



Highlights

The ICIS Power Index (IPI) has fallen to multi-year lows in the first trading days of 2015, showing how much power prices have fallen in recent years.

- Wholesale electricity prices reflected in the IPI finished 2014 11% lower than the end of 2013. This trend accelerated in Q4, when the IPI fell by 8% in the month of December.
- The main reason for falling electricity prices was a glut of gas in the UK market, both from high storage levels and increased liquefied natural gas (LNG) imports, a trend that is expected to continue into 2015.
- UK generation capacity concerns have supported power prices, so electricity prices have lost less value than gas. The UK government's concern to ensure enough spare electricity generation to deal with high demand led to a capacity auction in December, ensuring payments for plants that may otherwise have closed. However, this auction is not expected to affect wholesale contract prices on which the IPI is based for another two years.

Price moves in 2014

The trend for power prices in 2014 as a whole has been firmly downwards, and the fall in value gathered more momentum in Q4.

The IPI averaged £50.064/MWh over the whole of 2014, compared with £44.627/MWh on 8 January, its lowest level since calculation from 2011.

The highest value for the IPI in 2014 occurred on 2 January, reaching £52.866/MWh, while the lowest occurred on 10 July at £46.373/MWh – however, this low was surpassed early in 2015, when the IPI fell to £44.627/MWh on 8 January, its lowest level since calculation from 2011.

Gas oversupply

The key driver for 2014 has been lower gas prices, despite geopolitical tensions.

Much of the year was dominated by oversupply of gas, both with high storage levels and more liquefied natural gas (LNG) diverting to the UK.

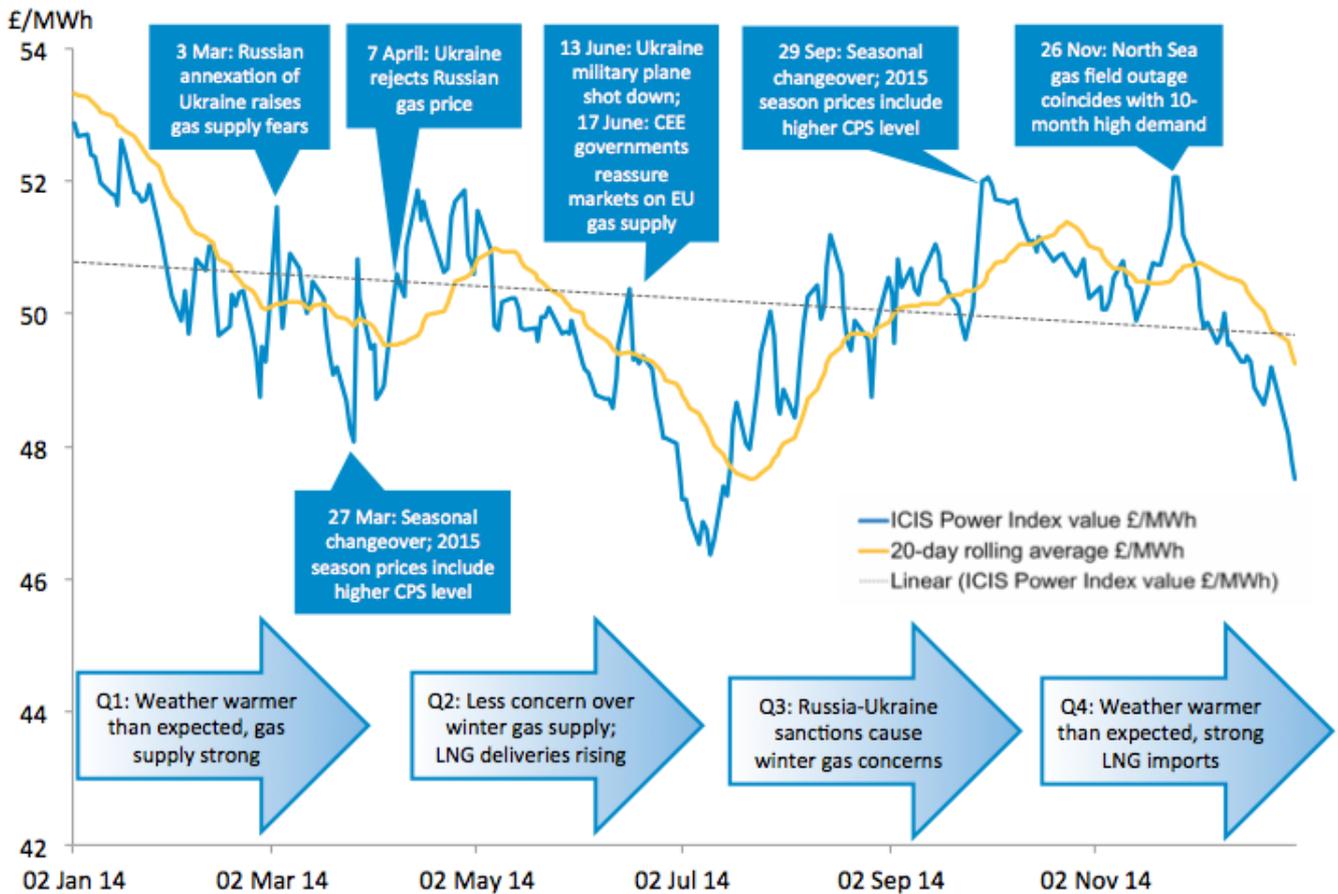
Gas is the most price-sensitive form of electricity generation, because gas as a fuel is usually more expensive than coal and plants are more flexible, so gas-fired generation only turns on when the price is high enough. As a result, gas prices are usually the strongest influence on power prices.

Warmer than average winter weather at the start of the year left more gas in storage after the winter than usual – UK storage capacity was 56% full in mid-April 2014, compared with 4% a year earlier after a late cold snap. More gas in storage than expected reduced the risk of a shortage in the event of a supply disruption, so prices for forward delivery lost value as participants were willing to sell any surplus.

In addition, extra LNG supply started coming to the UK, as demand from higher price environments such as Asia and South America has fallen.

A significant proportion of LNG production not locked into multi-year supply contracts has been shipped to Asia, where Japan in particular has needed gas for power generation, after turning off its nuclear plants in the wake of the radiation leak at Fukushima in 2011. In recent years, LNG has been in demand elsewhere as well, with droughts in Brazil affecting hydropower production, for example.

But northeast Asian demand fell this year with a warmer winter, leaving higher stock levels, which has meant more LNG cargoes from the Middle-East coming to Europe instead of Asia. LNG imports accelerated in the second half of the year in particular – the latest UK Customs data shows that between July and October, LNG imports rose by 34% year on year, and the trend continued into November and December.



Source: ICIS Power Index (www.icis.com)

Falls in crude oil prices have also impacted long-term gas values, as some long-term supply contracts still include a link to the price of oil. The cheaper the gas that companies buy under these long-term contracts gets, the less likely they are to buy gas in the wholesale market, which adds to downward pressure to prices.

Russia-Ukraine tensions ease

Both high storage levels and LNG volumes were heavily bearish for UK gas prices. But tensions between Russia and Ukraine boosted prices, as

market participants acted to buy in what they might need just in case.

Any interruption in Russian gas supplies to continental Europe would have an impact on the UK market, even though Russia does not export directly to the UK. Russia provided about half of Ukraine's gas consumption in 2013, but only a third last year, and the market was concerned that Ukraine would be unable to replace Russian volumes from domestic production and European imports if supply was cut for any reason. In that event, transit volumes of Russian gas to Europe via Ukraine could be affected, and continental Europe would

have to import from other sources, potentially including the UK.

Tensions were highest during Q2 and Q3 last year, and events related to the conflict accounted for some of the most significant price rises during 2014, including Russia's incursion into Crimea in March and EU sanctions activity against Russia in Q3. But tensions eased in Q4, as Russia signed an agreement at the end of October to resume supply to Ukraine. The deal was made as part of trilateral negotiations including the EU. Russia began flowing gas to Ukraine in early December, after receiving payment in advance for volumes.

Wholesale gas prices lost value to reflect the lower risk of supply disruption, and the lower fuel costs caused power prices to fall as well.

In November, a reminder emerged that Russia is not the only source of supply that might be disrupted, with outages hitting Norway's Asgard, Troll and Skarv fields in the North Sea and an outage on the SAGE pipeline importing British gas production.

Norway is the UK's largest main source of gas imports, providing almost 40% of UK demand in 2013.

These disruptions coincided with higher demand because of colder weather, causing gas prices to spike, and the effects were also evident on power prices, reflected in the IPI.

Electricity supply margins

However, gas prices have lost more value over the year than electricity prices – gas prices for delivery during 2014 ended the year 27% lower than the equivalent contract in 2013. By comparison, the IPI ended 2014 11% lower than the year before.

While there has been plenty of gas for 2014, the electricity surplus has appeared rather less comfortable.

Electricity storage is inefficient, and not as extensive or immediate as gas particles stored in a tank, so generation must be available to match demand at the time when it is needed.

In recent years, the UK has lost generation because of the EU's Large Combustion Plant Directive, requiring older plants with higher emissions to either upgrade or close down. In 2014, at least 1.5GW was removed from the grid to comply with this directive.

In addition, low profitability has caused some power plants to be 'mothballed' in recent years, or taken offline until market conditions improve, as the alternative is to run at a loss. More renewable generation has squeezed out opportunities for gas-fired plants to respond to higher prices, as the demand is now met by increased wind and solar.

So the UK's power plant availability was expected to be tighter than it has been for some years for winter 2014-15, with British transmission system operator (TSO) National Grid forecasting in October a margin of 2.3GW during an average cold spell.

National Grid has responded by bringing in new measures to make more generation available to the market. It brought forward its new supplemental balancing reserve mechanism to 2014 instead of this year, to encourage power plants that have been closed to generate to meet extra demand during peak times on weekdays. The TSO also ensured more capacity with its demand side balancing reserve, encouraging industrial and commercial users to reduce demand, and these two measures raised 1.1GW of extra capacity. In addition, a 460MW nuclear unit originally scheduled to close at the end of September has been cleared by the Office for Nuclear Regulation to extend operations until the end of 2015.

Then in September, several large nuclear units had unexpected outages, and more of the UK's coal-fired fleet was offline than usual, so margins were expected to remain tight at times of peak demand. As a result, market participants were reluctant to sell electricity contracts for delivery during winter, particularly as margins were forecast to be even tighter for winter 2015-16, and this has supported prices.

However, concerns eased in Q4 as many of these plants have since returned to service, and forecasts for winter temperatures became more certain, which in turn has led to values for electricity for delivery next year coming down.

Capacity market

The government has responded to the challenge of making sure that the UK has enough electricity generation with a capacity auction in December to pay generating plants a supplement to market prices in return for remaining online.

The capacity market is unlikely to affect the price of electricity that is bought and sold on the wholesale market for delivery to households for several years, as most electricity is traded one or two years ahead, and capacity payments will not start until 2018.

However, while some plants have been given more certainty, there are concerns that plants missing out on these payments may decide to close before that time – so more uncertainty could come.

Carbon price support

One long-term factor that has prevented electricity prices falling as far as gas is the UK's carbon price support (CPS) policy. The policy aimed to give low-carbon generation an advantage, and ceases to apply when the EU emissions price reaches a certain price.

Unlike other policies aimed at long-term environmental benefits, the CPS is factored into the wholesale energy portion of retail bills, rather than as a separate charge, because the levy is charged on fuel used to generate electricity.

However, at current emissions prices, the price support means that UK generators pay 60% more for the carbon dioxide they generate than generators paying the EU emissions price alone.

The IPI shows the impact of the policy on electricity prices, because the CPS rises over time.

Wholesale power delivered from 1 April 2014 had an extra £9.55 to pay per tonne of carbon dioxide emitted (tCO₂e) – but from 1 April 2015, this levy increases to £18.08/tCO₂e. This rise has been responsible for two of the three largest single day-on-day increases in the IPI during 2014.

The CPS level for the contracts on which the IPI is

currently calculated means that 80% of the profit margin from burning gas to generate electricity is used by emissions costs, and 70% for coal-fired generation.

However, despite the increasing CPS level, wholesale power prices have continued to fall, indicating that these costs are being absorbed by the market.

Long-term price trends

The downward price trend for wholesale power is expected to continue. Greater energy efficiency has led to households using 9% less energy in 2013 than they did in 2000, resulting in less demand and therefore softer prices. Renewable generation has also increased over the last year – which pushes wholesale power prices lower, because renewable electricity generators receive subsidies to generate as much green energy as possible, to save emissions. Operational costs for renewables are also negligible compared to conventional generation.

Wind generation provided 9.3% of the UK's generation last year, according to RenewableUK, up from 7.8% in 2013.

The extra generation is meeting more of the UK's total demand, so the market price for conventional generation is falling.

Measures to increase energy efficiency are paid for as a separate section of the retail bill, and these costs are rising, although this is offset by falls in the wholesale price section of the bill, a trend that is expected to continue.

Traded volumes in 2014

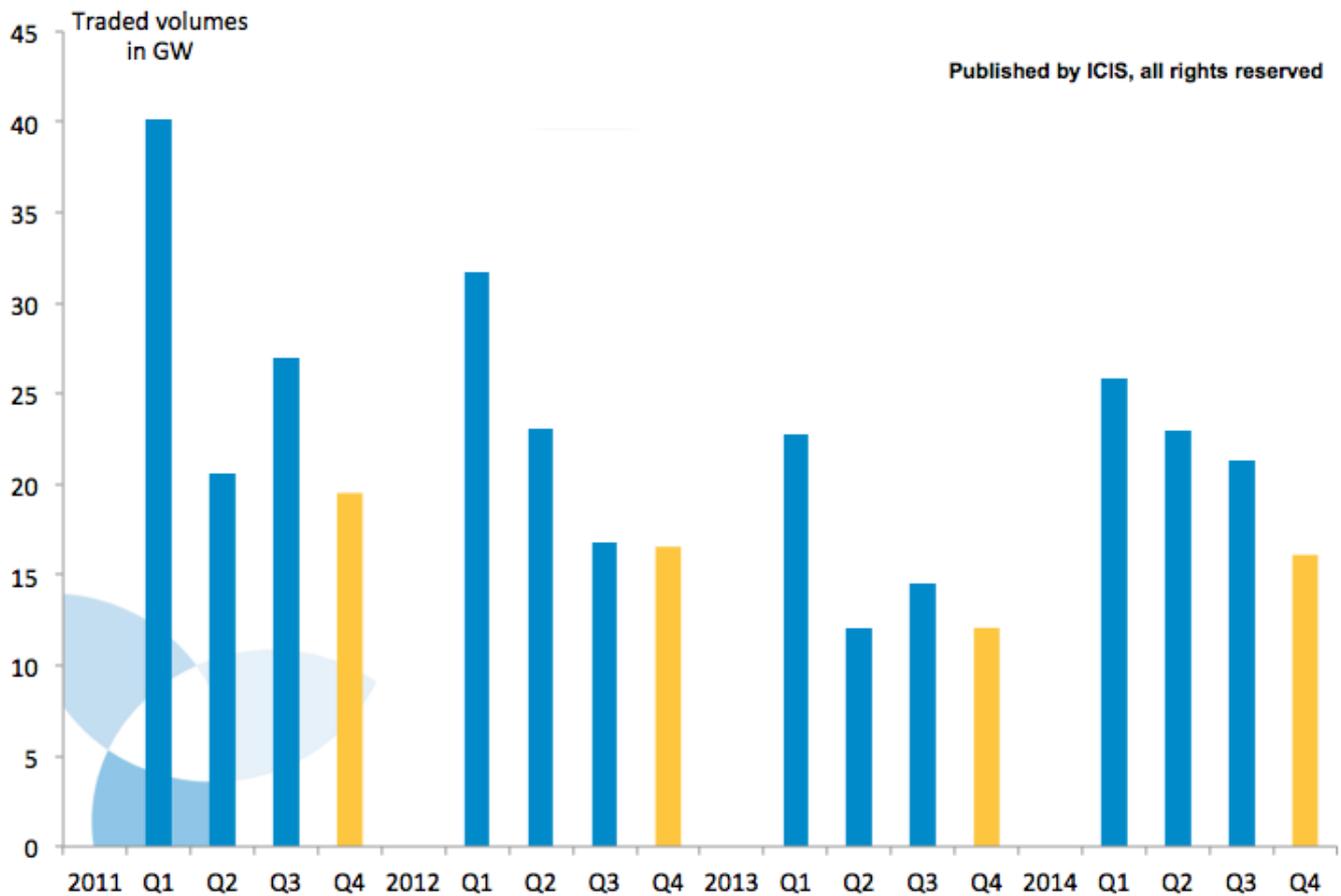
Q4 traded volumes for wholesale contracts used to calculate the IPI show that trading activity once again increased year on year, rising by 33% to 16.1GW. Q4 volumes are typically the lowest of the year, in part due to the holiday period in December, and the rise in trading was less marked than other quarters this year.

However, 2014 as a whole marks the first rise in traded volumes since 2012.

Strong trading volumes are important, because

without electricity being made available to buy or sell, new participants cannot get involved in trading, and price signals are weaker.

British regulator Ofgem has aimed to address falling volumes with a mandatory market-making obligation (MMO) on the largest market participants from April. This requires the biggest utilities to make power available to both buy and sell within two trading windows during the day. However, IPI data shows that traded volumes began to rise at the beginning of 2014.



Source: ICIS Power Index (www.icis.com)

Outlook for 2015

The bearish trend for electricity prices is expected to continue this year, according to current market valuations.

Key factors include:

- LNG imports into the UK are expected to increase, with more flexible LNG volumes available and looking for a market.

Global LNG production is set to rise next year, with some new Australian liquefaction capacity already online and more to follow next year. The first of several US mainland projects is also due to begin production in 2015.

Some of this LNG is already secured under multi-year contracts, but with more Australian LNG flowing to Japan, the non-contracted or 'flexible' cargoes that Japan and Korea were previously buying are likely to remain in the Atlantic Basin, with the UK as a likely market.

- Renewable generation capacity is expected to rise further. The only sizeable new capacity expected to come online in 2015 is wind generation, with at least 430MW of offshore wind developments scheduled to supply more power to the grid. The financial support for renewable energy is ongoing as part of both the UK and EU drives to reduce emissions, ensuring renewable energy generation continues to be profitable.

The additional capacity will depress whole sale prices further over the long term with more supply, but will also increase the volatility of short-term prices, as other forms of generation must adapt to take account of intermittent production.

- Gas prices have also come under pressure from falling oil prices, and the global oil oversupply is expected to continue in 2015. Other price drivers such as coal and carbon emissions prices are expected to remain low, with coal prices falling heavily over 2014 and oversupply on the EU emissions trading system.

However, this trend could reverse if there is a threat of the current supply-demand situation changing significantly. Key factors include:

- Unseasonably cold weather increasing demand in Q1. This would likely increase both gas and power prices delivered over the next year, but electricity margins are particularly narrow this winter, and any suggested supply shortage would hit power particularly hard, causing prices to spike.
- Unplanned outages, either for gas or power infrastructure. UK nuclear outages at the end of September caused power prices to spike, while North Sea gas field outages were an alarming prospect for participants and caused a similar reaction for both gas and power. Unplanned outages of any duration would typically boost prices as traders seek to cover their obligations, and as above, electricity supply margins are at their tightest in some years.
- Geopolitical tensions affecting gas supply. The current tripartite agreement between Russia, Ukraine and the EU is expected to last into March next year, but tensions between Russia and Ukraine are not resolved, and traders will watch carefully for any sign of hostility that could upset the fragile status quo.



About the IPI

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:

<http://www.icis.com/energy/electricity/icis-power-index/>

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, analysis and independent consulting, enabling our customers to make better-informed trading and planning decisions. With a global staff of more than 800, ICIS has employees based in Houston, Washington, New York,

London, Montpellier, Dusseldorf, Karlsruhe, Milan, Mumbai, Singapore, Guangzhou, Beijing, Shanghai, Yantai, Tokyo and Perth. ICIS is a division of Reed Business Information, part of Reed Elsevier Plc.

About Reed Business Information

At Reed Business Information we provide information and online data services to business professionals worldwide. Customers have access to our high-value industry data, analytics, information and tools. Our strong global brands hold market-leading positions across a wide range of industry sectors including banking, petrochemicals and aviation where we help customers make key strategic decisions every day. RBI is part of Reed Elsevier, a leading global provider of data, information and solutions for professional customers.

About Reed Elsevier

Reed Elsevier is a world leading provider of information solutions for professionals. We help scientists make new discoveries, lawyers win cases, doctors save lives, corporations build commercial relationships, insurance companies assess risk, and government and financial institutions detect fraud.

Contacts

Zoe Double, Head of Power, ICIS

Email: zoe.double@icis.com

Jamie Stewart, European Daily Electricity Markets Editor, ICIS

Email: jamie.stewart@icis.com

Telephone: +44 (0) 207 911 1920

Analysis and related material are published by ICIS, all rights reserved