



Highlights

- The ICIS Power Index (IPI) rose to 17-month highs at the end of the third quarter with concerns over power supply shortages in the UK and France for winter 2016.
- Average power and gas prices saw their strongest rise in five years, as the average value of the IPI and gas prices for delivery over the next year during Q3 2016 rose by 13% from Q2.
- Power prices remained strong throughout the third quarter. Gas prices initially fell as concerns over storage availability eased, but rose in September as higher power prices were expected to boost demand for gas-fired generation over the winter.

Price trends

Power supply concerns drove the ICIS Power Index (IPI) to its highest level since May 2015 in the third quarter, reaching £45.103 per megawatt hour (MWh). Concerns over the UK's tight supply margin was made worse with nuclear maintenance in France, the UK's largest source of electricity imports.

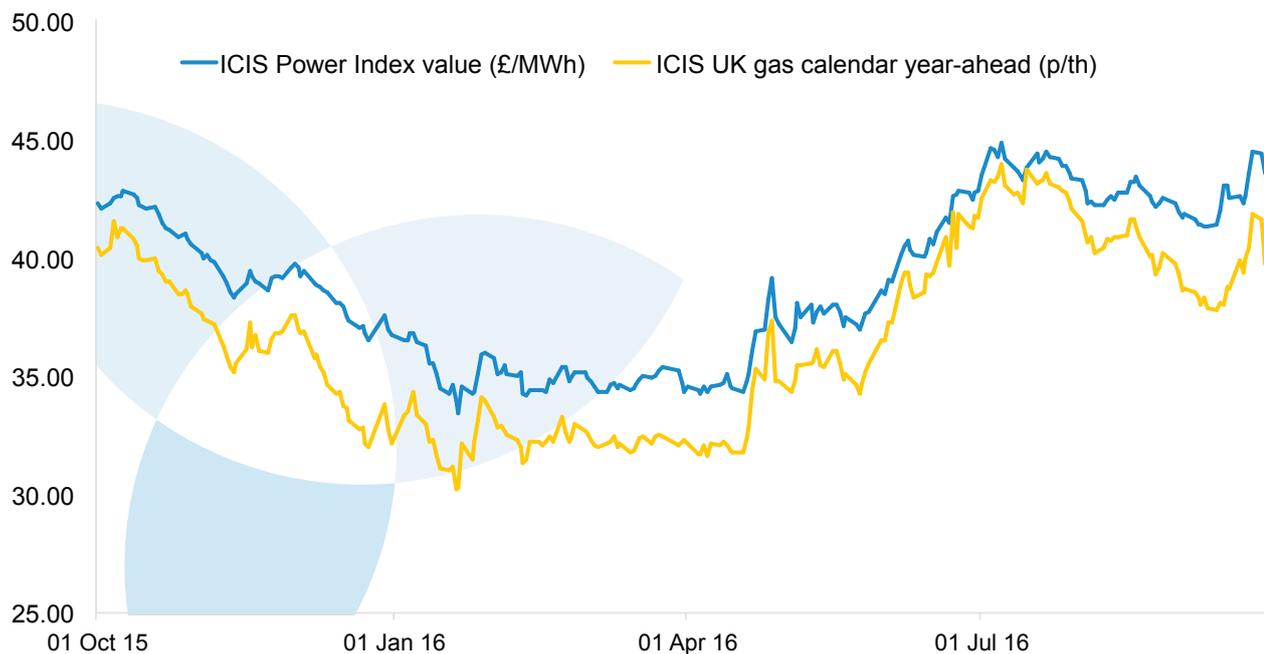
The average value of the IPI for Q3 2016 was £43.06/MWh, the highest quarterly average since Q2 2015, as traders factored in the potential for price spikes. The IPI average was 13% higher than the previous quarter, the strongest quarter-on-quarter rise in six years.

The quarterly average for gas delivered over the next year also rose, at 40.978 pence per therm (p/th), up 13% quarter on quarter.

But while electricity prices rose year on year, with the IPI average for Q3 2016 up 0.5%,

the average quarterly gas price was down by 5% over the same period.

Sentiment over long-term gas prices over the summer was mixed, given that gas could not be injected into the UK's largest long-range storage facility. Initial concerns about less gas in storage going into winter eased as European storage facilities neared capacity. The oversupply of gas that would normally have been injected into storage kept short-term prices low over the summer, which influenced the price of longer-term contracts.





Power supply concerns

UK energy market moves during Q3 have been strongly influenced by concerns over power supply shortages.

Going into this winter, the UK grid is expected to have the tightest supply margin on record, and electricity prices for long-term delivery have risen with expectations of price spikes.

The expected margin is 2GW for some weeks of the winter according to Elexon data, compared with peak demand last winter of 50GW. Leaving out capacity contracted in reserve, National Grid analysis in July showed that margins could fall as low as 0.1% of peak demand this winter in the wholesale market.

In fact the middle of September saw a new record for price spikes, as higher temperatures than usual boosted demand. But supply was particularly tight, as unexpected outages at a coal-fired plant and a nuclear unit coincided with high levels of ongoing maintenance for gas-fired plants ahead of the winter; low wind power; and intermittent maintenance on an interconnector with France.

All of these factors caused traders enough concern to send prices to a record £200/MWh for electricity delivered over a 24-hour period.

Concerns over supply from France rose again on 28 September, with maintenance of some nuclear units prolonged into 2017 as operator EDF performs additional safety checks.

Nuclear generation usually provides three-quarters of France's electricity demand. Lower production levels this year have caused concern over potential supply during winter, as France has less flexible generation from gas and coal that can be used to meet peak demand.

If France needs to import electricity to meet consumer demand in the winter, this could impact electricity supply margins in the UK.

The UK usually prices at a premium to France because of the additional cost of emitting carbon dioxide under the carbon price floor, which only applies to fuel for UK electricity generation. Imports of cheaper French electricity via the 2GW interconnector have supplied more than 7% of UK demand at times during Q3.

But nuclear supply concerns boosted French prices to the extent that the UK's premium to France for the coldest quarter of the year, which averaged €16.05/MWh (£12.96/MWh) for 2016 to date, was cut to less than a quarter of its previous level, at €3.37/MWh (£2.91/MWh).

If French prices rise above the UK, there is the possibility that electricity flows could reverse – which would in turn boost UK prices to attract additional supply.

Gas oversupply

Gas prices have been heavily impacted by the UK's gas storage situation over Q3, although the surplus of gas over the summer has also helped to boost profit margins for gas-fired power generation.

Maintenance at the Rough natural gas facility is ongoing. The facility accounts for around three-quarters of the UK's total storage capacity, and met around 10% of peak demand in the coldest months last year. Traditionally the site is filled over the summer while gas demand and prices are low, in preparation for the winter season.

When the Rough natural gas storage facility operator Centrica first announced in June that there would be no gas injected for 42 days, longer-term prices rose, because the facility could not be filled ahead of winter 2016.

Prices then spiked further on 15 July with the news that the facility would not be accepting gas injections for the entire winter.

However, in August, prices softened as UK market participants sent volumes to European gas storage facilities instead, with sites in countries such as Germany and the Netherlands up to 85-90% full earlier in the year than usual.



On 22 August, Centrica announced that around two-thirds of withdrawal capacity from Rough would be available from November – so at least some gas could be used to meet demand from that point.

In addition, Norwegian field maintenance has been less disruptive than usual over the summer. Some market participants had reportedly bought additional gas ahead of the maintenance season, but there was less buying interest than expected in the event, which helped to push prices lower during August trading.

LNG cargoes continue to come to the UK, with 22 cargoes arriving during Q3. Ongoing global oversupply has helped to allay supply fears over winter gas availability in the UK.

Towards the end of Q3, gas prices for long-term delivery rose more sharply, which is partly due to short-term delivered prices rising.

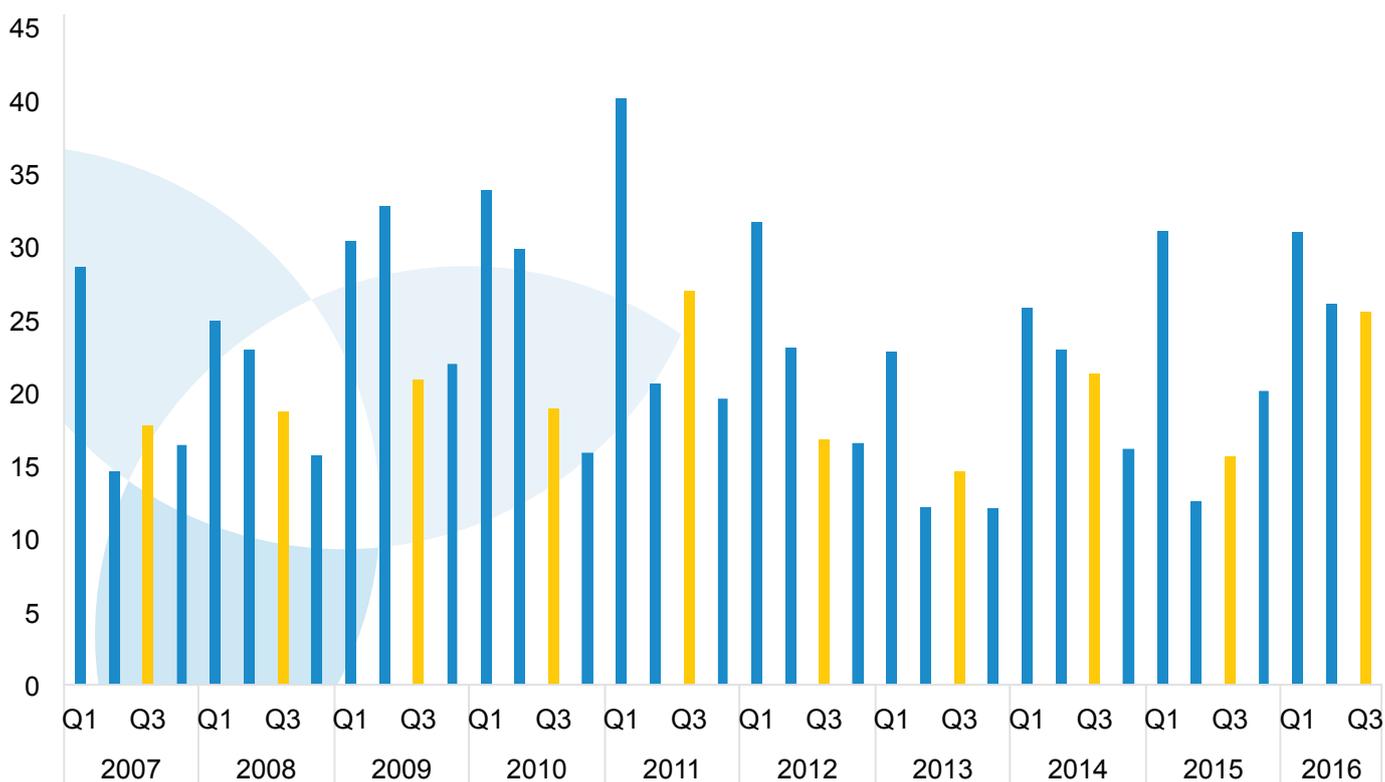
The UK gas market has been oversupplied for most of the summer with gas that would have been injected, which has pushed long-term prices down. However, as supply and demand have moved towards greater balance and short-term prices have strengthened with lower temperatures, there has been a reversal in sentiment, and UK gas prices have moved closer to European levels once again.

With pronounced price spikes in the UK power market, traders are also anticipating strong demand for gas in electricity generation, as profit margins have improved.

Low gas prices have meant that gas-fired generation has remained strong during Q3 this year, meeting 47% of total demand of 62TWh, compared with 35% of 65TWh for the same period last year.

Sterling has weakened further since the Brexit vote, which has also boosted UK gas prices for

Traded volumes in GW





long-term delivery. A falling pound makes UK wholesale gas more attractive to purchasers from continental Europe using euros, who can get more for their money.

In fact, one of the strongest daily price rises during Q3 came on 23 September, in the wake of mixed messages from the UK over when Article 50 would be triggered, which would formally begin the UK's exit from the EU.

In addition, the price of Brent crude oil has remained above \$45.00/bbl for much of Q3, stabilising at higher levels with hopes of OPEC reaching a supply agreement.

The oil price affects the UK gas price as a measure of economic sentiment, but also has 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. Although this system is little used in the UK, some continental European buyers still procure their gas this way, which can impact UK prices because the markets are linked by two pipelines.

Liquidity

Price volatility led to the highest traded volumes on the two front seasons that comprise the IPI for a third quarter since 2011.

Traditionally Q3 is one of the quieter quarters for trading, partly from less volatility and partly fewer participants at their desks, but 25.4GW of electricity was traded for delivery over the next two seasons.

Outlook

Expectations for winter will depend strongly on the severity of the weather.

- UK electricity supply risks have been well-publicised, and remain foremost in traders' minds, with any concern over a system shortage translating into price spikes.

Participants expect prices to remain jumpy over this winter which would affect long-term prices, even if temperatures and weather are comparatively mild.

- Risks to nuclear production could trigger price spikes in both France and surrounding markets such as the Netherlands. If prices in continental Europe rise high enough, the UK would not only lose a source of supply, but would potentially export to higher-priced countries. However, if the resulting exports would leave the UK grid short, market forces are likely to push prices higher to retain power in the UK.
- However, power prices included in the IPI take account of electricity delivery for future winters. More electricity generation is expected to be available with the start of the UK's capacity market in winter 2017, and this is expected to ease supply margins and bring longer-term prices down going forward.
- Even so, any supply disruptions experienced this winter could imply greater risk of disruption in future years as well, boosting long-term prices again.

In the event of a cold winter, the UK uses more gas for residential heating than other markets, so demand could rise. The Rough storage facility has less gas than expected, and some European gas production remains curtailed in the Netherlands.

But expectations for gas supply are less fraught, with other sources of supply available in the event of higher demand (see [ICIS infographic](#) on the impact of the Rough storage facility).

- More global LNG production is expected before November from Australia, which will help to satisfy Asian requirements for the winter, although nuclear plant outages may support demand. Asia accounts for around 70% of the world's LNG demand and is expected to remain the highest-priced region, as strong summer demand from Middle East and Egyptian markets should taper down over the northern hemisphere winter period.



- If UK gas supply does become tighter and prices rise, more cargoes could choose to come to Europe and the UK into the winter. Strong liquidity makes these attractive markets in which to sell flexible cargoes, although northwest European buyers would not pay above the equivalent gas market price for LNG.
- The supply of pipeline gas from Norway and Russia has been strong in the last 18 months, and infrastructure usage is below capacity.
- There is arguably more incentive for Russian and Norwegian exporters to provide gas, partly because they risk losing market share to LNG supplies, and partly because the low oil price has affected profits in other parts of the business.
- European interconnections have not operated at capacity either, with pipelines with Belgium and the Netherlands able to supply gas from European storage sites, where many UK traders have chosen to store gas.
- The UK also has flexible 'medium-term' storage sites that can be activated to meet a short-term spike in demand for colder weeks.



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:

www.icis.com/energy/electricity/icis-power-index/

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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.

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