APX Energy Trading Symposium
Reducing Market Concentration – Session One

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Will the EU Commission's proposals on effective unbundling of TSO gas and power networks deliver more market competition?

Current problems

Network infrastructure is fundamental to security and continuity of supply. This is especially so in the increasingly interconnected European energy markets in which we live. For example, as we witnessed in the recent past, shutting off a power line over the River Elms can make the lights go out in Belgium, France, Spain and even Portugal.

Because networks are a natural monopoly, ordinary market forces cannot ensure security of supply and a strong, independent regulator is needed to ensure fair play. This is particularly challenging when network companies are integrated within commercial energy companies.

The reality is that there is a fundamental conflict of interest within integrated companies between those parts of the business that manage networks and those parts that sell to the consumer.

Examples of existing failure include Italy, where ENI was fined €290million for delaying cross-border pipeline development as it would have had a negative effect on the gas sales of its own downstream affiliate. Additionally, the European Commission states that three German transmission companies received €400million in congestion revenues from their ownership of networks, yet they invested less than 10% of this to build new interconnectors.

UK liberalised market

In the UK this problem was recognised early on and led to the dismantling of the integrated gas and electricity state monopolies into independent and commercial entities to create real competition and consumer choice. This led, for example, to the ownership unbundling of the gas network (National Grid) from the supply business (British Gas, owned by Centrica).

So what is the evidence for this apparent success story?

First, the UK has one of the most competitive and dynamic retail markets in the world with suppliers competing on price and service with a significant degree of product innovation. At the domestic consumer level there are six major suppliers active in both gas and electricity.

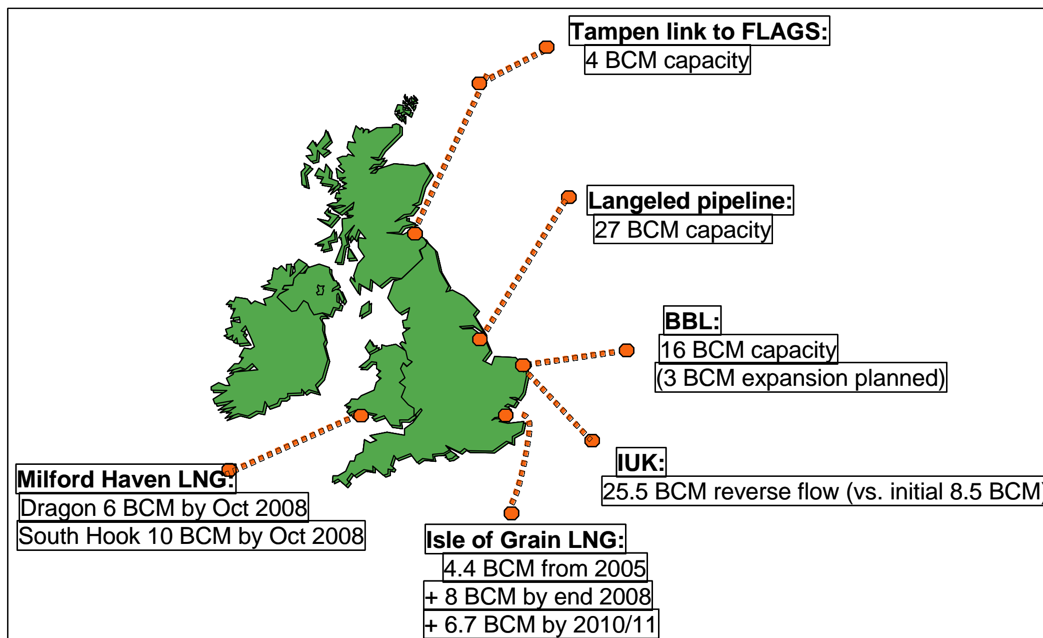
There is considerable and growing take-up of internet-only tariffs and a variety of fixed or capped rates at varying contract periods complementing standard tariffs; or for the particularly sophisticated domestic consumer a rate that is fully variable and linked to movements in the wholesale price.

In excess of 100,000 domestic consumers are switching supplier each week, with over 4 million (some 20% of customers) switching in 2006 alone. This exerts a huge competitive pressure on retail offerings. Domestic consumers have done particularly well out of the UK's liberalised market with, for example, retail gas prices consistently one of the lowest in the EU 15 since 1988.

The second, significant piece of evidence is the way that the market has had to respond to a turn around in the UK's gas fortunes with self sufficiency being rapidly replaced by increasing import dependency. **(See Figure 1 below)**

By 2015, the UK will be importing as much gas as it produced in 2007. So how has the liberalised UK market responded to this unprecedented challenge? Not surprisingly each player has taken a slightly different approach.

Figure 1 - Major new UK gas import facilities



24 companies from 11 countries are currently investing over €13bn in UK energy markets. New capacity has taken the form of new pipelines (e.g. Langeled bringing nearly a quarter of UK peak requirements from Norway), enhancements to existing interconnectors with continental Europe (e.g. Interconnector UK) and 'back to the future' with new LNG facilities built (e.g. Isle of Grain)

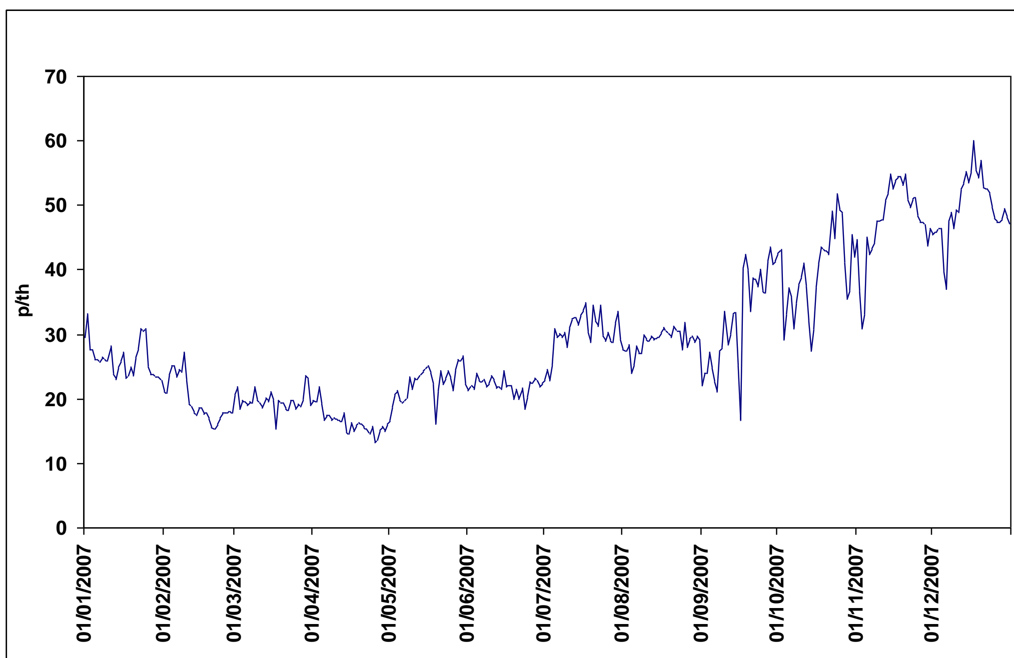
This diversity is a testament to the success of the liberalised UK market with liquidity of the traded gas market at the NBP giving confidence and clear price signals to investors. Of course long term purchase contracts, normally at market prices, have been part of the picture. Centrica has entered into €16bn of gas contracts that have helped underpin some of these new import projects. Importantly, long term contracts entered into without the need for network assets as part of a vertically integrated company but instead enabled by Centrica's demand portfolio.

A liberalised Europe matters

So if the UK is such a success why does liberalisation on the continent matter to us? It has not been all plain sailing in the UK, far from it.

We are able to get the gas we need and the market is responding but the answer is illustrated in **Figure 2** below.

Figure 2 – 2007 UK daily wholesale prices



Prices in early 2007 fell to a low of 13 pence per therm, and then rose by 47 pence to a high of 60 pence per therm at the end of the year with huge intra day volatility. This wholesale price volatility has an inevitable and profound effect on retail prices. It is not just gas prices which are impacted. Gas fired generation is at the margin and therefore gas prices set power prices.

Crucially, new capacity does not necessarily translate into the equivalent volumes of gas flowing into the UK.

LNG is becoming a global gas market with increasing arbitrage opportunities between the European, American and Asian markets. In a tight market spot cargoes are being attracted to the highest priced market (which is currently Asia) and UK LNG capacity has often been left idle this winter.

The addition of Langeled and the Tampen Link Spur to add to Vesterled has led to the UK being exposed to much greater producer arbitrage. Total and individual flows from these supply sources into the UK are highly variable and difficult to predict given Continental non-transparency. This has added a UK anxiety premium.

Winter 2005/6 was a salutary lesson that despite UK spot prices as high as, 200 pence per therm within day; we could not rely on European gas to flow into the UK. As recently as quarter four of 2007, Interconnector UK imports remained low despite high gas price differentials. This is caused by physical and contractual congestion on the continent, limited co-ordination of “open season” processes, secondary markets that are hardly functioning as well as opaque security of supply standards.

This last point is behind a tussle between the European Commission that is vigorously pressing for competitive energy markets in the form of ownership unbundling and some European Governments who are reluctant to accept a transition to more competitive markets.

So while the UK is able to source the total volumes of gas that it needs it is paying a higher price than it should because of its dependence on a relatively un-liberalised European market

Effective unbundling and competitive markets

It is widely agreed that effective unbundling is essential to underpin non-discriminatory access to networks, provide the necessary cross border investments to ensure security of supply but it is also vital to delivering liberalised markets. But this means different things to different people.

The two key options for reform put forward by the European Commission in draft legislation at the end of last year are the Independent System Operator (ISO) model and full ownership unbundling.

The ISO is an independent organisation that operates one or more transmission systems. The transmission assets continue to be owned by the Transmission Owner (TO). So the ISO separates ownership from operational control of the transmission grid. A deep ISO or ISO plus, the particular model favoured by the European Commission, is where the maximum extent of activities are carried out by the ISO. Here the TO's activities are limited to asset ownership with the ISO responsible for all investment and operational decisions.

The ISO model in the UK electricity market was not established to prevent an abuse of a dominant position and, not surprisingly, is not a solution to this type of problem in Europe. Therefore the ISO has to date been used to facilitate market integration not separation. Only a very deep ISO would be adequate to ensure the necessary investments and this would require ongoing heavy and complicated regulation.

By contrast, under full ownership unbundling the network assets are no longer owned by the supply or generation business or any related entity. Ownership unbundling provides clearer financing structures which reflect the relatively low risk nature of the capital intensive activity of network ownership. With ownership unbundling there would be no risk of investment decisions being influenced by internal generation or supply interests and it would lead to the elimination of any cross-subsidies between the monopoly and competitive businesses. Therefore, ownership unbundling is the cleanest solution and is supported by twenty of the twenty seven EU counties with fourteen countries in electricity and seven in gas already having implemented it.

France and Germany, supported by now just five other member states, have proposed a 'third way'. This proposal does nothing to address the serious concerns highlighted by the European commission's lengthy investigation into the energy market as it largely just

describes in detail how the existing transmission legal unbundling obligations might be implemented, though in a weak way.

Recently, the Commission published another possible way forward in its so-called "2nd non-paper". This proposal includes increased independence of investment decisions and an eventual move to a form of regional, cross-border, ISO. This would be dependent on missing detailed descriptions of how separation would be implemented and enforced. Moreover the regional ISOs would not be implemented for several years and there would still be concerns about common despatch arrangements between several vertically integrated companies.

Effective unbundling is not enough

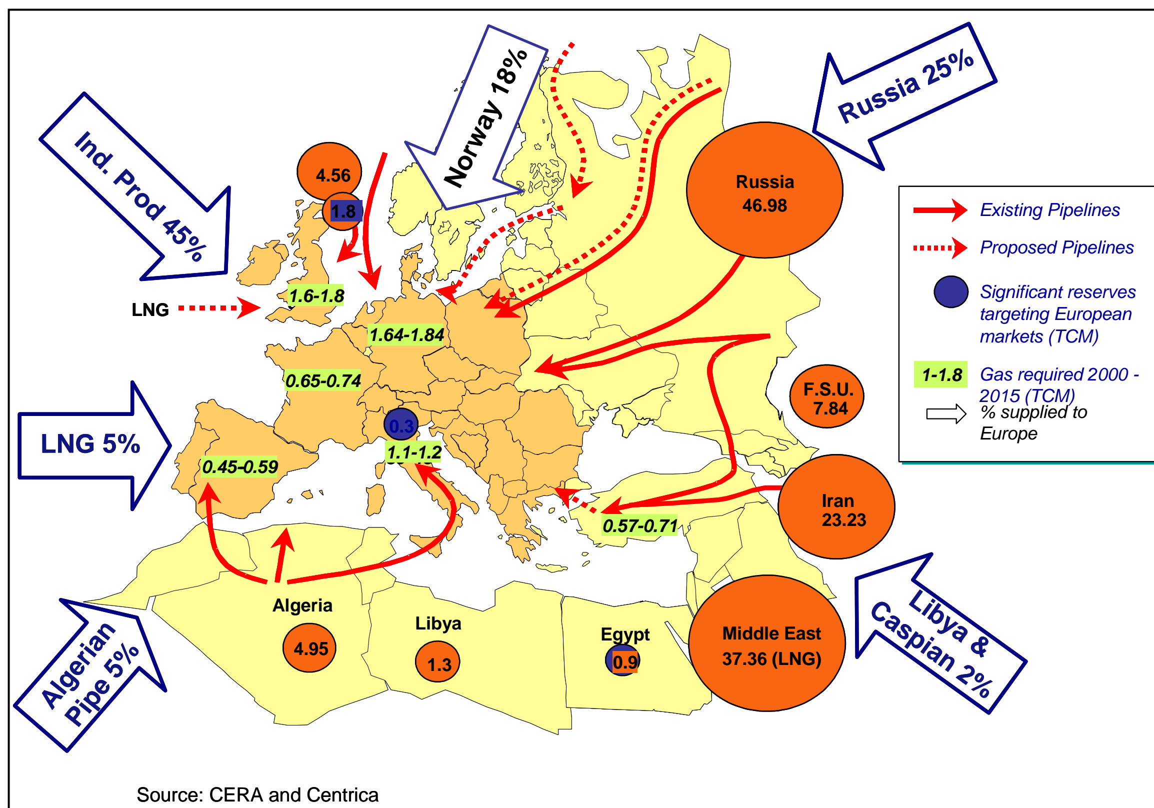
Effective unbundling of transmission is key to unlocking many of the current problems but it will not be enough. Unless there are strong and independent energy regulators whose powers extend to the wholesale and retail markets, there will not be the confidence to ensure a properly competitive retail market. The necessary reform also includes increases in market transparency, adequate access to gas storage and effective separation of distribution from supply, the latter not having had the attention it deserves.

Meeting Europe's needs

Whilst it is important to implement these changes in electricity, it is even more critical in gas.

A member state can, if required, increase its own electricity generation using a diversity of technologies whether it is gas, coal, oil, nuclear or increasingly renewables. Of course the absence of the necessary cross-border investment would mean less competition and higher prices for consumers.

Figure 3 - Where is the gas?



Source: CERA and Centrica

For gas most member states are not self sufficient and will not be in the future as they are increasingly dependent on imports with 75% dependency by 2020 **(See Figure 3 above)**. LNG facilities, on their own, will not ensure that the necessary gas will flow. Member states are dependent on cross-border flows to access the significant volumes of gas just outside Europe's borders. For gas, the necessary investments to support these gas flows can only be ensured by effective unbundling, with ownership unbundling the cleanest and clearest solution.

The recent decision by EON to sell off its German electricity transmission networks to head off a European Commission investigation into its activities has given ownership unbundling a necessary boost. The likely derogations granted under the new legislation to small and isolated markets will inevitably reduce the number of member states supporting France and Germany's opposition to ownership unbundling.

The final months of the Slovenian EU presidency will be critical to a political agreement between member states and within the European Parliament. The timing is driven by the French presidency in the second half of 2008 and by the parliamentary elections in 2009. If a deal can be reached by the June 2008 meeting of the EC heads of state then the

legislation could be finalised by early 2009 with implementation of the necessary reforms in 2010.

European energy markets are at a crossroads. Billions of Euros will have to be invested over the next few years to replace ageing power stations and upgrade and expand gas networks. At the same time a massive shift to low carbon generation must be delivered. Attracting new entrants and sufficient funds is critical to this new investment and the clearest signal that a country can give that it is being serious about competitive markets is by ensuring equal access to the monopoly network by new entrants. By doing so security of supply will be improved and consumers will get a better deal.

Will Europe finally put the interests of customers first by embracing competitive markets or will the interests of large incumbents continue to hold sway?