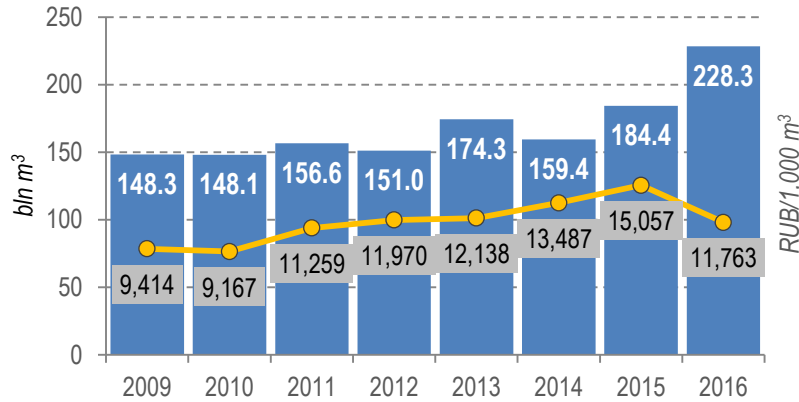


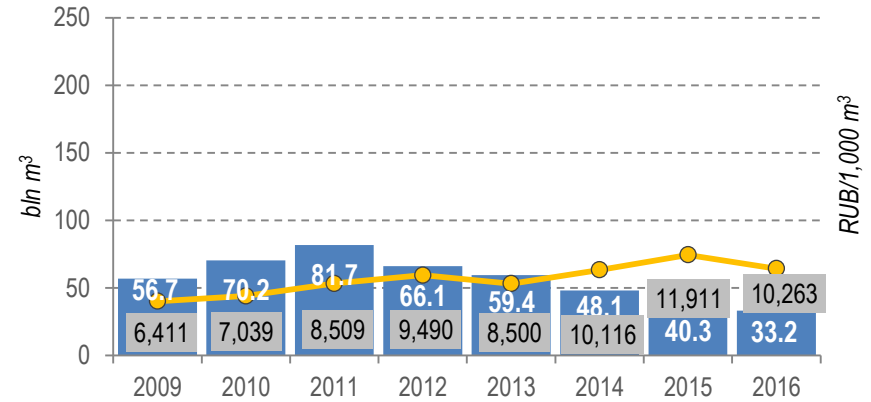
# GAS EXPORT AND ENHANCING RELIABILITY OF GAS SUPPLY TO EUROPE

ALEXANDER MEDVEDEV  
Deputy Chairman of Management Committee, Gazprom

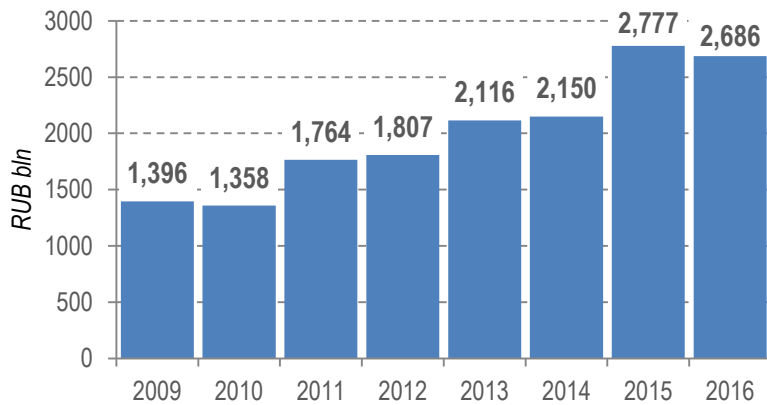
Volume and average price\* data of Gazprom Group gas beyond former Soviet Union (FSU)\*\*



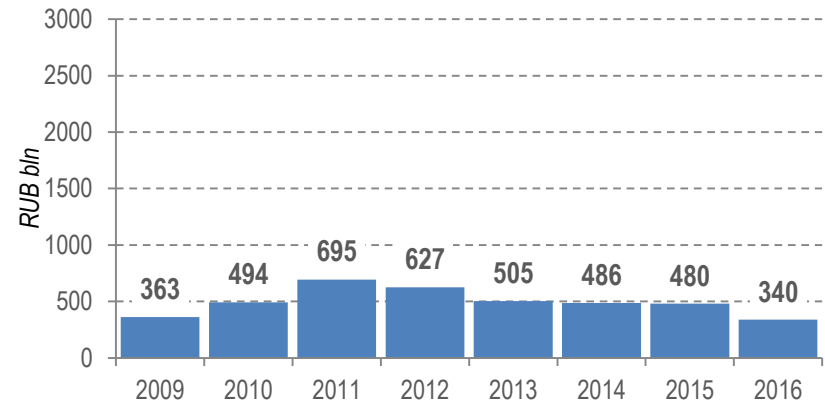
Volume and average price\* data of Gazprom Group gas in FSU



Net revenue\* from gas sales beyond FSU



Net revenue\* from gas sales in FSU



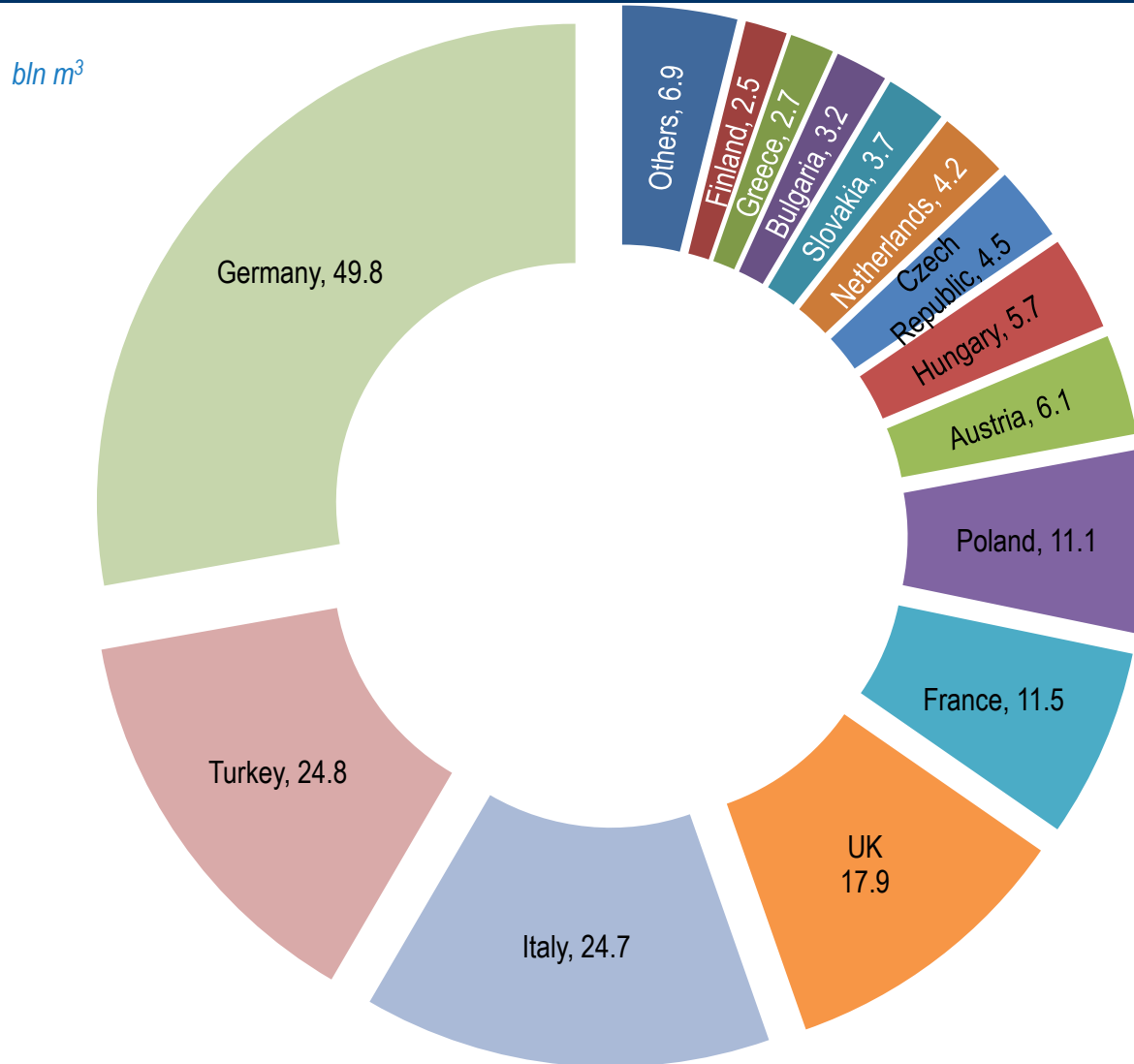
\* Inclusive of (excise tax and) customs duties

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

# GAZPROM GROUP'S GAS SALES BEYOND FSU

(UNDER CONTRACTS OF GAZPROM EXPORT AND GAZPROM SCHWEIZ)

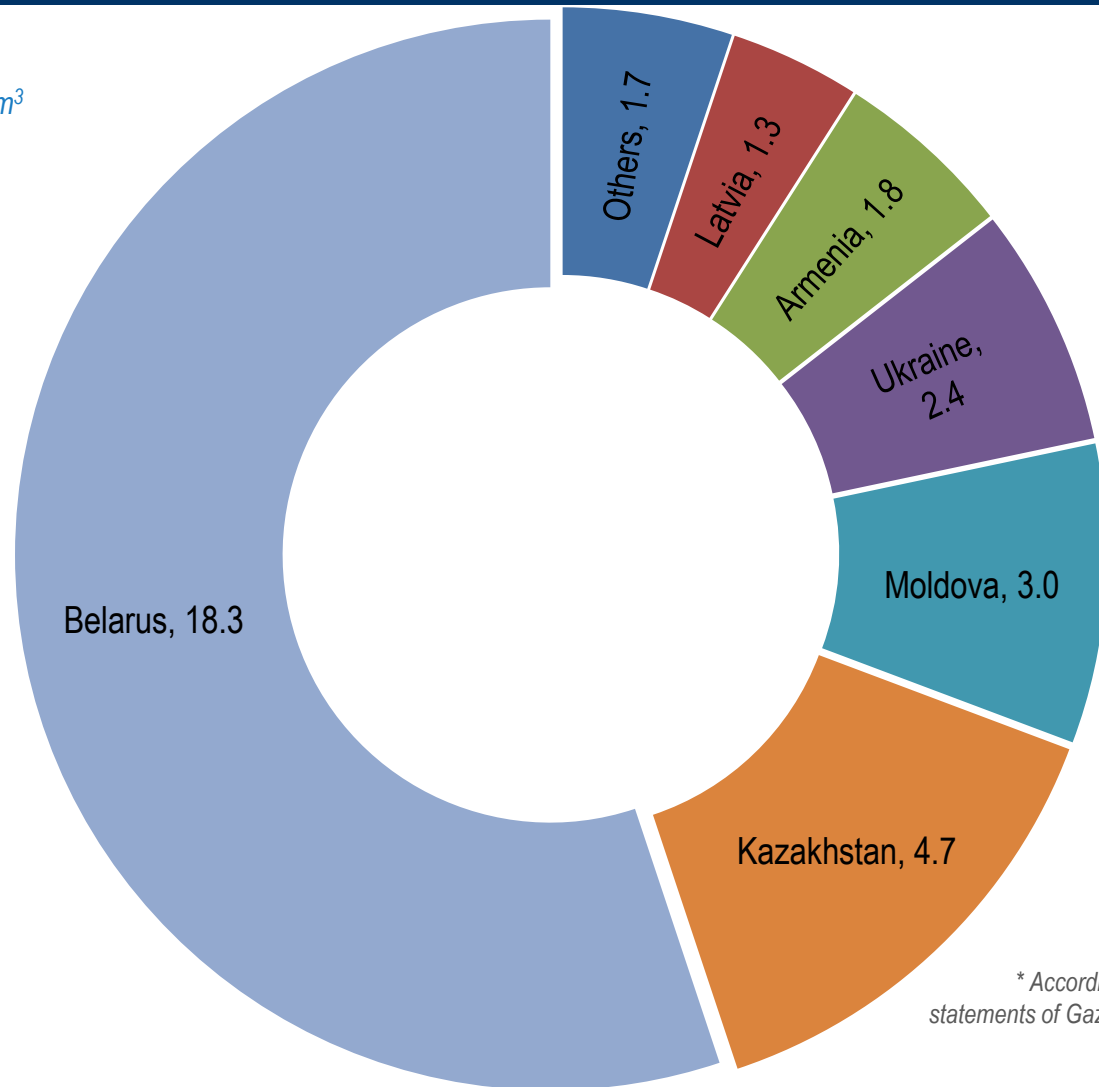
- Total sales in 2016 amounted to 179.3 bln m<sup>3</sup>
- Increase of 19.9 billion m<sup>3</sup> (+12.5%) from previous year
- Major gas buyers in 2016 were Germany, Turkey, and Italy



# GAZPROM GROUP'S GAS SALES TO FSU IN 2016

Gazprom's gas sales in FSU totaled 33.2 bln m<sup>3</sup>\* in 2016

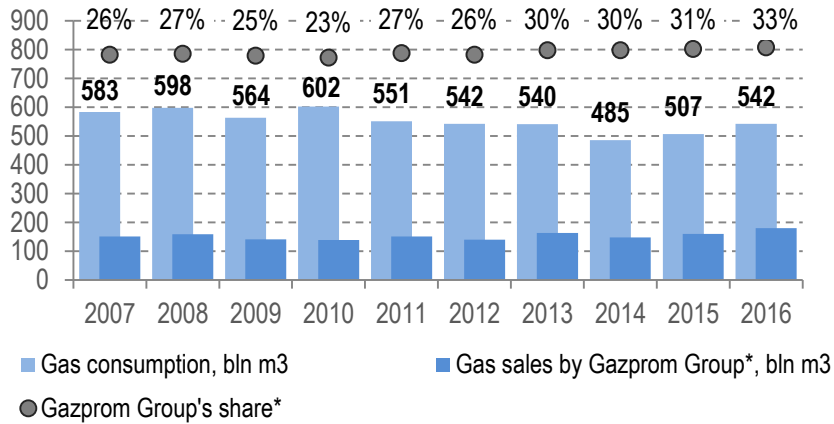
bln m<sup>3</sup>



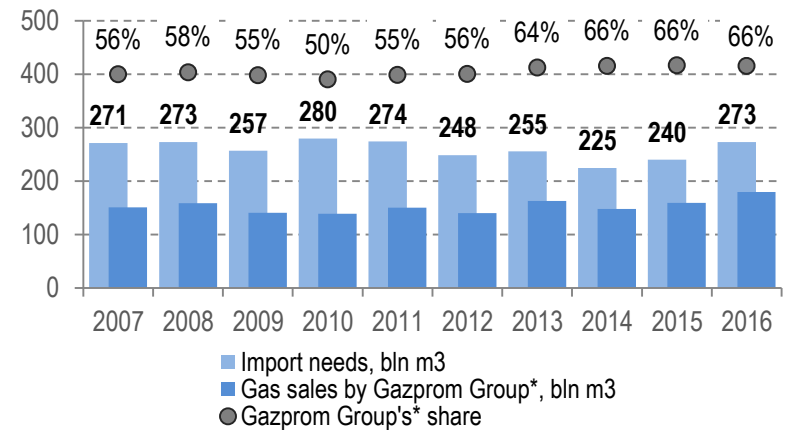
\* According to consolidated financial statements of Gazprom prepared under IFRS

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

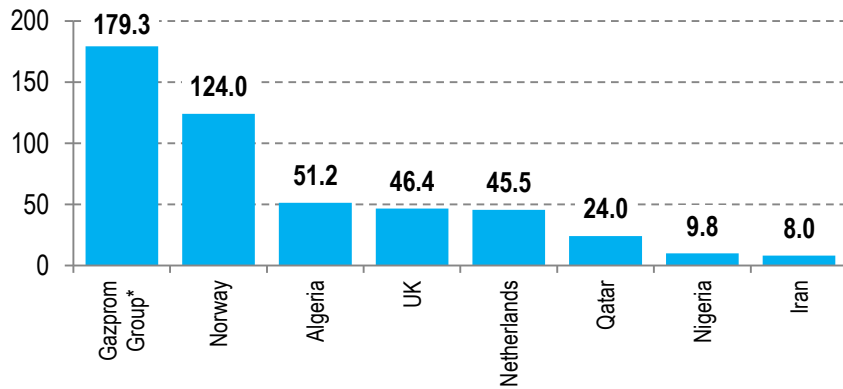
### Gazprom Group's\* share in European gas consumption



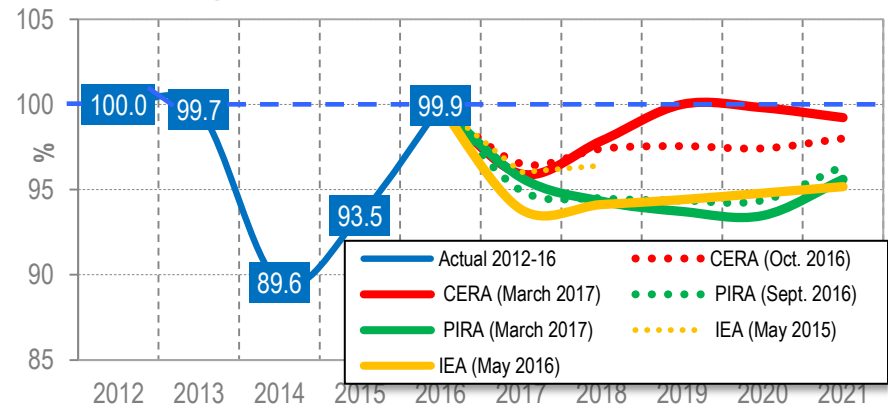
### Gazprom Group's\* share in European gas imports\*\*



### Gas supplies to Europe by major gas exporters and producers in 2016, bln m<sup>3</sup>



### Short-term forecasts for gas consumption from world's leading companies (consumption in 2012 = 100%)

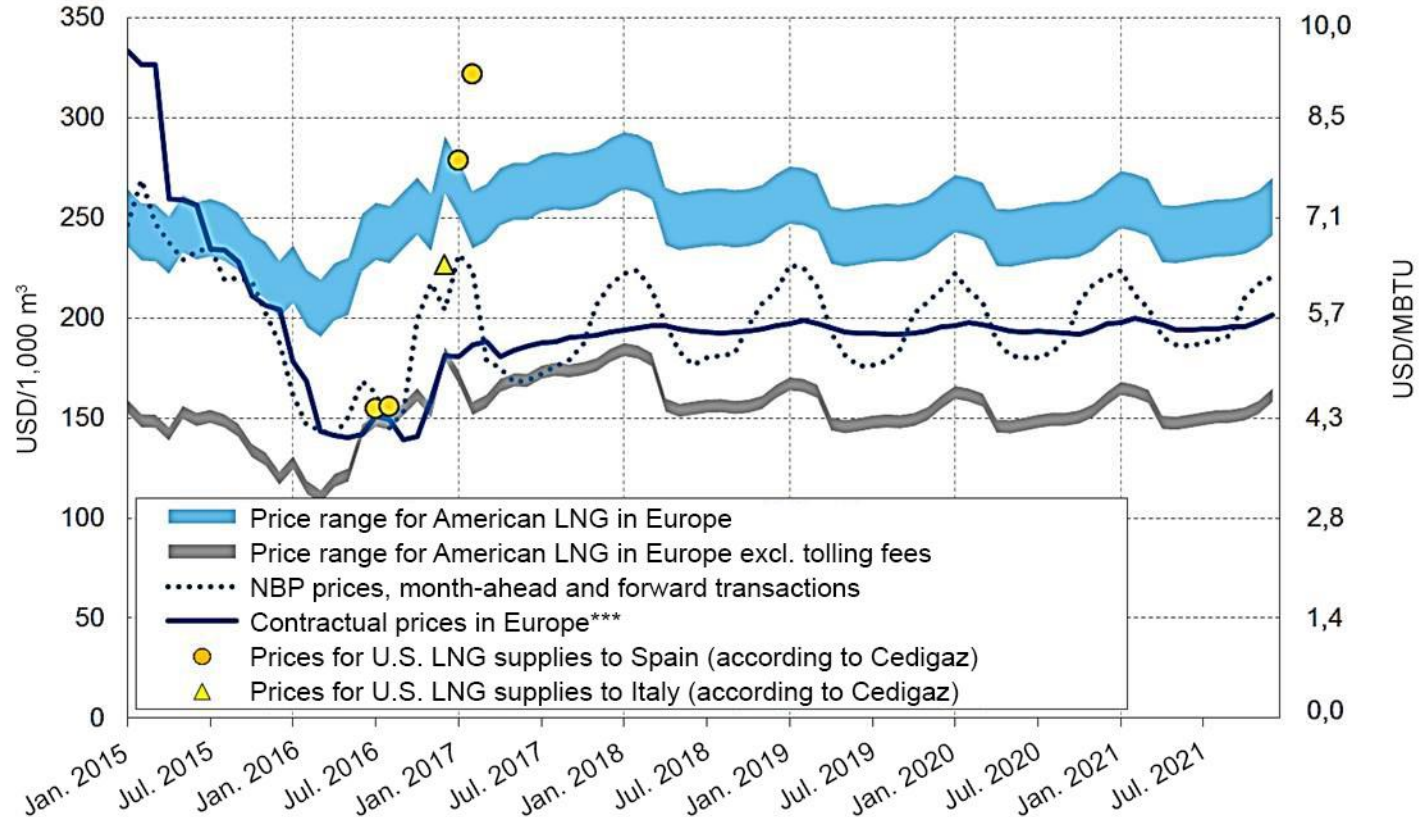


\* Gas sales to European countries beyond FSU under contracts of Gazprom Export and GAZPROM Schweiz

\*\* Difference between consumption and indigenous production

# LOW COMMERCIAL ATTRACTIVENESS OF U.S. LNG SUPPLIES TO EUROPE

Estimated price range\* for U.S. LNG supplies in Europe versus forward prices\*\* in European gas market



In current environment, forward contract prices at European trading platforms do not cover full cost of future U.S. LNG supplies linked to Henry Hub prices

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

\*\* NBP forward prices

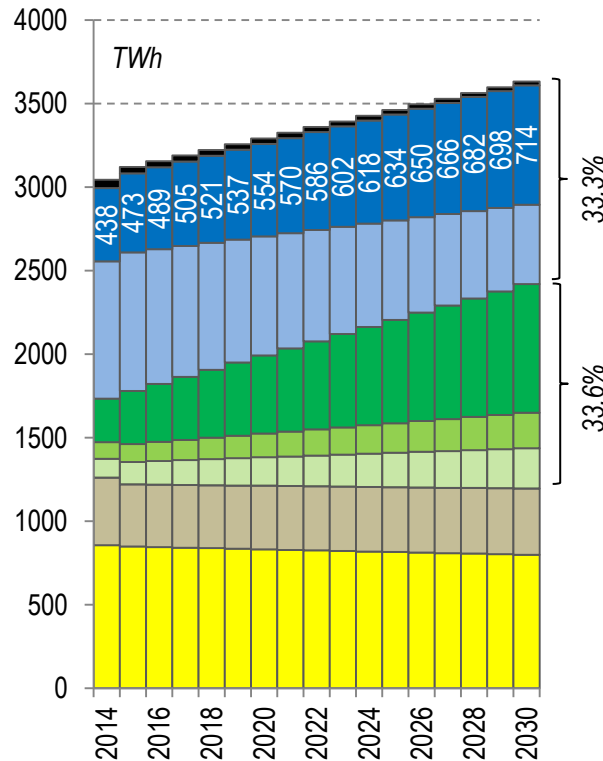
\*\*\* Historical data: Russian gas prices, including delivery, at German border (according to World Bank), projected data: based on current forward prices of Brent and TTF

Sources: Bloomberg, Cheniere Energy, WoodMackenzie, World Bank

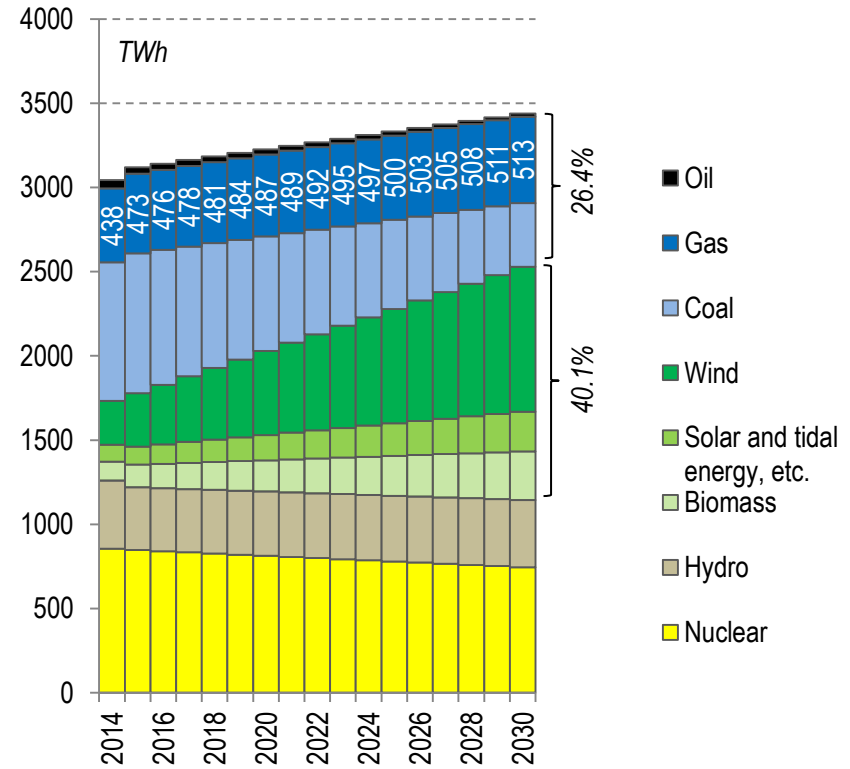
# FORECASTED GROWTH IN GAS-FIRED POWER GENERATION

Power industry shows highest growth rates in gas consumption across Europe. Even EC's most radical ecology-oriented scenario, with highest subsidies for RES, envisages increased gas use for power generation. According to baseline scenario, by 2025 gas-fired power generation in EU will grow by one-third versus 2015.

Baseline scenario\*



2030 Energy Strategy scenario\*\*



\* 21% increase in energy efficiency by 2030, 33% reduction of greenhouse gas emissions by 2030 versus 1990, 24.4% share of RES in primary energy consumption by 2030.

\*\* 27% increase in energy efficiency by 2030, 40% reduction of greenhouse gas emissions by 2030 versus 1990, 27% share of RES in primary energy consumption by 2030.

Source: European Commission, ENTSO-E

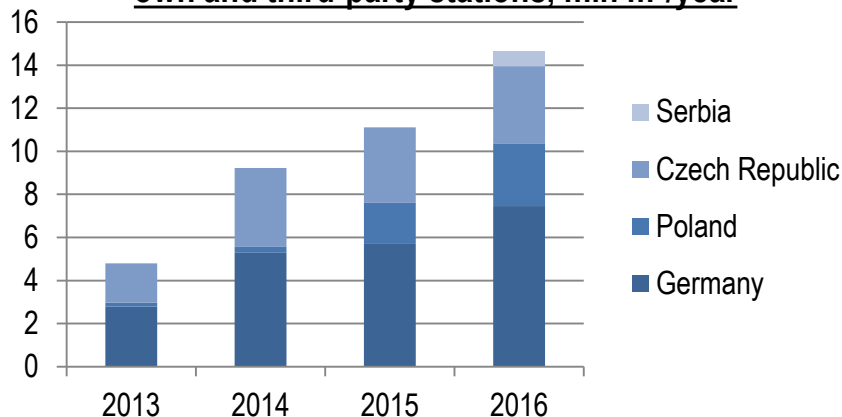


Between 2013 and 2016:

- Number of Gazprom Group's gas filling stations in Europe increased from 23 to 69
- In 2016, Gazprom Group entered Serbia's NGV market, with retail services offered at two stations
- Gazprom's supplies of CNG and LNG to its own and third-party gas filling stations grew from 4.8 to 14.6 mln m<sup>3</sup>
- In collaboration with local companies, Gazprom NGV Europe (part of Gazprom Group) implements Europe's first projects for introducing LNG as vehicle fuel in public bus transportation in Poland: 11 buses in Olsztyn and 35 buses in Warsaw



**Gazprom's sales of gas as vehicle fuel through its own and third-party stations, mln m<sup>3</sup>/year**



## Prospects for gas demand increase in transportation sector:

- Heavy-duty truck can consume up to 200–300 kg of LNG daily
- Transportation company with 20–40 trucks consumes several mln m<sup>3</sup> of gas per year
- Europe's demand for natural gas as vehicle fuel can reach up to 27 billion m<sup>3</sup> by 2025\*

\* ACER (Agency for the Cooperation of Energy Regulators) forecast.



## 2016: development of Europe's underground gas storage network



During 2016/2017 withdrawal season, Gazprom operated **5 bln m<sup>3</sup>** of storage capacities in Europe.

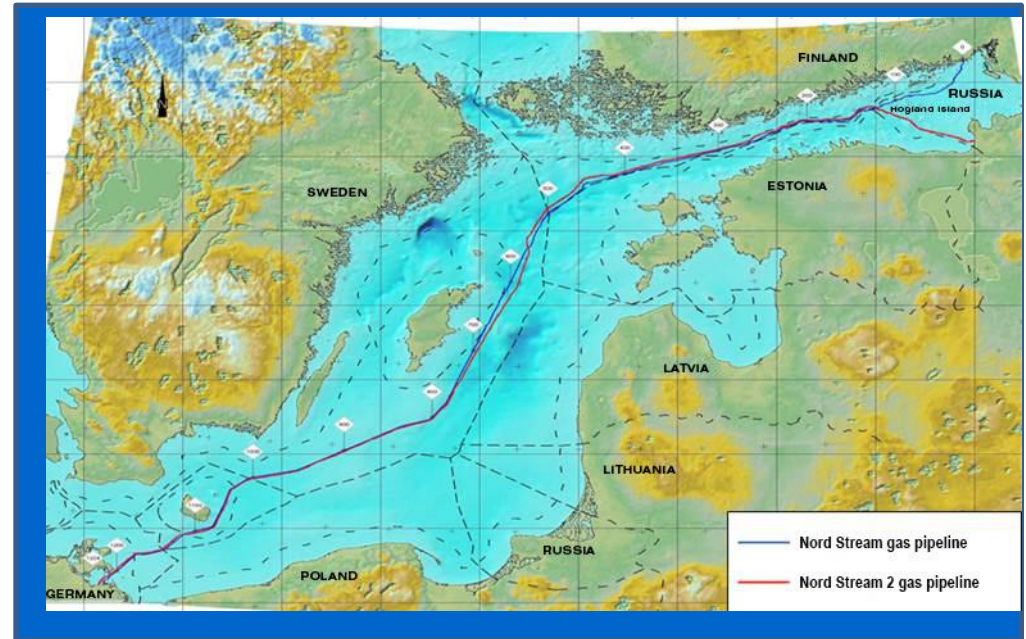
Maximum daily deliverability of UGS facilities in Western Europe was **83.3 mln m<sup>3</sup>** during 2016/2017 withdrawal season.

Katharina and Damborice UGS projects are in progress:

- Katharina UGS facility has 6 operational caverns with total working capacity of 315 mln m<sup>3</sup> and maximum daily deliverability of 23.2 mln m<sup>3</sup>. On April 1, 2017, UGS surface facilities were brought onstream.
- On July 1, 2016, Damborice UGS facility with design working capacity of 456 million m<sup>3</sup> was put into operation in Czech Republic. At present, Gazprom has access to 156 mln m<sup>3</sup> of Damborice's storage capacity, with maximum daily deliverability standing at 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 Kingisepp 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 higher reliability of supplies, Nord Stream 2 project is consistent with EU objectives for energy security and harmful emissions reduction
- Nord Stream 2 AG project company was set up to deliver project
- Nord Stream 2 AG signed financing agreements with ENGIE, OMV, Royal Dutch Shell, Uniper, and Wintershall for Nord Stream 2 gas pipeline project



# TURKSTREAM

- TurkStream is project for transit-free export gas pipeline stretching across Black Sea from Russia to Turkey and further to Turkey's border with neighboring countries
- First string (15.75 bln m<sup>3</sup> in capacity) of gas pipeline is intended for Turkish consumers, while second string (with same capacity) will deliver gas to EU countries
- On October 10, 2016, Russian and Turkish Governments signed Agreement on TurkStream project
- South Stream Transport B.V., wholly-owned subsidiary of Gazprom, is responsible for construction of gas pipeline's offshore section
- On May 7, 2017, pipe-laying of TurkStream gas pipeline started near Russian coast (Audacia vessel owned by Allseas)
- Pioneering Spirit, world's largest pipe-laying vessel, has arrived in port of Anapa to build TurkStream pipeline in deep-water area of Black Sea
- TurkStream is expected to come onstream before late 2019



THANK YOU FOR YOUR  
ATTENTION!