

Research study expects EU gas supply mix to change

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Credit: King's College London

Research study expects EU gas supply mix to change fundamentally – European production will decline but EU remains in a strong strategic position

Despite a projected [decline](#) in European gas production, the European Union (EU) is in a strong position to diversify its gas imports and ensure its gas security, says a major research study by two energy think-tanks. Mapping out gas supply over the next 20 years, the report states that the EU maintains multiple options to diversify its gas imports in the near-term as well as in the longer-run.

The research by ewi Energy Research & Scenarios, Cologne and the European Centre for Energy and Resource Security (EUCERS), at King's College London, provides a comprehensive assessment of EU

options to diversify gas supplies in the coming 20 years and outlines several potential scenarios of future markets.

Combining economic analysis of market fundamentals and a detailed assessment of key political risks, the study focuses on the factors and the key players –including Russia and Turkey which are likely to markedly influence Europe's gas future.

The report, funded by the German Foreign Office, identifies two main factors for the EU to maintain a favourable strategic position: Externally, the availability of alternative sources of piped gas and growing possibilities for Liquefied Natural Gas (LNG) imports provide a favourable context for increased competition. Internally, the EU could benefit from further progress in market integration, in particular through infrastructure investments connecting its highly liquid north western European gas market with markets in South and Eastern Europe.

Declining European gas production will be to an important extent substituted by Russian gas, remaining a major source in the European gas supply mix, as well as LNG imports, which are projected to more than double until 2035.

In that context, the pricing strategy of major gas suppliers such as Gazprom is identified as crucial for import prices, and consequently for the EU supply mix. Only if Gazprom adopts a competitive pricing strategy, it could ensure continued high gas exports to Europe. In a scenario assuming Gazprom applies an oligopolistic pricing strategy, higher prices would facilitate LNG imports, and potentially attract the inflow of new gas from the Southern Corridor, making Russian exports decline compared to today.

The pricing strategy of Gazprom directly relates to the profitability of Nord Stream 2: The pipeline capacity is only needed in a competitive

pricing strategy scenario. If Gazprom were to opt for oligopolistic pricing instead, Russian export routes would be highly underutilized and, hence, investment into Nord Stream 2 would not be economical.

However, the profitability of Nord Stream 2 is also affected by tariffs for gas transit through Ukraine—today's most important supply route for Russian gas exports. As the study finds, Kiev has the potential to significantly weaken the economic rationale of Nord Stream 2 by lowering its transit fees. The continued flow of gas through Ukraine, however, is a choice that will be shaped by both economic and political considerations.

Principal author Dr Harald Hecking of ewi said: 'The gas market over the next couple of decades will witness major change – affecting both supply and price for consumers. These modelling techniques allow us to narrow down future projections, while at the same time, recognising the key uncertainties for the foreseeable future.'

Co-author Dr Adnan Vatansever of EUCERS at King's said: 'The future of the EU's gas diversification depends on political factors that may be partly exogenous to Europe's policy-makers, specifically policy decision making in Russia and Turkey, two countries critical for EU's gas future. A major project such as Nord Stream 2 may proceed under the assumption that the EU and Russia are not engaged in a political crisis that escalates further.'

The Nord Stream expansion would turn Germany into the main transit country of Russian gas and the major gas hub in Europe. Nord Stream 2 would come along with the build-up of new interconnection capacity linking Germany, Czech Republic and Slovakia. This would enable increased supplies of Russian and non-Russian gas to Eastern European countries.

Likewise, the expansion of gas imports through the Southern Gas Corridor is predicated on Turkey's future role as an energy transit country. Such a role, however, can be influenced by Ankara's strained relations with the EU and its neighbourhood. An expansion of gas imports through the Southern Gas Corridor could be influenced by Turkey's political trajectory, both at home and in its foreign relations.

Provided by King's College London

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