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REKK INSIGHT 05 2017

BORBÁLA TAKÁCSNÉ TÓTH, PÉTER KOTEK

HOW WILL LNG SUPPLY TO EUROPE SHAPE THE EUROPEAN WHOLESALE GAS PRICES AND FLOWS BY 2025?

REKK has carried out a modelling based analysis[1] to assess how different future scenarios of the global gas market supply and demand patterns can affect the wholesale gas price levels and infrastructure utilization in Europe by 2025

1. The analysis was part of the "Follow-up study on the LNG and Storage strategy" ordered by the European Commission in 2017 (ENER/B4/ADM/2016-383/SI2.742632)

The main variables in the analysis are the European gas demand and the LNG supply to Europe. This later factor is dependent on two main drivers, mainly the global LNG supply availability (depending on pending final investment decisions on certain upstream projects and LNG liquefaction facilities) and on the global demand development (mainly the gas demand in Asia). Based on a detailed analysis of uncertainties on these European and global factors five alternative scenarios were assembled, as depicted on Figure 1.

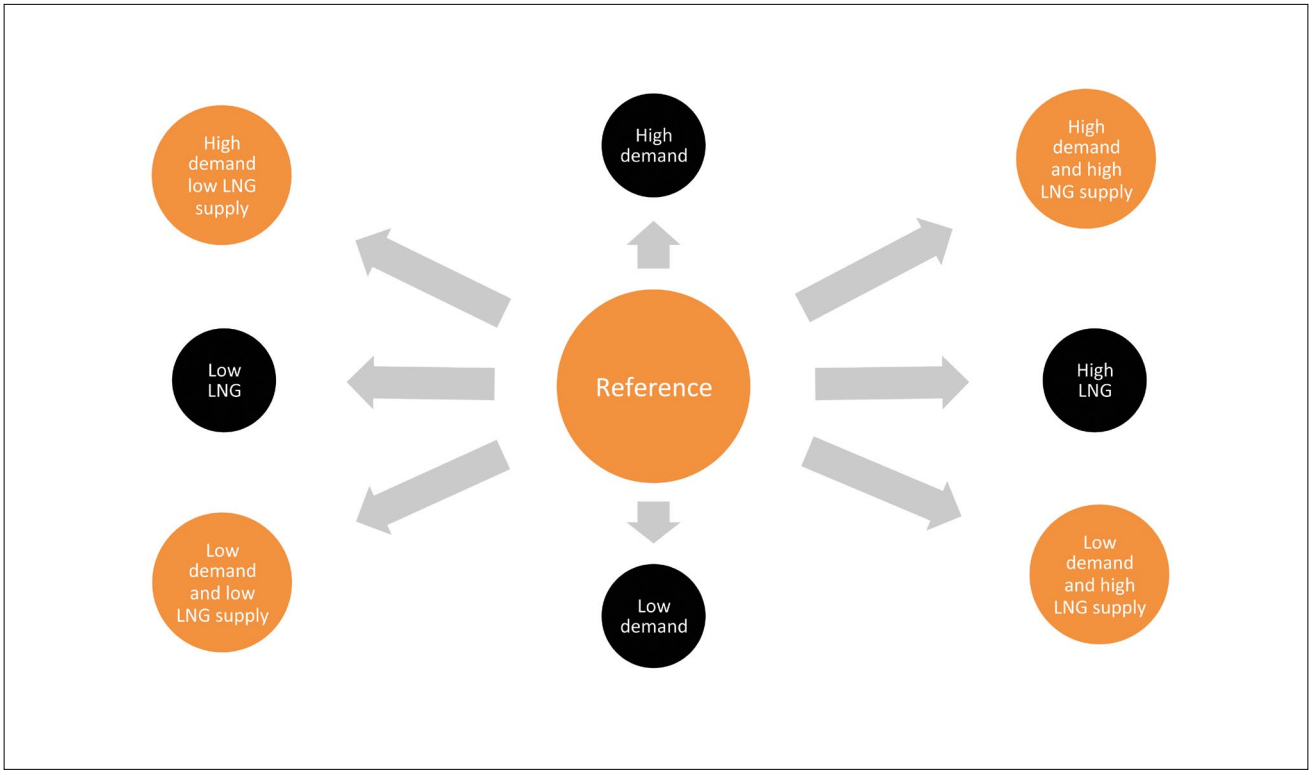

FIGURE 1: SCHEMATIC REPRESENTATION OF ALTERNATIVE FUTURE SCENARIOS

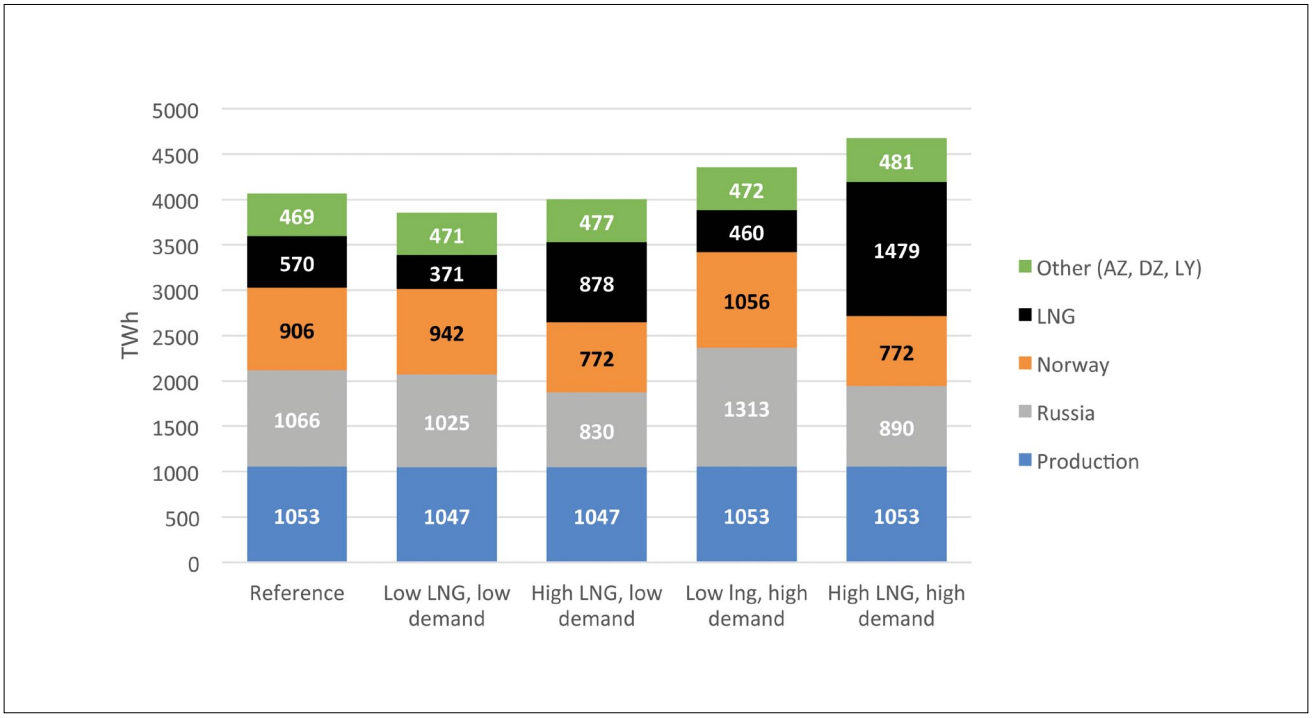

FIGURE 2: SUPPLY STRUCTURE OF EU 28 IN TWh, 2025

The reference scenario assumes that Russian strategy is to protect the market share at the European gas market. As European gas production is falling, there will be a competition between Russian pipeline supply and LNG for the substitution of the domestic production. The competition of these two sources will put a downward pressure on prices for the benefit of European consumers. On the other hand, the increased import need – depending on European climate goals impact on European gas demand – might put an upward pressure if gas based electricity production is outcompeting coal in the merit order and increases gas demand. Moreover, energy efficiency measures might have a reverse effect and decrease the European demand.

The supply structure in the modelled alternative future scenarios has these uncertainties embedded.

According to these assumptions LNG inflow to Europe by 2025 varies between 370-1500 TWh (about 38-150 bcm natural gas): a quite wide spectrum. It is important to note that despite these very different supply structures, the EU28 wholesale – volume weighted average – gas price level does not change more than 10% up and down in the different scenarios.

The infrastructure network in Europe allows for price convergence and the price difference between North-West Europe and South East Europe is not exceeding the level of the transmission tariffs. On the whole, the following is expected on the European gas markets:

- Regulation and low EU28 demand has provided convergence in prices apart from some fringe markets
- Falling European production can be met with increased LNG deliveries or higher supplies from incumbent suppliers
- The role of LNG is crucial: it serves as a competing source for incumbent players and this way induces price competition
- We found no probable extreme scenario in which the stability or price convergence of European markets is threatened considerably

TABLE 1: EUROPEAN VOLUME WEIGHTED WHOLESALE REGIONAL GAS PRICES IN €/MWh, 2025

	Reference	Low LNG & low demand	High LNG & low demand	Low LNG & high demand	High LNG & high demand
NWE	17.83	17.95	16.18	18.84	16.61
SEE	18.62	19.36	17.09	21.68	18.78
EU28	18.31	18.45	16.70	20.55	17.39
EnC	22.41	22.43	21.41	23.72	21.81
TR	19.16	24.23	16.54	24.40	16.72

NWE: Belgium, Germany, the Netherlands, and the United Kingdom; SEE: Bulgaria, Croatia, Greece, Hungary, Romania, and Slovenia; EnC: Albania, Bosnia and Herzegovina, FYR of Macedonia, Moldova, Serbia and Ukraine; TR: Turkey

ANNEXES

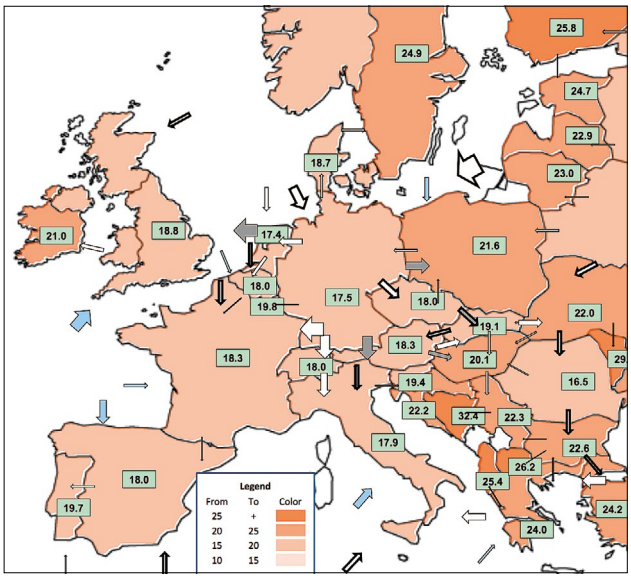

FIGURE 3: WHOLESALE NATURAL GAS PRICES IN EUROPE IN THE LOW LNG – LOW DEMAND SCENARIO €/MWh, 2025

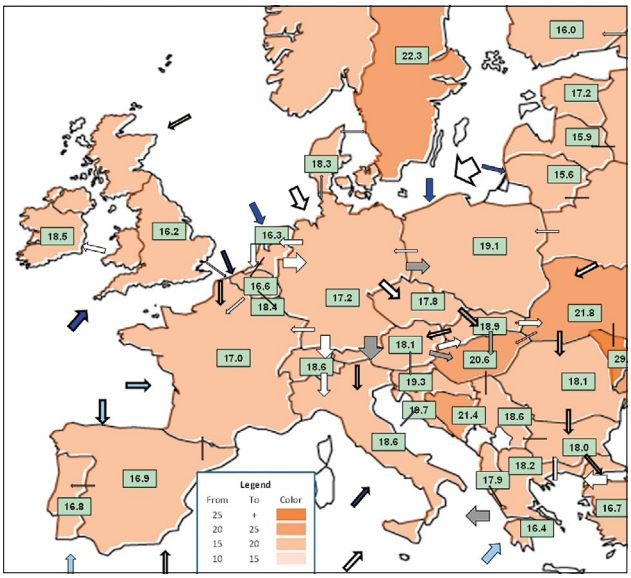

FIGURE 4: WHOLESALE NATURAL GAS PRICES IN EUROPE IN THE HIGH LNG – HIGH DEMAND SCENARIO €/MWh, 2025

CONTACT

Borbála Takácsné Tóth
senior research associate

Borbála Takácsné Tóth has worked with REKK since its creation in 2004. In 2001 she received an M.A. in International Relations and European Studies at the Central European University in Budapest. Borbala was educated as an economist and received her degree from the Budapest University of Economic Sciences in 1998. She spent 5 years as a civil servant in government administration mostly in the field of energy regulation. Between 2001 and 2003 she was of the President's Secretariat responsible for international relations of the Hungarian Energy Office. In this capacity she worked closely with ERRA and CEER. Prior to this, from 2001 to 2002, she was an international relations manager. With REKK she has been leading several international and national consultancy projects, with many using the European Gas Market Model as the primary analytic tool. Her main fields of expertise include: regional co-operations; security of supply issues; energy geopolitics; major infrastructure initiatives in the gas sector and incentives for investments; competition cases in the gas market; and the effect of gas release programs on competition in the gas market in Europe.

Péter Kotek
senior research associate

Péter Kotek graduated in 2009 at the Corvinus University of Budapest as an economist, majoring in market analysis. He joined REKK in the same year as a research associate. From 2015, he is working as a senior research associate. His areas of interest are ancillary services market in electricity, and LNG and gas storage markets regarding gas markets.

REKK FOUNDATION

The goal of the REKK Foundation is to contribute to the formation of sustainable energy systems in Central Europe, both from a business and environmental perspective. Its mission statement is to provide a platform for open-ended, European-wide dialogue between government and business actors, infrastructure operators, energy producers and traders, regulators and consumers, professional journalists and other interested private entities. The Foundation will develop policy briefs and issue papers with forward-looking proposals concerning challenges posed by energy and infrastructure systems and organize regional forums allowing stakeholders to become familiar with the latest technological and regulatory developments within the industry.

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