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The Downside of Demand: Trends in the European Gas Industry

Since the price of crude oil began to sink at the end of 2014, the effect of cheaper oil on natural gas has largely been ignored. From a position of relative strength only one year ago, when gas was being hailed as the future alternative to coal, demand for natural gas has plummeted. This article looks at some of the reasons behind this rather abrupt change in fortune for the European gas industry, before going on to explore some of the trends occurring in the energy industry as a result.

A Crash in Oil

There is a surprising amount of support for the theory that the Organization of Petroleum Exporting Countries (OPEC) – in particular, Saudi Arabia – was the sole force behind the oil price crash of 2014. While OPEC does indeed play a profoundly important role in the global oil market, there are a myriad of factors that have, and are still contributing to both the oil price and its effect on the gas industry.

First, the importance of the shale fields cannot be underestimated. Oil recovered via hydraulic fracturing from the shale fields in the United States increased from 111,000 barrels per day (bpd) in 2004 to 553,000 bpd in 2011. With staggering speed, the United States had been transformed from a net importer of oil to a net exporter – when export permits are approved by Washington, that is.

Which was all very well until China announced a slow-down in growth in mid-2014, compounded in the fol-

lowing December by the news that its economic expansion had been the slowest since 1990. When China became the world's largest importer of oil in 2013 it had long formed the lynchpin of most analysts' forecasts for oil price development and was often viewed as the single fulcrum around which the world economy could turn. Instead, China's slackening growth meant it must act quickly – according to Platt's, crude oil imports had already decreased by 9% y-o-y by July 2014, reflecting weaker domestic demand and having a profound effect on the availability of oil worldwide.

The resulting supply glut and corresponding drop in price was perhaps to be expected, regardless of OPEC's policy on production. If we add to that the effect of long-term economic stagnation in Europe, combined with much higher energy efficiency and an increase in the renewable share of the energy market, an oil price of over \$100 a barrel was perhaps unsustainable under those conditions.

Equals a Crash in Gas

As the price of gas is linked to the price of oil through indexation mechanisms, a drop in oil value would eventually be replicated in the price of natural gas. Historically joined because a gas market simply didn't exist in the 1960s when it was first uncovered, it seemed logical to link gas to oil as they were in competition for the then key markets of heating and power generation.



Amy Faulconbridge,
T.A. Cook, Germany

As both the sources and uses of gas have evolved however, arguments for delinking the two commodities are increasing in volume. The main effect of the current indexation system is that gas contracts are sold at the same price as oil. But as demand for gas has decreased, major importers of gas argue that long-term supply contracts should be separated from oil. Forced to buy expensive gas from exporters but with a slowly eroding enduser, European importers in particular were hit hard by \$100 oil.

To a certain extent, deindexation has already begun. The UK's National Balancing Point (NBP), the Netherlands' Title Transfer Facility (TTF) and Belgium's Zeebrugge Hub all trade gas virtually, in contrast to Henry Hub in Louisiana, which trades gas in physical form. Some producers have used European hub prices to increase their market share: Norway's Statoil for example has allowed many of its utility customers to adjust their contracts according to hub prices, stealthily attracting customers from its chief competitor, Gazprom.

While the two commodities remain linked however, the sudden drop in oil has caused a corresponding decrease in the price of gas. Between November 2014 and March 2015, the price of gas fell from \$4.5 per million British Thermal Units (mmBtu) to only \$2.5/mmBtu. This may give some respite to the aforementioned European importers who suffered from high oil prices, but it still doesn't change the fundamental demand problems the European gas market is suffering from.

EU Energy Policy

European gas has largely been a victim of the same forces that oil has – namely, economic stagnation in Europe, decrease in Chinese growth and oversupply following the shale boom in the U.S. and Canada. However, there are a number of additional factors that have contributed to a significant decrease in demand for natural gas in Europe.

EU Energy Policy has, for a start, actively supported higher energy efficiency as laid out in the 2012 Energy Efficiency Directive. This requires energy distributors or sales companies to achieve energy savings of 1.5% per year via a number of different measures in order to reach its 20% efficiency target by 2020.

This so-called 20-20-20 target is but one of the EU's key climate change policies – the Kyoto Protocol and the “Roadmap for moving to a competitive low carbon economy in 2050,” – whose chief aim is to reduce emissions from power-generation, industry, transport, buildings and construction – are also affecting key gas markets. Consequently, most member countries have

responded to these Directives by focusing their energy policies on technologies or objectives that do not actively consider the gas industry.

Renewables have been the main beneficiaries, having increased their share of the power generation mix and become the focus of numerous national energy policies: Germany and France have both committed to achieving ambitious renewable energy targets by 2030 – 45% and 40% respectively.

Competing with Coal

Ideal as that is for the environment, the unpredictability of European weather means that at times of low wind and cloudy conditions, extra capacity needs to be provided as reliable backup. As a much cleaner alternative to coal, gas-fired power plants would be the obvious choice and has to some extent been supported by EU policy. Directives such as the EU Large Combustion Plant Directive (LCPD) for example aim at reducing the toxic emissions produced by large plants.

Once portrayed as the key driver of gas demand growth in Europe only a few years ago, gas-fired power generation is now facing a significant challenge in the form of coal. As the U.S. began to produce its own sources of fuel for power generation and feedstock, the need for foreign and domestic coal declined. Once again, the increased availability of coal made it particularly cheap for European importers.

This dynamic is now changing as a lower European gas price and the relative unpopularity of coal begin to have an effect. Finally reacting to public outcry following the alarming level of air pollution in its major cities, even China has announced plans to close all coal-fired power plants surrounding Beijing and will upgrade its plants to burn gas. Using gas to shore up renewable production makes sense environmentally, but volatility from more spot contracts and fluctuating gas prices may act as a break on development while coal still retains financial viability. How gas will be used in power generation also depends fundamentally on its availability – that is, the security of supply.

Russian roulette

European energy security as a concept is, for most Europeans, directly tied to Russia. Not without some degree of merit, if we take Mr. Putin's recent power games with Ukraine and Naftogaz into account. However, the issue of gas security – that is, the question of whether President Putin will at some decide to “turn the gas off” and what Europe will do if he does – is not quite as dramatic as some headlines would have us believe.

The fall in natural gas prices mentioned above have done quite some damage to Moscow, which apparently gains one fifth of its budget revenue from Gazprom alone. As European sanctions and a mild winter have weakened demand, so the pricing power and market share Gazprom enjoys in Europe are weakening too – reflected in a 60% drop in the company's third quarter net profits announced in January.

Blaming the impact of Ukrainian debt and the insecurity it risks by sending gas through Ukraine to Europe, Gazprom cancelled its South Stream project that would have taken gas through the Black Sea to Bulgaria. Instead, it will bypass Ukraine with a new pipeline through Turkey that will be able to take gas to the border with Greece. Additionally, the company announced the building of new pipelines towards China, making it clear where it believes demand to be more secure. This does not mean to say that the gas will simply stop flowing West, though – the EU represents 29% of the gas imported from Russia, translating into huge revenues that Moscow dearly needs.

At the same time, the EU has been pondering its own changes to gas supply. Norway's foreign minister, Borge Brande offered to increase the supply of gas from Norway to Europe at a discussion on energy security in March, building upon the 20% that it already provides. Meanwhile Iran, also suffering from sanctions over its nuclear program and a most unlikely white knight, offered to supply gas to Europe via the Caspian Basin in early 2014.

Liquid Alternative

Whichever deals are finally struck between the EU and the different suppliers on offer, the way in which gas is supplied to Europe is also changing. The pipeline network is not only aging but costly and time-consuming to upgrade, let alone poorly connected between some European member states. By freezing gas into Liquefied Natural Gas or LNG, it can be far more easily transported by boat or rail around the world. This makes it more flexible in terms of destination, availability and supplier.

However, the same influences that affected pipeline gas and oil have affected LNG prices, which themselves are widely variable – in Asia, strong demand growth following nuclear phase out has kept LNG prices much higher than in the U.S., which no longer needs to import it. That spurred a sudden rush of LNG terminal building projects from Alaska to Cyprus to take advantage of the high prices in Asia.

As LNG too, is linked to the oil price, the 2014 crash will only now begin to have a dramatic effect on LNG prices as the 6-9 month contracts begin to expire. Again, the same factors come into play – European economic stagnation, Chinese growth contraction and renewable advancement – making LNG replicate the fate of oil and natural pipeline gas.

This has already resulted in the delay or cancellation of a number of LNG projects: Chevron announced a 20% worldwide cut in spending on LNG worldwide, directly affecting its Kitimat project in Canada, while Royal Dutch Shell, BG Group and Petrolim Nasional have all slashed or delayed spending on LNG projects as far afield as Australia.

The Future for Europe

As these closures begin to take effect and Asian LNG prices decrease (down to less than \$7/mmBtu in March) on the back of gradually contracting demand, the price differential between Asian and European LNG could likely decrease, having a balancing effect on world LNG flows. That would be a major advantage for LNG importers and the European processing companies they deliver to, who have struggled to compete against international peers and their access to cheaper feedstock from shale.

Even if only short-term, margin increases for European processors will not only allow the reinvestment of revenue into current and future terminals but also enable increased energy diversification against a currently high reliance on Russian pipeline gas. Considering that BP anticipates that LNG will account for 30% of EU consumption by 2035, its role as part of European energy policy and political negotiation will no doubt increase.

Nevertheless, long-term strategic decisions must be taken by importers and processors alike as to the nature of future investment and operations. Even if LNG growth is likely, natural pipeline gas is still under significant price pressure and the economic and political tensions affecting the European gas market will not disappear overnight.

In this environment, ensuring that every possible aspect of operations and production has been optimized for profitability is crucial and could make the difference between those that survive those that don't. In a market where the balance of power can shift with alarming speed, survival may indeed be the only viable strategy.