

Gazprom's vision of competitive gas market in the EU

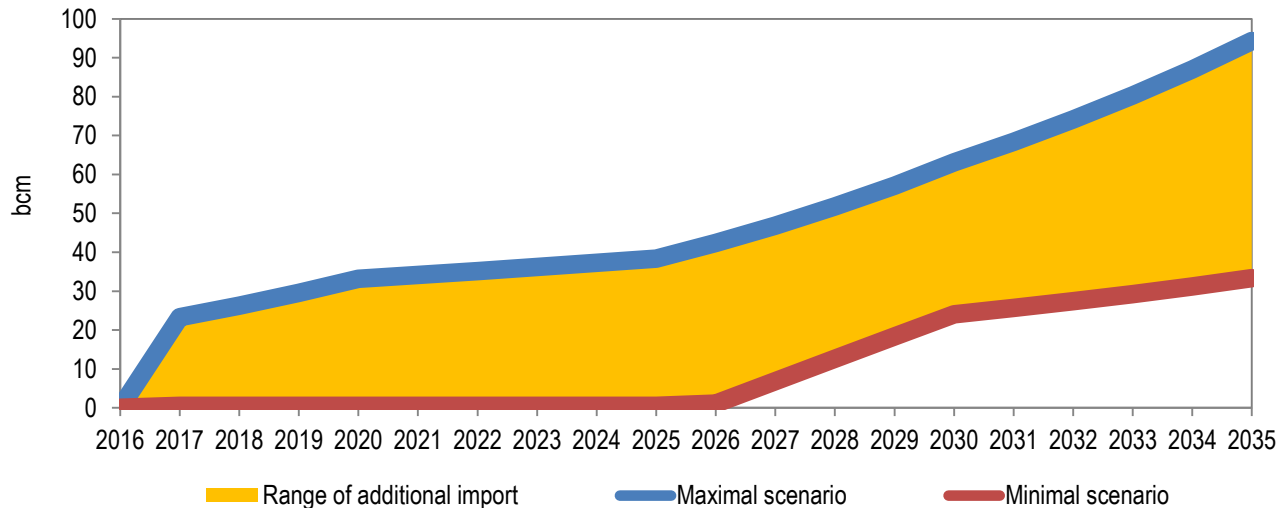
24th meeting of the EU-Russia Gas Advisory Council's Work Stream on Internal Market Issues
31st round of Informal Russia-EU Consultations on EU Regulatory Topics
01 December 2017 – Vienna, Austria

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01 December 2017 – Vienna, Austria

Forecast for additional import of natural gas in the EU*

Range of additional import (compared to 2016), bcm



According to the forecasts, additional demand (base year 2016) for natural gas import in the EU by 2035 amounts to approximately:

**from 33 bcm
up to 94 bcm**

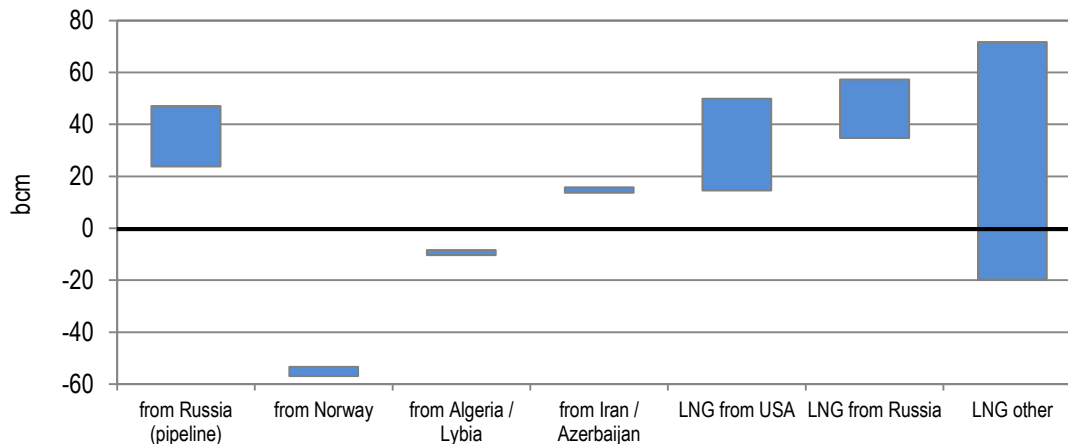
Sources: IHS Markit, WoodMackenzie

In light of expected demand for natural gas in the EU and declining indigenous production, the demand for an imported natural gas is increasing

*Views expressed in this presentation are the author's sole responsibility and do not necessarily represent that of Gazprom Export

Rising competition between exporters of natural gas

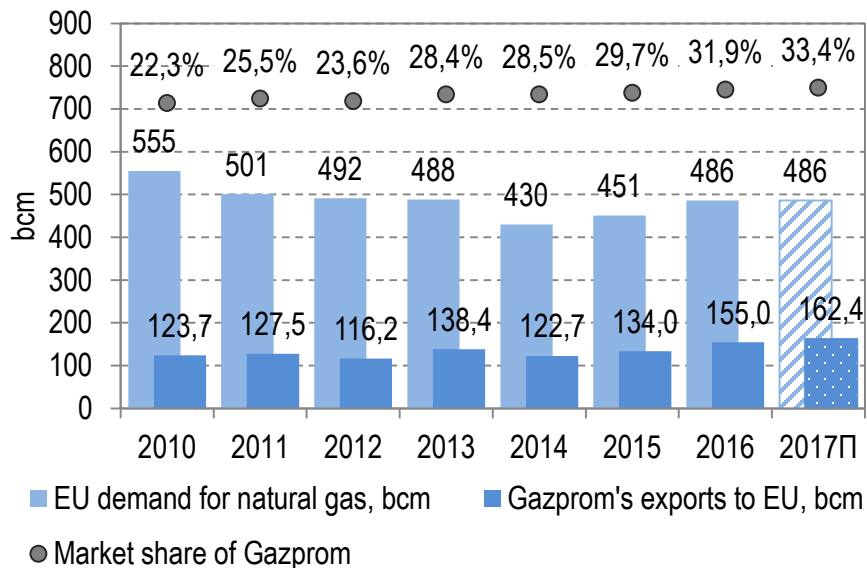
Range of additional import in 2035 from different exporters



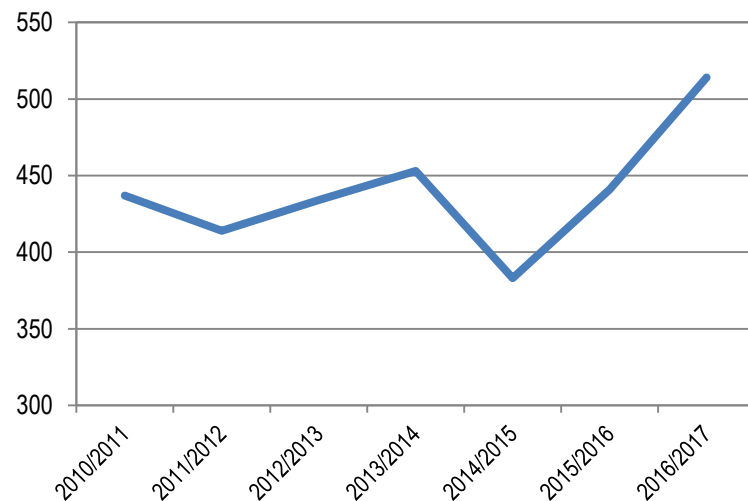
Sources: Gazprom PJSC, IHS Markit, WoodMackenzie

Current emergence of new exporters of natural gas will increase competition on regional markets. However, Gazprom has evident competitive advantages compared with other exporters.

Share of Gazprom exports in natural gas demand of EU



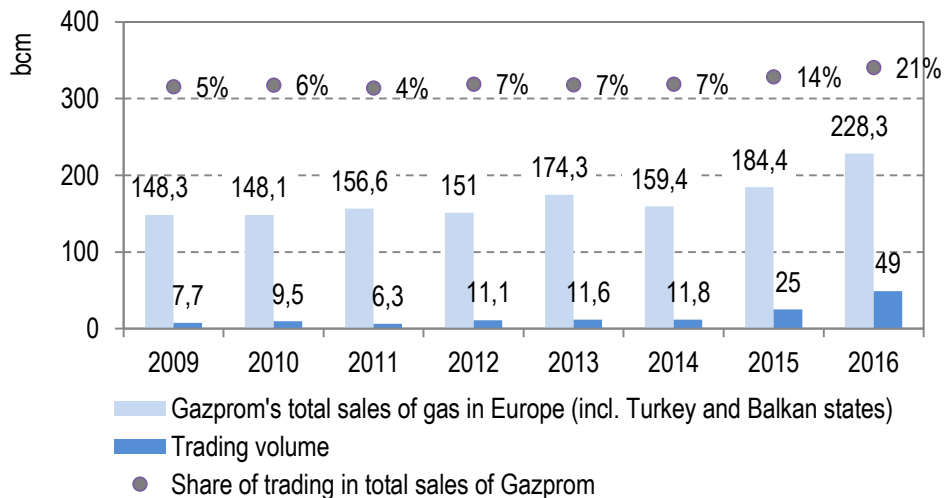
Peak winter supplies of Gazprom to EU, mmcm/d



Sources: Gazprom PJSC, Gazprom Export LLC

Gazprom is the largest supplier of natural gas to EU, providing more than 30% of demand for natural gas and successfully covering peak demand of the winter season.

Gazprom's export to EU and trading volume on the European hubs

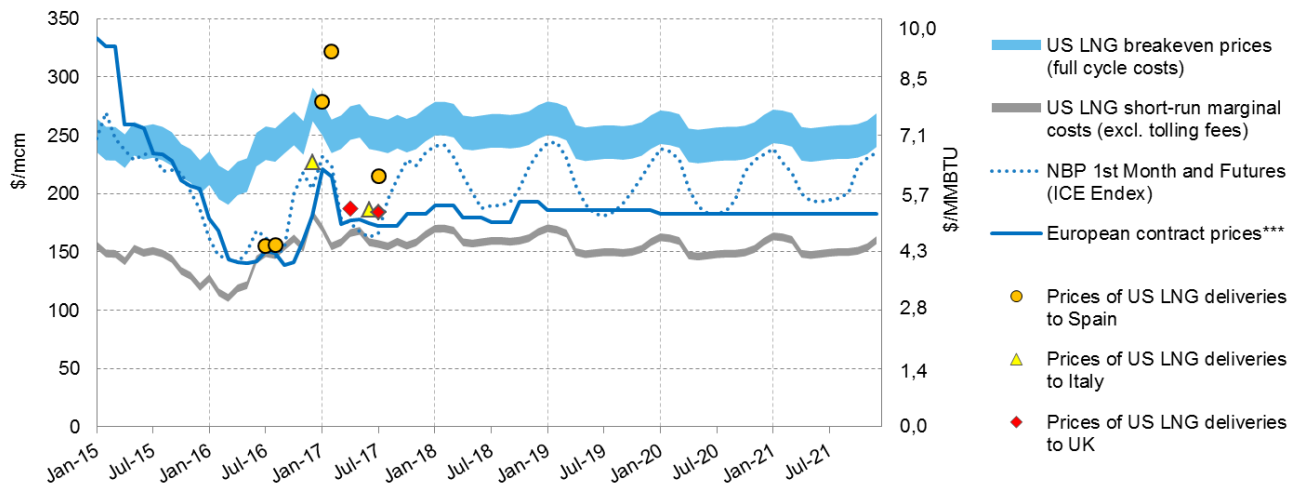


Trading on the European hubs in Gazprom is organized via Gazprom Export LLC and other subsidiaries. There is a direct competition with our customers, which sell a natural gas, bought under a long-term contract, on the European hubs.

Sources: Gazprom PJSC

Gazprom increases an economic efficiency of its sales, using various forms of gas trade, incl. trading and auctions

Natural gas prices trend in Europe and full marginal costs of US LNG Supplies to Europe

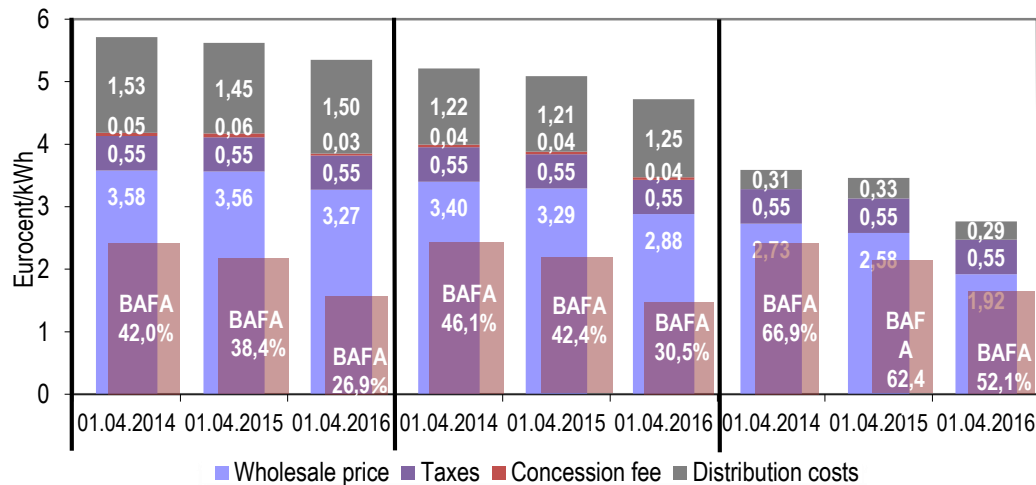


The full marginal costs of US LNG Supplies to Europe is a price limit for European market (currently: 7-8 USD/mmbte or 240-280 USD/mcm).

Sources: Bloomberg, Cedigaz, Cheniere Energy, Wood Mackenzie

Despite a high market concentration on supply side, there is no possibility to manipulate market prices due to hypothetical competition with LNG from US

Price structure on the retail market of Germany*

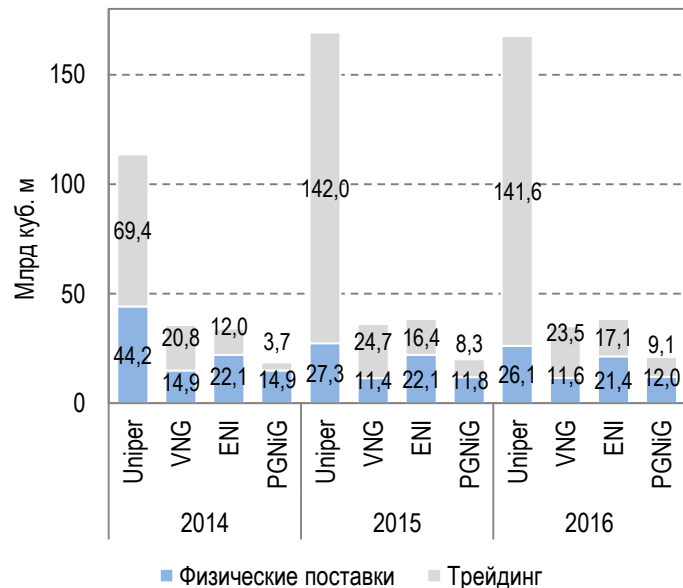


The European retail market is characterized by a high competition among suppliers. Our traditional customers are forced monetize our obligations under long-term contracts via trading.

*Does not include VAT

Sources: BAFA, Bundesnetzagentur.

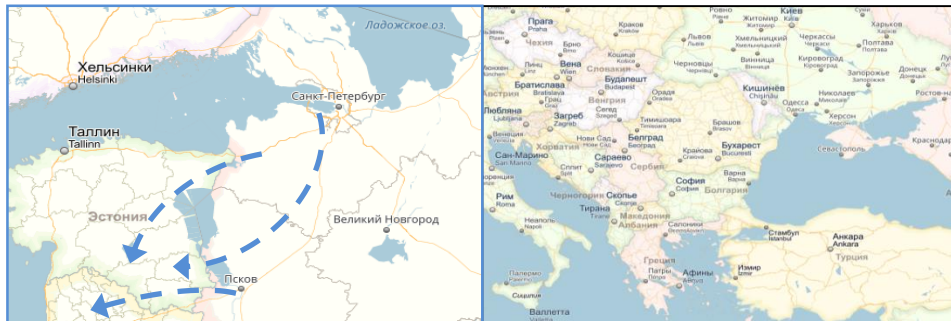
Share of trading in sales Gazprom's customers



Source: financial reports of the companies

The share of Gazprom on the niche segments of market is growing

Main directions for exports of a small-scale LNG by Gazprom Export



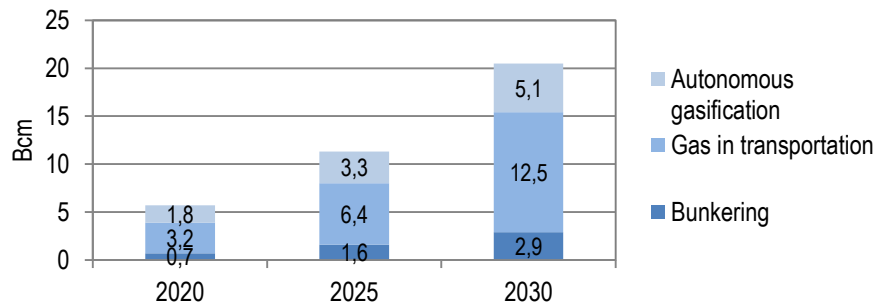
Gas in European transportation



- Total forecasted demand for gas in transportation (CNG and LNG) by 2030 estimates **24 bcm per annum.***
- Addition demand for CNG creates a potential for additional exports to Europe for Gazprom

* Source: IHS Markit

Forecasted demand for small-scale LNG on the European market



Sources: Gazprom PJSC, Gazprom Marketing&Trading Ltd., Gazprom Export LLC

Gas-to-Power

- Deliveries to power stations in Hungary and FYR Macedonia under tolling-scheme – up to 250 mmcm
- Perspective expansion of this contract scheme in accordance with forecasted gas demand in electricity generation by 24 bcm by 2030 and by 39 bcm by 2035

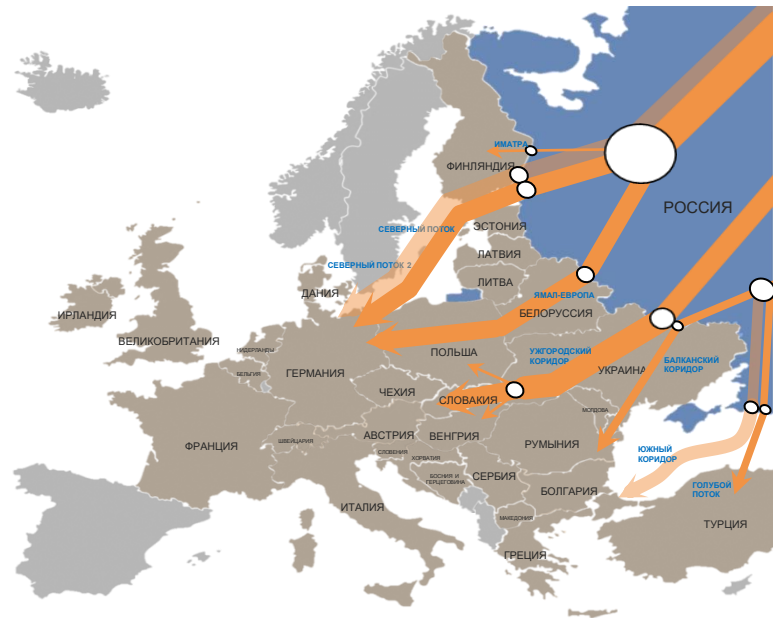


Optimization measures :

Use of existing and development of prospective gas transportation routes for gas supplies to the EU

Active use of European storages for optimal regime of supplies to the European customers

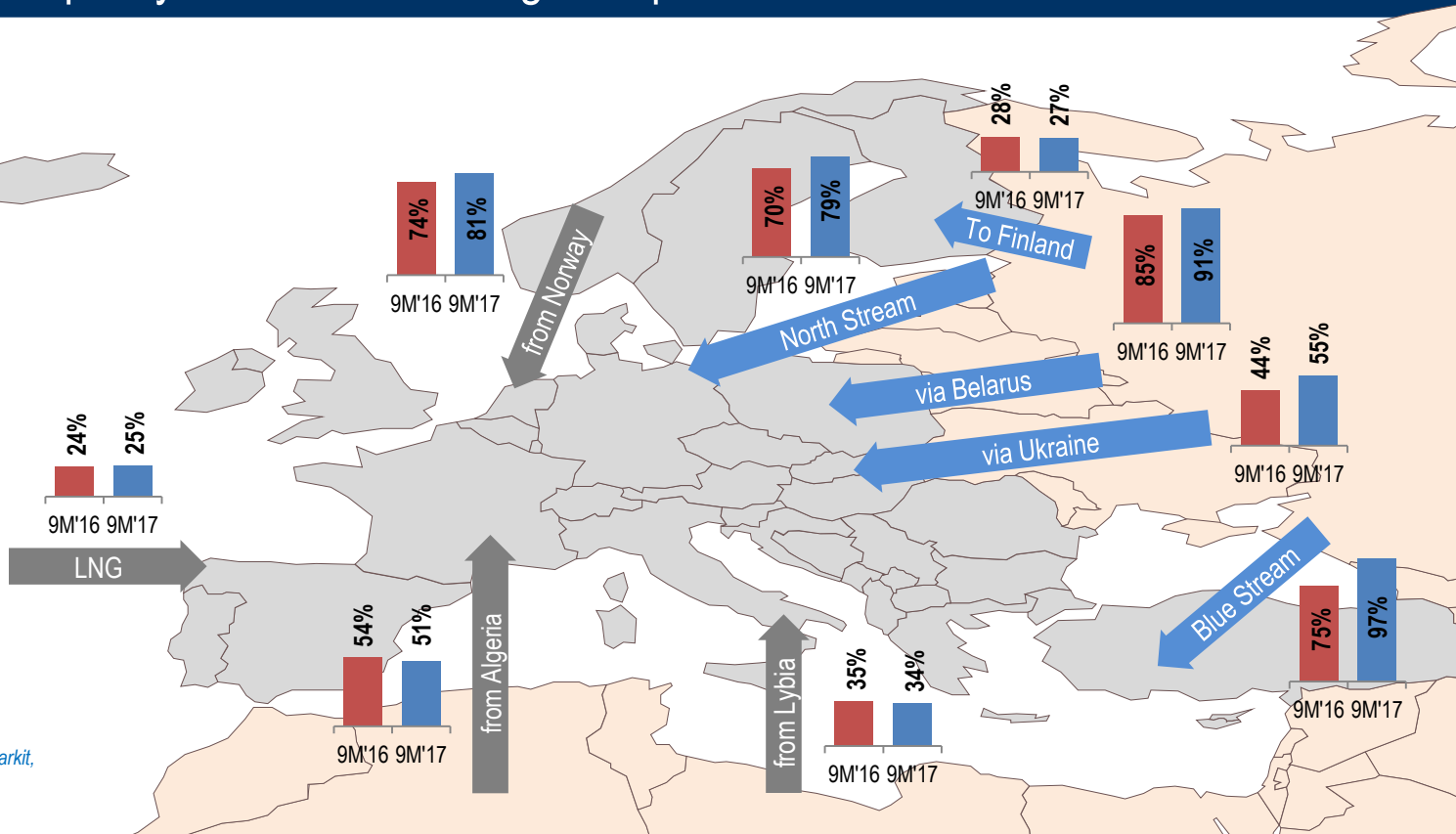
Use of geographical and time swaps with other market participants



Gazprom has a variety of optimization measures for its gas exports to the EU

High capacity load of the existing transportation routes

High capacity load of the existing infrastructure is a limit for export activities of Gazprom. The Ukrainian route might become an extortion instrument by introduction of excessive transit fees. In this case the European customers will be forced to buy a more expansive gas from USA.



Sources: Bloomberg, ENTSOG, Gassco, GIE, HIS Markit, Snam Rete Gas, Ukrtransgaz, Gazprom Export LLC

1. Demand for gas imports is increasing what will lead to a challenge of additional volumes allocation for suppliers
2. Role of Gazprom today is security of supply and flexibility incorporated into LTC
3. New ways of trading force tough competition on trading platforms between gas of Gazprom and gas of our partners'
4. Deliveries from new LNG projects create a competitive price benchmark
5. Gazprom is investing into new niche market for final consumption
6. New delivery routes provide reason for local and regional infrastructure construction

Thank you for your attention!