EFET Insight into Gas Trading

What is the gas market?

It is now 20 years since legislation was passed to establish a market for gas in the European Union. Historically, the entire process of acquiring, transporting and delivering gas to the end customer was typically managed by national or regional monopolies under long-term contracts. Nowadays, competing companies can buy and sell gas on a liquid wholesale market, respond to prices in adjusting supply and demand, and make better-informed investment decisions.

Gas is brought into the pipeline systems by producers and importers and can then be traded at virtual market places – gas trading hubs. It is bought by supply companies for onward sales to consumers, and by large industrial consumers and gas fired power generators who may trade on their own account. Network access terms have been designed in such a way that allows the greatest number of buyers and sellers to exchange gas at a common national or regional hub irrespective of precisely where the gas enters or leaves the system. Participants can manage risk by buying or selling gas in short, medium and long-term contracts. They can make adjustments in very short time horizons to account for production outages or demand changes because of weather variations.

Prices attached to trades are reported anonymously, so that parties can trade with confidence that they are transacting at competitive levels, which in turn promotes confidence in the market. As the market place has matured, new services develop such as brokers (who introduce buyers and sellers with specific needs), and exchanges (who provide the capability to trade anonymously by providing a central counterparty to stand between the buyer and seller).

As confidence grows, reported prices are used to form a price index that may become a contractual reference price. Under such a contract, buyers and sellers would know that a transaction for delivery some time in the future could be settled at the going price on that day. On the basis of these indexes, financial products can then be offered to allow sophisticated price risk management tools to be developed and offered.

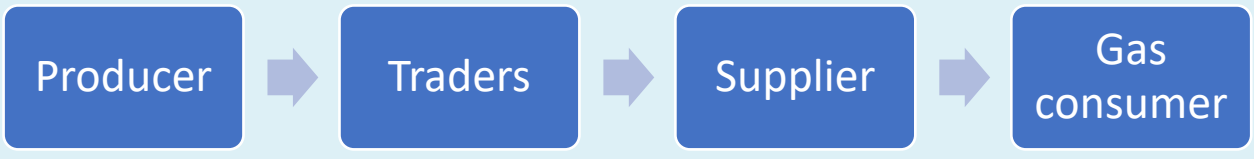


Figure 1. Default transaction flow

Why is trading important?

Traders can be intermediaries between entities extracting gas and wishing to sell it and suppliers that sell gas to end customers. As such, they support pooling gas in large quantities and are able to offer it at different granularities, timeframes and locations. Traders typically aspire to be active at several national markets to benefit from the temporal and geographical price differences between them – by moving gas from regions with excess gas availability to markets that are short on supply, they improve the price convergence on the EU internal gas market.

Producers and suppliers also have trading capability to help manage assets and portfolios of energy contracts and the risks associated with them.

Presence of traders brings benefits to all other market participants:

- Producers can easily find the demand for their commodity without having to adjust their (frequently inflexible) output rate to any specific demand profile or acquire and manage large numbers of customers.
- Suppliers can buy gas at a rate closely adjusted to the needs of their customer base and can equally buy or sell the additional or excess gas volumes in the short-term. This is particularly convenient since the demand for gas is highly weather-dependent. They can do this without needing to invest in production or LNG facilities.
- End-customers benefit from an optimal price level stemming from the competition at wholesale level and the traders moving gas to markets with the highest price, improving overall convergence on the EU gas market. Large industrial consumers can adjust their consumption patterns based on current prices where it benefits them to do so; power generators can reflect it in the electricity price.
- Through managing large gas portfolios, traders are well placed to quote prices for the future, helping to reflect the overall market expectations towards the price variations. Their quotes help producers, suppliers, consumers, as well as other traders, to protect themselves against major price volatility, thereby allowing them to plan ahead.

How is gas traded today?

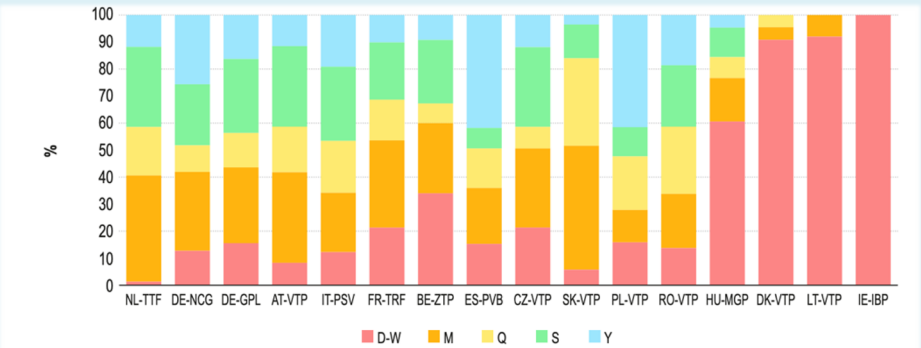
There are several ways in which gas can be traded:

- **Bilaterally →** under an agreement between the buyer and the seller. Usually there are a lot of details that need to be agreed upon under such transaction, yet the business has established framework contracts that – once signed – simplifies the process tremendously. You can learn about framework contract in one of our previous Insights.
- **Via an exchange →** transactions are anonymised (i.e. parties to a transaction do not know each other's identity) as they buy and sell through a single central counterparty. Companies trading via an exchange have to provide financial collateral to ensure that each transaction will be paid for.
- **Via brokers →** either via an IT platform or a bilateral negotiation. In this case, the willingness to trade between the counterparties is governed by their own policies and credit arrangements.
- Gas can still be contracted for the long-term (multiannual) deliveries, yet in normal circumstances it would still be a transaction between two companies.

In all cases, gas is traded in short to long-term timeframe:

- **Short-term** – transactions for gas delivery on the same/next day.
- **Medium-term** – largely relating to monthly and quarterly gas deliveries.
- **Long-term** – spanning from seasonal (half-year) to yearly products.

Breakdown of trade durations at major hubs



Source: ACER estimate based on REMIT data.

Note: Product acronyms stand for: Y years, S seasons, Q quarters, M months, D-W refer to day-ahead and within-day.

Source: ACER Market Monitoring Report 2020

The role of storage in trading

Different forms of storage have emerged to allow better matching of supply and demand:

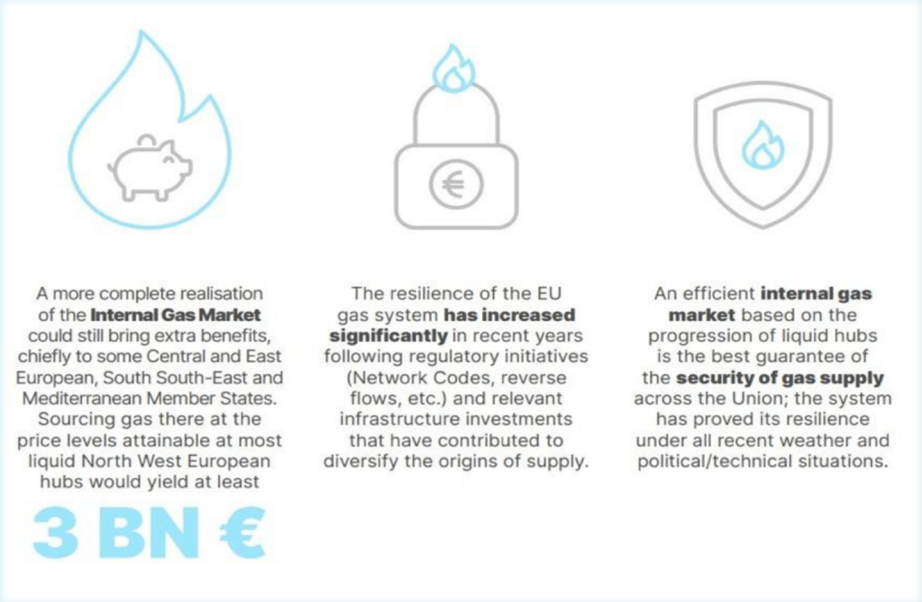
- **Seasonal storage,** where gas is injected in summer when there is excess production over demand and withdrawn in winter when demand is higher. This allows production fields to be run at more efficient, constant rates over the year.
- **Shorter term facilities** inject and withdraw more frequently, to cover short-term variations in supply and demand, and help ensure the system remains in balance.

Signals for when to inject and withdraw come from the traded market. Traders can compare the price of gas next winter with the costs of buying summer gas and storing it. A large price spread between summer and winter would increase the value and demand for storage. By adding to summer demand (for injection) and winter supply (by withdrawing), this not only helps the system balance but it reduces price volatility over the year. The same is true of short-term facilities that can help reduce price variations from day to day.

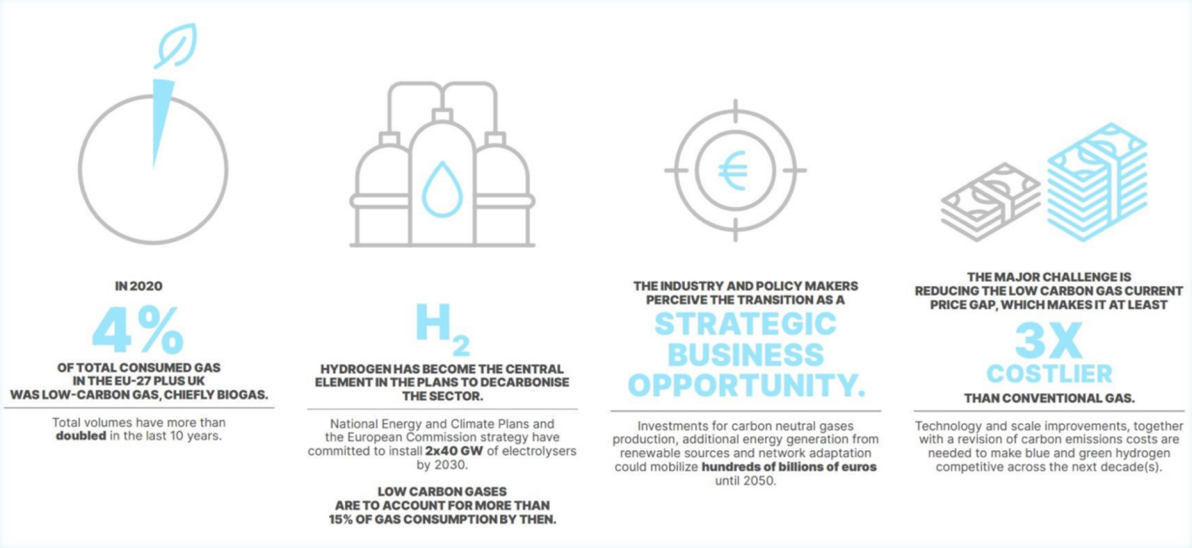
Access to storage is also important for traders in emerging markets. Where there are initially few buyers and sellers, holding gas in storage can be a backup option in case there are no counterparties when a transaction is desired.

What other benefits are brought by a gas market?

The successful national markets for gas in the EU (particularly the Dutch market) provide a valuable price reference for gas transactions concluded globally, improving the competitive environment and supporting Europe as an attractive destination for gas deliveries. The progressing integration of European gas markets and improved gas convergence are perceived to be the best guarantees of European Union's security of gas supply and offers considerable savings to the European consumers.



Source: ACER gas factsheet



Source: ACER gas factsheet

In summary

- Traded markets generate a price signal for the value of gas at that time, that is useful for both producers and consumers to produce more or save gas when it is scarce.
- Price signals also help to indicate when to put gas into storage and when to withdraw it – and when to invest in additional storage or reduce storage capacity.
- Traded markets allow parties to manage their portfolio and price risk more efficiently through specialist intermediaries, and make better-informed investment decisions.
- Market mechanisms can enable decarbonization of EU's economy at lowest possible cost, through empowering consumer choice and ensuring that the most efficient technologies are developed

For more information, feel free to contact us at secretariat@efet.org