

Bord Gáis Energy Index

UNDERSTANDING ENERGY

April 2014



5% fall in Bord Gáis Energy Index in April due to falling wholesale gas and electricity prices

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



Summary:

The Bord Gáis Energy Index fell 5% month-on-month in April due to falling wholesale gas and electricity prices. A steady supply of gas to the UK coupled with falling demand weighed on wholesale gas prices generally. However, tensions as a result of the Ukrainian crisis and the potential threat to European gas supplies did push wholesale prices, particularly forward prices, higher on occasion. Despite an apparent de-escalation in political and military tensions in early May, Ukraine's mounting gas debt remains an issue. Falling wholesale gas prices and carbon prices weighed on wholesale Irish electricity prices which are highly sensitive to the cost of importing gas from the UK. Brent crude prices continued to trade in a narrow range of between US\$105 and US\$110 with the prospect of increased supply being offset by numerous geopolitical events.

In April 2014 the Index stood at 133, an eight point drop month-on-month.

It has been a volatile month for wholesale gas prices in the UK. Amid robust stock levels, healthy supply and benign demand, curve prices hit record lows early in the month before escalating as tensions in Ukraine and the prospect of a civil war intensified. In the context of the Ukrainian crisis and given that Ukraine is the world's largest transit country for gas supplies (in 2013 Gazprom shipped 84 Bcm of gas through Ukraine, 52% of its total exports to Europe gas traders) gas traders have three concerns. Firstly, if heavy weapons are deployed would the gas pipelines have to be shut down for safety? Secondly, will tougher sanctions result in a retaliatory move by Russia to close off the gas taps? Thirdly, if Ukraine does not settle its gas debt will Russia starve it of gas? On the gas debt issue some clarity was achieved following a meeting in Warsaw in early May between Russia, Ukraine and the EU where it was agreed that there would be no disruption to supplies while negotiations are on-going this month. Russia claims that Ukraine owes it US\$3.5 billion for gas as Ukraine has not paid for supplies from Gazprom between February and April. Russia may move to a prepayment regime this month for June deliveries. This would involve an invoice being issued on May 16 for June gas deliveries to be paid by May 31. Russia has threatened that if that invoice is not paid it will restrict gas supplies to Ukraine. Ukraine is disputing the 80% price hike imposed by Russia since February which has been in force since April 1. Ukraine wants Russia to return to the price that was fixed on January 1 at the level of US\$268/100 cu m. Russia is imposing a unit price of US\$485/100 cu m. The International Monetary Fund has endorsed a credit line for Ukraine that includes a first tranche of US\$3.2 billion.

Oil Index



Oil

Month-on-month the front month Brent crude price was unchanged in euro terms. Over the month numerous geopolitical events helped to support prices but the offsetting impact of steady production has meant that the front month Brent crude price continues to trade in a narrow range of between US\$105 and US\$110.

In April Ukrainian government forces began to challenge pro-Russian insurgents more aggressively and markets calculated if this would unite Ukraine or divide it further leading to a Russian invasion. Uncertainty and the prospect of a civil war or invasion supported oil prices. Ukraine transited approximately 313,000 b/d of Russian crude through the Druzhba pipeline in 2013 but according to reports this only accounted for 8% of Russia's total crude exports last year. According to Platts, in 2013 OECD Europe relied

on Russia for 36% of its total net crude oil imports and Russia exported an average of 3.05 million b/d to OECD Europe. It is feared that tensions among Russia, Ukraine, the US and the EU could make it more difficult to reach a resolution with Iran on its nuclear deal. Iran is currently negotiating with world powers to scale back its controversial nuclear programme in return for an easing of international sanctions. In 1994 Russia and the US signed a treaty guaranteeing Ukraine's sovereignty in exchange for nuclear disarmament. The current threat to Ukraine's territorial integrity may increase Iran's resistance to a deal. The Ukraine crisis may also lead to reduced Russian cooperation with the West in the on-going negotiations.

The steady production of oil from the Gulf trio of Saudi Arabia, Kuwait and the United Arab Emirates is helping to stabilize prices but at the expense of global spare capacity which is thin at just 2 million b/d.

Brent crude prices did come under some pressure on the news in early April that Libyan rebels occupying four eastern oil ports had agreed with the government to gradually end their eight-month blockade. Zueitina and Hariga ports were set to open immediately with the larger ports of Ras Lanuf and Es Sider set to follow in the coming weeks. However, the country is still having difficulty boosting its oil production despite now having five export terminals able to send crude to international markets as protests at the oil fields that feed them continue. Libyan oil production is currently averaging just 275,000 b/d. The current production rate is way below the 1.5-1.6 million b/d Libya was producing before the current unrest began 12 months ago.

In April the impact of US shale oil continued to produce some extraordinary numbers with US proved reserves of US crude oil rising to 33.4 billion barrels, the highest since 1976. In a separate release US crude production hit a 26 year high of 8.36 million b/d in April.

Natural Gas Index



South Hook terminal increased its average daily send out by nearly 300%. The global LNG market tends to free up in spring which bolsters UK gas supplies because there is less competition from Japan and South Korea as the temperatures rise across the northern hemisphere. As the market enters summer, global competition will again increase and the market will tighten due to the need for extra power supplies in countries like Japan for summer air-conditioning which drives the need to burn gas to meet peak power demands.

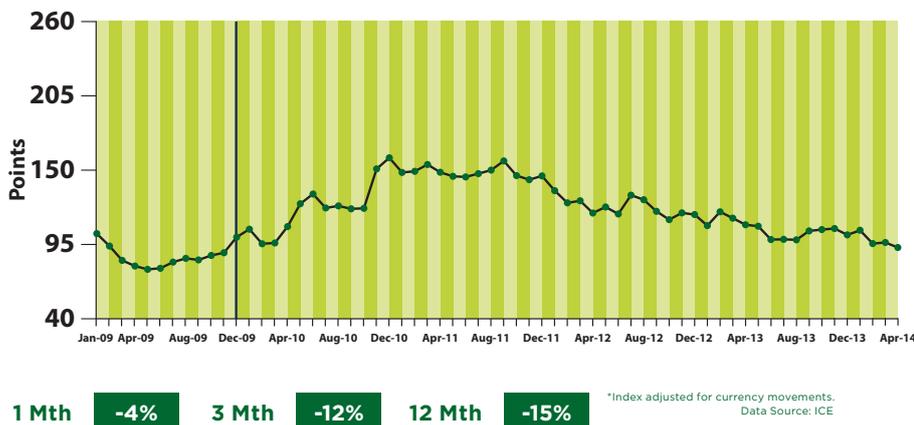
The Ukrainian crisis is continuing to have an impact on forward UK gas prices (winter 14/15 and summer 15). Having hit record lows on April 2, curve prices recovered and gained between 2p - 5p amid a warning from Putin that Ukraine's gas debt to Russia could result in supplies to Europe being impacted. However, in early May energy officials from the EU, Russia and Ukraine agreed during a meeting in Warsaw that there will be no gas supply disruptions to customers in Ukraine and the EU while negotiations are on-going in May.

Natural Gas

In euro terms the average Day-ahead gas price for April was 11% lower month-on-month as falling seasonal demand and healthy supplies combined to push prompt prices lower for the fourth consecutive month running. At 49.94p a therm, the April average Day-ahead gas price recorded a three and a half year low. The mild winter left UK gas stocks at 63% full at the end of April compared to 17% at the same time last year. The fullness of the UK's gas in store is a factor weighing on gas prices as the demand for gas in the months ahead will be lower because the need to replenish stocks in advance of winter 14/15 will ease.

Despite the seasonal drop in the flow of Norwegian gas to the UK (April is considered the start of the six month summer period of the gas year) supplies remained healthy with the UK seeing an increase in flows of Qatari LNG to the South Hook LNG terminal. Month-on-month the

Coal Index



January due to the company's noncompliance with environmental regulations stating that all coal export terminals in Colombia should have direct loading operations in place by a New Year deadline. Coal burn for European power generators remained low in April following a mild winter with power plants running at lower capacities and with demand remaining dampened in the run-up to summer.

The outlook for European coal prices remains weak. Atlantic basin coal prices are sensitive to Colombian supply, which accounts for around 40% of European imports. According to Argus, the expansion of major producer Drummond's Colombian output and export capacity will lead to a 23% increase in exports. Russia, another major exporter, is also planning to increase exports this year by 7%. Other suppliers that plan on increasing production include Australia, Indonesia and South Africa. In addition to increasing supply, European buyers are in a very comfortable position currently having failed to deplete stockpiles as normal through a fairly mild winter across the continent.

Coal

In euro terms the ICE Rotterdam Monthly Coal Futures contract was 4% lower month-on-month. Coal prices were relatively stable during the month and traded in a tight range of between US\$77.50 and US\$75.05. Intra-month coal prices did receive a boost from rising gas prices and concerns that the tension between Russia and Ukraine could result in sanctions on Russian coal exports. However the market failed to hang on to these gains as the underlying market is characterised by over supply, healthy stock levels and soft demand. Coal stocks at major discharge terminals in the Amsterdam-Rotterdam-Antwerp region have firmed to their highest levels this year at around 6 million mt. Market participants said supply-demand fundamentals have balanced out after US miner Drummond's Colombian coal exports restarted earlier this month. Drummond's exports were banned by the Colombian government in

Electricity Index



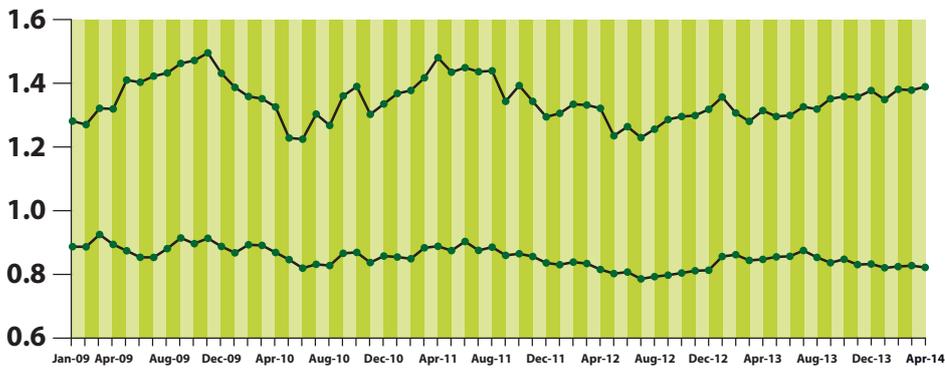
some efficient gas powered plant with more inefficient gas powered plant due to outages. When running, wind turbines tend to displace gas fired generation which can feed through to lower wholesale prices. However, as a source of supply, wind is unpredictable and lower wind output in April helped support spark prices.

Electricity

In April the monthly average Irish wholesale electricity price fell by 14% month-on-month with softer gas (gas powered generation dominates the generation mix on the island of Ireland and the price of imported gas from the UK has a significant influence on Irish wholesale electricity prices), coal and carbon prices.

Month-on-month the average 'clean spark' in April fell by approximately €2/MWh to over €12/MWh (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). In a European and Irish context, €12/MWh remains a strong 'clean spark'. In the month spark was supported by falling electricity production from Ireland's fleet of wind turbines and the requirement to substitute

FX Rates



1 Mth	1%	3 Mth	3%	12 Mth	5%	EURUSD
1 Mth	0%	3 Mth	0%	12 Mth	-3%	EURGBP

FX Rates

Month-on-month the euro gained versus the US Dollar and was unchanged versus the British Pound.

Another month of low volatility in exchange rate movements between the euro, the Pound and the US Dollar can again be attributed to the prospect of interest rates remaining low. In April it was reported that annual inflation in the euro zone was 0.5% in March, down from 0.7% in February. Officials again stressed that the region is not at risk of deflation but pressure is building to reduce the main interest rate below 0.25% and to weaken the euro which could be keeping inflation too low. Falling bond yields across the euro zone's peripheral economies in April reflects investors' hopes that the ECB will start printing money to stop inflation falling further.

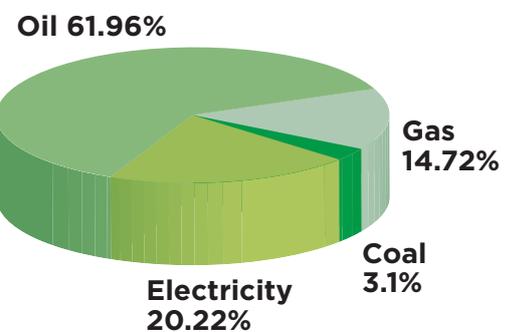
The prospect of a rate hike in the UK may have also been pushed further into the future with inflation falling to 1.6% year-on-year in March, the slowest annual increase since October 2009. With the UK's unemployment rate below the 7% threshold that would have triggered official talk of a rate hike, it would seem that this part of the Bank of England's forward guidance has been laid to rest. With inflation below 2%, it suggests that UK interest rates are not set to rise soon. Minutes from the US Federal Reserve's March meeting showed the committee believes that economic conditions may warrant keeping the official US interest rate low even when the economy is back to normal. So, like the Bank of England and the ECB, the US Federal Reserve Bank feels a low rate environment has many months if not years to run.

Market Outlook

In recent weeks the phrase "oil is money but gas is power" has gone to the fore as tensions in Ukraine have manifested themselves in gas prices rather than in oil prices. As reported in previous editions, in 2013 OECD Europe relied on Russia for 36% of its total net crude oil imports and Russia exported an average of 3.05million b/d to OECD Europe. While gas exports to OECD Europe generated revenue of around US\$57billion for Gazprom in 2013, Russian crude exports were worth about US\$100billion. As we enter the summer period with UK stock levels at close to 65% full and no obvious threat to prices other than a potential disruption to European gas supplies through the Ukraine, any perceived de-escalation in tensions should see wholesale UK gas prices soften. Indeed, the healthy storage stocks across Europe have helped dampen near-term security of supply concerns relating to the Ukraine crisis. However, despite some easing of tensions in early May and further softening of wholesale gas prices this month, the crisis is unresolved and could still push prices higher. Gazprom did say that Ukraine had failed to pay for April supplies of Russian gas, which raised its total gas debt to Gazprom to more than US\$3.5 billion and put under further threat future Russian gas deliveries to the country. Russian Energy Minister Alexander Novak reiterated an earlier statement by Russian President Vladimir Putin and gave Ukraine a month from April 17 to start paying its gas debts to Russia, saying that otherwise Russia would insist on prepayment. The switch to other sources of gas supplies such as LNG is being seen as a real alternative to Russian gas. Recent reports claim that the EU has 137 Bcm of spare LNG regasification capacity spread over 19 terminals and that the EU imported about 130-140 Bcm of pipeline gas from Russia in 2013. The same report claims that Belgium, France, Greece, Italy, the Netherlands, Spain, Portugal and the UK could all import more LNG if Russian gas supplies were cut, potentially freeing up pipeline gas from other sources to go to other parts of the EU. However, Europe's spare capacity is as a result of LNG producers sending their cargoes to higher-paying markets in Asia and Latin America rather than Europe. If Europe wanted to attract LNG, wholesale prices would have to rise. The EC is preparing reports on the EU's energy security and on reducing dependence on Russian gas for EU leaders to discuss in June.

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.



**For more information please contact:
FleishmanHillard — James Dunny — 086 388 3903**

The contents of this report are provided solely as an information guide. The report is presented to you "as is" and may or may not be correct, current, accurate or complete. While every effort is made in preparing material for publication no responsibility is accepted by or on behalf of Bord Gáis Éireann, the SEMO, ICE Futures Europe, the Sustainable Energy Authority of Ireland or Spectron Group Limited (together, the "Parties") for any errors, omissions or misleading statements within this report. No representation or warranty, express or implied, is made or liability accepted by any of the Parties or any of their respective directors, employees or agents in relation to the accuracy or completeness of the information contained in this report. Each of the Parties and their respective directors, employees or agents does not and will not accept any liability in relation to the information contained in this report. Bord Gáis Éireann reserves the right at any time to revise, amend, alter or delete the information provided in this report.