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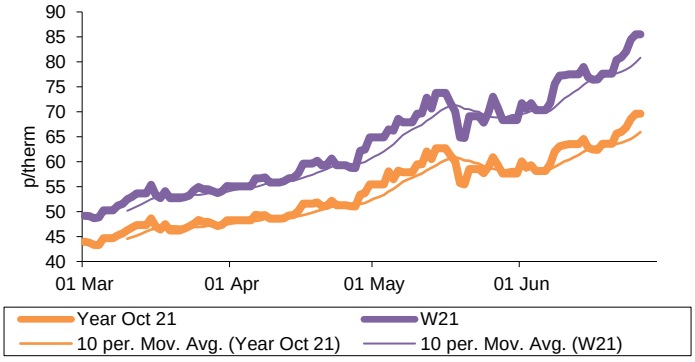
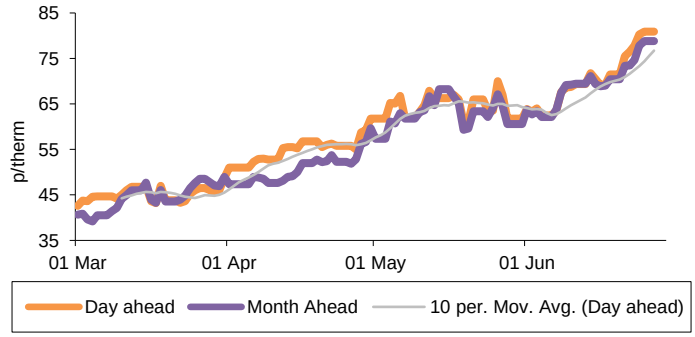
July 2021

Energy and Gas Prices Spiral out of Control

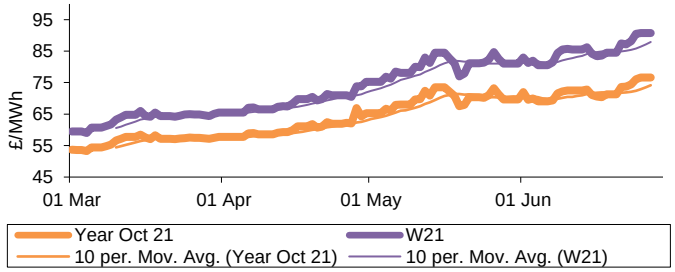
Annual gas prices



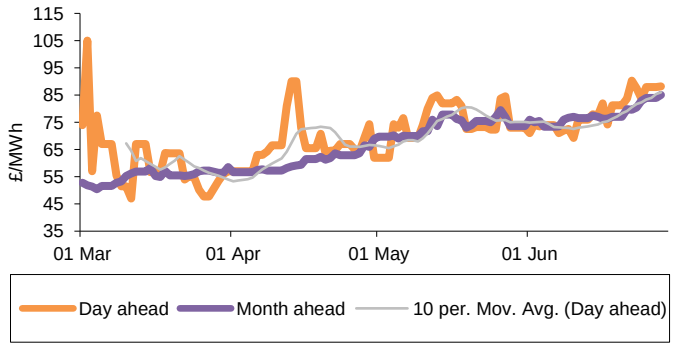
Spot gas prices



Annual power prices



Spot power prices



In June 2021, all tracked wholesale GB gas contracts rose, with the most pronounced rises observed across near-term contracts, continuing recent trends. Gas prices across the board remained comfortably above their levels seen at the same time last year, underpinned by strong performing commodity markets and notably low European gas storage levels throughout the entirety of June.

On average, seasonal gas contracts from winter 21 to winter 23 were 3.8% higher in June than in May, with prices collectively ending the month higher than they were at the month's start. Winter 21 rose 12.5% to average 77.94p/th, while winter 22 gas lifted 2.1% to 57.80p/th.

Gas prices generally, were supported by multiple drivers. These included the continued vaccination roll-out, sustained low European gas storage levels and a backdrop of rising international commodity prices including carbon and LNG markets. Low European gas storage levels, which are only half as full as the same time last year at around 30-40%, will act to increase gas demand for injections this summer. It was a generally prosperous month for carbon and Asian LNG markets, sustaining recent highs observed in months previous.

Periods of system undersupply and extensive maintenance campaigns across the UKCS and NCS lent itself to stronger NBP gas prices. Day-ahead gas prices as of 25 June averaged 80.90p/th, their highest since 2 March 2018. Consequently, day-ahead gas prices rose 9.8% on average in June, up to 71.30p/th.

Wholesale power contracts largely shared the bullish trends observed from gas markets, with some exceptions in longer dated seasonal contracts.

Seasonal power contracts up to and including winter 23 inched higher, rising 0.5% on average in June. Winter 21 rose 6.3% to £85.63/MWh, while summer 22 rose 0.2% to £59.51/MWh. The annual October 21 power contract rose 3.4% to average £72.33/MWh.

Forwards power contracts were supported by bullish gas and international commodity markets, particularly EU ETS and now UK ETS carbon prices. EU ETS prices continued to rise in June, supported towards the end of the month by a generally tighter European gas market. Conversely, in the UK ETS' first full month, prices fell 6.5% on average to £46.20/t. Prices have remained relatively consistent throughout the month, however.

Day-ahead power rose 2.0% in June to average £78.73/MWh. Baseload power is verging on unprecedented highs, particularly for summer months. To put this into perspective, average day-ahead baseload power prices in June 2021 were 177% higher than the same time a year prior. The winter 21 power contract was at its highest average price since April 2018, at £90.75/MWh, as of 25 June 2021.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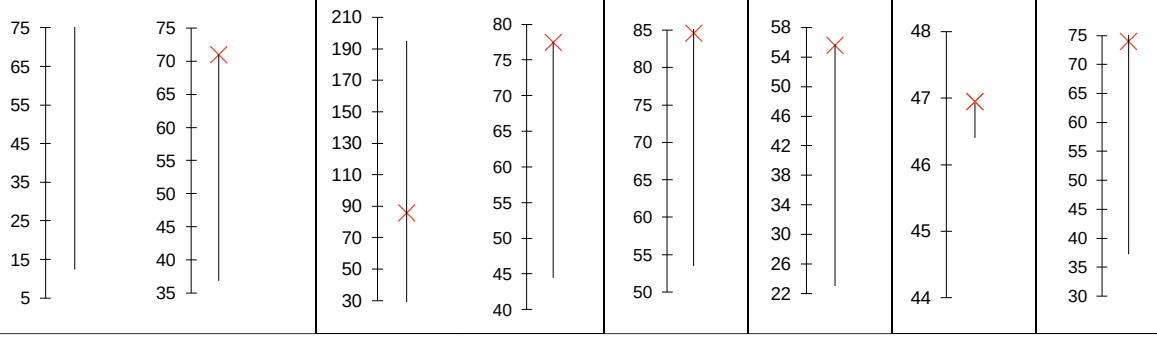
Key market indicators: 29/06/2021

		Gas (p/th)		Electricity (£/MWh)		Coal	EUA Carbon	UKA Carbon	Brent crude
		Day-ahead	Year-ahead	Day-ahead	Year-ahead	($/t)	(€/t)	(£/t)	($/bl)
This month	29 Jun 21	81.50	70.96	85.65	77.50	84.60	55.60	46.95	73.97
Last month	1 Jun 21	63.90	60.07	71.00	72.00	82.50	52.70	48.85	70.78
Last year	30 Jun 20	16.00	38.15	32.00	46.30	57.65	26.15	N/A	41.10
Year-on-year % change		409%	86%	168%	67%	47%	113%	N/A	80%
Year high		81.50	70.96	195.00	77.50	85.50	55.71	51.75	75.57
Year low		12.40	36.85	26.00	44.45	53.50	23.02	44.50	37.19

This table shows the price at the end of this month compared with prices from the previous month and year. The graphs show the position of this month's prices with a red X and the range of prices over the year is represented by the black line.



Commodities

Carbon: EU Emissions Trading Scheme carbon is quoted as over-the-counter (OTC) latest opening prices. All carbon prices are in euros per tonne (€/EUA).

Coal: Coal is quoted as OTC latest opening prices. All coal prices are in US dollars per tonne ($/t).

Electricity: UK power base-load and peak-load are quoted as OTC latest opening prices. All UK electricity prices are in pounds per megawatt hour (£/MWh).

Gas: UK National Balancing Point (NBP) gas is quoted as OTC latest opening prices. All UK gas prices are in pence per therm (p/th).

Oil: Brent crude oil is quoted as OTC latest opening prices. All Brent crude oil prices are in US dollars per barrel ($/bl).

Language/ terms

Bearish: A bearish market shows a general decline in prices over a period of time.

Bullish: A bullish market shows a general increase in prices over a period of time.

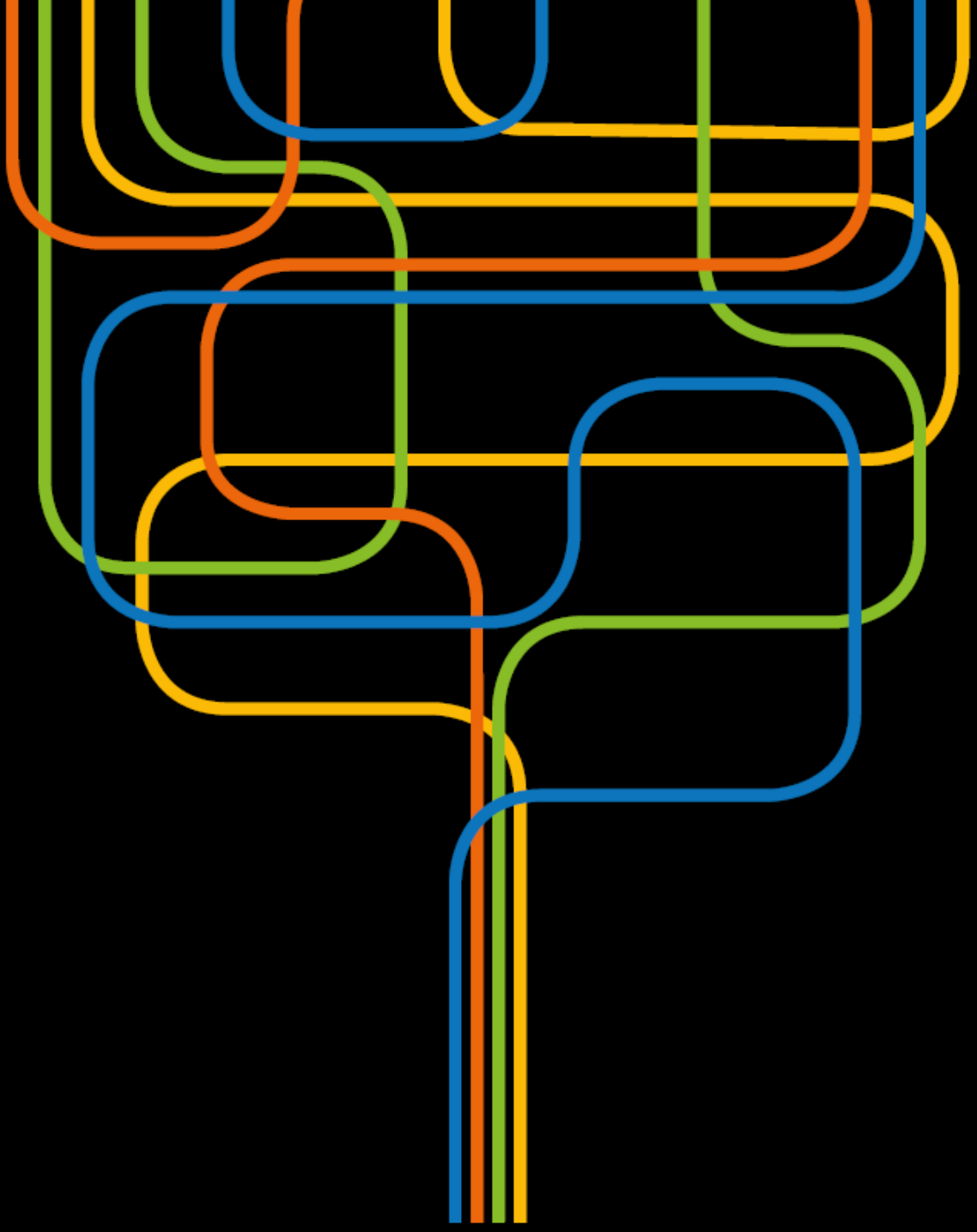
Curve: A graph of forward prices over a future time period.

Margin: The indicated UK imbalance of a given settlement period. It is the difference between the sum of the indicated generation available, and the national demand forecast made by National Grid.

Over-the-counter (OTC): The trade of a commodity directly between two parties, often on standardised terms.

Spark/ Dark spread: The theoretical net income of a gas/ coal-fired power plant from selling electricity having purchased the necessary fuel. The clean spark/ dark spread is this net income adjusted for the cost of carbon.

Disclaimer



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CCC progress report: UK needs plans for net zero

The Climate Change Committee (CCC) published a pair of reports, *Progress in adapting to climate change* and *Progress in reducing emissions*, to Parliament on 24 June.

The CCC notes that the government has made significant climate promises over the last year but is yet to release comprehensive plans. To this effect, the committee calls for the publication of the Net Zero Strategy before the COP26 climate conference in November, with clear policy plans and full backing from the Treasury. This should:

- Provide a comprehensive plan for achieving net zero, the 2030 Nationally Determined Contribution and the carbon budgets, setting out ambition for sectors and key technologies and behaviours that together will meet the challenge.
- Set timelines for how policies will start to deliver decarbonisation and ensure that wider policy development is consistent with the UK's climate goals.
- Introduce processes for monitoring progress and mechanisms to course-correct over time.

Another priority recommendation, this time for 2021-22, is that the government must develop a public engagement strategy for net zero which builds on the findings of the UK Climate Assembly by involving members of the public in decision-making. The CCC says this strategy should link to engagement on adaptation and identify "preferred policy options to empower people to contribute fully towards the path to net zero".

On power, the CCC is calling for, by 2022, a plan for reaching an emissions intensity of 50 gCO2/kWh by 2030, with a total of around 350 TWh of low carbon generation – this would include setting out a schedule for regular auctions to procure low carbon generation. In 2021, the government should commit to phasing out unabated gas generation by 2035, subject to ensuring security of supply. Additionally, it should publish, spring 2022, a comprehensive long-term strategy for unabated gas phase-out, including ensuring new gas plant are properly carbon capture and/or hydrogen-ready "as soon as possible and by 2025 at the latest".

Another priority for 2021 is for the government to replace the Green Homes Grant voucher scheme, backed by standards and support for non-residential heat pump installations. This, the CCC argues, would provide a stable long-term policy framework to support sustained energy efficiency and heat pump growth to the 600,000 installed annually which the government is aiming for by 2028.

Climate Change Committee

Consumers slow to adopt low carbon heating and EVs

On 24 May, Ofgem issued the outcome of its *Consumer Insights Survey for 2020*. For the first time, the survey included questions on consumer attitudes towards climate change and their intentions to change behaviour to help reduce the impact of climate change. More than half of participants (56%) think that they are already doing all they can to save energy at home, with almost half saying they have made home energy efficiency improvements. However, it is those that already have a greater involvement with the energy industry – those who have bought an EV or solar panels – that have the greatest intentions to change home energy use or transportation habits.

On the theme of transportation, Ofgem found that the uptake of EVs is still low, with only 3% of participants owning a fully electric car or van. Despite this, one-quarter of those without an EV believe they are likely to adopt one in the next five years. Only one in seven consumers stated that they intend to install low carbon heating such as heat pumps. Awareness of low carbon alternatives is also low. Aside from awareness, the main barriers to adoption are high perceived costs, scepticism that it will save money by reducing energy bills and perceived disruption to install.

Ofgem

GB on track for periods of zero carbon electricity in 2025

A report released by National Grid Electricity System Operator (ESO) has found that GB's electricity network is on track to becoming fossil fuel free by 2025. Published on 15 June, the report outlines the new approaches and technologies, such as the various Pathfinder projects, which are transforming how the ESO operates in order to accommodate 100% zero carbon power.

One of the key developments that the report highlights is the growth in renewable power, along with the policies which have help drive this change. This has seen coal-fired power go from providing roughly one-quarter of electricity five years ago, to just 1.6% of the generation mix in 2020. The report goes on to note that electricity from renewable sources has increased tenfold, with notable growth observed in the past decade. In 2011, less than 5.0% of electricity in GB was renewable, by 2019 this reached a record high of 37.1%. This growth has been made possible due to several policy initiatives, such as the *Climate Change Act 2008*, or market frameworks and initiatives such as Contracts for Difference, which have supported renewable generation onto the grid.

Figure 1: Recent zero carbon highlights

- May 21 2021: highest ever level and share of wind power.
- April 5 2021: lowest ever carbon intensity (39gCO_2/kWh).
- May 30 2020: highest ever share of solar power (34%).
- May 2020: greenest month on record (143gCO_2/kWh).
- April 2020: highest ever level of solar power (9.7GW).
- April-June 2020: longest ever GB coal-free period.
- Total coal-free hours in 2020: 5,147 hours.

Source: National Grid ESO

Looking beyond 2020, the ESO outlines three main trends and areas of focus. The first of these is the aspect of decarbonisation with the changing makeup of the generation mix. The second is decentralisation – change has not only been the technologies supplying electricity but also their location and the impact this has on the ESO in managing the system. The ESO's challenge is scaling up solutions to deal with the increasingly decentralised network. The last point concerns digitisation, with the ESO using the latest technologies to speed up and automate products and services required to deal with supply and demand imbalances driven by greater renewables penetration. The report goes on to cite the rollout of the Dynamic Containment service in September 2020, used to manage system frequency much closer to real time.

National Grid ESO

Government confirms coal phase-out to move forward to October 2024

GB will phase out unabated coal generation on 1 October 2024, the government announced on 30 June. This decision is the outcome of the Early Coal Closure consultation. The government has also decided that the emissions intensity limit will be implemented at a level of 450gCO_2/kWh on unit-by-unit basis and the 300MWth minimum threshold will not be introduced.

Additionally, emergency powers allowing the Secretary of State to suspend or modify the coal phase-out arrangements will not be introduced. The government will designate an 'Enforcement Authority' with the power to verify compliance on an ad hoc basis. The government will allow the designated Enforcement Authority to determine an appropriate reporting frequency. Energy and Climate Change Minister Anne-Marie Trevelyan said: "[Today] we're sending a clear signal around the world that the UK is leading the way in consigning coal power to the history books and that we're serious about decarbonising our power system so we can meet our ambitious, world-leading climate targets."

Government

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