**Bord Gáis Energy Index**

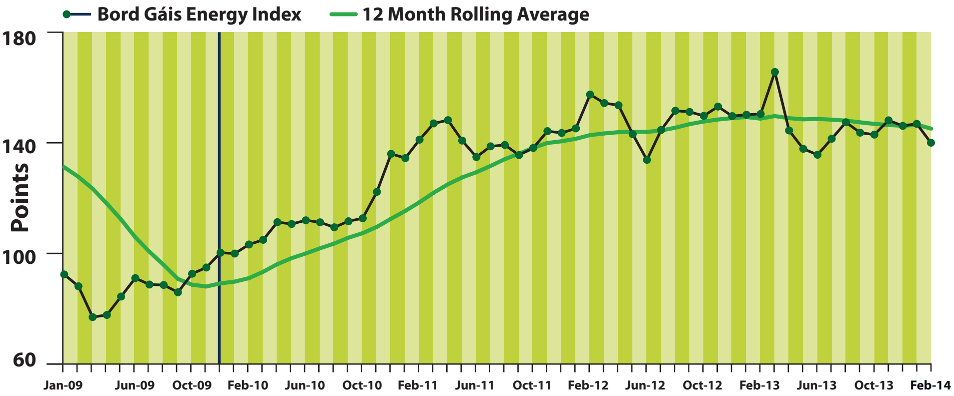
# UNDERSTANDING ENERGY

February 2014

Bord Gáis Energy

# High wind generation and mild weather result in 5% decrease in Bord Gáis Energy Index

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




**1 Mth** -5% **3 Mth** -5% **12 Mth** -7%

## Summary:

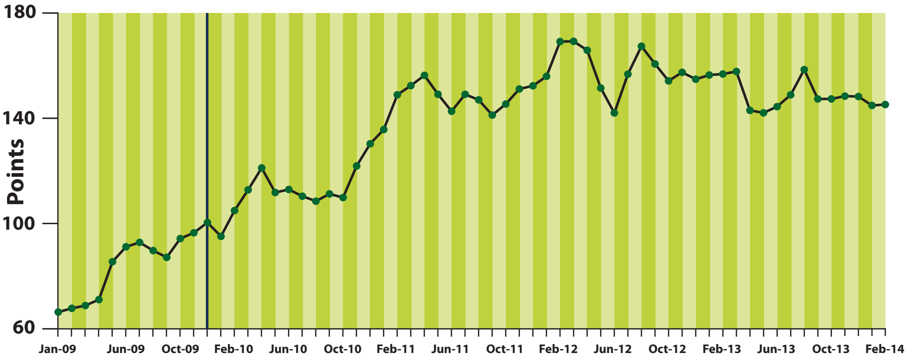

Month-on-month the Bord Gáis Energy Index fell 5% in February due to falling wholesale gas and electricity prices.

UK wholesale gas prices fell further in February as the on-going extended spell of unseasonably mild weather continued to erode demand amid ample gas supplies. High wind generation in the UK and Ireland had an influence in driving down wholesale UK gas prices as the need to burn gas to produce power was reduced. In Ireland approximately 23% of electricity demand was met by wind. This was close to an all-time high and it contributed to a 13% month-on-month fall in Irish wholesale electricity prices. The Ukraine crisis had no impact on wholesale gas prices in February as it was viewed as a domestic dispute by the market that did not threaten European supplies. However, Russia's intervention in early March spooked the market and wholesale prices did spike in the short term before easing back.

In February 2014 the Index stood at 140.


The crisis in Ukraine once again highlighted Europe's dependency on fossil fuel imports from outside the region. Following the Russian parliament's approval of President Putin's request to use Russian forces in Ukraine, wholesale gas prices rose across Europe before easing back as tensions de-escalated. Russia is Europe's biggest gas supplier providing about a quarter of continental demand. The EU is currently well supplied with gas after the mild winter left storage levels higher than this time last year and with the advent of spring, the EU's gas supply security improves further. In the wake of the crisis there have been fresh calls to diversify energy supply routes and/or exploit Europe's own energy resources to avoid uncertainty and price spikes due to the uncertainty over imports of Russian gas via Ukraine. These events re-enforce the importance of the recent decision by the European Commission to issue EU-wide non-binding recommendations for shale gas operations in an effort to boost public confidence in projects involving fracking. The more uncertain Europe's energy sources become, the more volatile prices become and this makes European industry less competitive. According to the Greek competitiveness minister (the EU presidency is with Greece) European gas prices are already "three to four times more expensive in the EU than in the US, Russia and India". A priority for the Greek presidency is to address "the high cost of energy". Efficient renewables, shale gas exploration, accelerated plans for regasification terminals and the development of the emerging southern gas corridor are potential solutions to the current uncertainty.

## Oil Index




**1 Mth** 0% **3 Mth** -2% **12 Mth** -7%

*Index adjusted for currency movements.
Data Source: ICE

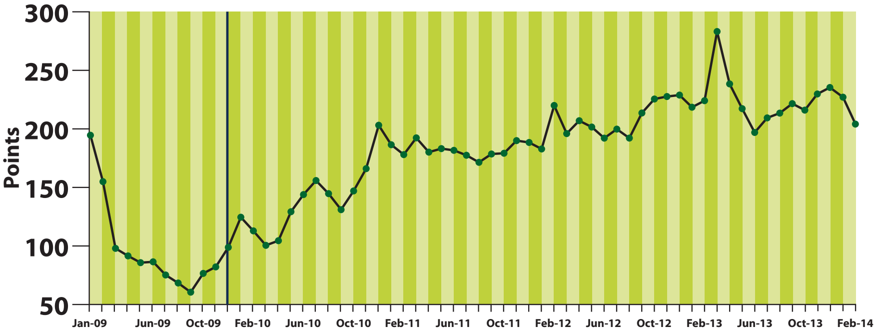
## Oil

Month-on-month the front month Brent crude price was unchanged in euro terms. However, in US Dollar terms there was close to a US$3 increase month-on-month. The front month Brent crude price closed the month at US$109 which is at the higher end of the US$105 - US$110 per barrel range it has occupied in recent months. The euro's gain versus the US Dollar over the month protected euro zone buyers from rising Brent crude oil prices.

Over the month there were a number of factors that supported prices. Firstly geopolitical risks remain a concern and as a result of issues, particularly in Libya and Venezuela, it is estimated that about 3 million barrels of oil a day remain offline. Despite what appeared to be an improving situation in Libya, in February the market reacted to news that Libyan oil production fell to just 230,000 b/d after fresh protests closed the major Sharara field in western Libya. Sharara is one of Libya's major onshore oil fields with the capacity to produce 340,000 b/d. In January Libya's oil minister claimed that the country was producing 650,000 b/d. Striking workers at Sharara had ended their industrial action on January 2 and with a ramp up in production the market had been more optimistic about Libyan oil supplies. In Venezuela markets are concerned that anti-government protests underline the risk that the country's economic and political climate will deteriorate further, possibly turning its production profile from sideways to downward. Protests appear to be a response to record inflation, shortages of basic food items, insecurity and crime. Demonstrations - the largest in a decade - have been sweeping through Venezuela since early February. The country's oil minister said that oil exports, which generate more than 90% of the country's hard currency, are running normally while the government has reportedly implemented a contingency plan to reinforce security around oil installations. In South Sudan the current conflict between rebels and the government, which erupted on December 15, has reduced oil production to just one state, Upper Nile, and production is reportedly cut by about a fifth to 200,000 b/d. The second factor supporting prices are expectations that world oil demand will rise more than expected in 2014 due to an anticipated pick up in European and US economic growth. Both the IEA (+120,000 b/d) and OPEC (+40,000 b/d) have recently revised upward their expectations of oil demand this year. These expectations compounded the news that global consumption of petroleum and other liquids outpaced production in January and February, leading to a 400,000 b/d drawdown of oil stocks which contributed to general market tightness and higher prices. Interestingly global consumption in January and February was 1.1 million b/d higher than at the same time last year. At 2.56 billion barrels, rising oil demand has left global commercial inventories at their lowest absolute level since 2008. News that OPEC's spare capacity slipped in January to 3.15million b/d from 3.33million b/d added further upward pressure on prices.

Rising Brent crude prices did encounter some headwind following a "good start" to talks in Vienna between Iran and the West toward reaching a final settlement over Tehran's nuclear programme. The Fed also confirmed that it would take a "significant change" to the economy's prospects for it to put plans to wind down its bond-buying programme on hold. Expanding credit and debt levels in China remain a concern for the global economy.

## Natural Gas Index




**1 Mth** -10% **3 Mth** -12% **12 Mth** -10%

*Index adjusted for currency movements.
Data Source: Spectron Group

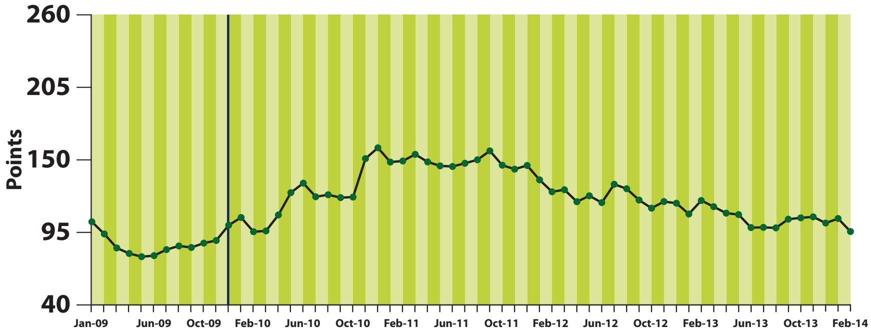
# Natural Gas

In euro terms the average Day-ahead gas price for February was 10% lower month-on-month as above average temperatures in the UK and healthy supplies combined to push prices lower for the second month running.

A particular influence on prices is the volume of gas held in store at the end of February 2014 when compared to February 2013. At the end of February long range stock levels were about 49% full compared to 20% a year earlier. Amid mild weather, demand for gas to heat homes this winter has been historically soft and the requirement to draw on stock levels has been reduced as a result. The average gas demand for February was 17% lower year-on-year and it was the lowest level for the month since 2000. High wind generation and competitive coal prices combined to erode the need to burn gas to produce power. With the prospect of a large storage overhang at the end of winter 13/14 wholesale prices continued to soften. The monthly average Day-ahead gas price out turned at 59.21p a therm, which is a 10% month-on-month drop in euro terms from the 65.31p a therm level recorded in January. Uninterrupted Norwegian gas supplies also contributed to weakening wholesale prices. The UK gas market entered winter 13/14 in a high state of anxiety following a prolonged cold snap the previous winter which saw wholesale gas prices soar amid low stocks and disrupted supplies. The story of winter 13/14 has out turned very differently as mild weather has eroded these anxieties and the market was comfortably supplied with abundant gas up to the end of February.

Despite the deteriorating situation in Ukraine during February, gas prices failed to react until early March when Russia intervened on the basis of "radical extremists" supposedly threatening the lives and safety of residents in Crimea and other south-eastern regions. On this basis Russia's President Putin obtained parliamentary permission to use Russian troops not just in Crimea, but in the Ukraine as a whole. This took the original domestic dispute to a disturbing international level and it created an anxiety that European gas supplies through Ukraine were threatened. These anxieties pushed gas futures 10% higher on March 3.

## Coal Index




**1 Mth** -9% **3 Mth** -10% **12 Mth** -19%

*Index adjusted for currency movements.
Data Source: ICE

# Coal

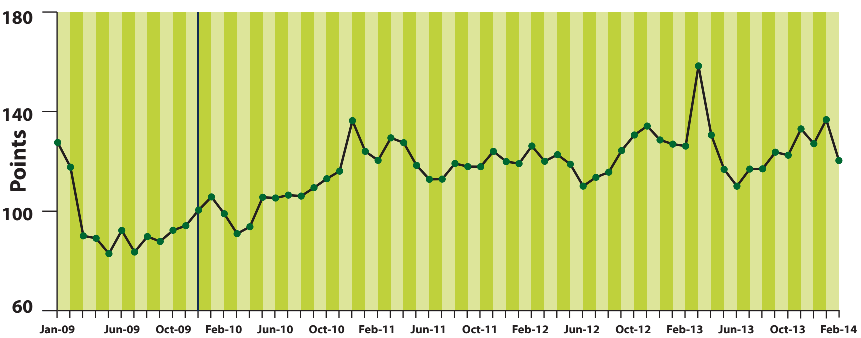
In euro terms the ICE Rotterdam Monthly Coal Futures contract was 9% lower month-on-month.

European coal prices fell month-on-month with the demand picture for the continent remaining "uninspiring" amid a protracted bout of mild weather and above-average inventories at power plants. At the end of February the ICE Rotterdam Monthly Coal Futures fell to a 2014 low of US$77.10. It is unsure as to where European prices could find a floor now that stock levels are reportedly reasonably high, given that winter 13/14 failed to stimulate demand and demand in Eastern Europe is reportedly "not there".

Prices fell despite US miner Drummond's ship-loading operations remaining suspended on environmental grounds for failing to install direct loading technology at its export terminal by a January 1 deadline. New port operations are expected to be complete by the end of March. Once the direct loading port is operational the ban on exports on Drummond will be lifted. Drummond exported about 22 million m/t last year (see the January 2013 Index for further details on this story).

According to CERA, the malaise in global coal prices shows little sign of being lifted as there is much to suggest further substantial export growth will be achieved in 2014. CERA are predicting that supply growth will come from Indonesia and Australia and that European supplies will be boosted by a year-on-year Colombian coal production increase in 2014. Russian exports grew strongly in 2013 and are expected to remain steady in 2014.

## Electricity Index




**1 Mth** -13% **3 Mth** -9% **12 Mth** -4%

Data Source: SEMO

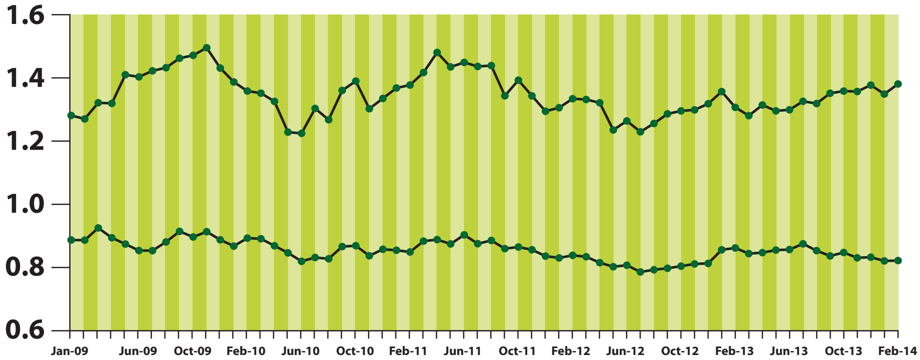
# Electricity

In February the monthly average Irish wholesale electricity price fell 13% month-on-month. It was a perfect storm for wholesale electricity prices as falling wholesale UK Day-ahead gas prices, extraordinary wind volumes and a lower 'clean spark' drove prices lower.

The average 'clean sparks' in February fell over €7/MWh to approximately €7/MWh month-on-month (the 'clean spark' is the theoretical gross margin of a gas-fired power plant from selling a unit of electricity, having bought the fuel required to produce this unit of electricity and the cost of abating the carbon emitted). A key factor for lower 'clean sparks' was the return of more efficient gas powered plants that were unavailable in January due to maintenance and increased coal fired production. Given current wholesale prices and the cost of abating a tonne of carbon, it is cheaper to produce a unit of electricity by burning coal so increased coal production puts downward pressure on wholesale prices. Coal units met 17% of the island's electricity demand in February, an increase of 1% month on month.

During the month, wind turbines met 23% of the island of Ireland's electricity demand which was the second highest percentage on record and only slightly behind the all-time record of 24% set in December 2013. The flood of electricity from wind turbines helped to displace costly gas fired generation which fed through to wholesale prices. However, the cost of producing a unit of electricity from a gas powered generation plant did fall with the 10% drop in the Day-ahead wholesale UK gas price. This factor also applied additional downward pressure on wholesale prices.

### FX Rates




| | | | | | | |
|---|---|---|---|---|---|---|
| 1 Mth | 2% | 3 Mth | 2% | 12 Mth | 6% | EURUSD |
| 1 Mth | 1% | 3 Mth | -1% | 12 Mth | -4% | EURGBP |

## FX Rates

Month-on-month the euro gained against both the US Dollar and the British Pound.

The euro received a boost in February on news that the euro zone economy picked up from 0.1% quarter-on-quarter growth in Q3 to 0.3% in Q4. As expected, an export-led expansion of the German economy led the way with the economy expanding 0.4% in Q4 quarter-on-quarter. Growth in Italy (+0.1% q/q) and France (+0.3% q/q) suggests that the region's expansion, albeit slow, is more broadly based than it has been in the past. Business surveys also released in the month supported the continued euro zone recovery story.

In contrast the economic growth picture from the US was less certain than it has been in recent months. GDP growth in Q4 was revised down from 3.2% annualised to 2.4% and the economy added just 113,000 jobs in January which was a weak performance by recent standards. A 0.4% fall in retail sales between December and January added to the uncertainty. The key question for the US economy now is whether the failure to meet expectations is down to the bad weather or a loss of momentum. In her first testimony to the House Finance Committee, the new Fed Chairman Janet Yellen said that interest rates would remain low long after unemployment has fallen below the Fed's 6.5% threshold for thinking about rate rises.

The UK economy continued to exceed expectations in February on a number of fronts. Construction saw its sharpest output rise since August 2007. In December the UK's trade gap fell to GBP£1 billion with expanding exports and falling imports. Year-on-year UK retail sales grew 4.3% in January but price pressures in retail are still absent. Almost 200,000 people found work in the three months to December 2013 and UK house prices are rising in many parts of the country. The service sector also expanded and with a 3.2% increase year-on-year in December, it expanded at the end of 2013 at its fastest pace since 2008. To address growing expectations of interest rate hikes, the Bank of England made three clear statements which may have weighed on the Pound. Firstly, excess spare capacity will keep rates low as long as it exists. Secondly, any future rate hikes will be gradual over the next two or three years. Thirdly, rates are unlikely to get to pre-crisis levels any time soon.

## Market Outlook

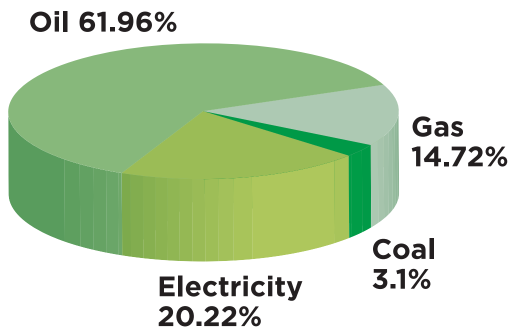
The big question for Brent crude oil prices in 2014 is what will be the main influence on prices. So far in 2014 the loss of supplies due to geopolitical concerns and rising demand due to the return of economic growth in developed economies has kept prices above US$100 which is a level that is beginning to look like a permanent feature. Given recent world events and on-going unease and violence in the Middle East and Africa, it is hard to see beyond the risks posed to global oil supplies. However the hope is always that North American shale oil and in particular the return of Libyan and Iranian oil in 2014 could weigh on price. Yet surprises to the upside seem never far away at the moment. China's economic evolution and the Fed's tapering programme may also exert some influence in the months ahead.

Of note in recent months is the growing expectation that the US will lift current restrictions and export light, sweet crude in the years ahead as a result of the "tremendous growth". Because of the shale revolution, US crude production has increased 60% since 2008.

If the crisis in the Ukraine were to be peacefully resolved through diplomatic means, then the changing of the seasons, falling demand and a substantial storage overhang are likely to exert downward pressure on wholesale gas prices. However this would also require the absence of any future potential or actual supply constraints.

## 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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