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The importance of LNG transport costs

Liquefied natural gas transportation is a key component of LNG acquisition costs. Its share in the final price of natural gas depends on the valuation of other cost components which include the remaining elements of the supply chain. When observing the current development of the LNG market in the world and its global nature a question should be raised to what extent the costs of transport should influence long-term purchasing decisions.

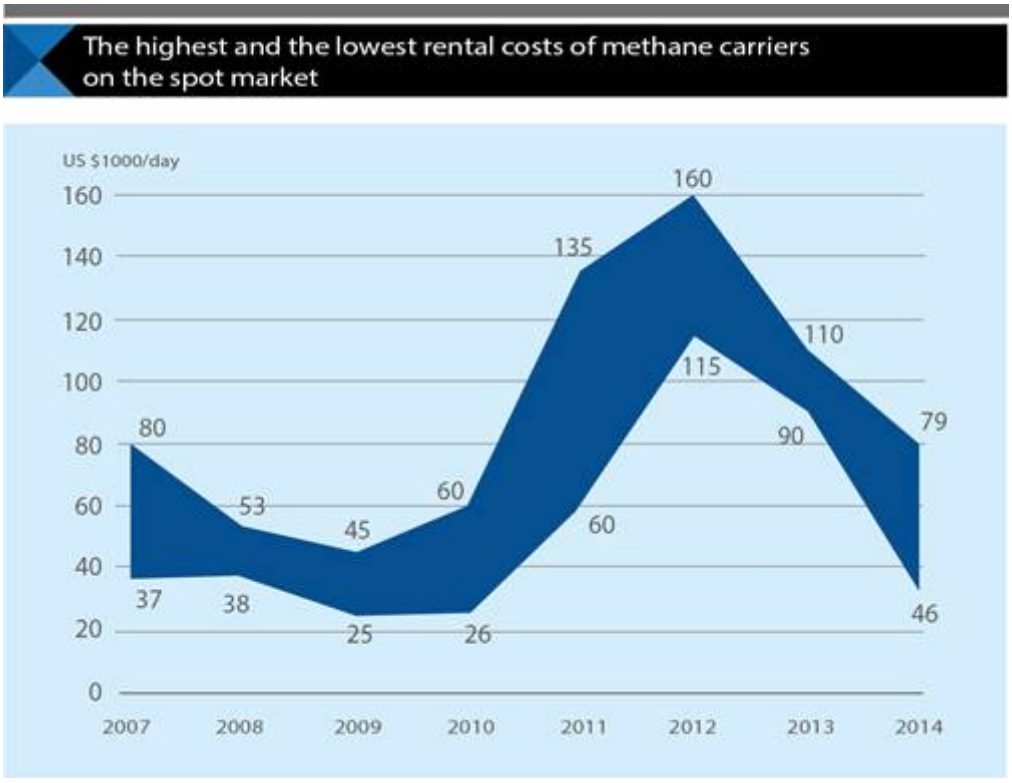
A simplified LNG supply chain consists of four components: costs of fuel acquisition at the source, costs related to the liquefaction process, transportation costs and costs of regasification. The above simplification enables the comparison of the structure and the meaning of individual stages in the LNG supply process. As regards extraction costs, including expenses related to the exploration of natural gas, and costs of regasification and liquefaction there are significant differences globally. In the process of gas extraction, these differences relate to diversified geological conditions, distinct characteristics of deposits, varied unit labour costs and distances from deposits to LNG terminals together with the resulting costs of natural gas transportation and the required infrastructure. Aspects that will be crucial in the processes of liquefaction and regasification are costs of investment in terminals, technologies applied and logistics associated with the natural gas offtake. Lower operating costs allow suppliers to increase their acquired margins or the attractiveness of their offers. At the contract negotiation stage, these two opposite directions are the main room for maneuver for those who set up trade relationships.

The LNG market is a global one and the distances traversed by methane carriers are often tens of thousands of kilometres. The major supplier of LNG for some time now has been Qatar which in 2013 supplied to more than 20 countries around the world. After opening the terminal in Świnoujscie natural gas from Qatar will also be supplied to Poland. In countries such as Algeria, Yemen, Nigeria and Trinidad and Tobago the list of receivers is also global, despite a smaller scale of export.

Transport costs constitute an important component of LNG purchasing costs. Its share in the total cost of liquefied natural gas ranges between 10-35% of the final price paid for natural gas. However, it should be noted that the transport costs are dynamic - significantly more dynamic than the costs related to other components of the supply chain. Spending associated with the transportation generally refers to four cost positions. They include rental costs of methane carriers, fuel costs, harbour fees and charges associated with freight by sea (e.g. a fee for crossing channels) and insurance.

Fees related to the rental of methane carriers strongly depend on two factors, i.e. the economic situation on the markets for natural gas, which is closely connected with the economic situation in the world, and on the supply of LNG fleet in the world. The post-crisis years were accompanied by a steady growth of daily rates until 2012 when their value was as much as US $160,000. The consequence of this phenomenon was the investment boom that resulted in rejuvenation of the fleet and the increase in the supply of methane carriers in the world. Currently, the fleet consists of 417 units, while at the end of 2012 there were 374 and in 2010 the number was 360. Currently, the

order portfolio includes as many as 140 units. Reducing the rate of growth of the LNG market and the increase in the transport capacity of the global fleet resulted in a decline in rental rates. In 2014 the lowest rates were below US $50,000 and the highest ones did not exceed US $80,000. It should be noted that the rental rates were decreasing since the beginning of the year.



Source: sample calculation October 2014, based on IGU and press.

Another cost driver is the price paid for fuel. In recent months, oil prices on global markets have been continuously decreasing, which resulted in a drop in fuel prices. Fuel used in maritime transport at the end of last year was cheaper by approximately 40% than at the beginning of the year (New York Harbor Ultra-Low Sulfur No 2 Diesel Spot Price (Dollars per Gallon) – EIA). The consequence of low fuel prices is the reduction of operating costs associated with longer distances between exporters and importers. The character of the two remaining cost factors is not that dynamic. Harbour tariffs and charges for transportation via sea lanes are administrative fees. Insurance costs are determined by the risk criteria which do not alter together with changes in the economic situation.

Fuel surcharges and charter fees account for around 80-90% of the supply chain costs. Currently, LNG market is facing circumstances where these two components are much lower than they were a few months ago. However, it should be borne in mind that the circumstances are constantly changing. The low oil price at the end of last year is not the price which may be expected in the long term and low rates of charter fees will also increase during the development of natural gas markets.

As far as the structure of transport costs is concerned and the range of values in which they co-create the final price of natural gas, they should be considered as significant aspects when choosing a supplier. However, they are not the only price-setting factors and the analysis of cost-effectiveness should be based on a comprehensive comparison of tenders. Lower purchasing price of natural gas at the source may increase the attractiveness of exporters who are away from the importing entity. Purchasing decisions allow for more precise estimations of costs when contracts

signed are short or medium-term ones. In the case of long-term liabilities, average values of costs should be taken into account and the risk of changes over the contract duration should be analyzed. What should also be considered is the aspect of partner's credibility which affects the energy security of the importing country. In the last month alone LNG was flowing to Europe from around the world. LNG from Qatar was flowing to Belgium and the UK, to Lithuania from Norway and the transport from Peru arrived to Spain. The United Kingdom also received transport from Trinidad[2].

LNG transport over long distances is a standard on the global market. In addition to the economic criteria and contract obligations there are two other important aspects. One of them is a spot delivery which is organized according to import demand. Organization of spot transport is so simple because parties are familiar with price conditions at a given period of time and they do not require estimation or the use of indexation formulas. The second factor generating trade over long distances is the capital relationship between entities at various supply chain levels. International gas companies are frequently engaged in investments related to mining or liquefaction, receiving infrastructure and commercial companies. LNG transport can take place between entities belonging to a certain part of the same capital group and low acquisition costs of fuel will not be offset by transportation costs which, especially in recent times, are relatively low.

The current situation is beneficial for LNG customers worldwide. Low price of crude oil has positively affected not only transport costs, but also the price of gas since the indexation formulas refer to the prices of petroleum-based fuels, and thus indirectly to crude oil. High fleet supply and the order portfolio including 140 methane carriers will enable getting lower charter costs over the medium term.