the organization. These metrics, if applied through ratios at individual sites or processes, target internal inefficiencies more effectively.

4. Target Setting and Goal Monitoring

Intensity Metrics represent a quantitative measure of the performance which provide a basis for SMART (specific, measurable, achievable, relevant and time-bound) sustainability goals.

5. Cost Savings

Intensity metrics help the organization with year-on-year improvements within their organization which usually brings new opportunities to optimize resource usage through energy efficiency increase or reduced waste etc., what directly impact the organization's profitability by contributing to increased profits through cost savings and operational efficiencies.



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Enhancing sustainability performance via intensity metrics presents challenges that organizations need to navigate.

1. Standardization challenges

Methodologies for calculating and reporting intensity metrics are not always aligned with the standardized methodologies, such as GHG Protocol methodology.

2. Data accuracy and reliability

Emissions calculations are often very complex; in some cases, it requires sophisticated tracking systems and well-established systems and process. This often requires organizations to invest into technologies and/or employees training.

3. Organizational Inertia

Many organizations have their own well-established practices that served effectively but are no longer practicable. Introducing modifications, however, is often met with resistance from management who may find it hard to depart from the familiar practices.

4. Cost Implications

This applies to small businesses more than to others. New tracking systems or employees training in new methodologies come usually with an upfront cost. Limited resources are often a key barrier for adoption new processes for organizations.

Effective Strategies to Overcome Challenges and Improve Operations

For everyone to understand the process and its positivity, it is essential to encourage open discussions to address any concerns and underscore the benefits of including carbon intensity metrics seamlessly. To reach a common goal, it is also necessary to promote collaboration between diverse departments, break down barriers and leverage the collective strength of the teams to enhance the accuracy, relevance, and effectiveness of carbon intensity metrics. Additionally, staff needs to be equipped with necessary understanding and skills to ensure that new methodologies are adopted. Besides, offering incentives for sustainable practices usually encourages individuals and teams to adopt eco-friendly actions, which consequently contribute to the successful integration of carbon intensity metrics.

Conclusion

In the ongoing era of environmental responsibilities and the pursuit of achieving net zero, many organizations must not only face the regulatory standards but also aim to stand out in their efforts to become more sustainable. Boxfish are an expert in this transformative journey, offering a deep understanding of carbon intensity metrics and innovative solutions, which can ensure the seamless integration of carbon intensity metrics into existing operational frameworks.

