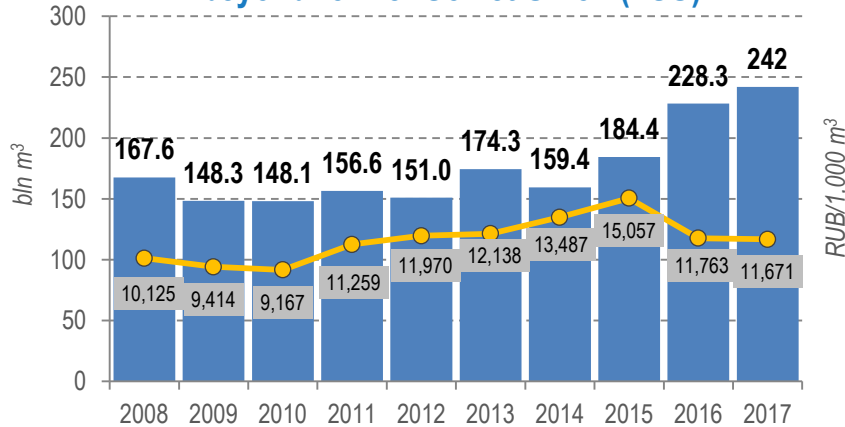


# GAS EXPORT AND ENHANCING RELIABILITY OF GAS SUPPLIES TO EUROPE

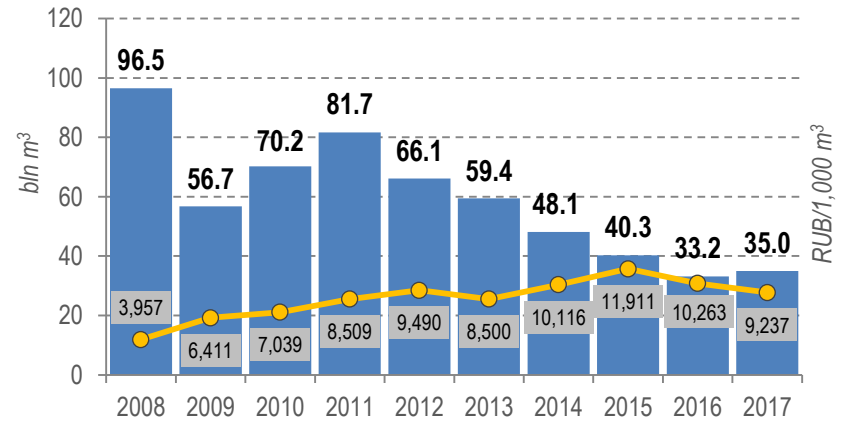
ALEXANDER MEDVEDEV  
Deputy Chairman of Management Committee, Gazprom

# GAS SALES BY GAZPROM GROUP

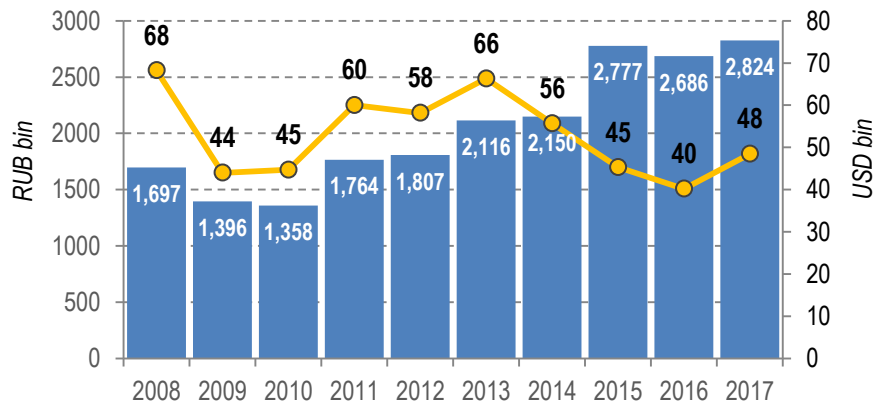
Volume and average price\* of Gazprom Group's gas exports beyond former Soviet Union (FSU)\*\*



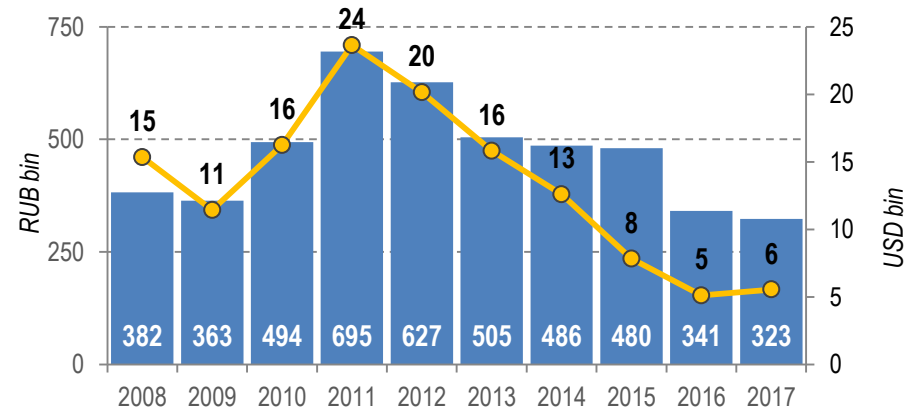
Volume and average price\* of Gazprom Group's gas exports in FSU



Net revenue\* from gas sales beyond FSU



Net revenue\* from gas sales in FSU



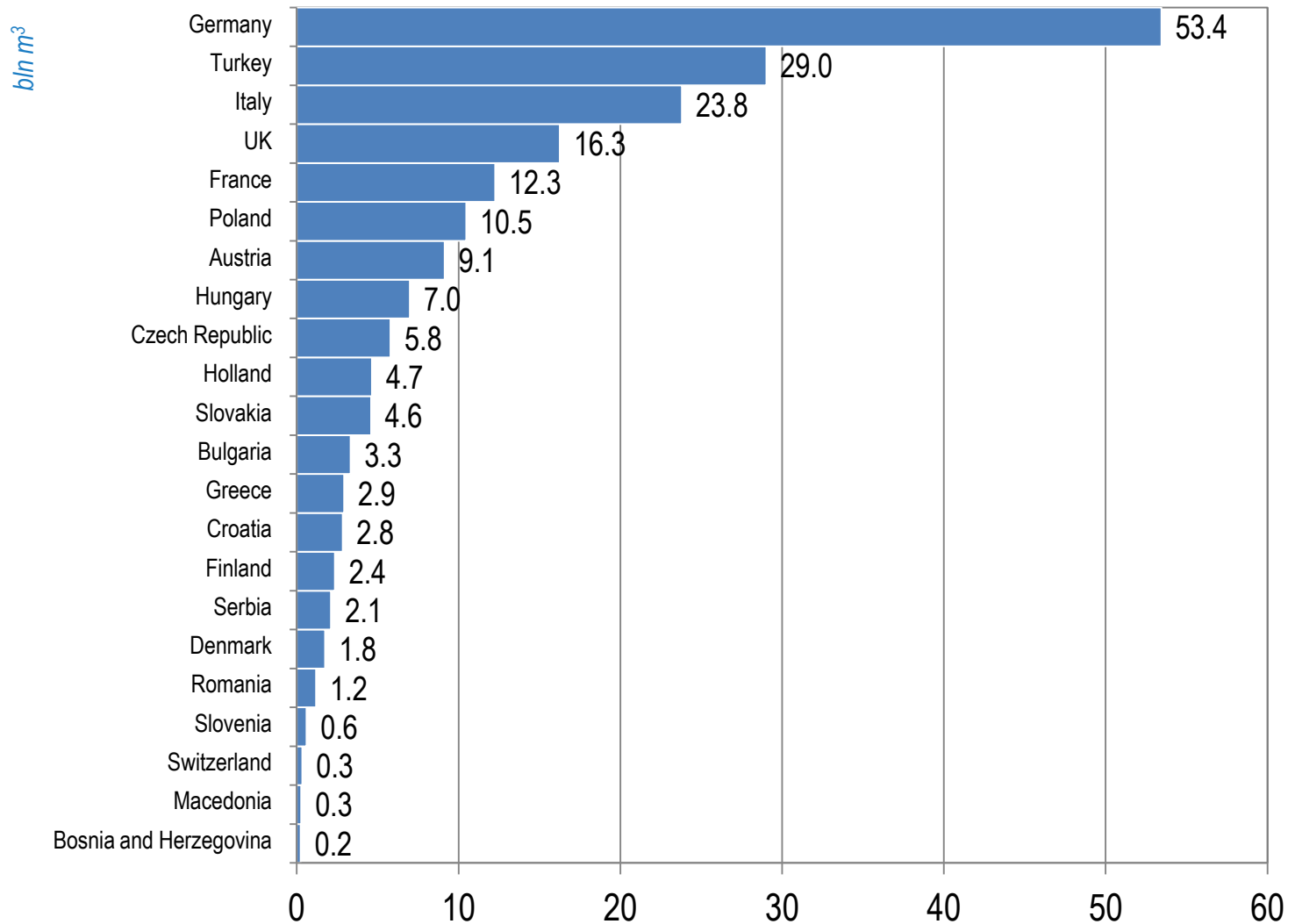
\* Inclusive of excise tax and customs duties.

\*\* Gas, including LNG, supplies to foreign countries, except for FSU, under contracts of Gazprom Export and other companies of Gazprom Group

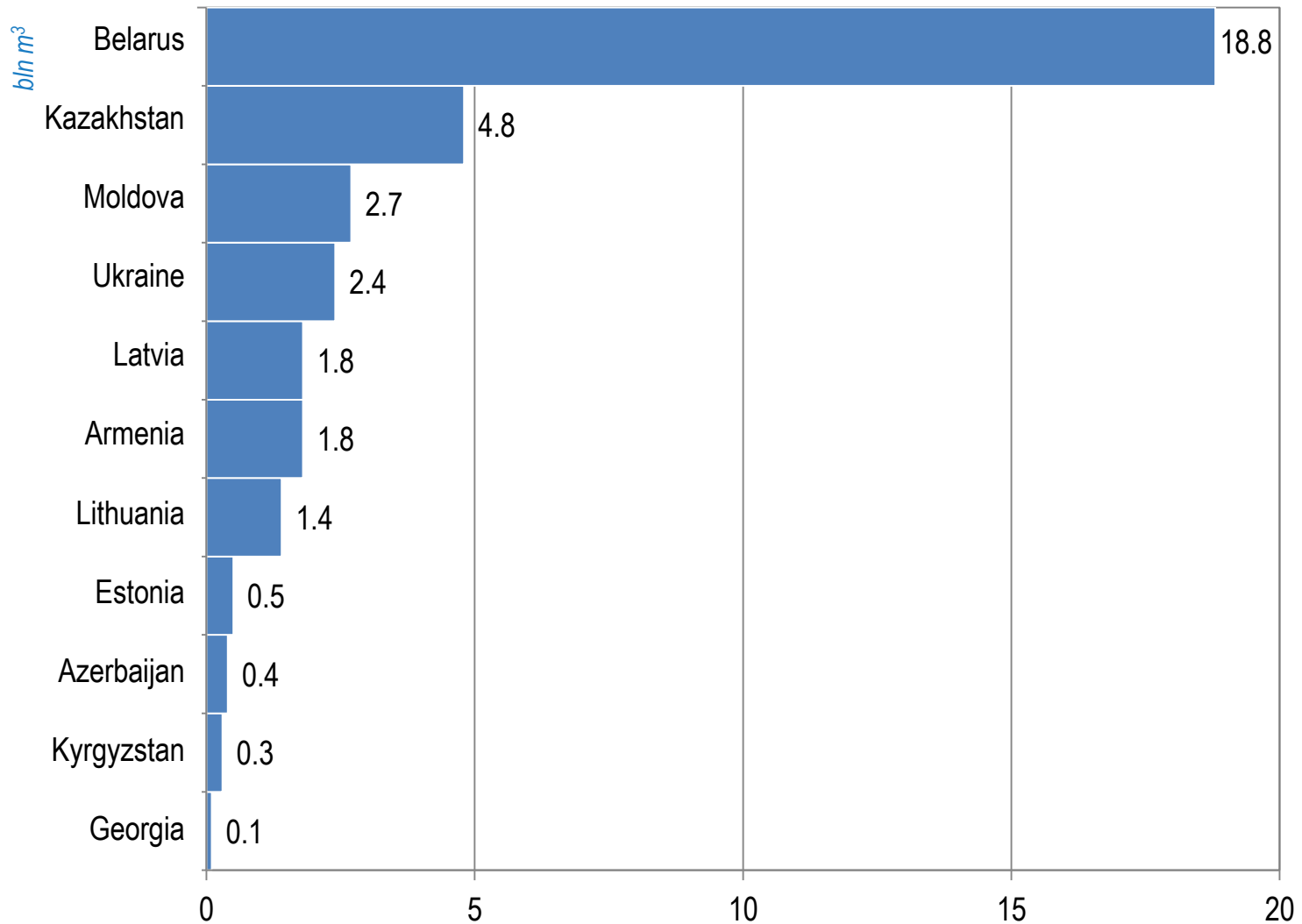
# GAZPROM GROUP'S GAS SALES BEYOND FSU IN 2017

(UNDER CONTRACTS OF GAZPROM EXPORT AND GAZPROM SCHWEIZ)

- Total sales in 2017 amounted to 194.4 bln m<sup>3</sup>
- Increase of 15.1 bln m<sup>3</sup> (+8.4%) from previous year



# GAZPROM GROUP'S GAS SALES TO FSU IN 2017

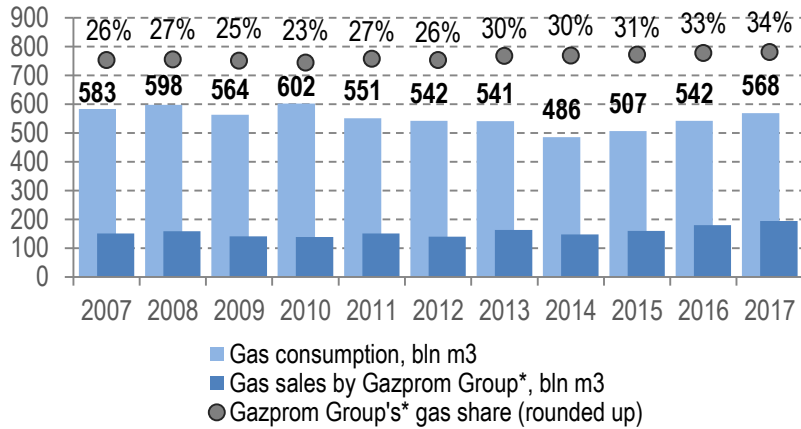


Gazprom's gas sales in FSU totaled 35 bln m<sup>3</sup>\* in 2017

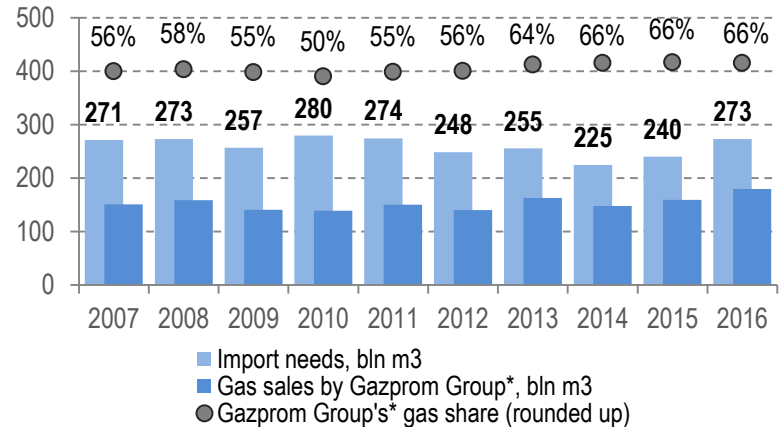
\* According to consolidated financial statements of Gazprom prepared under IFRS

# PIVOTAL ROLE OF GAZPROM GROUP'S GAS IN EUROPEAN MARKET

### Gazprom Group's\* share in European gas consumption

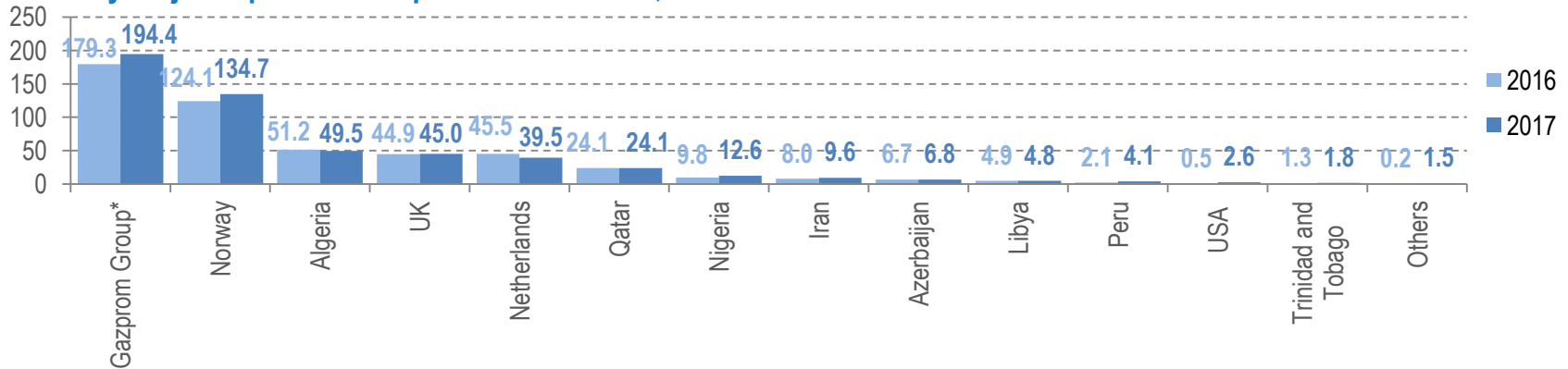


### Gazprom Group's\* share in European gas imports\*\*



## Gas supplies to Europe

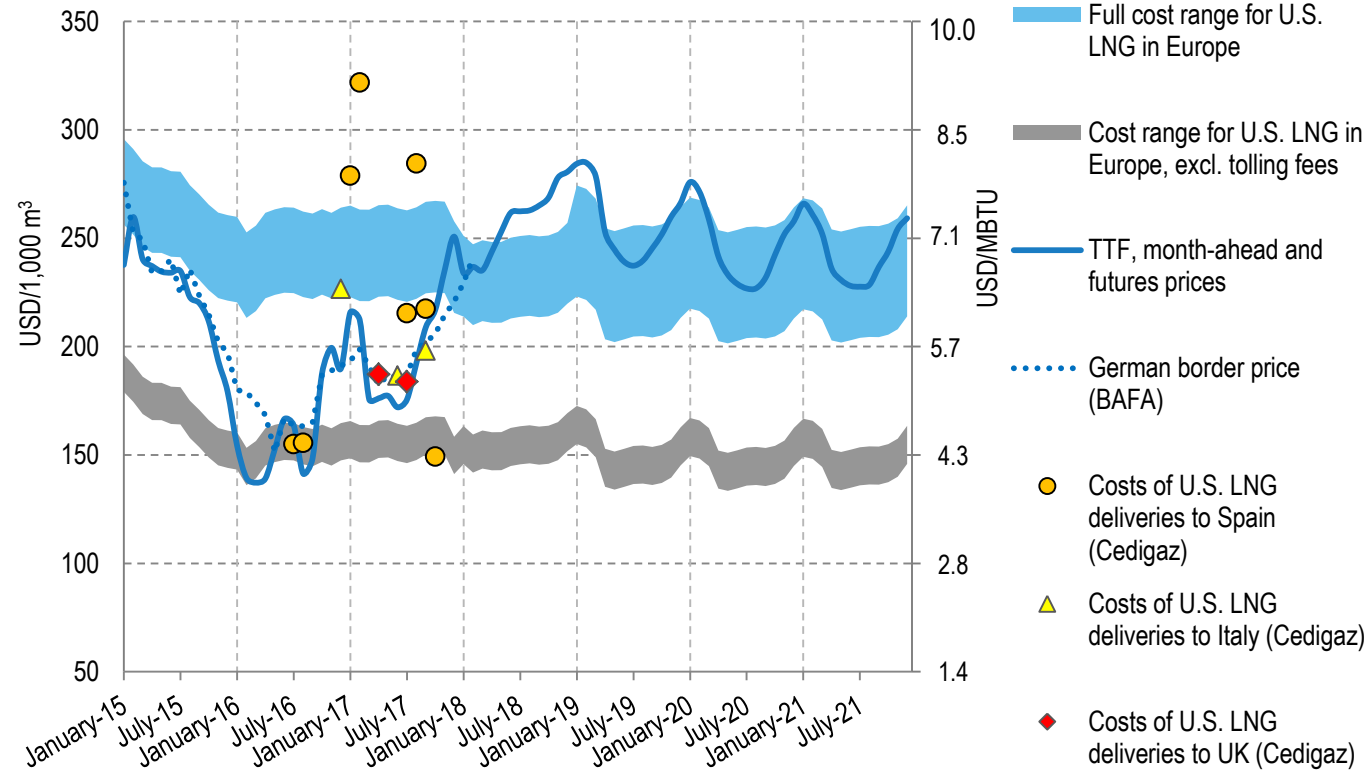
### by major exporters and producers in 2017, bln m<sup>3</sup>



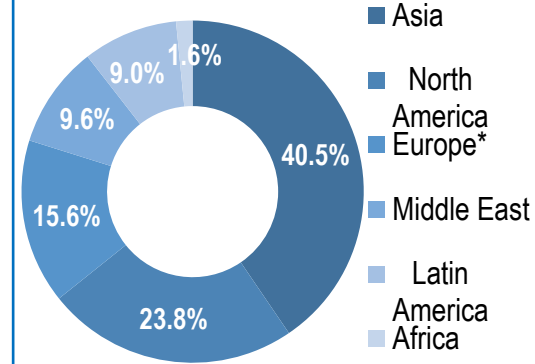
\* Gas sales to European countries beyond FSU under contracts of Gazprom Export and GAZPROM Schweiz

\*\* Difference between consumption and indigenous production

## Dynamics of European gas prices and prime cost\* of LNG supplies from USA to Europe



## U.S. LNG supplies by regions in 2017



In 2017, prices on European trading platforms failed to cover full costs of U.S. LNG supplies, resulting in most of them being rerouted to other markets. However, some LNG supplies from USA to Europe in second half of 2018 may be marginal even with account of full cost. What really matters is that competitiveness of these LNG supplies is influenced by not only marginality but also ratio between LNG and pipeline gas market prices.

\* incl. Lithuania

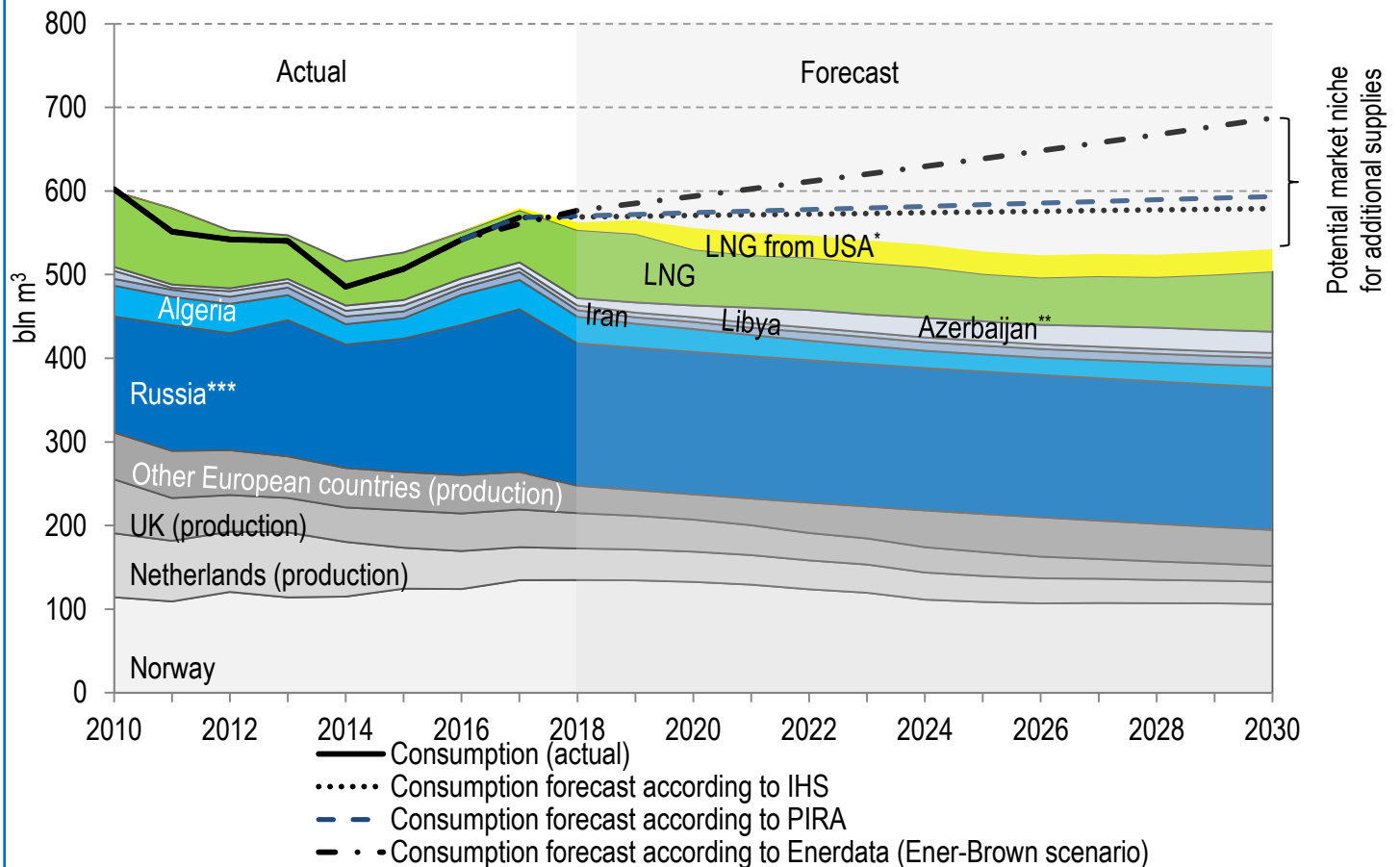
\* Based on Henry Hub forward prices,  $P = HH * 115\% + X$ , where X – liquefaction, shipment and regasification costs

Sources: Bloomberg, Cedigaz, IHS

# STUDY\* OF POTENTIAL MARKET NICHE FOR RUSSIAN GAS IN EUROPE

In 2018–2020, Europe's gas market is likely to face stronger competition, particularly from LNG suppliers. Due to declining gas production in Europe and rerouting of LNG supplies to other regions, untapped market niche will be available for extra supplies of Russian gas after 2020.

Forecast analysis of supply-demand ratio accounting for U.S. LNG supplies



\* Forecast takes into consideration contractual arrangements with European companies for LNG supplies from USA to Europe

\*\* Accounting for consortium's contracts as part of Shah-Deniz 2 development project jointly with Turkey and EU countries

\*\*\* At average level of supplies in 2010–2017

Sources: Gazprom Export, IEA, national statistics, Enerdata, IHS, PIRA

## 2017: development of underground gas storage network in Europe



During 2017/2018 withdrawal season, Gazprom Export operated **5 bln m<sup>3</sup>** of gas storage capacities in Europe. Combined with rented facilities, available storage capacities totaled **8.6 bln m<sup>3</sup>**.

Maximum daily deliverability of Company's UGS facilities in Western Europe was **83.3 mln m<sup>3</sup>** during 2017/2018 withdrawal season.

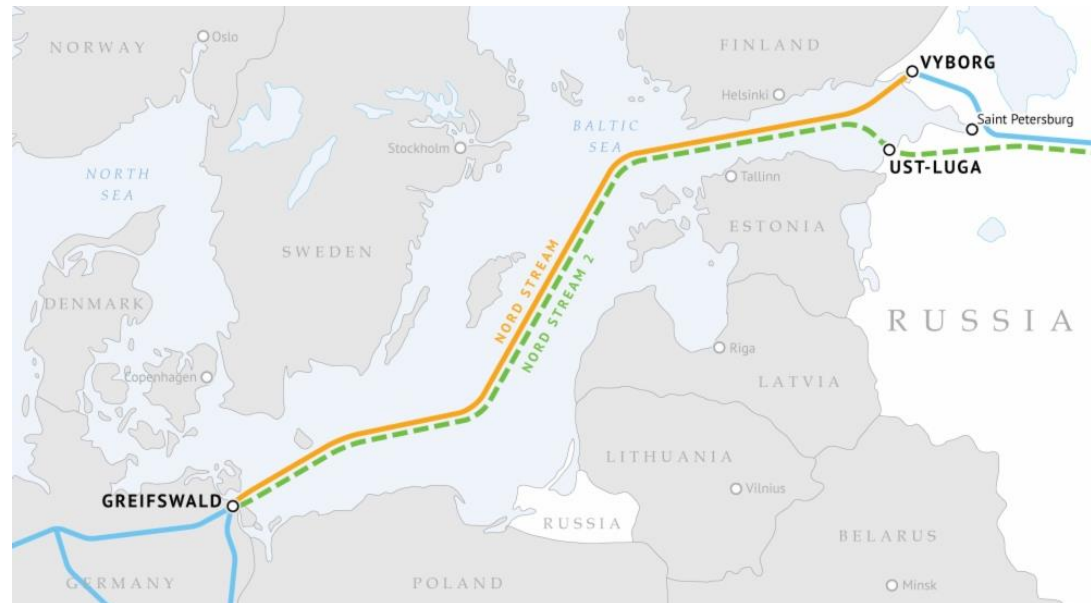
At present, Katharina and Damborice UGS projects are underway:

- Katharina UGS facility has 6 operational caverns with total working capacity of 317.5 mln m<sup>3</sup> and maximum daily deliverability of 23.2 mln m<sup>3</sup>. On April 1, 2017, its own surface structures were put onstream.
- On July 1, 2016, Damborice UGS facility with design working capacity of 456 mln m<sup>3</sup> was brought into operation in Czech Republic. At present, Gazprom Export has access to 173.7 mln m<sup>3</sup> of Damborice's storage capacity with maximum daily deliverability of 3.7 mln m<sup>3</sup>.



# NORD STREAM 2

- Nord Stream 2 project envisages construction of gas pipeline across Baltic Sea with entry point in Kingiseppsky District of Leningrad Region and exit point near Greifswald in Germany
- Length of gas pipeline: around 1,200 km
- Annual capacity: 55 bln m<sup>3</sup> of gas
- In addition to improved reliability of supplies, Nord Stream 2 project is consistent with EU objectives for energy security and harmful emissions reduction
- Nord Stream 2 AG company was set up to carry out this project
- Nord Stream 2 AG signed financing agreements with ENGIE, OMV, Royal Dutch Shell, Uniper, and Wintershall for Nord Stream 2 gas pipeline



# TURKSTREAM

- TurkStream project envisages construction of export gas pipeline stretching across Black Sea from Russia to Turkey and further to Turkey's border with neighboring countries
- On October 10, 2016, Russian and Turkish Governments signed Agreement on TurkStream project
- First string (15.75 bln m<sup>3</sup> in capacity) of gas pipeline is intended for Turkish market, while second string (with same capacity) will deliver gas to EU countries
- South Stream Transport B.V. is responsible for construction of gas pipeline's offshore section
- First string of TurkStream gas pipeline in deepwater area was completed on April 30, 2018
- TurkStream is expected to come online before late 2019

