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## **THE CREATION OF EUROPEAN LNG MARKET**

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### **Overview**

The goal of this article is to highlight the flexibility of the LNG, and to show also how Europe can have liquidity to secure its supplies. With a large portfolio of storage, the importers of gas can deviate their cargos, and so, they can have choice to dispose of their product.

The explosion of the international demand of natural gas, the stochastic variability in particular in seasonal demand, the dependence of european importers, the price volatility in regional markets, and the environmental issues encourage to invest in additional LNG tankers, and regasification capacities. We do believe that the LNG offers the possibility to meet these constraints.

Should we consider the LNG as a solution? Why? and How? What are the impacts of building a supply's portfolio on the european gas market?

The LNG provides several advantages. In fact, it offers the possibility to trade the cargo to distant markets and it gives the possibility, at any time, to deviate the final destination of the cargo according to the market attractiveness. After the delivery, the LNG is transformed by regasification process to natural gas. Then, it can be directly transported to the final customers, or, it can be stored. The storage presents a diverse portfolio options.

Consequently, there are clearly the different possibilities to sell our gas. But the constraint here is how to provide the sufficient quantity and liquidity of this product. One of the answers is to develop regional markets or "hubs" in Europe. This is why it is important to develop SPOT markets.

### **Methods**

We can speak about flexibility in two ways: "Contractual Flexibility" and "Technical Flexibility".

#### *1. Contractual flexibility*

It is very important to analyse the move from Long Term Contracts to Short Terms Contracts. The first ones were very rigid, because each part or segment in LNG chain is scaled to match long term flows between a specific supplier and gas buyer.

#### *2. Technical flexibility*

To take benefit from such flexibility, the buyer must have physical infrastructure to be able to use its product as he wishes (he can either sell it to final customers; store it to meet a market opportunities, or deviate cargos to another attractive market to fill a specific demand, and/or higher price). For this it is important to know what kind of investment he will make.

For better observing the LNG flexibility and the market arbitrage, I will suggest a modelisation, which determinate an optimal structure of LNG chain, with a minimum transportation cost and an optimal size of regasification terminal, with storage portfolio and within markets constraints.

**Results**

LNG makes possible to create a European Market. With the liquidity of the natural gas, we are going to local gas prices indexed in hubs market. In the futur, the SPOT market will dominate and we can have a global european or international gas market. We will see a decorrelation between gas prices and oil prices.

**Conclusions**

LNG gives more flexibility to the European gas market by the arbitrage and the possibility to convey the product to distant markets. In order to have this market arbitrage, the buyers must have liquidity and can storage gas in adequate infrastructure. Flexibility, liquidity and arbitrage are the essential parametters to create a European LNG Market.