

PROCUREMENT

# From the crash to now – a ten-year retrospective on energy markets

**The combination of events across the world stage over the last decade, along with regulatory changes at home, means that passive energy market participation for businesses is no longer an option, says Kath Chapman.**

In May 2008, the FTSE 100 was at 6,300, oil prices were heading towards \$140 a barrel and the world's financial system hadn't collapsed yet. The FTSE would end the year at 4,434, down nearly 30%, along with the rest of the global market as it lay in tatters.

A chart of market prices is like an echocardiogram. It records the pulse of a market, showing you its heartbeat as it goes through highs and lows. It is easy in retrospect to see (or convince yourself that you see) the pattern of events that led to decisions by market participants during the period. At the time of decision-making, however, nothing seems that clear.

In February 2007 energy prices in the UK fell to a low as new supplies from Norway through the Langede pipeline depressed prices and, for a few days, even turned gas prices negative. From February to August 2007 they remained moderate. Then, as we headed into the winter, they began an inexorable rise that only stopped when the financial markets seized up, indicated first with the collapse of Northern Rock and peaking with the fall of Lehman Brothers in September 2008.

Now we believe that the crash was rooted in new financial instruments; derivatives that were supposed to pool and reduce risk. Instead the effect was to concentrate it. Supposedly diversified companies suddenly found, like elephants rushing to the same side of a rowing boat, that they all held the same assets carrying the same weight and value, which was now potentially worthless. Trust dissolved, institutions stopped lending to each other, the world's markets seized up and governments were forced to intervene to rescue the financial system.

This story can be seen in Figure 1. The steady rise in commodity prices, as investors piled in with irrational exuberance during the dying moments of the boom, cheering on markets as they climbed

exponentially. Or, with shrewd insight, closing out short positions they had taken, foreseeing what was to come in a commodity super cycle. It's hard to tell. Did they know what they were doing? In May 2008, an analyst from Goldman Sachs, one of the most illustrious names in finance, predicted that oil prices would rise to \$200 a barrel.

Less than a year later, oil was heading towards \$30 a barrel.

Ten years on, the memory of the crash is fading but its effects still linger in low interest rates around the world. A feeble recovery, as governments nationalised major financial institutions and injected money into the economy, has prevented the meltdown that was experienced during the 1920s crash. From their low in 2009, market prices rose gradually. The UK election in 2010 brought in a new Conservative–Liberal government providing a small boost to prices along the way.

**World and UK trends**

In March 2011, a 15-metre tsunami led to a nuclear accident in Fukushima in Japan. It was the most significant nuclear incident since Chernobyl and led to the shutdown of all of Japan's nuclear reactors. The country turned to gas to fuel

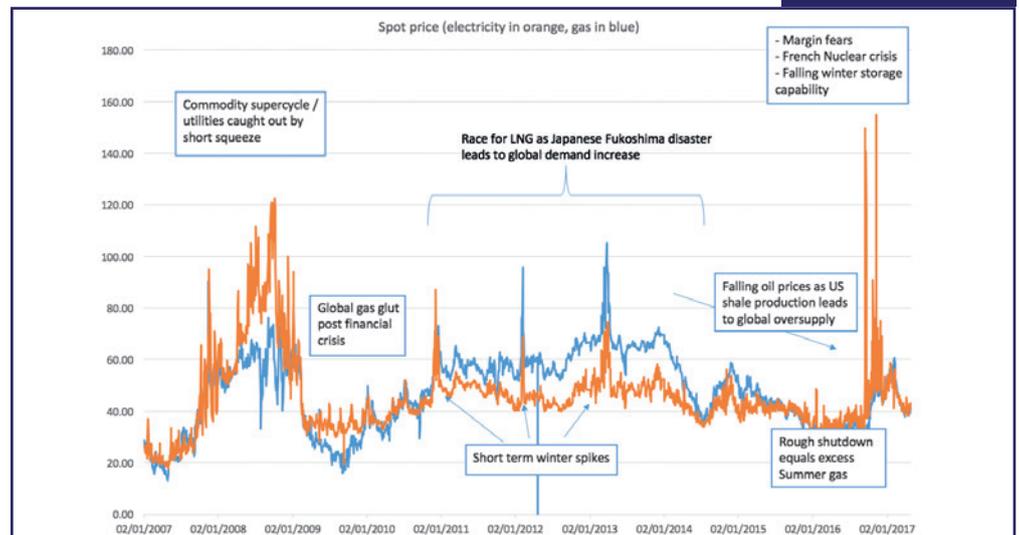
itself, sucking in liquified natural gas (LNG) from across the globe and sending Asian prices soaring.

At the same time, new gas producers were entering the market. Qatar and Australia were ramping up their LNG exporting capability and the US, realising it had more shale gas capacity than it could use domestically, began to construct export terminals. During the period from 2011 to 2014 the mismatch between supply and demand led to a global spread in prices, from \$2 per million British Thermal Units (MMBtu) in the US, to \$10 in Europe and approaching \$20 in Asia. Prices would not converge until 2015, when global capacity was sufficiently integrated to make the cost of transport the only variable factor between gas from different locations.

Everyone's focus in the UK, however, was on electricity. The UK's Energy Act 2013 introduced mechanisms to enable Electricity Market Reform (EMR) in order to provide low-cost and low carbon electricity to the UK from more

Figure 1: Gas and electricity spot prices over the last 10 years

Source: Ameresco analysis



secure sources. It did this by introducing capacity markets and Contracts for Differences (CfDs) that would replace Feed-in Tariffs and Renewables Obligation Credits for a new fleet of low carbon generation technologies.

Electricity contract options for large users became increasingly sophisticated. More users shifted from single all-inclusive fixed rate structures, with perhaps a day and night rate all year, to contracts that split out charges into wholesale, regulated and carbon-related components (see Figure 2).

The increased transparency of contracts allowed users to reduce margins and model their costs more effectively. They could now take action to avoid costs by changing when they used energy, or shutting down altogether at certain times. More participants started carrying out Triad avoidance. From 2010, a plethora of Demand Side Response (DSR) options have made it easier for large companies to generate an income from their energy infrastructure.

We are still in the early days of EMR. Renewable heat and transport are the next areas to progress, with heat meters now being installed and a gradual move towards a future with more electrified transport.

The UK is, however, almost certain to miss its target for producing 15% of its electricity from renewable sources by 2020. The future is clouded by Brexit, and what it means for climate change regulation in the UK after its exit from Europe. In the short term, there will be a hiatus before the election and until the new government is in place and Parliament resumes its business. The situation in the rest of the world could be even more dire. In the US climate change action could be put back a generation as the current administration implements its policies.

### Dominating factors

The ups and downs of the energy market from 2007 to 2015 can broadly be split into two major periods. From 2007 to 2010, markets were driven by what was happening in the world of finance, keeping an eye on which institutions were nationalised and how much money was being poured into the system through quantitative easing. The excess money helped lift the value of assets and laid the groundwork for a recovery, which filtered into energy markets and gradually pushed prices higher.

From 2011 to 2014, supply and demand fundamentals reasserted

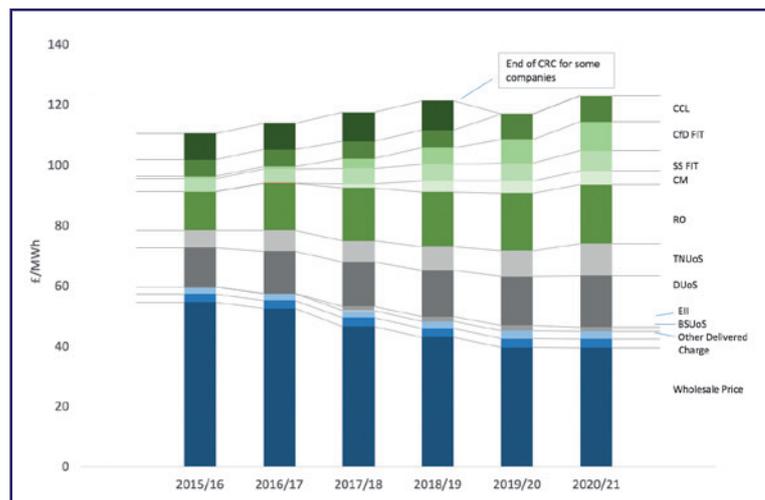


Figure 2: Wholesale (blue), regulated (grey), and carbon (green) charges for UK businesses

Source: Ameresco analysis

themselves. First a demand shock from Japan led to 30% of the world's LNG being diverted to one nation, sending prices higher. Then a supply glut from new producers resulted in regional oversupply until global market prices converged in 2014. Interestingly, a financial crisis takes months to resolve while a supply and demand problem, based on real assets, takes years to work itself out.

For two years, from late 2014 to 2016, we had a less exciting, more uneventful time. Prices drifted lower, with users on flexible supply contracts having the pleasant experience of falling wholesale costs month after month. All was changing, however, in the non-commodity part of the bill – the regulated charges that pay for new networks and the rising cost of green subsidies. That element quickly went from 20% of a large user's invoice to near 50%, and the unavoidable nature of those costs led to what seemed like a relentless increase in overall costs despite a fall in wholesale prices.

The UK voted for Brexit in June 2016, with the resulting drop in sterling having an effect in pushing prices for commodities higher. In late 2016 fears of insufficient capacity resurfaced, with the French nuclear fleet under intense scrutiny, worries about European power production and a lack of gas in winter leading to spot prices for electricity closing at over £150 per MWh at times. The rise has moderated in recent months, as a mild season did not stress the system as much as feared.

### Mitigating risk

So, how should large energy users think about their energy needs as we look into the future? The days of a system where centralised generators feed passive consumers at simple tariffs are over. Users are looking at a world where there are multiple sources of supply into

sites and a proliferation of contract options and opportunities to manage and reduce costs across an estate, and even generate income. Smart energy users need to think less like buyers and more like financial portfolio managers.

Research shows that 80% of your results when managing a portfolio will come from the strategic choices you make – the contracting framework, the governance mechanisms and the decision-making processes you put in place. Around 20% of your results come from market timing.

In today's world, putting a supply contract in place is only the first step. Ten years ago, you could have put a 3-year fixed price contract in place and forgotten about it. Now you need to put an active energy risk management system around that area of activity.

Looking forward there are still major changes that will be made to the UK's energy infrastructure. The overall aim of legislation is to give users choice – the ability to take decisions, invest in technology and let markets and competition determine the costs of the transition to a low carbon economy.

The best companies are already taking steps to change their operating processes, signing up to initiatives like Science Based Targets, which align your emissions reduction targets to climate change mitigation scenarios. They are bringing together functional leaders from finance, procurement and operations to create cross-functional teams that are capable of creating the conditions that will enable large-scale change amidst a backdrop of global political turmoil.

The next few years are likely to be both eventful and interesting. ●

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