Bord Gáis Energy Index

Understanding energy

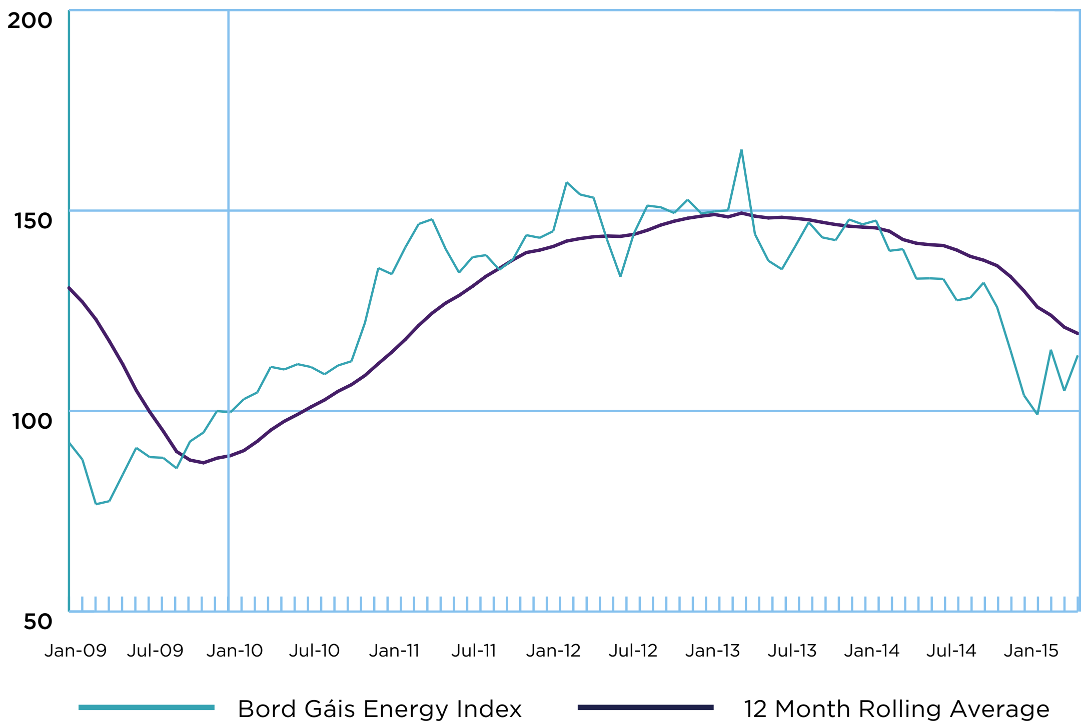
APRIL 2015

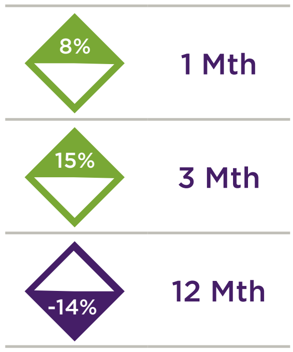
BGE/EI/UE/0515

Bord Gáis Energy Index

Commentary

Bord Gáis Energy Index (Dec 31st 2009 = 100)





Summary

The April Bord Gáis Energy Index rose by 8% month-on-month as Brent crude prices rose nearly US$12 month-on-month.

Heightened geopolitical concerns, shuts ins and an eroding spare capacity elevated tensions within the oil market during the month. Against these heightened tensions prices reacted to news stories that supported higher prices such as a falling US rig count; the seizure of a container ship by Iranian patrol boats in the Strait of Hormuz; falling stockpiles at the Cushing, Oklahoma and the closure of an oilfield in Libya. A weakening US dollar also supported prices as signs of a US economic slowdown accumulate. Month-on-month falls in the average UK day-ahead UK gas price (-2%) and weaker European coal prices (-3%) were surpassed by the 16% month-on-month rise in Brent crude oil prices.

In April 2015 the Index stood at a record low of 114.

(Continued overleaf)

Bord Gáis Energy Index (continued)

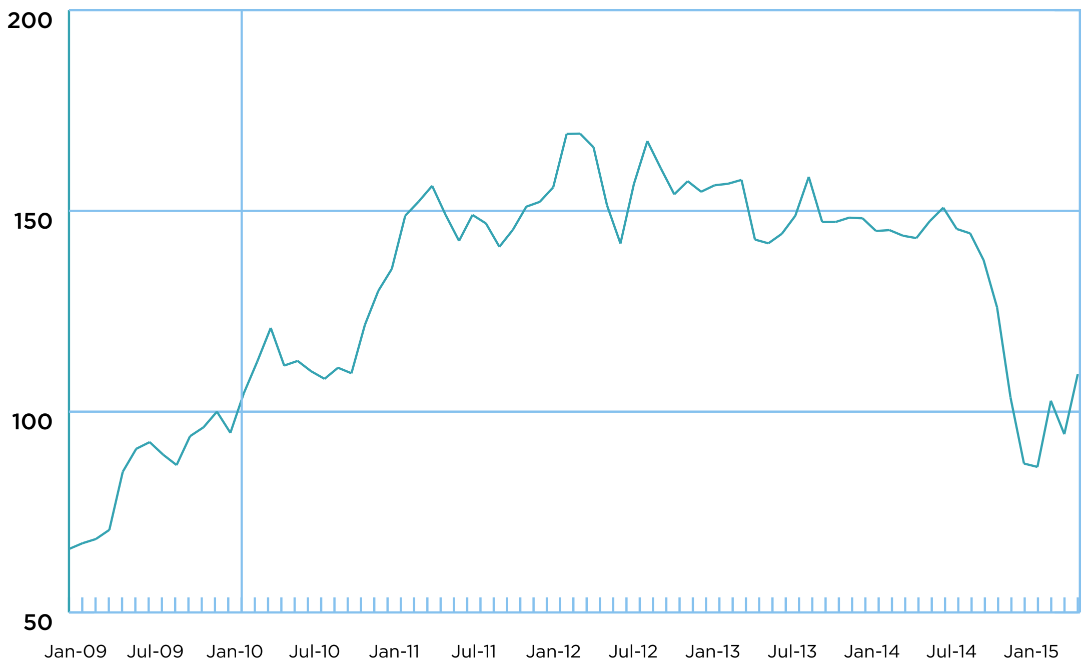
Are oil prices set to rally? Is the current price of circa US$66 a precursor of US$100 or US$200? According to Robert Smithson of Taube Hodson Stonex oil prices are likely to stay lower for longer and we will not see a rapid return to the US$100 plus that was the norm for the four years to mid-2014. Smithson believes that US tight oil production is like traditional long-cycle production and that it is a lot less price elastic than it appears. The commonly held view is that the rapidly declining rates associated with tight oil plays mean wells will not be drilled unless the price supports it. While this picture is compelling, according to Smithson it is a mirage. Utilisation will be maximised so long as the cash return is higher than the cash costs and in recent months the cash costs were coming down. Smithson is suggesting that operators have lowered the day rates on their rigs and for frac trucks. Land, hotel and restaurant prices have all fallen in those areas associated with the boom in US oil production. Labour costs are also falling. In addition, the boom has meant that a lot of the physical infrastructure has been built such as oil gathering pipelines, gas processing facilities and sand quarries. The existence of this infrastructure means that the cost of new projects will be lower in the future. Across the value chain, the cost of drilling for tight oil in the US is therefore declining and according to Smithson the cost for much US tight oil could come down from around US$70 in 2013 to perhaps US$40 a barrel.

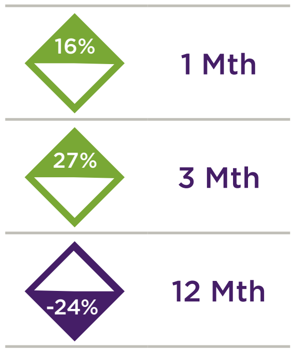
A second reason to assume that US tight oil production will continue to grow in a low price environment is increasing evidence from wells that oil production is staying higher for longer. The common narrative is that US tight oil plays come with rapid decline rates and that new drilling and thus production would slow amid lower prices. If Smithson is correct in concluding that the initial declines taper rapidly, then it follows that tight oil production will only slow moderately as more production comes from wells that are more than three years old and that fewer new wells are required to grow production to meet the forecasts that were based on the assumption that wells decline rapidly and consistently. Smithson is of the view that these factors plus large residual cash flows will support production volume. Another factor that will weight on the price of oil is an expected increase in conventional production in the next five years. Between 2000 and 2013, the capital spend by ConocoPhilips increased eight times, Shell seven times, by Chevron and Total five-fold and by Petrobras a staggering 13-fold.

In Russia, Gazprom and others increased capital expenditure to levels three or four times depreciation. Despite these massive capital commitments, they have not lead to increased oil production. Smithson is of the view that the development of new oil reserves takes a long time and that these capital commitments will deliver results in the next five years and that "mega projects" and their associated infrastructure will stimulate additional discoveries at lower costs from these regions. Combined with a more robust assessment of US tight oil production and a positive outlook for conventional production, Smithson believes that a weak global demand outlook will apply further pressure on prices. Demand is expected to be restricted by large end users switching to alternatives (for example around 15% of US oil usage is used directly as a petrochemical feedstock or to make liquid petroleum gases. The development of cheap natural gas in the US means many chemical companies are investing to change their feedstock away from oil-derived naptha towards ethane from natural gas), rising energy efficiency standards and even declining car ownership rates in developed countries. Growth is expected in developing countries but at the global level the world only needs to find around 1 million barrels of incremental production each year. According to Smithson, this should not be a big ask. Smithson concludes that "it is 15 years since both the beginning of the last bull market and the technological innovations that have brought about its end. The techniques discovered by those who drilled up the shales and tight rocks of the US will be applied all over the world. What has been learned cannot be unlearned and this gives us comfort that the energy needed to sustain global growth is not just available, but available at a cheap price". Of course the alternative view is also prevalent. The Economist carried the following view in April "reserves are depleting, but replacing them means large bets on big risky projects—such as deep offshore and Arctic drilling—which delight engineers but rattle shareholders. Climate-change campaigners say most oil reserves must be left underground for the planet's sake. Will big oil still be a good investment in 2025? Perhaps."

Commentary

Oil Index





*Index adjusted for currency movements.

Data Source: ICE

Oil

In US dollar terms the front month Brent crude price rose nearly US$12 over the course of the month to close April at a 2015 high of US$66.78.

So why are oil prices rallying? Firstly, Yemen has served as a catalyst for the return of a market premium. The market has interpreted the conflict as a proxy war between the region's two biggest oil producers and this has added fuel to the geopolitical fire. Yemen's importance is not because of the threat to its small remaining production levels of around 100,000 barrel a day, but because of its proximity to the Bab El-Mandab strait. The Bab-El-Mandeb acts as a strategic link between the Indian Ocean and the Mediterranean Sea, via the Red Sea and the Suez Canal. Recently released Suez Canal Authority figures show traffic via the strait has increased 20% from 2013. Secondly, with new outages popping up in the North Sea, Gabon, South Sudan, Malaysia, Brazil and Mexico, shut ins now sit at 3.4million barrel a day according to Barclays. This is on par with May 2014 when prices were US$109 a barrel. Bombings in Iraqi Kurdistan and the ISIS gains at the Baiji refinery in Iraq in April highlighted the worsening security environment for the 400,000 to 500,000 of Northern oil production and the country's stability. Thirdly, with Saudi Arabia producing more than 10million barrels a day, global spare capacity has estimated to have fallen to just 1.2million barrels a day, one of the thinnest cushions ever. This summer Saudi Arabia may need to pump another 500,000 to 600,000 barrel a day of additional crude oil to meet increased domestic demand for power generation, thus shrinking the spare capacity further.

Heightened geopolitical concerns, shut ins and an eroding spare capacity elevated tensions within the oil market during the month. Prices reacted to a number of news stories that supported higher prices such as a falling US rig count to 703 rigs at the end of April (oil production from the fastest-growing US shale plays is expected to drop by 45,000 barrels a day in May which would be the first monthly decline in over 4 years); the seizure of a container ship by Iranian patrol boats in the Strait of Hormuz; falling stockpiles at the Cushing, Oklahoma (however, US stockpiles are more than 100 million barrels above the five-year average for this time of the year); and the closure of the El Feel oilfield in Libya due to a strike by security guards which has pushed the country's production down to 500,000 barrels a day. A weakening US dollar also supported prices as signs of a US economic slowdown accumulate. Late in the month it was revealed that US GDP growth slowed more sharply than expected in the first quarter. In Q1 2015 the economy expanded at a 0.2% annual rate which was lower than expected and significantly lower than the 2.2% pace recorded in the previous quarter.

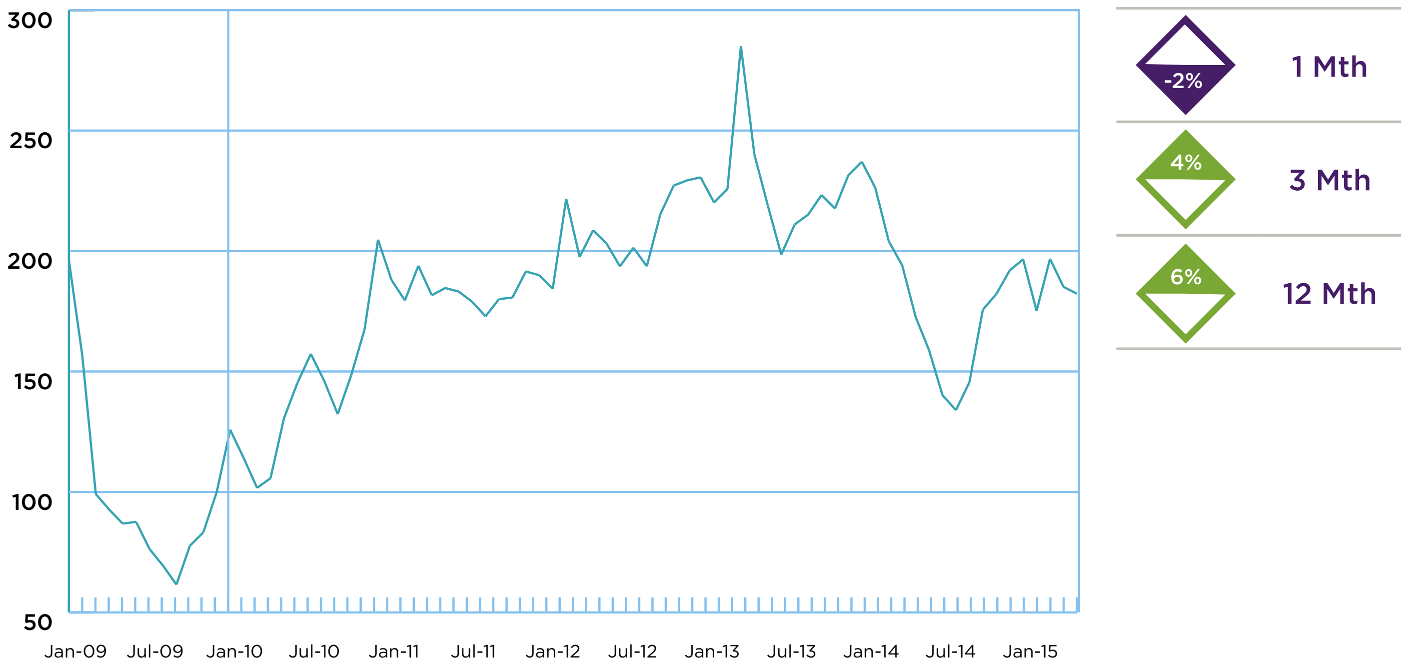
(Continued overleaf)

Oil Index (continued)

According to The Economist the new price normal lies between US$50 and US$70. Though the rig count has fallen by half, the International Energy Agency reckons that American oil production will decline only slightly by the fourth quarter of this year, from 12.6m barrels a day to 12.5m. That has created a “fracklog”—up to 800,000 b/d which will come into production if prices rally. Meanwhile OPEC keeps putting market share first: prices are down by 45% but Saudi Arabia is pumping at record level. As always, a big upset in the Middle East could change the outlook. But the lesson from America is that technology and finance are trumping geology and geopolitics, for now at least.

Commentary

Natural Gas Index



*Index adjusted for currency movements.

Data Source: Spectron Group

Natural Gas

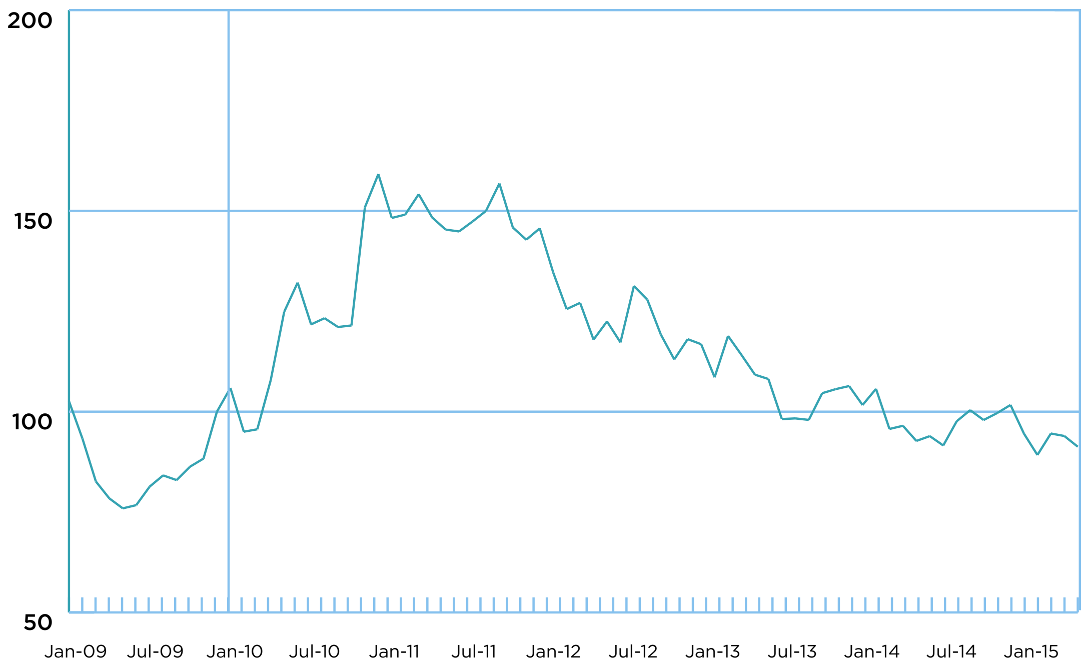
The average day-ahead gas price for April was 46.89 pence per therm (p/th), in line with the March average of 47.19p/th. April's outturn was considerably lower than levels seen in recent years with prices averaging 49.85p/th in 2014, 70.75p/th in 2013 and 59.88p/th in 2012.

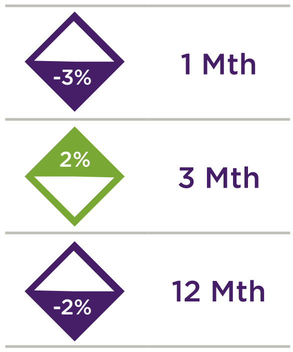
Norwegian deliveries fell sharply over the month as extensive maintenance was carried out on key infrastructure. Norwegian deliveries into the UK fell from an average of 96mcm per day in March to 68mcm per day in April. In addition, interconnector flows from the Netherlands to the UK dropped to zero from 18mcm for much of the month as the Dutch market held gas to compensate for lower Groningen production and Norwegian flows. Despite these lower flows into the UK market, the system was able to use storage withdrawals to comfortably balance the system and prompt prices remained relatively stable. This has left storage at its lowest levels in the last five years with the Rough storage facility, which accounts for over 70% of UK storage capacity, only 15% full. Prices were also held steady due to the sustained weakness in Asian LNG prices that has resulted in continued strong LNG flows into the UK.

Uncertainty continues in relation to production at the Dutch Groningen gas field. The Dutch government commissioned a scientific study into production at Groningen following increased seismic activity. An appeal to halt production at the field, taken by concerned parties, was not refused in a preliminary ruling delivered by the top administrative court in the Netherlands on the April 14. The commissioned study is due to report in July and remains a risk for markets.

As storage facilities move from storage withdrawals to injections, prices suggest that the market remains confident that periods of undersupply over the coming months should be rare. However, risks remain and the outturn over the summer will depend on maintenance, LNG flows, Russian flows and developments in relation to production at the Groningen field.

Coal Index





*Index adjusted for currency movements.

Data Source: ICE

Coal

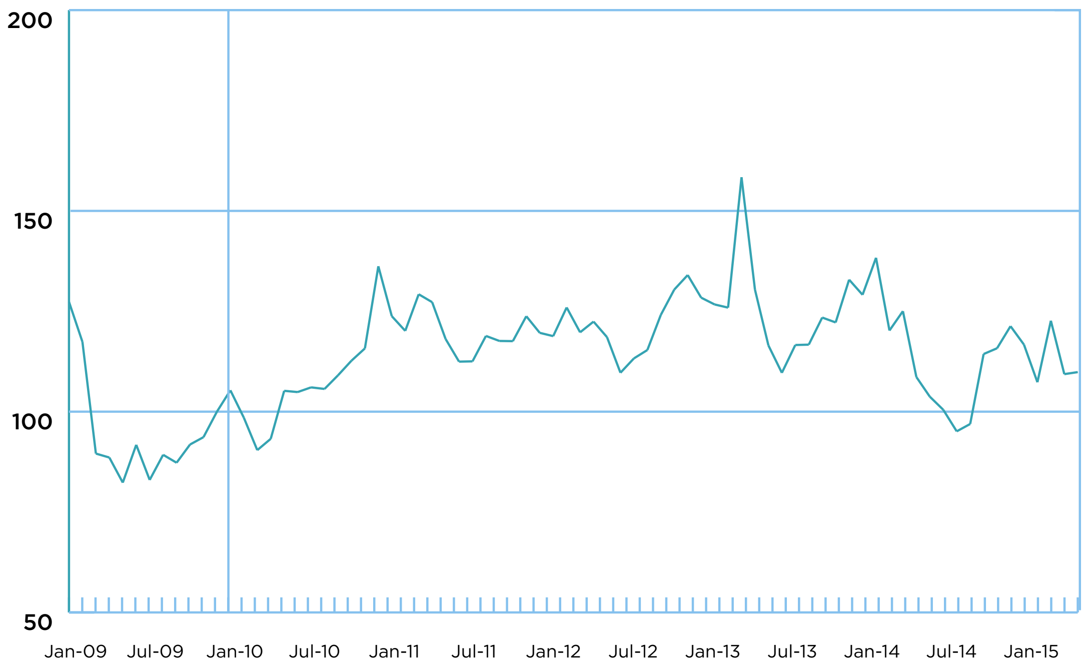
In US dollar terms the front month ICE Rotterdam Futures Contract gained US$0.95/mt to close at US$59.80 on April 30. During the month the price hit a low of US$57.40 and a high of US$59.95 with prices trading in a very tight range. At US$57.40 prices hit a low not seen since March 2009. In short, European coal prices are stable amid faltering demand.

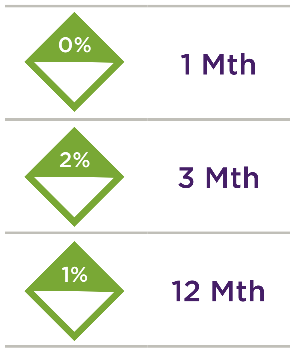
Prices did receive a boost on unconfirmed news that US producer Drummond might have cancelled some Colombian coal shipments due to the ongoing Fenoco night rail ban. However, the market did not overact to these rumours as data released during the month showed Colombian March thermal coal exports at record high levels. For some, this is a proof that the country had sidestepped any serious burden from the Fenoco ban, which started in February. News that a landslide severed a rail line in Russia's Kuzbass region provided some additional price support. It is being reported that the Kuzbass landslide will take as much as two months to clear, but there is reportedly little evidence of market participants trying to defer cargoes or of a build-up in shipments. Russian coal producers have reportedly sufficient flexibility to replace the material from the mines affected by the landslide. Rising oil prices and a weaker US dollar also contributed to a firming of wholesale prices from the US$57.40/mt low as did further evidence that the euro zone economy was recovering.

The news was not all supportive of prices during the month and it is being reported that the traders are starting to see a significant decrease in coal shipments to the UK since an effective doubling of the Carbon Price Support Mechanism since the start of April. In addition, the global market for coal continues to be soft. The Asia spot metallurgical coal market weakened throughout the month with oversupply and poor Chinese demand seen biting into price premiums achieved in places such as India. Slower demand for steel and tighter environmental scrutiny that has shut some mills in China continued to curb the appetite of the world's biggest spot consumer of imported coal for imports. Another factor is fear of further price falls which is eroding demand.

Commentary

Electricity Index





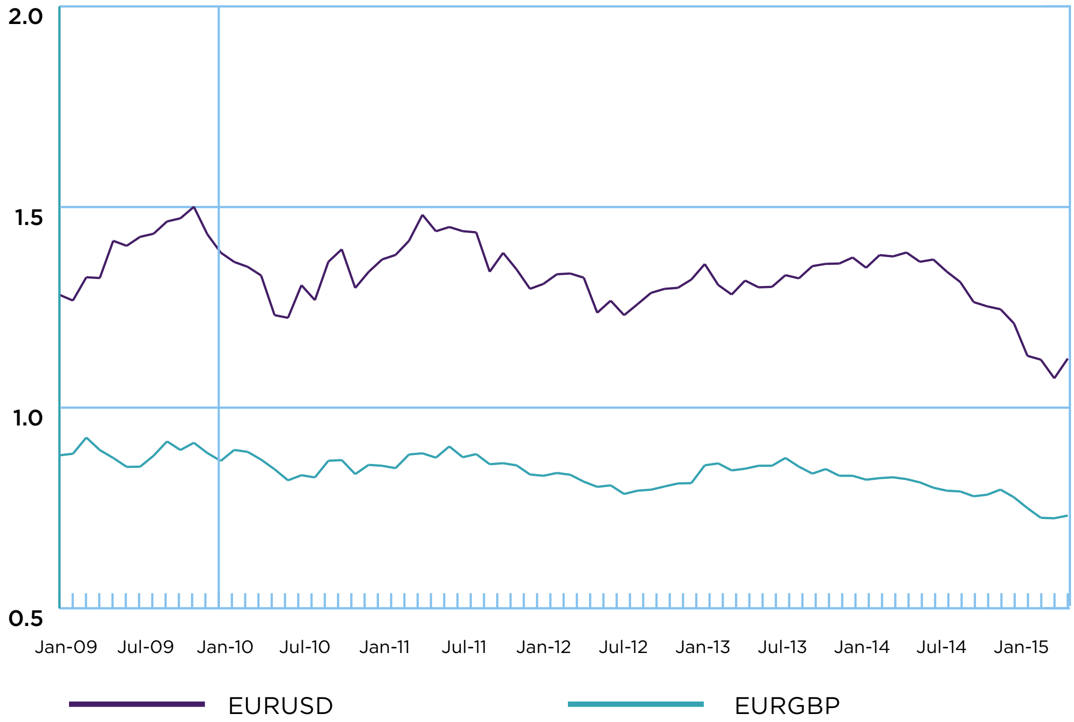
Data Source: SEMO

Electricity

Month-on-month there was no change in the average wholesale price of electricity. However there was an increase in the average clean spark. Excluding supplier capacity payments the average wholesale price for April was €55.51/MWh compared to €53.32/MWh in March. The wholesale price of electricity can be broken into three components (gas, carbon and spark) and month-on-month the spark element was over €2/MWh higher.

Over the course of the month the average clean spark was nudged higher on the combination of sudden drop in wind and a lack of wind in the second half of the month. The wind pattern recorded early in the month was erratic as it changed suddenly from trading period to trading period. This pattern required thermal plant to start to fill the production gap left by wind powered units. These starts fed through to the wholesale price of electricity in the form of higher sparks. The lack of wind also had a significant influence as consistently low wind powered production in the second half of the month resulted in a number of thermal gas plants of varying efficiencies being called on to meet demand. These plants put upward pressure on sparks but they also alleviated price events as the system operator ran them consistently and wholesale prices remained steady. During the month a new gas powered generation unit became operational on the shores of Waterford Harbour at Great Island, Co. Wexford. This plant increases the island's capacity of gas powered generation units which, combined with ever increasing wind powered capacity, has added further pressure on the economics of existing gas powered plant.

FX Rates



EURUSD

5%	1 Mth
-1%	3 Mth
-19%	12 Mth

EURGBP

1%	1 Mth
-2%	3 Mth
-11%	12 Mth

FX Rates

As stated in the Oil Section, signs of a slowdown in the US economy have been accumulating and these concerns are feeding through to a weaker US dollar. The dollar weakened noticeably on the news that US GDP growth slowed more sharply than expected in the first quarter of 2015. The dollar also reacted to the Fed downgrading its view of the US labour market and economy in a policy statement that reportedly suggests that the central bank may wait a little longer to begin raising interest rates. Other economic data releases reinforced the view that the US economy is still in need of the stimulus provided by ultra-low interest rates. Consumers are holding back, despite lower petrol prices: their wages are growing only slowly, because the labour market still has plenty of slack. Investment is also stalling as oil companies, smarting from lower prices, cut back. Add to all this a negative inflation rate—of -0.1%, year-on-year, in March—and it is clear that the world's biggest economy still needs very loose monetary policy. Given the recent economic data, a rate increase in June, although long awaited, now looks less likely according to the experts. As the clouds of uncertainty hang over the US there are tentative signs that the euro zone's economy is recovering. In April the European Commission raised its forecast of the euro zone's economic growth this year to 1.5%, from 1.3% in February. Surveys of business activity and consumer confidence during the month suggest that preliminary first-quarter GDP figures, will show a strong start to the year, with growth probably exceeding the 0.3% of the last three months of 2014 (itself the best since a faltering recovery began two years ago). German GDP is expected to continue growing strongly, and there are hopes that the Italian economy might at long last revive after suffering not just a double - but a triple-dip recession. Euro-area consumers and businesses are benefiting from the collapse in the world oil price, which works like a tax cut, while exporters are being helped by the cheap euro, a consequence of the European Central Bank's ultra-loose monetary policy, including the launch of quantitative easing in March.

For the majority of the month, the pound was gaining versus the euro and on April 23 it hit a monthly low of 0.7117 having traded as high as 0.7379 on April 3. Over this period the pound benefited from a number of positive economic releases indicating that the British economy was doing well. Specifically these releases during the month pointed to strength in the UK services and manufacturing sectors, in the UK jobs market, in retail sales and growth in average pay. However, uncertainty surrounding the outcome of the UK election and news that Britain's GDP growth rate slowed in the first quarter, to 0.3% (the weakest since late 2012) weighed on the pound in the latter days of the month. On April 30 the pound hit an intra-day high of 0.7334.

Bord Gáis Energy Index

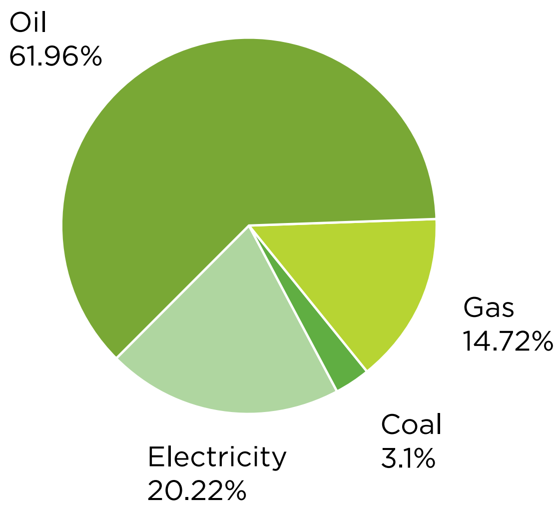
Commentary

Market Outlook

In April the UK National Grid released its 2015 Summer Outlook Report. National Grid are bullish on supply in the months ahead with total supply capacity well in excess of expected summer demand. Supplies from the UK Continental Shelf (45%) and Norway (24%) are expected to be similar to last year and make up the majority of the total. Flows from continental Europe may be lower than last year (2bcm to 1bcm) due to production restrictions at the Groningen field in the Netherlands. In December 2014 the Dutch government imposed a cap on production from the Groningen field in the north east of the Netherlands in response to fears of seismic events. Since February 2015 BBL flows have been reduced by around 10mcm/day on average. Net injection over the summer is expected to be higher than last year as stock levels were lower than last year at the end of the winter. LNG flows are difficult to predict and in 2014 a combination of lower demand in East Asia and steadily increasing supply in the Pacific basin from Papua New Guinea meant that more LNG was available for export to Europe. National Grid is expecting that supplies of LNG to Europe will be more plentiful this summer than for some years. Thomson Reuters are equally positive on increased LNG supplies to northwest Europe. Reuters expect the LNG Asian spot price to remain depressed at 7 – 9 $/MMBtu (Korean LNG imports were down a surprising 25% in February year-on-year) and that higher northwest European prices will attract uncommitted Atlantic volumes and excess Qatari production to Europe. However, Reuters do strike a note of caution and highlight that potential new demand from Egypt (according to the Egyptian Petroleum Ministry the country will need to import about 20 mcm/day of gas during peak summer months as a result of dwindling domestic gas production), some growth in Asian LNG imports and unforeseen maintenance at Qatar's liquefaction trains could disrupt their forecast of three more conventional cargoes per month this summer compared to last to the Atlantic. Reuters also highlight Europe's LNG exposure to spot market prices by claiming that the region has only one firm contract between ENI and Qatar for 2.7 bcm/yr of LNG delivery at Zeebrugge, Belgium.

Re-weighting of Bord Gáis Energy Index

Following the SEAI's 2011 review of energy consumption in Ireland, there was a 6.4% drop in overall energy consumption. Oil continues to be the dominant energy source with most of the oil used in transport and the remainder being used for thermal energy. For the purposes of the Bord Gáis Energy Index, the total final energy consumption in Ireland fell 1,089 ktoe (toe: a tonne of oil equivalent is a unit of energy, roughly equivalent to the energy content of one tonne of crude oil) between 2009 and 2011. This fall was made up of a 1,022 ktoe drop in oil consumption (down 13.5%), a 20 ktoe drop in natural gas (down 12.6%), a 7 ktoe drop in electricity (down 0.3%) and a 40 ktoe drop in coal (down 10.98%). The Bord Gáis Energy Index has been re-weighted in January 2013 to reflect the latest consumption data. The impact has been minimal and has resulted in slight reductions in the share of oil and gas and a slight increase in the weighting of electricity in the overall Index.



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