

Bord Gáis Energy Index

UNDERSTANDING ENERGY

January 2014



Increased wholesale electricity prices results in a 1% increase in Bord Gáis Energy Index

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



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

Summary:

Month-on-month the Bord Gáis Energy Index rose 1% in January due to rising wholesale electricity prices.

UK wholesale gas prices fell in January as the extended spell of unseasonably mild weather continued to erode demand amid ample gas supplies. Irish wholesale electricity prices did not benefit from falling gas prices (UK wholesale gas prices form a significant cost component of Irish electricity prices) as the reduced availability of relatively cheap and efficient power plants ultimately put upward pressure on the wholesale electricity price. The front month Brent crude oil price continues to trade in a tight range but concerns surrounding China and other emerging economies have raised question marks about future demand growth amid potential supply increases in 2014.

In January 2014 the Index stood at 147.

According to IHS CERA, one of the biggest themes at the World Economic forum at Davos in January was 'competitiveness' and in particular competitiveness arising from access to low cost energy. Given the ongoing shale gas revolution in the US, the US has been judged the clear winner with its abundance of low-cost natural gas and cheap industrial electricity prices. Coinciding with the first day of Davos, the European Commission released a new policy paper on energy and climate. Interestingly, as well as seeking a binding target to reduce carbon emissions by 40% from 1990 levels by 2030 and targeting renewables to provide 27% of EU energy by 2030, it also placed a heavy emphasis on the price of such policies and called for a more cost-efficient approach to renewables. The Commission warned of the mortal risk facing industries that have a high share of energy costs and which are exposed to international competition. According to IHS CERA, "it is jobs, as much as the spectre of de-industrialisation, the de-industrialisation in industry, that is now making competitiveness a significant part of Europe's energy debates". The Commission also issued EU-wide non-binding recommendations for shale gas operations to ensure proper environmental safeguards are in place in an effort to boost public confidence in projects involving fracking. In the Commission's new policy statement it observed that "the availability of shale gas in the USA has substantially lowered natural gas prices there as well as electricity generated from natural gas". Clearly Europe is no longer concerned only with policies that promote sustainable energy but policies that are both competitive and sustainable.

Oil Index



1 Mth **-2%** 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 2% lower in euro terms. For the majority of the month prices traded in a very tight range of between US\$106 and US\$108. However, a slight softening occurred toward the back end of January as concerns about emerging economies grew.

As economies such as the US and UK recover there are rising expectations of interest rate increases. Money is reportedly leaving places like Turkey and India which is causing stock markets and currencies to fall sharply and engendering instability in their economies. These concerns, along with further evidence that China's economy is not as aggressively expanding as it had been in the past, is weighing on oil prices as emerging economies are the driver behind rising oil demand.

In early February the foreign ministers of the United States and Iran reportedly held rare private talks in Germany to discuss the next stage in efforts to reach

a definitive agreement to end a decade-old dispute over Iran's nuclear programme. Nuclear negotiations between six world powers and Iran will resume in Vienna on February 18. The talks will aim to settle the nuclear dispute after Iran agreed, under a landmark preliminary deal last November, to halt its most sensitive nuclear operations in return for winning some relief from sanctions. On January 20 the landmark agreement between both sides came into effect. While Iran is to receive limited sanctions relief, the core oil and banking sanctions - including the EU embargo on imports of Iranian oil - remain in place. The US has agreed not to put pressure on countries still buying Iranian crude under exemption from US financial sanctions to make further reductions in imports over the next six months. Iran has committed to halting enrichment of uranium beyond the 5% level and diluting half of its stock of 20%-enriched uranium. The mid-2012 imposition of US and EU sanctions directly targeting Iran's oil revenues reduced Tehran's crude exports from 2.2-2.3 million b/d to around 1 million b/d. Iran's president Hassan Rouhani attended Davos and in a closed-door meeting he reportedly delivered a direct invitation to international oil company chiefs to help Iran develop its oil and gas resources. In response to these positive moves and the potential increase in oil supplies from Iran and Libya in 2014, OPEC's secretary general said he was not concerned that the potential increases will lead to an oversupply in world oil markets. Libya's oil minister claims that the country is producing 650,000 b/d and that some oil ports closed by rebels in the east of the country could reopen if negotiations between the Tripoli government and rebels are successful. National production was boosted in January with the resumption of the Sharara oil field. Towards the end of the month South Sudan's government and rebels signed a ceasefire to end more than five weeks of fighting.

In its first projections for 2015, the US Energy Information Administration said US output will rise by 9% or 750,000 b/d next year to reach 9.3million b/d, the highest in 43 years.

Natural Gas Index



Natural Gas

In euro terms, the average Day-ahead gas price for January was 5% lower month-on-month as above average temperatures in the UK and healthy supplies combined to push prices lower.

Last month we questioned whether robust supplies, a storage overhang and continued mild weather would combine to put significant downward pressure on prices provided demand remained below seasonal norms. We also questioned whether this combination would seriously challenge what appeared to be the fragile new norm of 70p a therm. In January we got answers to these questions as the Day-ahead price tumbled to a low of 62.64p a therm. In early February prices traded below 60p a therm. Last year Day-ahead prices climbed sharply in late March and early April when a prolonged cold snap hit and storage levels across much of northwest Europe

were all but emptied. Since then gas prices have been supported by increased demand to replenish stocks over the summer months and anxieties that the UK would struggle to satisfy gas demand this winter. These anxieties have been assuaged as an extended spell of above average temperatures has diminished demand leaving ample gas stocks for the remaining two months of winter 13/14. Strong supplies of Norwegian gas, above average temperatures on the Continent and the absence of any significant supply constraints has further eroded anxieties and prices. The Dutch government's decision to cut production from the giant Groningen gas field over the next three years provided some temporary support. Groningen provides the bulk of Dutch production but increasingly frequent and intense earthquakes in the vicinity of the Groningen formation has led to concerns. The market expects the gap to be filled by Russia, which added some 20% to its exports to Western Europe in 2013. With ample supplies, a drop in European LNG imports to the lowest level since March 2008 has had no impact on prices.

UK Gas prices for summer 14, next winter and beyond also fell in January as falling prompt prices and the reduced need to replenish stocks over the coming summer period combined to push prices lower. As evidence of how much tension has been extracted from the wholesale gas market during January, at 59.8p a therm at the end of the month, the summer 14 contract price hit its lowest point since July 2012 and fell a dramatic 5p in January alone.

Coal Index



Coal

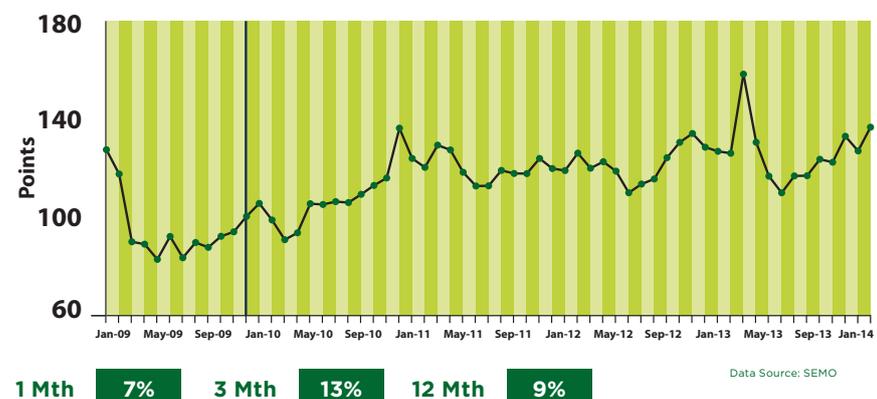
In euro terms the ICE Rotterdam Monthly Coal Futures contract was 4% higher month-on-month.

European prices received a boost in January as the US-miner Drummond was banned by the Colombian government from exporting coal after the company did not have a required direct loading system at its ports ready in time to comply with a January 1 deadline as stated by local environmental regulations. Drummond violated environmental laws by continuing to load coal in open barges. Barges are used to transfer coal from the coastline to ships where floating cranes scoop up the coal for loading. Drummond blamed a labour strike in 2013 for causing the delay in the construction of the new infrastructure and it said that the new port would be ready by the end of March. The new loading laws have been expected for several years. According to Platts, market sources said that up to 7million mt of thermal

coal would be shut in during the period. In 2013 Colombia collected about US\$8 billion in export sales from coal, or 8% of its US\$95 billion in total exports.

European coal prices reacted as it is the main destination for Colombian exports. After rallying to US\$84.50 on January 16, prices eventually started to ease back as the market reassessed the supply concern amid reports that Drummond's Colombian port operations could come online sooner rather than later. With little demand for coal in Europe due to mild weather and high stocks, price reaction has been limited. In addition, these lost volumes might be compensated by the extra South African cargoes that have been shipped to Europe since the end of 2013.

Electricity Index



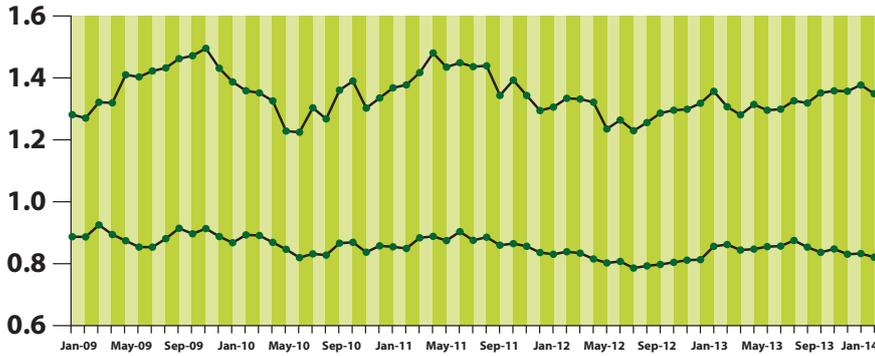
Electricity

In January the monthly average Irish wholesale electricity price rose by 7% month-on-month despite a 5% fall in the wholesale Day-ahead gas prices, near record wind volumes and steady carbon prices. The reason for the rise was attributed to higher 'clean sparks' in January (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). Month-on-month the average 'clean spark' rose from €5/MWh to €14/MWh.

The January monthly average 'clean spark' rose with the loss due to maintenance of one of the most efficient gas powered plants on the system. The loss of three coal powered plants compounded the problem which saw relatively expensive gas powered plants meeting 38% of

demand versus 34% in December. Coal only met 16% of January's demand and typically it meets 25% of demand. At current wholesale prices it is cheaper to produce a unit of electricity by burning coal rather than gas so the loss of these coal units and their substitution with more inefficient gas-fired units applied upward pressure on wholesale electricity prices in January. Despite wind satisfying 19% of demand, a near record, it was unable to counteract the loss of the efficient gas powered plant and the three coal units.

FX Rates



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

FX Rates

Month-on-month the euro weakened against both the US Dollar and the British Pound as these economies continue to expand, raising expectations of interest rates hikes.

A series of positive economic releases in the UK during January helped to strengthen the Pound. The UK economy grew 1.9% in 2013 which was the fastest since 2007 and retail sales in December hit a nine year high. Surveys suggest that confidence in the services sector remains high and house prices continued to rise in November with a 5.4% increase month-on-month. UK unemployment hit its lowest point since 2009 at 7.1%. The latest Bank of England Agents' Survey of Business Conditions continued the positive momentum as it pointed to higher profits, higher sales, more employment and more credit. In a related release, new borrowing by UK businesses increased "significantly" in Q4 2013 for both SMEs and large corporates. With

inflation hitting 2% year-on-year in December, low inflation rather than deflation is a welcome condition attached to the economy's growth. The positivity associated with the US economy continued in January but when it was reported that it added only 74,000 jobs in December (less than half the monthly average in 2013) some of the optimism pared back. However, in 2013 the US economy added 2 million jobs and US Industrial Output (aided by cheap energy) grew by 3.7%. It is now estimated that 2.1 million jobs in the US are supported by the unconventional oil and gas revolution. The January data set also revealed that the US economy expanded by 3.2% in the last quarter of 2013 and that interestingly it is rebalancing by exporting more (cheap energy has supported energy intensive industries and industrialisation) and imported less. With growth, spare capacity continues to fall with industry now running at 79.2% of capacity. This suggests that future growth could be inflationary and US interest rates could rise to more "normal" levels. As the US economy continues to normalise, the Fed announced a further \$10 billion per month reduction in its quantitative easing programme. However, as the Fed curtails this programme some of the cash that had gone seeking higher returns in emerging economies is being enticed back. This has caused instability for emerging economies and during the month South Africa, India and Turkey were forced to raise interest rates to stem slides in their currencies. The euro suffered in January as calls for the ECB action to help protect the euro zone's economy grew following the release of weak and falling inflation and stubbornly high unemployment.

Market Outlook

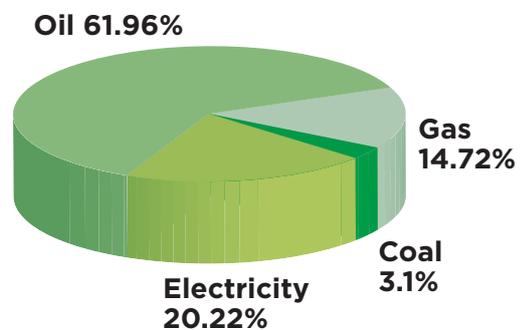
As discussed last month, the big question for oil in 2014 will be whether the potential supply growth materialises and whether this puts downward pressure on prices rather than limiting the upside. Not only has North American shale oil the potential to increase global oil supplies, the return of Libyan and Iranian oil in 2014 could have a significant impact. According to Societe Generale, it could take 3-9 months for Iranian oil output and exports to recover the 1million b/d of exports lost in recent years.

However, with the Middle East remaining unstable, risks to the upside are constant. As outlined previously, in a normal environment OPEC will attempt to orchestrate supply to maintain prices between US\$100 - US\$110 so any potential downside is limited. With demand continuing to be driven by emerging economies such as China, India and Brazil, the current economic uncertainty could act as a drag on prices if these economies continue to suffer a flight of capital in the wake of the normalisation of more advanced economies in the West.

With only two months left in winter 13/14 we are unlikely to see a repeat of escalating wholesale gas prices as we did in March and April of last year. However, the events of March 2013 weren't expected in January last year but with healthy gas storage levels and benign weather forecasts a repeat of these events is unlikely but not impossible.

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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