Gas Tracks – Worldwide Gas Market Model

Long-planned infrastructure projects are cancelled, others reach the construction stage, new supply sources are developed while others are running dry. All these developments are embedded in changing consumption patterns and dynamic political and environmental circumstances. Gas Tracks helps to determine the future development of an increasingly interdependent global gas market.

The complex interrelation of these factors and their influence on gas flows and prices cannot only be understood qualitatively – enervis therefore has developed a holistic gas market model which allows to understand the status quo and enables scenario analyses of different development paths.

As a consulting company with in-depth knowledge and experience on all levels of the North-West-European gas market enervis is uniquely qualified in assessing the consequences of these future developments.

Mirroring market conditions

Gas Tracks is a linear network model, linking production, transportation, storage and consumption and taking into account constraints such as the regulatory framework, long-term contracts and pricing patterns – it determines how and where the gas will flow.

In order to mirror the present state of the market, enervis maintains a regularly updated worldwide database of crucial input parameters:
- key infrastructure characteristics
- consumption data per segment
- economic framework
- long-term contracts and pricing patterns

Swing is key – gas demand is not static. Gas Tracks therefore also mirrors the fluctuating demand and the means to match it:
- demand patterns of end-user segments (temperature, economic development)
- flexibility of import contract proxies
- swing from production and storage
- capacity of pipelines and LNG infrastructure

Constructing scenarios

Gas Tracks is a tool for understanding the dynamics driving the gas market and the impact certain developments can have – as such it works based on scenarios. Gas Tracks is e.g. open for analysing changes in:
- production sources and infrastructure
- size and type of long-term delivery contracts
- demand and pricing patterns
- production shutdowns

Translating market observations and expectations into viable scenarios is the crucial step – benefit from enervis insight and knowledge in helping you assessing the possible impact of e.g.:
- varying climate parameters
- security of supply scenarios
- role of gas in the German ‚Energiewende‘
- the switch from L- to H-cal gas in Germany
- developments in power to gas and decentralised injection

Simulating gas flows

Gas Tracks’ simulation works by balancing worldwide and European gas flows for several subsequent years for the respective scenario. In addition, Gas Tracks performs sensitivity analyses by varying climate data as well as economic development. This allows for example analysing the impact of economic up- and downturns or of unusually warm and cold years.

Analysing results

Gas Tracks provides results on a daily basis for:
- storage, pipeline, production, LNG and contract utilization
- consumption by country and segment for different weather/economic scenarios
- results per gas-quality (L-cal/H-cal)

For each scenario, Gas Tracks helps identifying per scenario infrastructure challenges in terms of capacity and flexibility bottlenecks, regional supply shortages as well as assessing the utilization and development of infrastructure. As such, it allows analysing major changes in gas flows and their impact on the future gas market.

Models are only the starting point for further analyses – enervis helps you to draw the right conclusions!