



The Gas Market Evolution

Much has been written about the need for storage on a pan-European basis, but limited material has been written about the benefits of storage for a stakeholder. By stakeholder, we define this term loosely to include an end-user utility company, a producer, a trader and a regulator. We purposely do not include a gas pipeline company, as they firmly understand the benefits that they derive from storage for their pipeline and their bundled products.

Deregulation

With deregulation the market becomes more fragmented and price transparency increases along the value chain.

In the 1970s and 1980s, gas was generally dedicated to a specific market. This was known as a point-to-point gas supply arrangement. It dominated pipeline gas sales as well as LNG sales. In certain markets, the use of the gas was also stipulated in the contract. In this case, the market was very rigid with no futures market or gas storage being provided by the production process (wellhead load factor at 65%) and with limited liquidity.

During the next phase of the market evolution, regulators in the major regulatory cities of Washington DC, London and Brussels started to crack the status quo by fiat as well as market (re) structuring. This eventually led to the disallowance of point-to-point contracts to ensure that gas become as fungible as possible and the creation of more liquid markets.

The North-American market evolved via 2 regulatory initiatives: Order 436 and Order 636. These initiatives created a liquid gas commodity market as well as a more liquid transportation market whereby gas transportation costs could be bid up during times of peak demand with lower bids during times of off-peak demand. The pricing signals allowed the stakeholders to build infrastructure projects to meet the market signals.

The UK market underwent a transition based on one fundamental change: the breakup of the UK gas company British Gas by the regulator. This created enormous opportunities, as well as value, for the shareholders of the UK gas monopoly and for its employees. Today the UK has the most liquid trading point called the National Balancing Point (NBP). Much has been written about this story, so we will not dwell on it here.

Next Market Evolution

Today, Continental Europe is going through a similar process.

- *Point to Point*
Brussels has disallowed point-to-point contracts and is looking unfavorably at long-term gas contracts. Continental Europe has gas supplies from the major gas producing nations of Russia, Norway, The Netherlands and Algeria. From a security of supply perspective, the world natural gas reserves are located in close proximity.
- *Gas Index*
The gas-index that predominantly supplies the market is tied to the oil market. Consequently, there have been no market signals that could justify seasonal gas storage plays. The UK gas market as previously stated is now a gas-to-gas index market. Whereby, the gas price reflects the market demand.
- *Supplies*
Over the last several years, two major shifts have occurred in the natural gas supply picture. The first is the increase in unconventional gas in North America. This has resulted in an 8% increase in gas supply year on year.
Secondly, LNG supply has also undergone a major shift. The market has responded to the market signals via US gas prices from 2005 to 2007. The challenge now for the US as it relates to global LNG is the balance. Three years ago, it appeared the US needed LNG desperately. Today, it appears LNG producers may need the US as a place that volume can be moved to. In the US market, a product can be placed without the need to have a pre-arranged buyer.



- *Transparency*
Today, the market has become more knowledgeable. This market knowledge translates into buyers wanting to understand how they can source gas more effectively. As well as, producers wanting to better understand the market so they can sell gas more effectively. Regulation, consistency in transportation and rate design are themes that are of paramount importance for the end-user as well as the producer. A key challenge for Continental Europe is gas pipeline regulatory rate design. This regulatory rate design should allow for three critical elements: transparency, a secondary market that the primary capacity holder is obliged to offer on bulletin board when not using, and a system that will encourage new investments in infrastructure to serve the market.
- *Commodity*
Regarding commodity, it is critical to consider the volatility and the liquidity in the market. In the UK and European markets, liquidity is a critical element to understand and manage as an imbalance on a pipeline creates a disproportionate risk relative to the reward. While the regulators are addressing this issue, it is clear that a risk on an imbalance during the summer months should not be as onerous as when the system is under stress. Once again, proper transportation rate design is and will be key to ensuring markets will evolve for the benefit of the stakeholders. Again, our position is that the stakeholders (end-users, producers and liquidity providers and traders) make a market work. Pipeline companies additionally have a critical role and that is to run an efficient transport grid that does not inhibit gas flow or the development of the market from an investment and marketing perspective.

Basic elements for portfolio management

There are only two known's in managing a gas portfolio or portfolio management. The first is that gas is produced base-load and the second concerns the market which consumes gas when it needs gas. To manage a portfolio, a "sum of parts" analysis needs to be accomplished based on the diagram below:



For an end-user it is critical to assess the cost it will incur in staying with the traditional approach. This traditional approach is the safest and is risk free. It will however have a cost that can be calculated in "lost opportunity" or "real loss." For a company to assess the value of the "unbundled product" or "sum of the parts", it is essential to identify the costs associated with the delivered product, which are the following:

Unbundled elements in gas supply:

1. Commodity: This can be an oil or gas index. It is revenue neutral.
2. Transportation: This is defined as entry into system and entry out of system. It is cost that is the same for all parties.
3. Flexibility: This can be defined as peak capacity (least cost sourcing). This will turn the gas supply which can be delivered monthly or quarterly, but the flexibility allows the commodity to be delivered into the demand.
4. Portfolio Management: Ability follows from the unbundled elements above.

This is a very simply exercise. But the numbers are extremely compelling. To manage a portfolio, an end-user will need a gas storage product.



Strategic Portfolio Management

As soon as a company makes a decision to manage its portfolio, the steps to manage it are very clear. Strategic portfolio management revolves around three critical elements:

- Flexibility
- Balancing offsetting positions
- Commodity sourcing

The benefit of having a long term storage contract is that it allows either a “hands off the switch approach” (thereby getting the benefit of lost flexibility) or a “hands on” approach (thereby taking proactive control of your portfolio).

