

**Bord Gáis Energy Index**

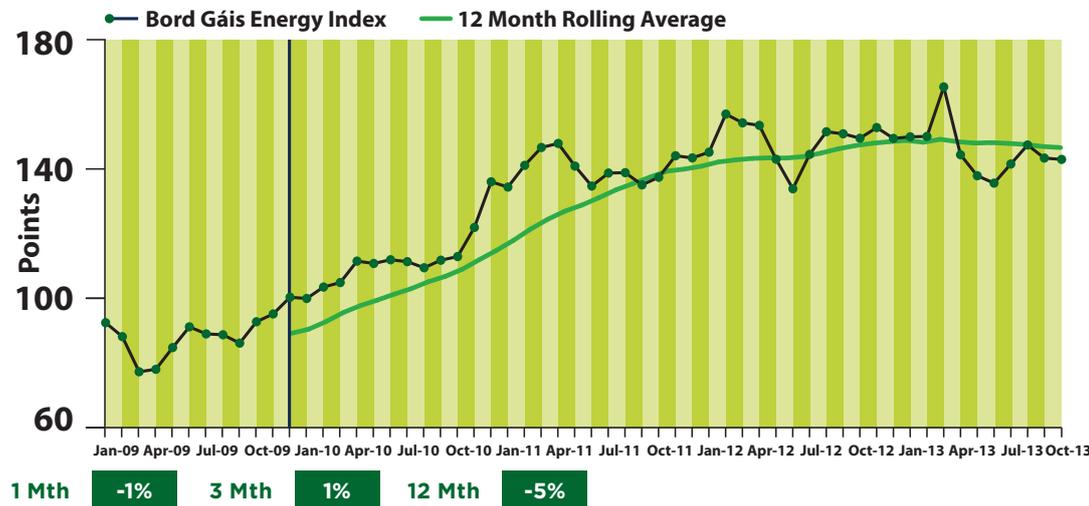
# UNDERSTANDING ENERGY

October 2013



# Bord Gáis Energy Index falls 1% following a turbulent month of oil price movements

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



## Summary:

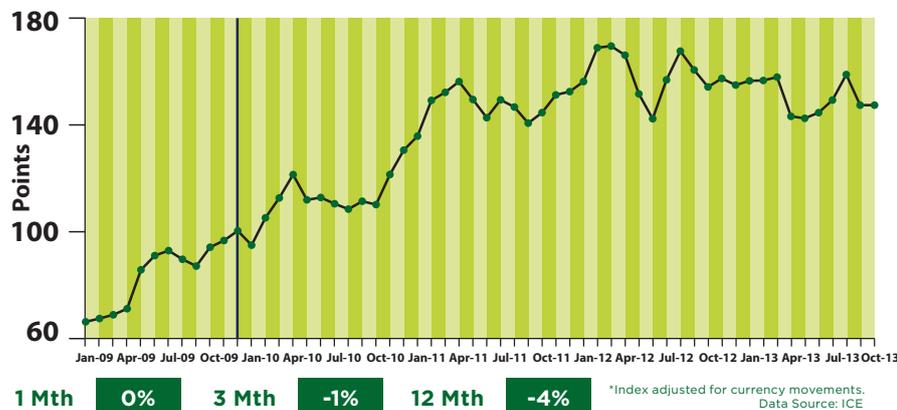
The Bord Gáis Energy Index fell 1% in October 2013 due to a modest softening in wholesale gas and electricity prices. Softer wholesale UK gas prices reflected a balanced gas market in the absence of any significant supply or climatic event during October.

Despite what appears to be stable wholesale commodity prices, there were dramatic moves intra-month in Brent crude oil prices as the market reacted bullishly to events in Libya and bearishly to the continuing easing of geopolitical pressures, a stronger US Dollar and positive supply stories.

In October 2013 the Index stood at 143.

In an unusual move the CEOs from 10 of Europe's biggest energy utilities said at a joint press conference in Brussels that the risk of electricity blackouts in Europe has never been higher as utilities are forced to close uneconomic natural gas-fired power plants. The CEOs blamed subsidies for renewables, priority grid access and low carbon prices for making gas plants uneconomical. CEOs fear that, with the mothballing of 50GW of efficient gas turbine plants in recent years and the threat to a further 130GW, there will be insufficient back up for renewables and this will become a particular concern when the European economy recovers in the years to come.

## Oil Index



## Oil

Month-on-month the front month Brent crude price was unchanged. However, this headline stability conceals some significant fluctuations in Brent crude prices during October as prices responded to a series of bullish and bearish factors which ultimately cancelled each other out.

In October oil prices continued to be supported by events in Libya and the country's output has become a major near-term uncertainty hanging over the oil market. In the post Gaddafi era a security vacuum has allowed growing political unrest to shut down oil export terminals and production facilities. Since August Libyan output has fallen to a fraction of the 1.4 to 1.5 mb/d it produced earlier in the year. Lost Libyan supplies have contributed to the erosion of the world's surplus crude oil production capacity to under 2 mb/d in recent months. In September there had been cause for some optimism when a deal was struck with workers at two major fields which had led to their restart and renewed exports. However, this optimism

proved to be temporary and in October oil prices reacted to the kidnapping, albeit brief, of Libya's Prime Minister Ali Zeidan which underscored the challenging security environment. The picture deteriorated further when a fresh strike was called at an oil field and Libyan production reportedly fell to just 250,000 b/d. Towards the end of the month the situation started to improve modestly and month-on-month Libya's production increased, albeit from a low level in September. However, according to Barclay's Bank "the potential for a near-term resolution that would allow the bulk of Libya's oil to return to the market on a sustainable basis is remote" so markets will continue to monitor the situation. Despite OPEC's enormous belowground resources, production issues in Venezuela, Nigeria, Algeria, Iran and Iraq have added to oil supply anxieties. Other factors supporting oil prices during the month were the Fed's decision not to slow quantitative easing, a growing sense that the world's Central Banks will continue the era of easy money in 2014, record equity prices and rising bond prices. An expanding manufacturing sector and economy in China contributed some additional upward price pressure. Asia is the centre of energy consumption and is expected to remain the demand engine going forward. In this context, in October China overtook the US as the biggest importer of oil due to economic growth and the rise in car sales.

These bullish events were counterbalanced by news that Syria's declared equipment for producing, mixing and filling chemical weapons had been destroyed. It is now expected that Syria will destroy its chemical weapons by mid-2014. Easing of geopolitical tensions continued as it emerged, following talks between Iran and the West in Geneva, that Iran had made a proposal aimed at ending the long-running dispute over its nuclear programme. This was described as "an important contribution" following "substantive and forward-looking negotiations". Talks are set to resume on November 7-8.

Rising US crude inventories and targeted North American oil production growth of 1.2 million b/d in 2013, due to the revival of US production, also weighed on prices. The American benchmark oil price slid throughout the month and suffered its longest losing streak in 17 months, amid expanding US crude supplies. This weakness in turn weighed on Brent crude prices. News of rising OPEC production growth in October, due to a rebound in Iraqi production, provided some additional downward price pressure as did the US Dollar's sharp and significant gain versus the euro late in the month. Brent crude prices tend to soften when the US Dollar gains in strength. The euro suffered on speculation that the ECB will cut interest rates.

## Natural Gas Index



LNG stocks at 69% at the end of October as we descend deeper into winter. This relief was felt in forward prices which also weakened slightly month-on-month.

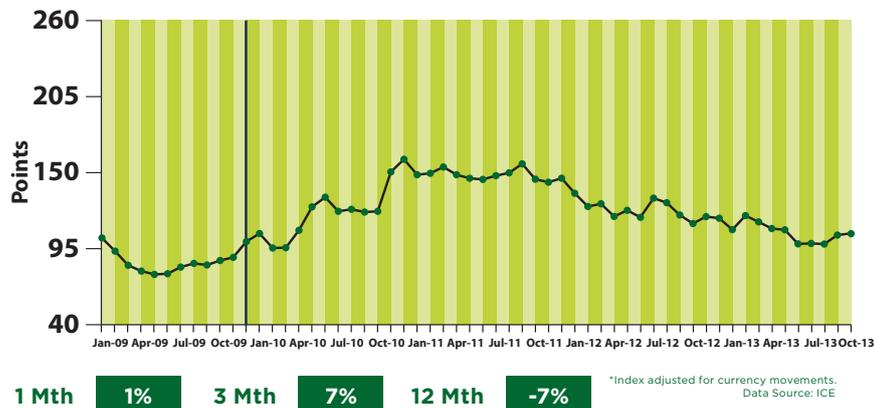
During the month National Grid released its much anticipated Winter Outlook 13/14 and it estimates that UK Continental Shelf gas output will be around 19% lower than last year and that LNG imports are likely to remain low. As a result the UK will be more dependent on storage and imports from mainland Europe and Norway. It states that "it is clear that the combination of UK supplies and a diverse range of import capacity, combined with a mixture of storage types has performed well over the last eight years...(but that)...multiple, coincident events within a winter could prove challenging". Pressure on LNG supplies to the UK has already emerged as China is reportedly "scouring global markets for gas imports to avert a looming supply crunch" and competition from South Korea and Japan has pushed Asian LNG spot prices to around US\$17.50 per mmbtu, far exceeding European spot prices. In a separate report, Qatar (which is historically a major supplier of LNG to the UK) is expected to have reduced flexibility to deliver LNG to Europe as high volumes of cargoes have been committed to Asian buyers this winter through long-term contract volume extensions. So far this year there has been a 38% drop in the number of Qatari cargoes arriving in Britain compared to the same period last year. Fears of a fresh natural gas dispute between Russia and the Ukraine also intensified after Kiev defaulted on its US\$882 million August payment for Russian gas supplies.

## Natural Gas

In euro terms, the average Day-ahead gas price for September was 2% lower month-on-month and traded within a tight range of between 63p - 66p a therm. A stronger euro versus sterling had a strong influence on the month-on-month drop. The euro's strength was attributed to the expected repatriation of overseas assets by euro zone lenders ahead of the ECB's audit of the region's financial system. The sale of offshore assets is seen as a move by lenders to consolidate their balance sheets, repay loans taken out under the Longer-Term Refinancing Operations and reduce their exposure to foreign currency-denominated assets which could be an issue during the asset quality review.

Since July the monthly average Day-ahead gas price has been stuck at around 65p and, without any significant weather event or gas supply issue in October, wholesale gas prices remained stable. On a positive note, with the average Day-ahead UK gas price for October out turning at 64.87p, it was nearly 2p lower than the average forward price for October in 2013. Gas traders will be relieved to see long range UK stock levels at 93% full and

## Coal Index



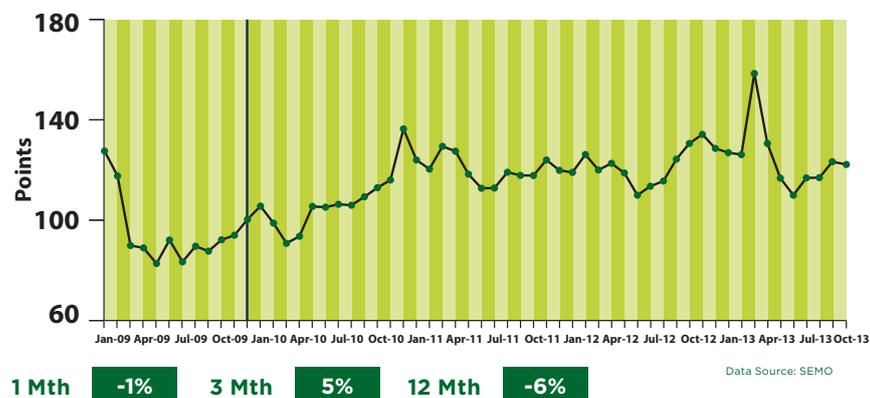
By way of background, rapid heavy industrial growth and high overall GDP growth rates in the decade spanning 2001 to 2011 fuelled rapidly rising coal demand in China. This outpaced domestic coal mining capacity and increased coal imports from suppliers in Australia and Indonesia which in turn supported global prices. However, in recent years the market has turned to oversupply as Chinese mining and transportation infrastructure developed and coal demand fell. Chinese demand has eroded due to aggressive-wide energy efficiency targets, a general slowdown in the Chinese economy and weaker-than-expected power demand. Coal at Australia's Newcastle port, an Asian benchmark, has dropped nearly 15% this year alone. However, in the short-term some traders expect an increase in Chinese demand as stockpiles at both port and power plants have reportedly declined and coal production cuts by Australian miners are expected to contribute to a hardening in Asian coal prices. Abundant European supplies, lower coal and firm gas prices, and a crash in the cost of abating carbon has meant that coal-fired power plants have increased their dominance in the European generation mix in 2013.

## Coal

In euro terms the ICE Rotterdam Monthly Coal Futures contract was 1% higher month-on-month. Intra-month, wholesale prices had been rising steadily (moving from a low of US\$81.60/mt to US\$86.40/mt) before the market reassessed how tight the situation was to ensure that month-on-month there was little movement.

At one point the ICE Rotterdam Monthly Coal Futures contract hit a closing high of US\$86.40 as the market had been perceived to be tight with: the impact of the delayed shipments from Colombia following a 53-day miners' strike which ended in late September being felt; supply concern following a bomb attack by the leftist guerrilla group FARC which disrupted the rail line connecting some mines to ports that supply Europe; Russian logistical issues marring vessel shipments from one or two Russian producers; and robust German coal burn contributing to lower stocks in Amsterdam-Rotterdam-Antwerp. However the market failed to retain any significant wholesale price rise as the supply concerns proved fragile and gave way to news that a large Switzerland-based trading house reportedly was set to ship a large amount of South African coal into the European market starting from November onwards.

## Electricity Index



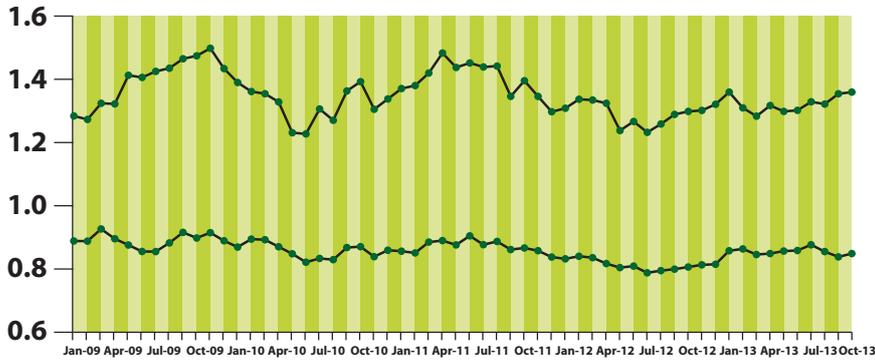
## Electricity

In October the monthly average Irish wholesale electricity price fell 1% month-on-month with the combination of falling wholesale UK gas and carbon prices and lower 'clean sparks' (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).

The October monthly average clean spark decreased on a combination of increased wind and a reduced number of thermal plant starts in the month. In October there was an increase in the volume of electricity being produced by wind turbines. These turbines displaced more expensive traditional thermal electricity generators from the system and as the wind blew on a sustained basis, traditional plants were required less often to start and fill supply gaps left when the wind stopped blowing. Reduced thermal generation and a reduction in the number of traditional plant starts applied downward pressure on wholesale prices. A month-on-month increase in the volume of relatively cheap electricity being imported from the UK also contributed to lower wholesale prices.

The cost of abating carbon remained weak in October ahead of the start of planned sales of 100 million EUAs by the European Investment Bank next month which will increase the supply of carbon allowances in an already saturated market. Uncertainty over the European Commission's backloading plan also weighed on prices in October but it is hoped that a mandate from member states will be approved in early November to start talks with the EU Parliament on a text for backloading (backloading will allow the delay of auctions of some carbon permits to help stem supply and enable carbon prices to rebound from record low levels).

## FX Rates



1 Mth	0%	3 Mth	2%	12 Mth	5%	EURUSD
1 Mth	1%	3 Mth	-3%	12 Mth	5%	EURGBP

on the UK economy (covering GDP growth in Quarter 3, UK house prices, retail sales and the UK services and manufacturing sectors), the pound lost some ground on the euro month-on-month. However, similar to the situation with the US Dollar, the euro gave up most of its gains toward the end of the month and closed at 1 euro to 0.846 sterling having hit a high of 1 euro to 0.856 sterling.

Early in the month the ECB decided to leave rates unchanged at 0.5% on continuing signs of improvement in economic activity across the monetary block. This was later reconfirmed as data showed that industrial production and the manufacturing and service sectors across the economy expanded. However, falling euro zone inflation weighed heavily on the euro as market expectations grew that the ECB would cut interest rates in November to stimulate growth and spending. These expectations proved correct as the ECB surprisingly cut its main refinancing rate to a record low of 0.25%. A weaker euro may help stimulate exports but it has the potential to make non-euro denominated commodities such as oil and gas more expensive for euro zone buyers.

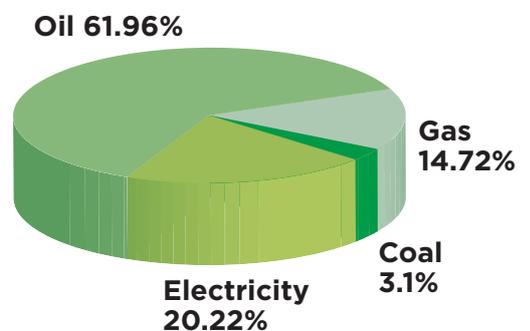
## Market Outlook

With a stable start to winter 13/14 there will be a sigh of relief among gas traders, especially given the healthy state of stocks. The outlook for gas prices over the next five months of winter 13/14 will be determined by Mother Nature. The same primary concern exists, being the 34 million cubic metres curtailment of Norwegian gas production due to compressor problems at the Troll swing field. According to Reuters, the Troll outage significantly limits flexibility to ramp-up Norwegian production to meet peak demand in severe weather conditions. With declining domestic supplies and further expected decreases in LNG imports, the UK will be more reliant than ever on piped gas from Norway and Continental Europe. This by itself is not a concern but based on recent years multiple, coincident events within a winter could still prove challenging. However it is worth noting that according to National Grid, each year has its own unique supply patterns and UK supplies and a diverse range of import capacity, combined with a mixture of storage types has performed well in the past. In a separate development, the head of the European Commission's energy unit for renewables, research and innovation and energy efficiency outlined proposals to guide legislation and environmental rules on shale gas in the EU. At the moment legal certainty regarding shale gas exploration is unclear and the guidelines will also seek to clarify other environmental concerns over the technology. The head said that the EC wants the guidance to be an enabling piece of legislation that will encourage shale gas exploration in the EU. Linked to similar supply concerns in the UK context above, the head said that "we can never be absolutely sure the tap won't be turned off" and that "we are currently over 70% on import dependency and we will go to 80% in the next decade". In October, a Russian governmental commission also approved a draft law to liberalize LNG exports which would put an end to Gazprom's monopoly on Russian LNG exports. Russia's energy minister said it expects Russia's share in the global LNG market to grow to 11-12% by 2020 and further up to 20% by 2030 from the current 4.5%.

Oil supplies and the intensity of any disruption will continue to dominate Brent crude oil prices in the months ahead with particular importance being placed on Libyan supplies and the ongoing talks between the West and Iran over its nuclear programme. Despite OPEC having enormous belowground resources, production constraints have been an issue and given the diverse nature of these constraints a quick and sustained solution to all is not obvious. On a positive note, the "great revival" in US production continues apace and production gains are expected in Canada, Brazil and Kazakhstan. In the shorter-term, OPEC itself is predicting sluggish fuel demand and increasing supplies this winter as consumption in Asia is expected to be constrained by the removal of subsidies in countries such as Indonesia and Malaysia. Subsidies are being cut to ease budget difficulties that threaten investor confidence. According to OPEC, increasing product supplies and sluggish demand will likely dampen margins, leading to lower refinery runs and a reduced demand for oil. Significant weakness in the euro versus both sterling and the US Dollar was recorded in late October and early November which has an impact on euro zone buyers of oil, gas and coal.

## 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:

**Fleishman-Hillard — James Dunny — 086 388 3903**  
**Bord Gáis Energy — Aoife Donohoe — 087 773 3344**

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.

## FX Rates

Month-on-month the euro held steady against the US Dollar and gained slightly versus sterling. However, these minimal month-on-month changes mask significant currency moves intra-month.

As discussed in the Gas Section above, the euro's mid-month strength was attributed to the expected repatriation of overseas assets by euro zone lenders ahead of the ECB's audit of the region's financial system. In turn, the US Dollar's drop in value was linked to economic weakness, sparked by the government shutdown, coupled with a string of underwhelming data releases (on jobs, manufacturing, non-manufacturing, confidence, auto sales) which pointed to some loss of economic momentum. In turn, this delays the timing of the Fed's tapering and the continuation of its bond buying programme. At one point, 1 euro was equal to 1.3822 US Dollars (an exchange rate not seen since November 2011) but most of these gains were lost toward the end of the month with the euro equalling just 1.3584 US Dollars on 31 October. The euro suffered on speculation that the ECB will cut interest rates.

Despite a continuation in the stream of positive data releases