GAS AND POWER MARKETS - TO CONVERGE OR NOT TO CONVERGE
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Comments such as “A key development in the European energy sector in recent years has been the growing convergence between electricity and gas” (InnEurope, 2003) or “Convergence between gas and electricity is a fact of life in the European energy markets” (Morgan Stanley, 2002) are common. But it is worth raising the question - Is market convergence inevitable across the whole of Europe?

Three phenomena

In some parts of Europe (and other OECD countries) we are faced with three phenomena:

- Power companies take over gas companies (RWE – Transgas, E.On – Ruhrgas) or power and gas activities are merged together (National Grid Transco)
- Power and gas are increasingly sold on a dual fuel basis
- Natural gas substituting oil and coal as a feedstock in power plants

Merger and acquisition

Notwithstanding the spate of take-overs and mergers (the mega-mergers in the oil industry have been more spectacular in terms of market capitalisation), the majority of European electricity and gas utilities are still independent (EDF, GDF still separated). Furthermore, before we conclude from a few capital market transactions, that power and gas are converging, we should remember that in recent years energy companies have invested larger amounts in oil, mining, water and more recently in telecoms, media and technology. The driving concept behind this strategy was investment diversification to spread risk, and this is unlikely to be successful if sectors are converging.

Dual fuel

As far as dual fuel customers are concerned, there is a clear trend in the UK for unbundling the ownership of integrated power and gas companies as a result of regulatory and political intervention. The now segmented companies supply households and small enterprises with both power and gas. Unable to produce or transmit their own energy, as integrated entities do, pure power distributors find themselves forced to sell additional services to their customers: gas, water, telephone- and credit cards etc. – or lose them.

In the UK, more than one third of all power and gas consumers are now served by a dual fuel utility. This is not completely new in Europe. In countries with public regional and local municipal utilities, e.g. the German Stadtwerke, households and industry are traditionally served with electricity, gas, water, waste disposal and public transport from “one hand”.

The actual percentage of dual fuel consumers in Germany is higher than in the UK, despite the fact that the two largest cities Berlin and Hamburg have separate, established local suppliers for gas and electricity.

Power generation

The trend for natural gas to push out the share of imported coal in power generation is again indisputable in the UK. In neighbouring Norway (also with sufficient indigenous natural gas resources) natural gas is exported or used to lift crude oil from the offshore reservoirs, but is not used to generate power. 50% of Germany’s power is produced from coal and lignite, 28% from nuclear energy, only 10% from natural gas - and an increasing proportion (4%) from wind. In Sweden, gas accounts for only 2% of the primary energy consumption. All in all, a too small amount to get natural gas prices wagging.

Contrary to the favoured competition model in European power and gas (with one (regulated) transmitter and a few (unbundled) suppliers), the dominant economic model in the oil sector is vertically integrated oil and gas companies. These energy companies deal from crude oil production, via refineries to petrol stations and from exploring natural gas fields to the production of fertilisers.

Their global presence, their size and the high share of oil products in primary energy consumption worldwide will ensure crude oil's position as the dominant fuel. Apart from some local arrangements, limited in time, a permanent decoupling of other primary energy sources such as coal, nuclear energy, hydro, wind and gas from oil prices seems to be against general market rules or the result of hefty regulation and/or hidden subsidies.

Europe's supply

Basically, a higher input of natural gas in European power generation is not a question of availability. When compared with the US and Japan, Europe is much closer to the world's largest proven reserves in Western Siberia, Central Asia, Middle East and Africa.

Disregarding developing Middle East production, the transmission from the other sources has a proven track record. But apart from the UK and the Netherlands with gas supplies nearby, most of the other European countries have to arrange their supplies from resources which are very distant.

Even the major consumption areas in Russia are some thousand kilometres away from the gas fields in Orenburg, Urengoj and Yamburg. This limits the input of gas in power generation to base load plants, because lower utilisation rates in 5000 km pipeline and storage facilities used only for a few hours per year would have a stronger cost impact than the gas price at the wellhead.

Alternatives to gas

Most of the estimates for Europe show a significant increase in gas demand up to 2020, with more than two thirds coming from the power sector. All these figures of increasing consumption in the future are deduced from power plants to be built. While construction companies and plant contractors still wait for the first wave of tenders, it could be useful to contemplate possible alternatives or different developments. (learning from former scenarios of The Club of Rome reports, oil price scenarios, nuclear power booms, etc).

Additional energy sources and higher efficiencies and lower redundancies from increasing cross-border co-operation will help to fulfil the Kyoto CO2 reduction targets. Coal, lignite, oil and hydro will defend their positions with new technologies. Significant demand for further gas could only be the result of a rapid phase out of nuclear power in a number of EU member states. The Swedish and German example shows a different picture.

The impact of regulatory regimes in the EU could either enhance natural gas input or block any further investments in field developments, long distance transmission and storage facilities. After some years and efforts establishing sophisticated regulatory means and sweeping out market oriented elements, the EU commission could find out that the gas competition model does not work. In electricity this would be a pity, as there is no competing energy. But traditionally natural gas had to fight for its market share against coal and oil as a heating fuel and as a feedstock in power plants. Strengthening the competitive environment of these competing fuels would therefore have a stronger impact on gas prices.

Oil price link

The lack of a clear, vital and stronger trend of gas to power convergence does not mean that multi-energy companies will not succeed. They will, but in competition for customers and investors against companies with different structures: gas companies, power companies, multi-utilities, integrated oil and gas, etc. In future, power and gas will be sold on a dual fuel basis, but also as separate fuels, or combined with other goods and services. Last but not least, natural gas will not be the one and only fuel to generate power in the future, as nuclear energy was thought to be in the 1960s. In terms of key factors influencing gas prices, the price for crude oil will remain the strongest influence.

Not to converge

Kant, the great German Philosopher argued that there are two factors that can mislead you on the way to a pure and reasonable decision: will and experience. So, if the convergence of power and gas is a must for your future business success, there's a danger that you are ignoring alternative principles and scenarios.

I have tried to argue from experience with faulty trends and estimates, which is also bad. But when we look at the convergence between gas and electricity over a longer period, in a global context and with the influence of other fuels and technological progress, then I must conclude: No, they do not converge. Not always. Not everywhere.

April 2004