

Bulls and bears in energy trading

Expensive energy imports are a burden on any economy at a time of budgetary deficit. Crispian McCredie and Ruud Weijermars, Alboran Energy Strategy Consultants, see a trend emerging where energy traders succeed in securing cheaper supply side contracts.*

Fossil fuel prices can make or break the recovery of fragile economies. Consumers' disposable income has been sharply reduced by the rising oil prices, and nations which import oil or gas with oil-indexed prices (or both) bear most of the impact. For example, Japan posted a record trade deficit of \$18.7bn in January 2012. The steep rise was due to the compounded impact of higher oil prices and more fossil fuel imports after the Fukushima crisis.

With record high 2011 oil prices, the oil importing nations jointly transferred \$5bn/d to the oil exporting nations. This is nearly double the daily rate of \$2.2bn flowing from oil importers to exporters in 2005.¹ A staggering 5% of the world's \$63tn 2011 GDP is spent on oil supplies, and the trend is still rising.

Only in North America do we see part of the burden of rising oil prices being offset by cheap domestic shale gas supplies. Trading around \$2/mn Btu, an 85% discount on the calorific equivalent of wholesale US oil prices, US natural gas has not been so cheap in a decade. Cars may soon be running on natural gas rather than petrol. Natural gas has become even cheaper than domestic coal supplies, which is why US power stations are using more natural gas than ever before. A silent clean US energy evolution is in the making, although the US coal power lobby would argue that not only is it disadvantaged by low natural gas prices but will be further damaged by proposed new emission legislation. However, in the end analysis, it is the consumer who benefits from low gas prices.

Gas prices threat

Unlike the declining gas prices in North America, prices have steadily firmed up

everywhere else in the world. For example, European wholesale gas prices have been between three to five times higher than in North America (see **Figure 1**), which is entirely due to the oil indexation of continental European gas prices. Europe's high dependency on imported fossil fuel energy puts it at a higher risk of being adversely impacted by rising oil and gas prices. In 2010, Europe imported 50% of its gas and 70% of its oil.² This amounts to about 10.6tn cf of gas imports and 3.64bn b/y or 10mn b/d of oil.

Using average European market prices of \$100/b for oil and \$10/1,000 cf for gas, it can be concluded that Europe annually transfers about \$470bn to oil

and gas exporters. This is equivalent to the 2011 GDP of the Netherlands, or 3.8% of the EU's \$12.5tn 2011 GDP. A recent study of the economic effect of gas cartelisation on European import prices suggests that Europe will face further losses of consumer surplus to the amount of about \$91bn by 2030.³ And here lies the problem, whilst oil and coal cargoes are an internationally traded commodity, albeit with limited transparency, the natural gas market is still more regionally based, less easily transported and therefore less of a globally traded commodity compared to coal or oil. However, this is now changing with the US Congress approval of cheap LNG exports by US shale gas producers.

Energy trading power

Global energy trading companies can help Europe's economic recovery if they succeed in securing cheaper gas supply contracts for Europe. While US gas traders have succeeded in providing their consumer markets with cheap gas supplies, the wholesale gas suppliers to European traders have only raised their prices. Utilities set their consumer prices based on wholesale prices procured by their gas traders with energy producers, which is why European consumers still pay too much for their gas deliveries. Traditionally, the bargaining position of European energy traders has been weaker than that of their upstream suppliers.

Continental Europe is a captive market, but spot market gas prices have already gained some ground and are beginning to compete with oil indexed prices of long-term gas contracts. The



Figure 1: Oil and gas prices in \$/mn Btu equivalent 2010–2012

cheaper spot gas deliveries and LNG cargoes in the Atlantic Basin provide a fertile basis for international arbitration procedures. These procedures are prompted by price re-opener triggers that seek to indemnify the contracting parties of long-term (LT) contracts. Traders can benefit from rebates when undue price hikes have hurt them as physical gas buyers, and suppliers can ask for higher prices when undue price drops adversely affect their returns – but that has not happened yet.

Most European gas importers are now in arbitration disputes with Gazprom over price-opener clauses in their LT contracts. Gazprom uses a gas pricing formula indexed to the price of crude, which is why excessive rises in oil prices have made Europeans pay up to five times more for gas than their US neighbours. Poland's monopolist gas trader PGNiG recently filed a suit against Gazprom and Gazprom Export with the Arbitration Tribunal in Stockholm. The subject of the suit is an amendment of the price terms of the LT gas supply contract of 25 September 1996 executed by PGNiG with the two Russian companies.

Due to the nature of the arbitration proceedings and, in particular, the confidentiality issue, PGNiG is not in a position to provide any further details regarding the suit. However, earlier in 2012, Gazprom agreed to lower its gas price by an undisclosed amount to several other European importers. The beneficiaries included France's GdF Suez, Germany's Wingas, Italy's Sinergie, Slovakia's SPP and Austria's Ecomgas Group.

The trader's dilemma

The dilemma for European gas trading companies is to constantly estimate future demand profiles, model forward domestic production decline rates and then seek to contract complementary gas volumes to cover the emerging supply gap. The gas trader must decide which part of their gas stream will be locked in by LT contracts. Such contracts have a take-or-pay (TOP) arbitration window when cheaper spot gas makes paying the penalty attractive for not taking part of the agreed gas volume. However, annual gas consumption rates have varied greatly with the recent economic turmoil. For example, Europe's gas consumption was down steeply in 2009. TOP arbitration occurred without the luxury of replacement by cheaper spot gas which was simply not needed.

Gas trading strategies must address:

- What is a permissible risk profile?
- What opportunities are available to hedge market exposure?
- Should the trading company lock in

on expensive LT gas supply or cheaper but more volatile and less secure LNG spot cargoes?

- Exactly what portion of the future gas supply should be flexible and spot indexed?

No energy company can afford to take a 100% long-term position in a free market economy where the utilities serve a consumer market with the option to switch supplier. Traders that contract gas from Gazprom need to accept oil-indexed price when they buy the gas. However, traders cannot pass on the full risk of such oil-price indexed price to their consumers, simply because many end-consumers will not accept such contracts. Traders must, therefore, focus on two main strategies to reduce undue exposure to price volatility. On the spot market side, they must utilise the derivatives market to hedge against price risks. On the physical LT contract side, they must negotiate with Gazprom for de-linkage of oil-indexing to reduce exposure to oil-price volatility.

Trading losses

If traders make the wrong decision, they run the risk of ruining their trading position. Germany's E.ON, the world's largest utility by sales, posted a massive \$2.4bn of energy trading losses in 2011 as it was caught out by price fluctuations linked to Germany's decision to phase out nuclear power. The main reason for the loss was reported as due to high transfer prices locked in from 2008 onwards for power hedges linked to its own power generation business which expired in 2011. E.ON was caught out by lower prices as the weak economic environment in the Euro-zone depressed demand.

There are numerous earlier dramatic examples of erroneous hedging strategies. Take for example, the 2006 demise of Amaranth – the then largest US gas trader. Amaranth traded up to 80% of the total volume on NYMEX gas futures and found no buyers when it needed to sell.⁴ The result was a \$6bn loss for Amaranth and \$1bn gains for Centaur, a trading company which held the opposite positions. Today, the Federal Regulatory Energy Commission (FERC) oversees the US natural gas and power markets. It has recently ordered a \$30mn fine against a former Amaranth trader in relation to the 2006 case.⁵ It has also warned power and natural gas traders against market manipulation.

Global gas price competition

Price volatility in global oil and gas markets adds an increasing degree of risk. The changing market conditions have led the prices for oil and gas on international markets to diverge – as

noted earlier, gas is now cheaper than coal in North America. US manufacturing companies using natural gas as a feedstock will continue to reap the benefits of low gas prices over their European and Asian competitors. As a consequence, gas traders in China and India have already boldly refused to contract any new Russian gas deliveries if Gazprom insists on expensive oil-indexed gas prices as high as those in Europe. Both India and China are now accelerating their efforts to develop their domestic shale gas resources.

This new situation requires the adoption of flexible solutions in trading strategies. However, European gas traders must continue to import increasingly larger volumes of gas in order to close the emerging supply gap. If shale gas remains a remote option for Europe, its future supply gap can only be filled by purchasing gas from two sources – either long-distance pipeline supplies from Norway, Russia or Algeria, or overseas LNG supplies from Qatar, Trinidad, Australia and potentially the US. In the end, shale gas may still be the cheapest solution for Europe, be it as imports from the US or Poland, the anticipated shale play opener in Europe.⁶

If gas traders cannot win the tug-of-war for cheaper gas contracts from their suppliers, European end consumers need to recognise that for the foreseeable future they must live with energy costs taking an ever larger portion of their household budgets. As a result, the economic recovery may last just a little bit longer for Europe than for the rest of the world. ●

References

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(*) Also at Delft University of Technology