



## Highlights

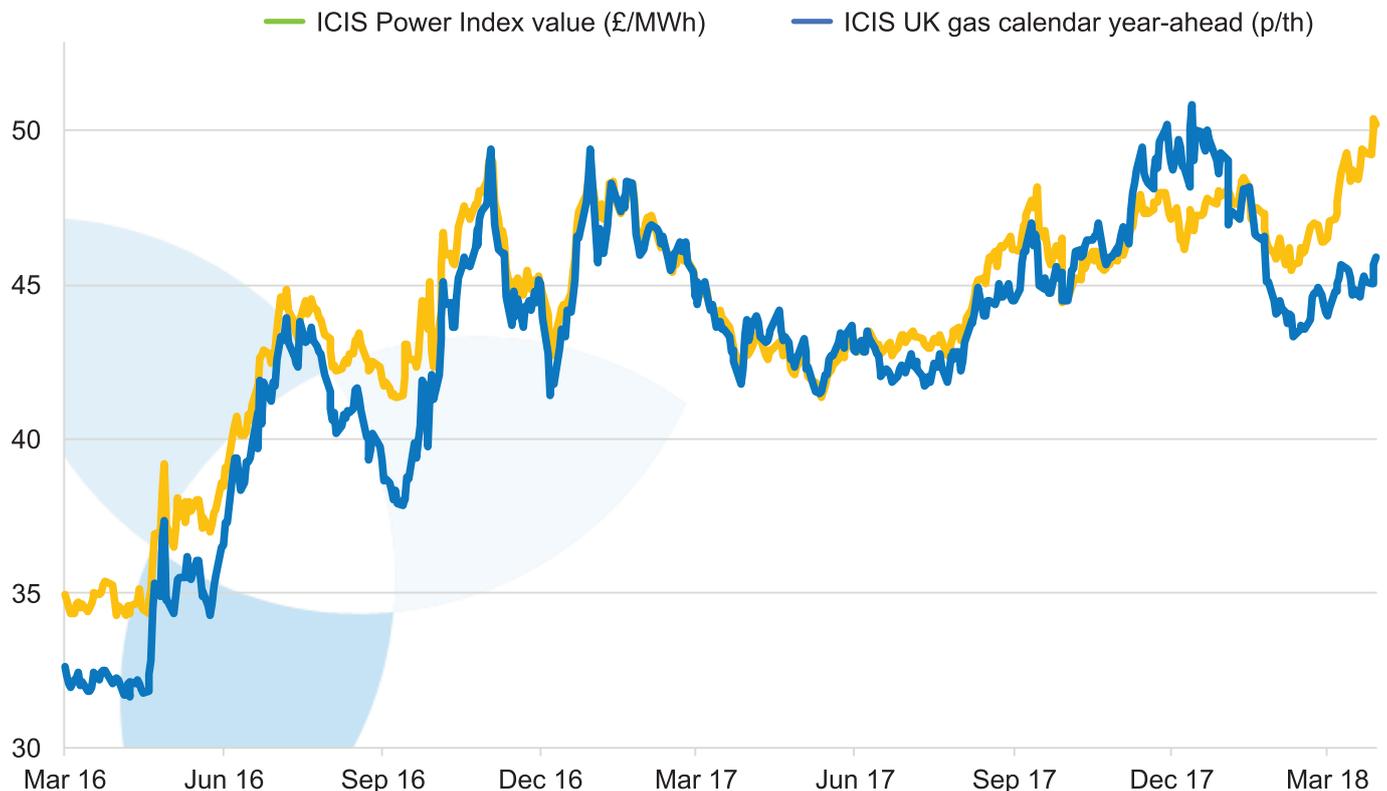
- UK wholesale energy prices hit four-year highs on the forward products most regularly traded by energy companies
- Wholesale rises have already been cited in recent days as a driver of household bill increases
- A number of supply problems combined with the 'Beast from the East' to increase fundamental risk in the markets
- Reform of the carbon market also raised the cost of emitting carbon from fossil-fuelled power plants over the long-term

## Long-term UK energy prices at four-year highs

Energy was being traded on the forward market in the UK at the highest price seen for four years in the first quarter of 2018, the ICIS Power Index (IPI) reveals.

Winter in the UK saw a number of supply and demand shocks that tested the resilience of the country's energy infrastructure, squeezed supply margins, drained stocks of energy held in storage and boosted the price of electricity and gas on the wholesale market.

A bullish global energy complex also boosted UK energy prices, with carbon credits particularly strong on the back of reform of the European CO<sub>2</sub> market, and crude oil and coal both gaining in value due to tightening long-term fundamentals.





With wholesale energy costs making up around 40% of a dual fuel household bill according to energy regulator Ofgem, UK energy companies will be under pressure to raise end-user bills going into the summer if they have not done so already.

And further pressure will be on smaller suppliers. This is because a number of small suppliers entered the UK energy market and won over swathes of new customers by offering low tariffs underpinned by what were historically low wholesale prices from 2014 to 2016. But the recent move into a higher wholesale price range will undoubtedly mean some companies will have to revisit their approach as low tariffs may no longer be sustainable.

### Price trends and household bills

The IPI ended Q1 2018 at just over £50/MWh. This was the first time since late-2014 the £50/MWh ceiling had been surpassed. This was up from a low of £33/MWh in early 2016.

The IPI tracks the price of electricity to be consumed in the UK for 12 months starting from the beginning of the season ahead, in this case, summer 2018 into winter 2018-19.

Setting similar multi-year highs, in late-December 2017, the price of gas to be delivered over the next calendar year rose to its highest level since early 2015. This retreated in Q1 2018 however mainly due to the delivery period rolling over to become 2019.

Although many of the bullish price drivers were short-term in nature, affecting the market during the winter, this can lift prices for energy to be consumed in the future as well. This is because storage stocks, such as stored gas and hydropower reserves, have to be drained to meet demand. This in turn means there is additional demand in the summer months as stores have to be refilled before the following winter.

The energy companies that supply British consumers with power and gas tend to lock in costs a year or two in advance, although a certain amount of energy is still traded on a shorter timescale, and some even further ahead. This makes it difficult to say when energy companies will raise – or lower – end-user bills, but a sustained increase in the wholesale price, as has been seen over this past winter, will generally lead to higher household bills at some point.

### Price drivers in depth

#### A major test for the UK electricity grid

The one certainty in wholesale energy markets is that nothing is certain, and winter 2017 proved no exception for UK power.

Energy demand is largely driven by weather, and is therefore mostly out of our hands. Supply, however, is still – for the most part – a man-made factor. But in winter 2017, man did not make it easy for himself, as a series of supply-side shocks ensured energy market volatility:

- France and Belgium experienced a second consecutive fourth quarter of faltering nuclear power, after an equally bad third quarter, due to regulatory issues linked to the extremely high safety requirements of the nuclear industry. This meant less power was available to export to the UK, while any surplus UK production was more likely to be exported to mainland Europe
- This was offset to an extent by the UK's capacity market which was operational for a full winter for the first time. The market ensures some power plants are available to turn on at short notice if required, for example, when supply unexpectedly fails elsewhere
- An explosion at a gas processing plant on Austria's Baumgarten grid in December triggered concern over the viability of UK gas imports from mainland Europe. As the price of gas rose, so did the cost of producing electricity at gas-fired power plants, so the cost of power rose too



- This was swiftly followed by an unplanned shutdown at the UK's Forties Pipeline Network in the North Sea after a hairline crack was discovered, which slashed production. This also triggered a short gas price spike which raised power prices

On the demand side, Q4 2017 saw only mild increases due to short bursts of below average temperatures, but no sustained cold spell. As winter rolled into Q1 2018, supply stabilised, while weak demand ensured an easing of fundamental risk.

### The beast

The real test was lying in wait however. By late February, an extreme cold front, labelled the Beast from the East, which had been tracked ominously by weather forecasters for a number of weeks as it made its way from Siberia to Europe, arrived over western Europe and the UK.

Coming at the back end of winter – one that had already seen its share of supply-side shocks – the extreme demand spikes saw Europe's and the UK's remaining energy stocks quickly diminish. This meant additional demand would be in the market for the coming summer due to the need to replenish dwindling stocks, hence the inflationary effect on the periods tracked by the IPI, pushing the ICIS index to its four-year high.

### UK in the Rough

Winter 2017-18 saw the British natural gas market exposed to its first serious supply shocks since the end of storage operations at what was the country's largest storage site, the Rough facility. The winter was the UK's first without Rough.

- In December 2017, the unplanned shutdown of the Forties Pipeline Network cut back North Sea gas production, so imports and storage withdrawals surged to compensate for the shortfall

- National Grid issued its first ever gas deficit warning on 1 March when the Beast from the East caused demand to spike and infrastructure to fail. Gas was dealt both on a very short-term, within-day basis at 350 pence per therm (p/th) and on a next-day basis at 280p/th. Both were all-time highs, ICIS data showed
- The system operator National Grid enforced stricter balancing rules, scaled back exit capacity and bought volume in the market to match supply with demand. It was also the first time in several years that National Grid had used operating margins gas. This refers to gas held in reserve at storage and LNG sites, only to be used in times of system stress
- The cold winter depleted storage stocks across Europe, leaving the market with its largest injection deficit of the decade and elevating forward products for delivery over this coming summer

### International energy commodities

#### European carbon

- Carbon prices surged in the first quarter of 2018 as Germany abandoned its 2020 emissions reduction targets and reform to the EU emissions trading scheme was finalised
- The reform aims to reduce an oversupply of EUAs from 2019 onwards, which European generators must purchase in order to emit carbon
- The long-term visibility this provides to the market attracted hedge funds and other financial players to take up long positions anticipating further gains
- EUA futures almost doubled in price in Q1 2018 alone, trading just below €13.50/tonne CO2 equivalent by the end of the quarter



#### Coal

- Coal prices started to rebound at the end of March 2017, having fallen earlier in the year, and climbed for the rest of 2017
- Prices surged in the second half of 2017, due to heatwaves and a major hydropower failure in China, the world's largest producer and consumer of coal
- A very mild January increased European coal stocks early in 2018, but demand picked up in February and March

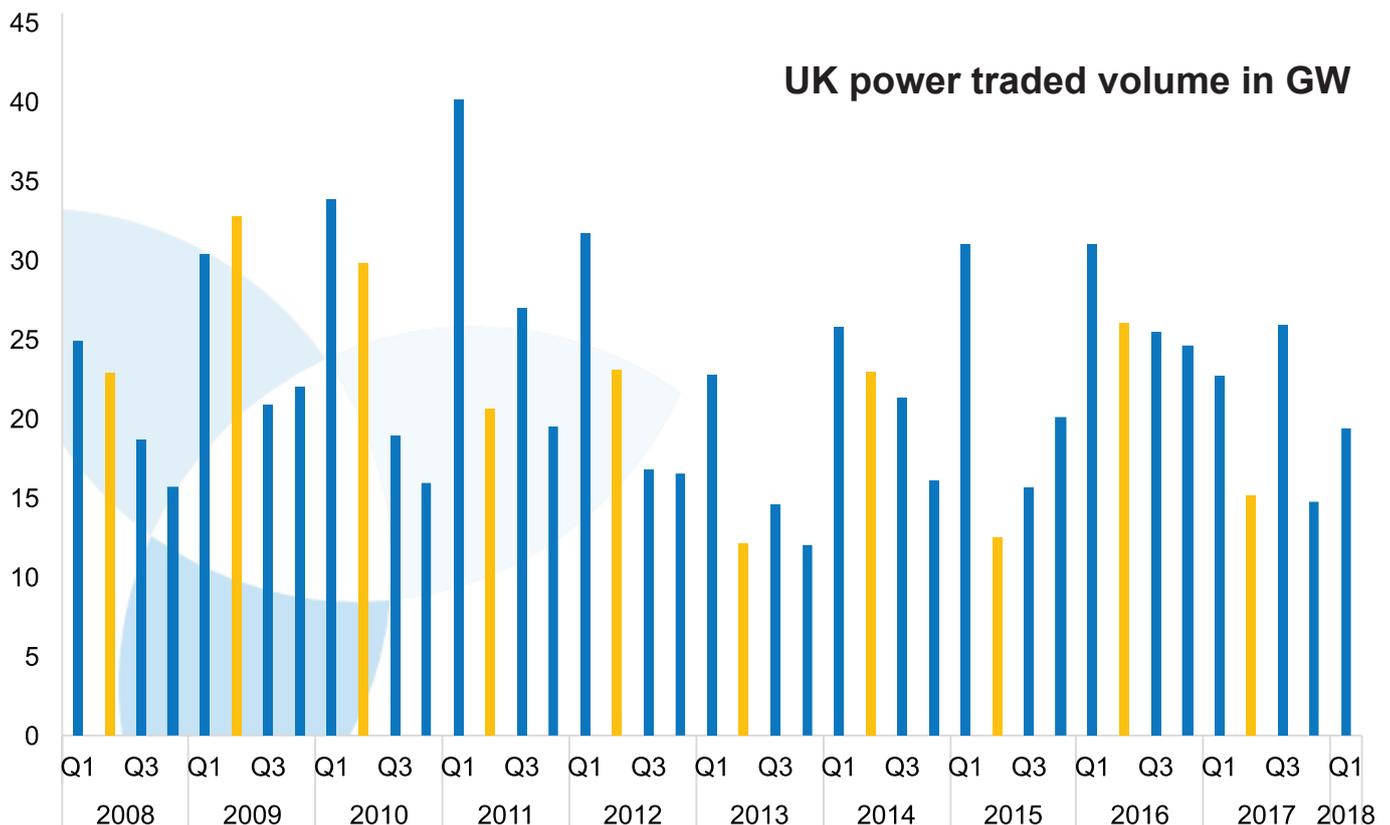
#### Crude oil

- Oil prices rose strongly throughout the second half of 2017 as an OPEC-led agreement to curb output underpinned the bullish trend
- US oil inventories weakened as demand in the key oil consumer remained high

- Exchange rate volatility led by the US dollar continued to move oil futures with net support overall as the American currency fell slightly, meaning more demand for oil from buyers backed by other, strengthening currencies
- Rising tensions between the US and Iran caused concern over possible oil supply disruption in the Middle Eastern country

#### LNG

- UK LNG imports fell by 11% year-on-year to 1.6 million tonnes in Winter 2017-18 as a result of lower supply from Qatar
- Q1 2018 LNG imports fell to 534,000 tonnes from 1m tonnes in Q1 2017
- Qatar's share of UK LNG supply fell to 70% this winter compared with 88% last winter





- The diversity of LNG supply broadened with three cargoes received from the Russian Yamal LNG plant
- The Welsh Dragon terminal received the first cargo from the US Cove Point plant in March
- UK LNG imports are likely to rise over the summer as demand falls from some premium Asian markets but will remain a small proportion of total consumed gas

## Outlook

The coming months should be a more relaxed period for the UK wholesale energy markets, although nothing can be taken for granted.

While Europe faces a major gas storage deficit, which will have to be pulled back over coming months, the loss of Rough on the UK's system means relatively less demand in the UK. This has already had the effect of easing UK gas prices for the summer, while lifting them for the winter.

On the power side, there is nothing to suggest fundamentals will not be comfortable through the summer, but that said, recent history has shown the UK is more likely to be caught short during shoulder periods. These are the months of lower demand linking winter and mid-summer.

The risk is that power generators will take assets offline for maintenance due to the assumption of low demand. But should demand spike for unforeseen reasons – for example 2016 saw a late-September heat wave, while this year's Beast from the East event came very late in the winter – the system can tighten and prices can spike due to the lack of generation availability.



## About the IPI

The IPI delivers independent insight into the complex world of wholesale power prices for both households and industrial electricity consumers, based on real market trading. The IPI is updated every working day and is freely available from the [ICIS website](#), along with ICIS' quarterly analysis of price trends and volume.

## About ICIS

ICIS is an independent price reporting agency focusing on global energy, petrochemical and fertilizer markets, and we have covered the complex UK electricity market for nearly two decades. Every day, we assess electricity contracts for more than 40 different delivery periods in the UK market alone. The analysis and data that we produce is widely used as a reference price in energy contracts.

It is our aim to give companies in global commodities markets a competitive advantage by delivering trusted pricing data, high-value news, analytics tools and independent consulting, enabling our customers to make better-informed trading and planning decisions.

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