



## Highlights

- Wholesale gas prices finished 2015 at six-year lows, and power prices at five-year lows. The price of gas for delivery over the next year fell by 34% over 2015 as a whole, while power fell by 23%.
- The Q4 period saw particularly heavy falls in gas and power values, as mild winter weather and more gas supplies coming to the UK brought prices down even further.
- Wind generation accounted for more UK electricity demand than ever before, at 9.4% of the total.
- Market participants expect UK wholesale energy prices to remain weak, as commodity market sentiment and gas oversupply keep prices low. However, the ongoing price pressures give little incentive to invest in further infrastructure.

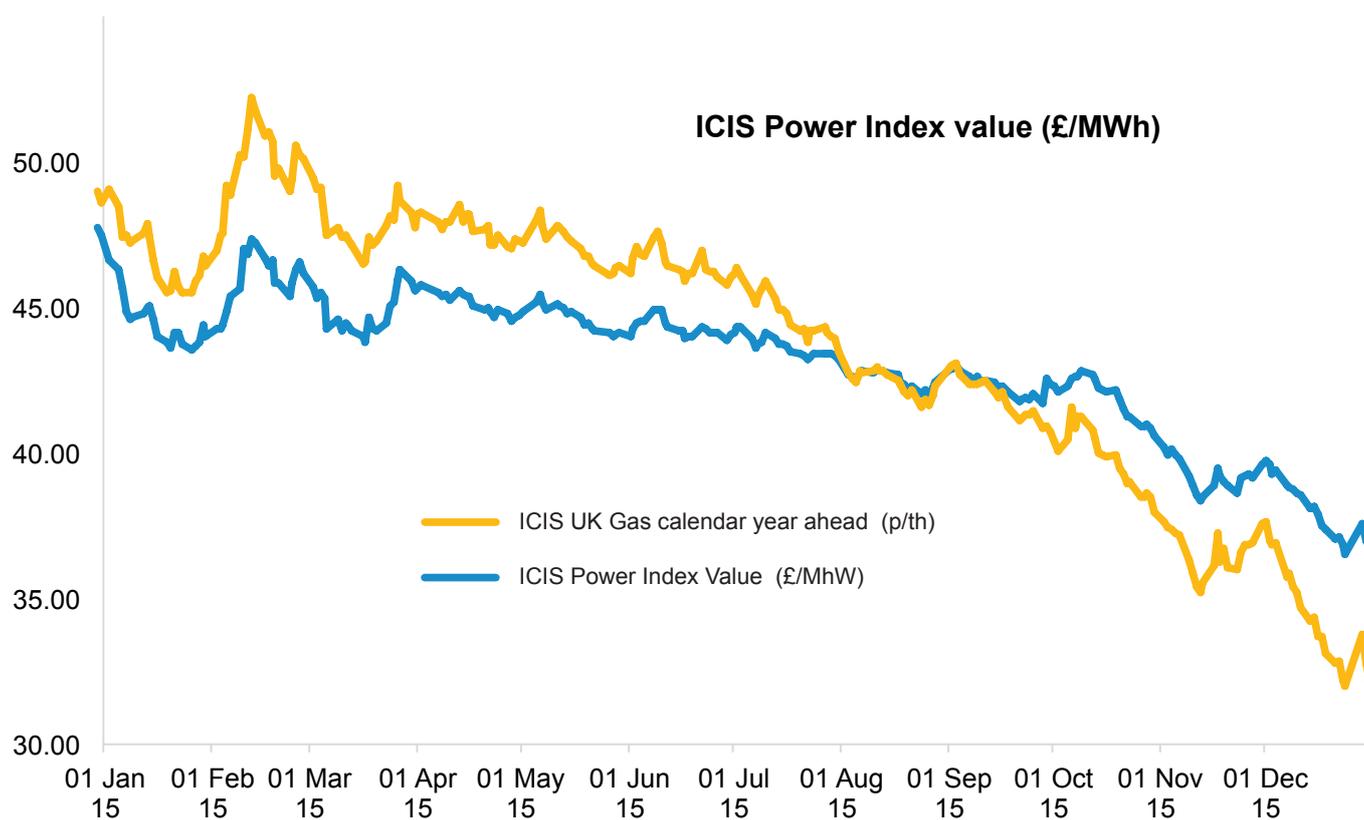
## Price moves

The falls in the oil price pushed UK power and gas values down further. The price of gas to be delivered the following year fell by 34% over the year as a whole, and values are now at their lowest point since 2009, reaching 32.0 pence per therm (p/th) on 24 December.

Power prices continue to lose less than gas, however. The ICIS Power Index (IPI) lost 23% of its value over the year, and electricity prices hit a new five-year low at £36.524 per megawatt-hour (MWh).

The pace of decline was sharpest in the fourth quarter for both gas and power, with gas ending 2015 at 32.15p/th, down 20% from the end of Q3. The IPI finished 13% lower, at £36.764/MWh.

In terms of average prices over the quarter as a whole, the Q4 2015 average gas price was 37.0p/th, down 14% from Q3, while the average Q4 IPI value dropped 7.2% to £39.77/MWh.





### Underlying price trends

#### Oil price still falling

Both gas and power in the UK were affected by the plunge in the oil price over 2015.

Brent crude oil lost more than a third of its value last year, and ended 2015 near its lowest price in 11 years, hitting \$36.17/bbl on 21 December, well below the lows seen during the recession of 2008.

Values have fallen even further in the early days of 2016, and stand near 12-year lows at the time of writing.

Oil as a measure of the macroeconomic environment has reflected lower demand for fossil fuel usage globally. This is partly because of greater energy efficiency, and more emphasis on cleaner forms of energy, including in the developing world. For example, China's coal use is forecast to come down after 2020 with environmental concerns.

Market sentiment has also been affected by concerns over major economies such as China. In addition, OPEC's continued production at around 30 million barrels per day despite the falling price has increased concern about oversupply, widely regarded as an attempt to squeeze the profitability of US shale oil production.

In recent days, the increased tension between Saudi Arabia and Iran make cooperation within OPEC to cut production less likely.

The falling oil price has also had a more direct impact on the price of gas supplied under long-term contracts, where gas is sold on the basis of the average Brent crude oil price over the previous six to nine months. Over time, lower prices bring down the long-term average, which means the price of gas supplied under contract becomes increasingly cheap.

Although this system is used little in the UK, some continental European buyers still procure their gas in this way. This can then impact UK gas prices because the markets are linked by two pipelines.

As continental gas buyers see their prices fall because of the plunge in oil, UK buyers can lower their prices, as they only need to remain marginally more competitive to guarantee imports from Europe.

Another macroeconomic factor that has helped to keep UK gas prices lower is the changing currency rate. European buyers using euros have found their buying power eroded over the year. Early in 2015, €1.00 bought £0.795-worth of gas, but the year ended at £0.739 – even dipping as low as £0.701 in July.

#### Oversupply

Gas prices remain under pressure from an influx of liquefied natural gas (LNG) shipments, with most of them bringing Qatari gas into Britain's South Hook terminal. The amount of cargoes attracted to the UK's gas market has also increased over the year, and is expected to rise further.

For 2015 as a whole, data from ICIS' LNG Edge tracking and analytics platform shows 103 cargoes coming to the UK, compared with 84 over the previous year – a rise of 22%.

But the rate increased towards the end of the year – in Q4, the number of cargoes was 55% higher year on year, with 31 cargoes coming to the UK.

Demand for gas elsewhere in the world has fallen, such as Japan and South Korea, so cargoes that are not contracted to a particular destination are coming to the UK.

The UK gas market is likely to continue to appeal to global sellers, as more LNG production is expected onstream in 2016. The US is expected to export its first LNG ever in January, although this volume is unlikely to come to the UK. Nevertheless, the extra production will add to the global glut, which in turn could lead other cargoes to be diverted to Europe.

#### Low gas demand

The total amount of gas consumed in Britain rose for 2015 as a whole, up 4.9% from 2014 to 83.2 billion cubic metres (bcm), according to daily



demand expectations from National Grid. However, 2014 itself was a year of low demand, at 79.3bcm – compared with an average of 85.8bcm for the last five years.

The rise in demand was not enough to offset expectations of future oversupply, so gas for delivery in 2016 lost value.

Prices were pushed down further with low demand at the end of the year, when mild temperatures meant that households' need for gas fell during the warmest and wettest December in more than 100 years. Domestic demand for gas used in cooking and heating was the lowest in Q4 since 2009.

## Power

Power generation volumes in the UK continues to fall, down 5% for the year as a whole.

The generation mix is also becoming cleaner, encouraged by the UK carbon price support scheme, which taxes fuels for power generation at a rate of £18.00 per tonne of carbon dioxide generated.

This affects coal-fired generation most strongly, because burning coal emits more carbon dioxide than gas. Therefore the proportion of gas-fired and nuclear generation have risen year on year.

	2015 production (TWh)	Year on year production change	2015 proportion of production	Q4 2015 production (TWh)	Year on year production change	Q4 2015 proportion
Gas	84.3	-2.8%	29.1%	22.8	2.2%	30.1%
Coal	74.6	-22.8%	25.8%	16.7	-38.3%	22.1%
Nuclear	65.8	10.2%	22.7%	17.6	32.6%	23.3%
Wind	23.5	11.1%	8.1%	7.1	2.2%	9.4%
Others	41.1	9.8%	14.2%	11.5	17.9%	15.2%
<b>Total</b>	<b>289.3</b>	<b>-4.1%</b>	<b>100.0%</b>	<b>75.7</b>	<b>-4.6%</b>	<b>100.0%</b>

Source: Elexon

The amount of gas in storage going into Q4 was comfortable, with stocks at around 70% of capacity, and there has been little need to draw gas out of storage since then, so levels increased to almost 80% in November. Storage levels usually start falling during Q4.

With plenty of spare gas to draw on, market participants consider that any short-term rise in Q1 demand could easily be met with reserves, so there is less risk of having to buy at high prices to fulfil customer needs.

Gas-fired generation is also flexible, and used to meet variations in demand. This means that the price of gas still has a strong influence on power, because higher electricity prices incentivise gas-fired plants to turn on, to provide the additional generation needed.

This is why the UK government introduced a capacity mechanism under its Electricity Market Reform, to make sure that there is enough supply to meet demand. Electricity generators take part in an auction to receive capacity payments, with bids descending so the amount of capacity needed is secured at the lowest price possible. But successful generators will not see the first payments under the scheme until the winter of 2018/19, so there are still two years of tighter supply ahead.



### Additional renewables

The share of gas-fired generation could have been even higher, but the share of renewable generation has increased in recent years, as more wind and solar capacity has been installed.

Falling gas prices have played their part in lowering the IPI, while increased quantities of renewable generation connecting to the grid have also contributed to losses.

Typically, gas-fired power plants account for around 30% of the UK's total gas usage over a year, but more wind and solar generation is pushing the wholesale value of electricity lower, which reduces the profitability for gas-fired generators.

Low operating costs for solar and wind generation reduces the value of wholesale electricity.

### Supply margins

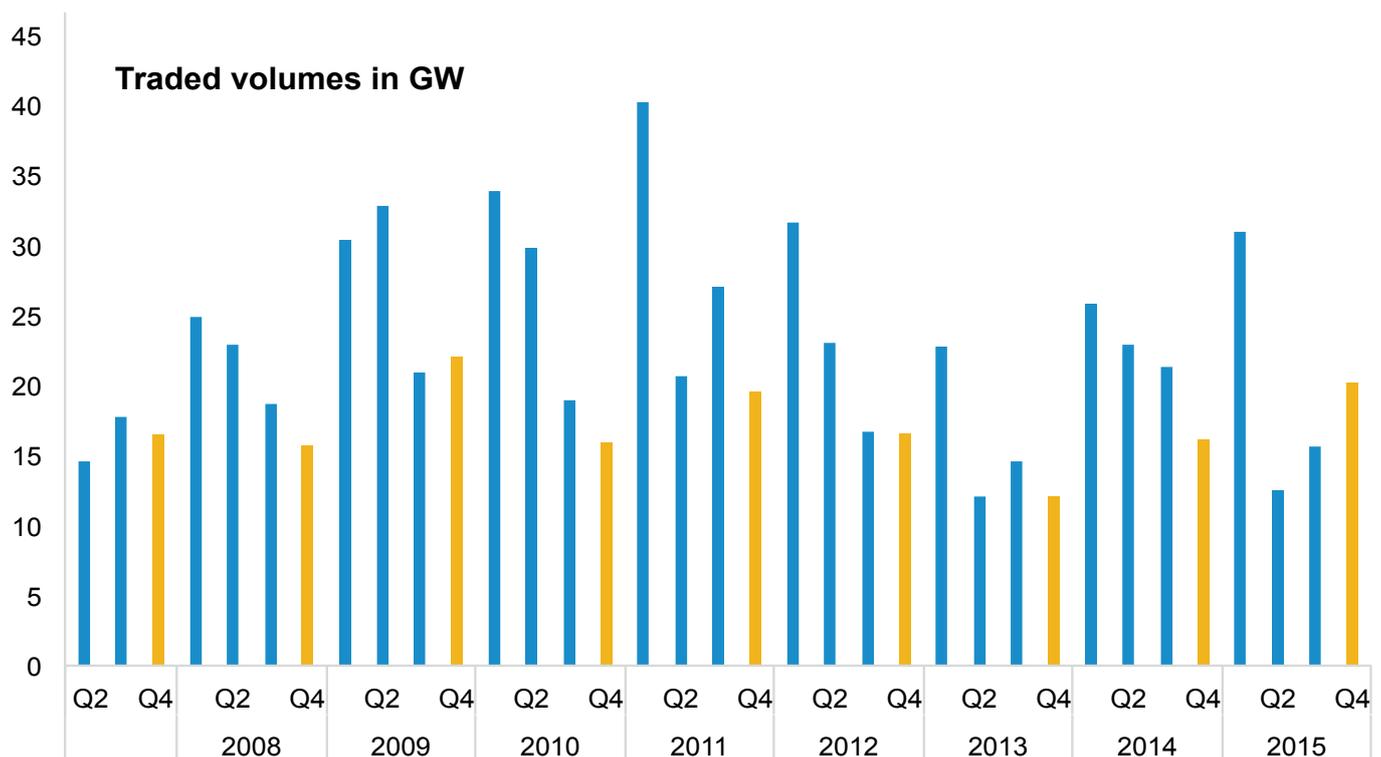
Power prices have fallen because of the influence of fuel prices, but electricity values have lost less than gas.

One reason is that there is less oversupply. In fact, data from the UK electricity market operator Elexon expects that there will be less generation capacity available to cover demand for the winter of 2016/2017 than currently, with some weeks at the end of 2016 forecast to see more demand than supply during certain times.

Low electricity prices have led many unprofitable plants to cease production to avoid further losses, and this has reduced the amount of generation in the market. For example, 5.4GW of coal-fired capacity will close by the end of March because of low prices – equivalent to 10% of the UK's total peak demand.

### Liquidity

Traded volumes making up the IPI for Q4 reached their highest level since 2009, in a pleasing development for UK energy regulator Ofgem, which has been keen to boost the amount of trading activity in the UK electricity market. Volumes reached 20.2GW.





### Outlook

Market participants expect wholesale gas and power prices to remain low in 2016.

- Gas oversupply looks set to continue as new LNG liquefaction capacity, most importantly in the US and Australia, comes on stream. Traders expect most of the new volumes to make their way to Europe, as the global LNG market is already oversupplied and Britain especially has plenty of regasification capability.

The trend is expected to last longer-term as well, with global LNG production capacity forecast to increase by more than 50% from 2015 to 2020. Sellers are hoping that gas will continue to replace coal for power generation.

- Commodity market sentiment also remains bearish, with tensions between OPEC kingpins Saudi Arabia and Iran making production cuts less likely to happen.

Iran is expected to commence selling a new grade of crude as soon as March or April once international sanctions against the country are lifted, exacerbating the global glut in oil, while analysts estimate a rising US dollar and any further devaluation of China's yuan could pressure oil prices further.

Coal prices are also expected to continue to fall, with miners reluctant to take mining capacity offline.

- Increased quantities of renewable generation are expected to enter the system this year, with 1.2GW of onshore wind set to be installed, adding to 13.6GW of onshore and offshore wind capacity already installed, according to latest RenewableUK figures. Solar capacity is also set to increase, which brings down electricity prices in the middle of the day, which were previously some of the most profitable times to generate with higher demand.

- However, electricity market prices may remain higher than gas, because of the questions over whether there will be enough generation to meet supply. Much will depend on weather forecasts, as milder than normal temperatures this winter have suppressed demand and kept the market oversupplied. Power prices for delivery in Winter 2016/17 remain high, but long-term expectations continue to show falling prices, with power delivered in Winter 2017/18 and Winter 2018/19 expected to be cheaper again.
- Ongoing low wholesale prices give little incentive for private companies to invest in the UK's energy infrastructure. The low power price has led to concerns over supply meeting demand, leading to the UK government stepping in with subsidies for generation to stay online, with the capacity market.



### About the IPI

About ICIS The ICIS Power Index (IPI) gives homes and businesses an insight into price trends on the UK wholesale electricity market.

Robust energy markets are vital to the UK economy, and the IPI makes electricity price trends and activity more visible and accessible to household consumers and commercial buyers, as well as media and policy-makers.

The IPI is published daily by ICIS, an independent authority on UK electricity market pricing, and is available at:

[www.icis.com/energy/electricity/icis-power-index/](http://www.icis.com/energy/electricity/icis-power-index/)

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.

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