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Wholesale prices hit fresh highs amid low wind

Wholesale power and gas prices rose across the board in August, with many contracts rising for a sixth consecutive month.

In the nearer term, day-ahead power went up 5.8% to average £60.9/MWh. Prices rose as low renewables output led to more expensive forms of generation meeting demand, with the contract ending the month at a five-month high of £66.4/MWh. All seasonal power prices grew in August, up 5.4% on average. Winter 18 ascended 5.3% to average £65.2/MWh, peaking at a record high of £70.6/MWh on 28 August. Rising gas and commodity prices, which, coupled with low renewables output throughout August, has led to sustained growth for near-term and seasonal power contracts.

Day-ahead gas rose 6.8% to average 61.6p/th. Prices increased from 58.5p/th at the start of August to highs of 68.3p/th on 28 August. Prices have been supported by increased gas demand for power generation amid low renewables output, and several strikes and outages affecting North Sea supplies. All seasonal gas contracts increased in August, rising 5.1% on average. Winter 18 gas prices rose 5.2% to average 67.5p/th. Winter 18 peaked at a record high of 73.8p/th on 28 August, finding support from commodity prices.

EU ETS carbon at a 10-year high, but oil and coal fall

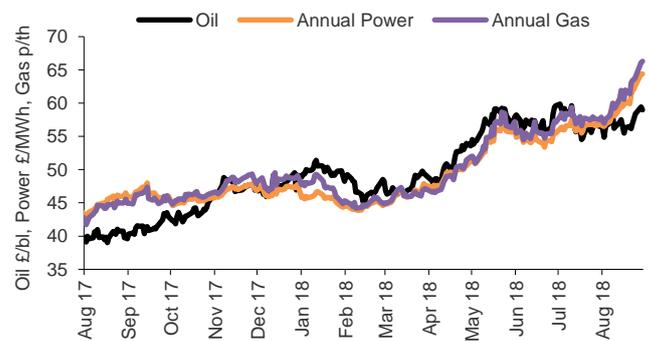
EU ETS carbon gained 12.7% to average €18.4/t in August, its eighth consecutive monthly rise. Prices hit a fresh 10-year high of €21.8/t on 27 August. Prices were supported by an announcement from the European Commission that German auctions will be postponed from 9 November until early 2019, deferring the sale of 21.8mn allowances until next year, and creating a tighter carbon market. The news has led analysts from several firms, including ICIS, to revise their carbon price expectations. ICIS forecast EUA prices to end

2018 at over €20.0/t, whilst analysts from the Carbon Tracker Initiative have revised forecasts to €25.0/t having previously predicted prices to end 2018 at \$15.0/t. A rise in EU ETS carbon prices is important for wholesale power, as prices incorporate the cost of carbon.

Brent crude oil prices fell for the third consecutive month, dropping 2.6% to average \$73.2/bl during August. Prices continued to respond with volatility to ongoing geopolitical tension amid the US-China trade war, and the upcoming US sanctions on Iran. Prices fell to below \$70.6/bl in the middle of the month following the announcement of an unexpected build in US crude stockpiles. Prices recovered towards the end of August, peaking at \$76.7/bl on 28 August.

API 2 coal prices fell for the first time since March, down 1.5% to average \$88.0/t. Coal dropped to \$84.8/t on 2 August, its lowest since May. As with the other commodities, coal rose at the end of the month, to \$92.3/t on 29 August.

Crude oil and annual wholesale gas and power prices

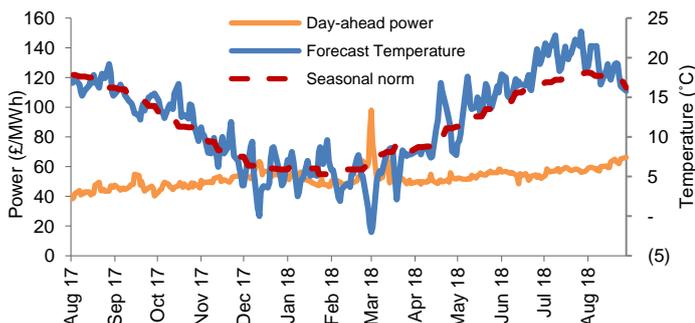


The month-ahead: Market fundamentals signal sustained high gas and power prices

Higher wholesale power prices could be sustained or further supported as low renewables, rising commodities, and planned gas field outages, continue to provide support for the wholesale market. However the latest medium-term forecast from the Weather Company, suggests warm weather could last until November, and may provide respite from upwards price movements.

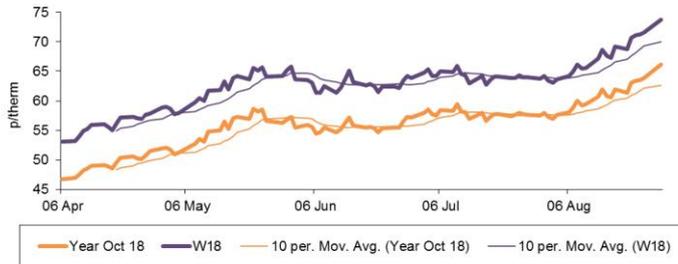
Catalyst Commercial Services' independent approach enables clients to manage their exposure to energy price risk, while at the same time benefiting from a first-class service from a range of major and independent suppliers. Catalyst Commercial Services' procurement solutions make it simple, so contact a member of the team to discuss requirements.

Spot power prices and temperatures





Annual gas prices

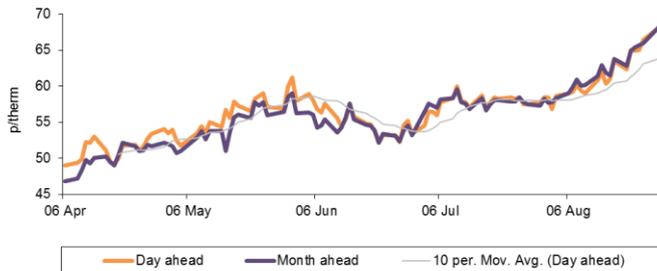


All seasonal gas contracts grew in August, up 5.1% on average.

Winter 18 and winter 19 gas averaged 67.5p/th and 61.5p/th, up 5.2% and 4.2% respectively. Winter 18 has grown 28.3% from January 2018 when it averaged 52.6p/th. Summer 19 and summer 20 gas both went up 5.1% to average 54.0p/th and 48.9p/th respectively.

The annual October 18 gas contract grew 5.1% to 60.8p/th.

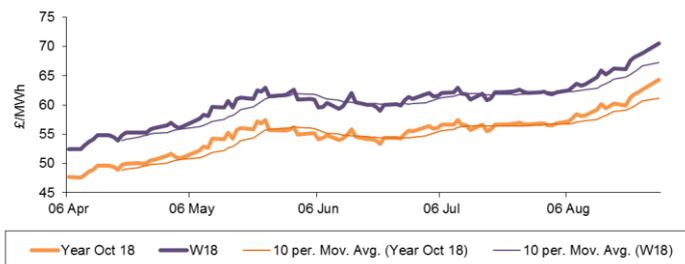
Spot gas prices



In August, day-ahead gas prices increased 6.8% to average 61.6p/th. The month-ahead (September) gas contract went up 6.0% to average 62.0p/th, peaking at 68.6p/th on 29 August.

Day-ahead gas prices have been driven higher by low levels of wind output, which increased gas demand for power generation, as well as low levels of LNG imports. Prices were affected by ongoing strikes at three of Total's North Sea oil and gas fields which, coupled with unplanned outages in Norway, saw the gas system undersupplied at times.

Annual power prices

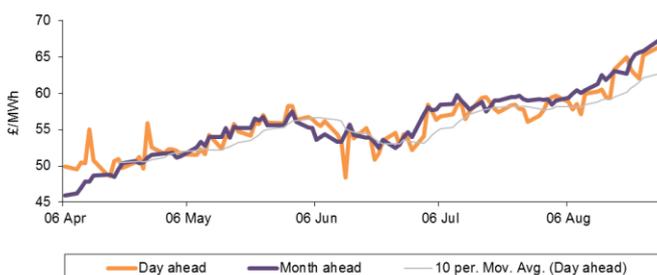


All seasonal power contracts rose, gaining 5.4% on average across August.

Winter 18 increased 5.3% to £65.2/MWh. Summer 19 and winter 19 power rose 5.4% and 4.4% to average £53.8/MWh and £59.6/MWh respectively. Contracts for summer 20 and winter 20 delivery were up 6.0% and 5.9% to £49.4/MWh and £56.9/MWh.

The annual October 18 power contract increased for the sixth consecutive month, up 5.3% to average £59.5/MWh.

Spot power prices



Day-ahead power grew 5.8% throughout the month to average £60.9/MWh. Day-ahead power peaked at £68.9/MWh on 29 August, a five-month high. The month-ahead (September) power contract gained 5.0% to average £61.6/MWh, peaking at £67.1/MWh on 29 August.

Day-ahead power prices have continued to rise amid low renewables generation this summer, following gas prices higher.



Energy Element / September 2018

Key market indicators: 29/08/2018

	Gas (p/th)		Electricity (£/MWh)		Coal	Carbon	Brent crude
	Day-ahead	Year-ahead	Day-ahead	Year-ahead	(\$/t)	(€/t)	(\$/bl)
This month 29 Aug 18	68.80	66.27	68.85	64.41	92.25	20.92	76.08
Last month 30 Jul 18	57.80	57.52	56.90	56.81	86.25	17.12	74.29
Last year 29 Aug 17	45.00	44.53	47.25	43.88	79.00	6.02	51.46
Year-on-year % change	53%	49%	46%	47%	17%	248%	48%
Year high	125.00	66.27	98.00	64.41	93.10	21.38	79.83
Year low	47.80	44.18	46.50	43.85	73.00	7.76	62.43

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.

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Government reviews energy security auctions

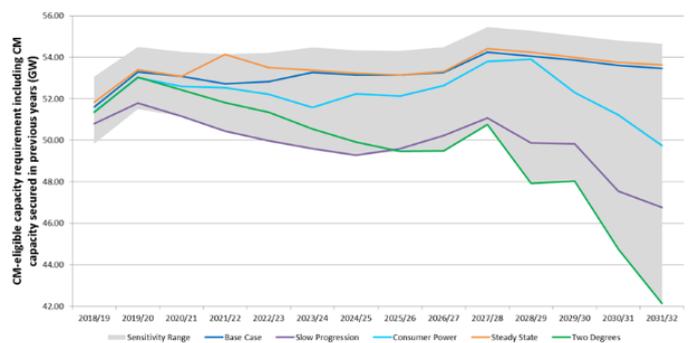
The government launched its five-year review of the Capacity Market (CM) on 8 August.

The CM is designed to ensure sufficient reliable capacity is available by providing payments to encourage investment in new electricity capacity or for existing capacity to remain open. This review is intended to assess whether: the CM is still needed in future; the CM is meeting its objectives of ensuring security of supply, cost effectiveness, and avoiding unintended consequences; if these objectives remain appropriate; and if they can be achieved in the future in a way that imposes less regulation. The costs of the CM are levied on energy user bills.

Working well

The call for evidence states that the government’s current view is the CM is working “broadly as intended” and while it may find ways to enhance elements, it does not foresee the need for “fundamental reform at this point”. BEIS added the review offered a valuable opportunity to consider whether the CM needs to adapt in light of changes to the electricity system as new technologies begin to compete effectively with traditional generation assets. The review will also seek to ensure that the CM is better able to support technologies such as Demand Side Response and enhance participation for aggregators and other smart system services.

Total CM-eligible Capacity required in Future Years



Source: National Grid

Route for renewables

Currently, the CM’s framework does not provide a route for some types of renewable capacity, specifically, solar and wind, to participate in the auctions. Most renewable technology is entirely supported by low-carbon support schemes such as Contracts for Difference or the Renewables Obligation. However, the first round of subsidies is due to expire in 2027, meaning that the fleet of early renewable generators would be eligible to enter early CM auctions from 2023. The start of subsidy-free projects means these developers could also legitimately compete.

Ofgem also received three formal requests from industry to change the CM framework to allow renewables participation in future auctions. However, BEIS found several issues that must be corrected before the technology can realistically compete. BEIS noted the non-dispatchable nature of renewables would raise “unique challenges” for the CM that would require a review of current de-rating methodologies and how they would apply to renewables, in particular, with solar and wind. Legislative changes would also be required to allow for “hybrid projects” under one project application. Views are invited by 1 October.

Overall the Capacity Market continues to fulfil its role well, with electricity capacity margins now returned to healthy levels.

Government

Coalition of energy groups call for continuation of export tariff for small-scale renewables

The Solar Trade Association (STA) unveiled a letter on 30 August signed by over 200 stakeholders ranging from trade associations and developers to politicians and investors, urging the government to continue supporting an export tariff for small-scale renewables.

Currently such projects – like rooftop solar – are rewarded under the Feed-in Tariff (FiT) scheme for the volume of power they generate, and additionally for volumes exported back to the electricity grid through a generation tariff and export tariff respectively. However, in a recent consultation, the government indicated it will look to close both tariffs to new installations from April 2019. The STA’s letter warned that the solar industry faces “huge policy uncertainty” as a result. The letter read: “If the export tariff is removed [...] householders, SMEs and others investing in solar and smart technologies will encounter very nascent markets that currently lack regulatory foundations.” It added that they could therefore potentially have to “spill their power onto the grid for free”.

STA



Government considers reforms to flagship renewables scheme

The government opened a consultation on 30 August, looking at further changes to the Contracts for Difference (CfD) scheme.

A generator party to a CfD is paid the difference between the “strike price” – a price for electricity reflecting the cost of investing in a particular low-carbon technology – and the “reference price” – a measure of the average market price for electricity in the GB market. It gives greater certainty and stability of revenues to electricity generators by reducing their exposure to volatile wholesale prices, whilst protecting consumers from paying for higher support costs when electricity prices are high. CfDs are now allocated in competitive auctions.

Reforms

A government consultation on the future operation of the scheme, launched in December 2017, proposed that CfDs should use higher assumed load factors – the ratio of how much electricity a generating unit produces over a period divided by its hypothetical maximum output. The proposal is designed to guard against the risk that CfD-supported projects produce more power than expected, resulting in greater than initially forecast payments by electricity suppliers that must then be passed onto energy bills.

In Part B of its response to the December consultation, the government said that it will implement the proposal to use higher load factor assumptions in the valuation formula for projects in the next CfD allocation round. The assumptions will be an upper portion of the expected distribution of load factors for each renewable technology, rather than the central assumptions currently used. However, the response clarified that the government does not intend to use different load factor assumptions for individual technologies in the next allocation round, so that for example they could vary from one area to another.

Reaction

Other specific elements of the plans have already drawn fire from groups with an interest in the auctions. The Renewable Energy Association criticised plans to adopt a new greenhouse gas threshold of 29kg CO₂e/ MWh for new biomass Combined Heat and Power under the CfD scheme, which is significantly lower than the 180kg CO₂e/ MWh threshold that will apply from 2025-2030 for existing biomass generators under the Renewables Obligation.

Benedict McAleenan, Head of Biomass UK, part of the REA, commented: “With this decision the government has undermined its own energy policies by attacking biomass yet again. Just when we need low-cost, flexible power to back up technologies like wind and solar, this decision risks it all. It will make it harder and more expensive to remove coal from the UK power grid.”

Up to £557mn in support is set to be offered through future CfD rounds, with the next auction scheduled for spring 2019.

Whilst these are fairly technical changes, such changes have previously exerted a significant influence on auction results, and consequently the costs consumers have to bear.

Government REA

Local network looks to procure demand-side response services

Distribution Network Operator UK Power Networks (UKPN) has predicted that by 2023 it will need in excess of 200MW of demand-side response (DSR), outlining a series of tenders in coming years through which it will look to acquire this.

Through DSR services, businesses and consumers can turn up, turn down, or shift demand in real-time. For power grids it can help soften peaks in demand and fill in the troughs, especially at times when power is more abundant, affordable and clean. For business and consumers, DSR is a way to save on total energy costs and reduce carbon footprint.

UKPN plans for a procurement process that will begin with expressions of interest this month and invitations to tender for both 2019-20 and 2020-21 in December. UKPN will tender for six months out as well as 18 months ahead of delivery – and will publish the locations in which it requires flexibility ahead of the procurement process.

UKPN



Academics highlight challenges of major swings in heat demand

Research published on 17 August by the UK Energy Research Centre (UKERC) has shed new light on the scale and variability of local gas demand, highlighting the particular challenge of providing energy for heating and hot water throughout the winter.

By consolidating gas demand data from Great Britain's local gas networks over a period of 11 months, the research highlighted the hourly variation in local gas consumption, revealing "immense swings" in demand throughout the day, emphasising the energy security issues at play.

Beat from the East

The 'Beast from the East' weather event led to the highest gas consumption of the 2017-18 heating season, with 214GW of local gas demand measured at 6pm on 1 March. Earlier in the day, National Grid issued a "Gas Deficit Warning", calling for additional gas to be made available to ensure sufficient supply during this day of peak demand. A forecast drop in gas pressure was averted as market players brought more gas onto the system and withdrew less gas from the system than was originally forecast. The data reveals that this peak demand was only marginally higher than that of the previous day (+4GW higher), but there was significantly increased demand between the hours of 10am and 3pm. With many schools and businesses closed, homes were occupied throughout the day leading to a greater demand for heating, as a result increasing the load on the system "considerably".

Morning Rush

The data also highlights the formidable challenge of delivering the necessary amount of gas to meet demand on winter mornings. Between the hours of 5am and 8am there was an immense increase in gas consumption – the steepest rise was recorded on 28 February with an increase of +116GW. However, this was by no means unusual – a quarter of all days during the 2017-18 heating season measured an increase in demand of +100GW between 5am and 8am. For comparison, the peak supply of the entire electrical system over 2017-18 heating season was 53GW, and the highest 5am to 8am increase was +16GW.

Dr Grant Wilson, UKERC Researcher said: "The sheer scale of the variability in demand was particularly surprising. It highlights another important challenge for the decarbonisation of heat and provides even more evidence of the wider system benefits of improving the energy efficiency of homes throughout Britain."

Such swings in demand naturally have cost implications for businesses in the short term given rising wholesale prices, and also a longer-term challenge on how to pursue heat decarbonisation.

UKERC

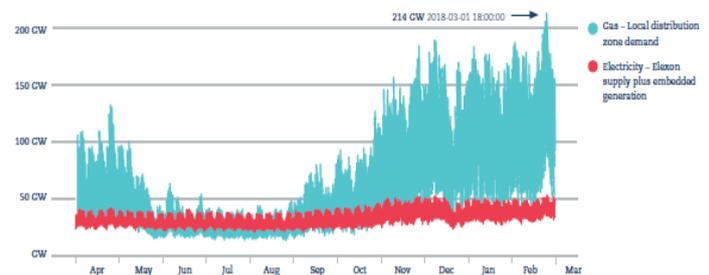
Business smart meter installations show a slight rise

Just over 1mn smart and advanced meters have now been installed by energy suppliers in small non-domestic sites.

Official statistics published on 30 August showed that over Q2 2018 17,400 smart and advanced meters were installed in smaller non-domestic sites by large energy suppliers. Of these, 12,100 were advanced meters and the rest smart meters. Advanced meters function much like smart meters, but with more limited functionality. The installation figures mean there was a small increase in non-domestic installations compared to the previous quarter. As at 30 June 2018, there were a total of 2.37mn meters operated by large energy suppliers in smaller non-domestic sites in Great Britain. Of these, 650,100 (69,000 gas and 581,100 electricity) were operating in smart mode, or with advanced functionality – representing over a quarter of all non-domestic meters in operation. The government is aiming for all domestic and small non-domestic properties to be offered a smart meter by 2020.

Government

Britain's hourly local gas demand and electrical system supply, 2 April 2017 - 6 March 2018



Source: UKERC



London Mayor commits to 2030 zero carbon buildings target

Mayors of 19 cities around the world, including London, have vowed to ensure all new buildings are carbon neutral by 2030.

The Net Zero Carbon Buildings Declaration was established by C40 – a network of cities committed to addressing climate change – and also includes a commitment to make all buildings, regardless of when they were constructed, carbon neutral by 2050.

Mayor of London Sadiq Khan said: “My strategy to improve London’s environment includes some of the world’s most ambitious targets to reduce carbon emissions from our homes and workplaces. This includes expanding my existing standard of zero carbon new homes to apply to all new buildings in 2019. We want to make London a zero-carbon city by 2050 and we’re working hard to ensure its buildings are energy efficient and supplied with clean energy sources.”

C40

Water firm expands renewable energy portfolio

Water supplier Severn Trent announced on 30 August that it had acquired renewable energy company Agrivert for a total investment of £120mn.

Agrivert UK has five well-established food waste anaerobic digestion (AD) plants and five green and comingled waste composting sites, located to the south and west of the Severn Trent region. The acquisition will add 106GWh/ year of energy generation to the 354GWh currently produced by Severn Trent’s broader energy and renewables portfolio.

Liv Garfield, Severn Trent Chief Executive commented: “Renewable energy is strategically important to Seven Trent and the UK as a whole as we work towards achieving our decarbonisation targets and delivering attractive shareholder returns. Agrivert UK strengthens our established presence in anaerobic digestion where we have been leaders in the water sector for many years.”

Severn Trent

International energy efficiency standard updated

The flagship International Standard for improving energy performance – ISO 50001 has been updated for the first time since its creation in 2011.

The International Organization for Standardization created the standard as a tool for allowing businesses to take a strategic view of how to improve their energy performance. Updates reflect updated terms and definitions and greater clarification of certain energy performance concepts. ISO 50001 also continues to offer a route to compliance with the mandatory Energy Savings Opportunity Scheme for affected organisations.

Roland Risser, Chair of the ISO technical committee added: “There is a stronger emphasis on the role of top management as well, as it is important to instilling an organisational culture change [...] It is also now aligned with ISO’s requirements for management system standards, making it easier to integrate into an organization’s existing management systems.”

ISO

Facebook aims for 100% renewable power by 2020

Having signed contracts for over 2.5GW of renewable power over the last year, Facebook is aiming to source 100% of its electricity across its global operations from renewable sources by 2020.

In 2015, the company set a goal of supporting 50% of its facilities with renewable energy by 2018. It achieved that goal a year early, reaching 51% clean and renewable energy in 2017. All projects are new and on the same networks as Facebook’s data centres, creating jobs, investment and a healthier environment.

Alongside the renewable power goal, Facebook has pledged to deliver a 75% cut in greenhouse gas emissions by 2020.

Facebook
