

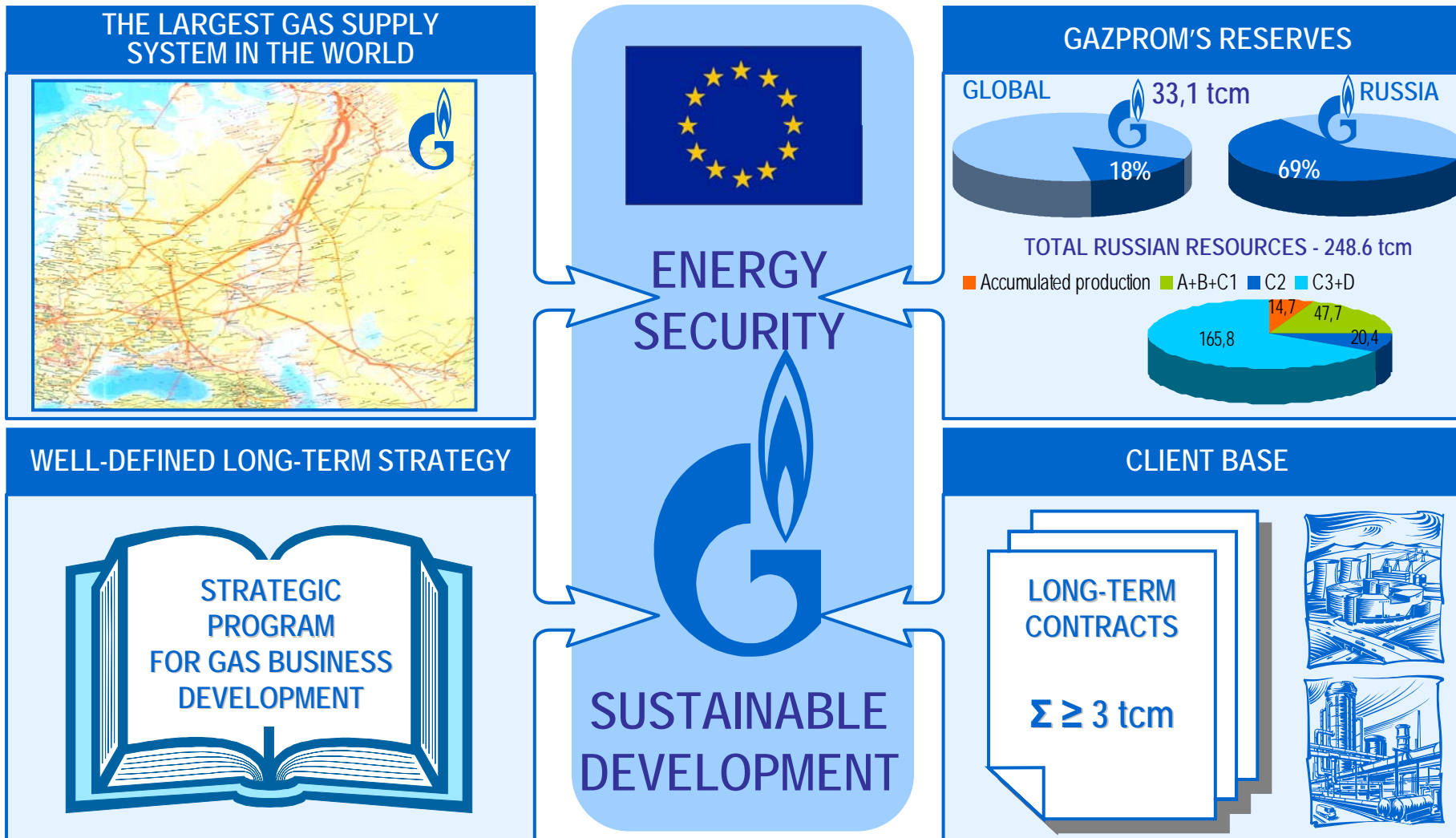
EUROPEAN NATURAL GAS PIPELINE PROJECTS AS GUARANTEE OF ENERGY SECURITY

DEPUTY HEAD OF STRATEGIC DEVELOPMENT DEPARTMENT

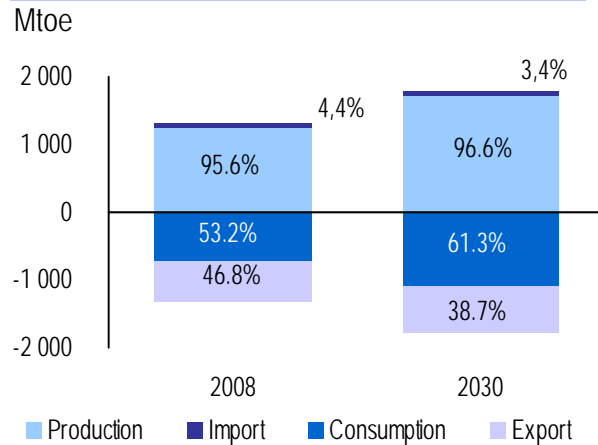
SERGEY PANKRATOV



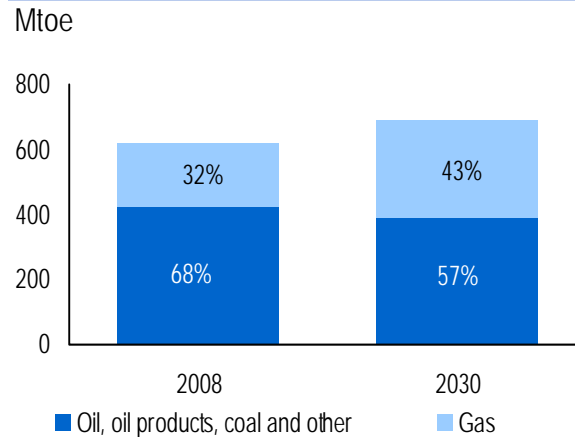
24.11.2010



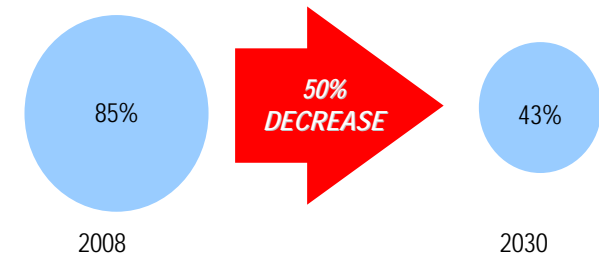
Primary Energy Resources



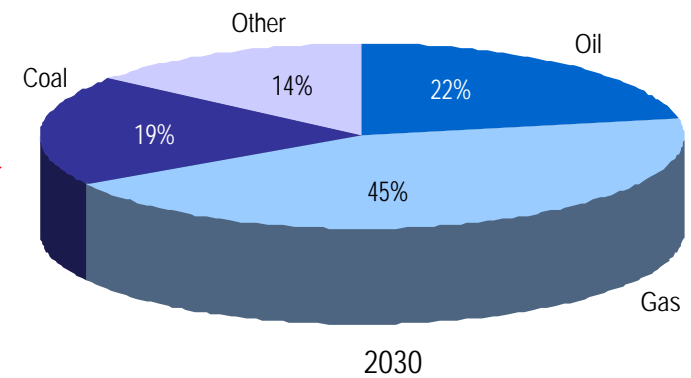
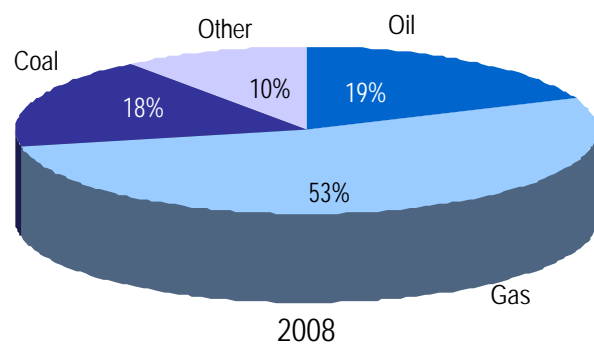
Energy Resources Export



GDP Energy Intensity⁽¹⁾



Total Final Consumption



Source: Energy Strategy of Russia 2030
1. Compared to 2005 levels

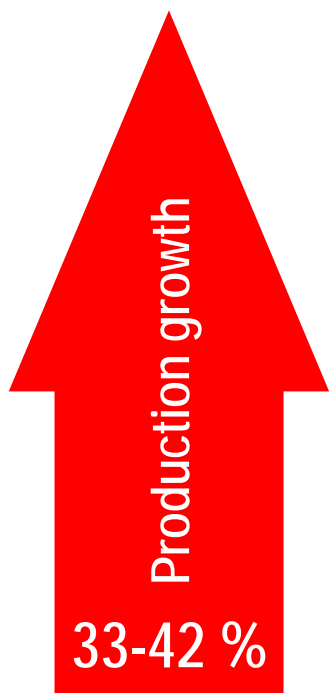


Key highlights:

- main parameters of gas industry development
- key factors of successful gas industry development
- risk assessments and mitigation
- recommendation of state supportive measures

General plan specifies the most effective way for gas industry development

885-940 bcm
in 2030

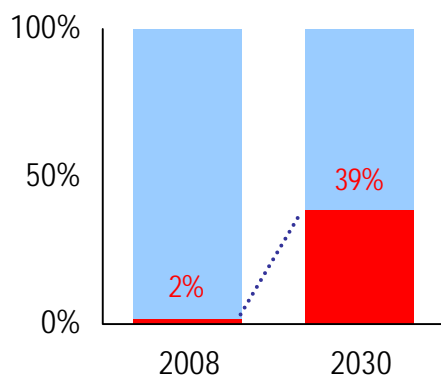


33-42 %

664 bcm
in 2008

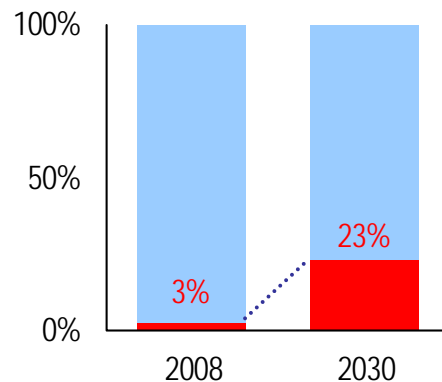
Source: Energy Strategy of Russia 2030

Production



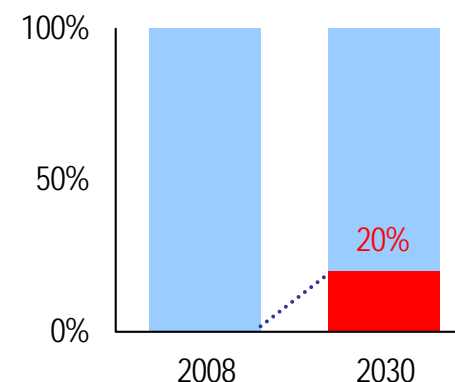
■ Share of new regions

Transportation

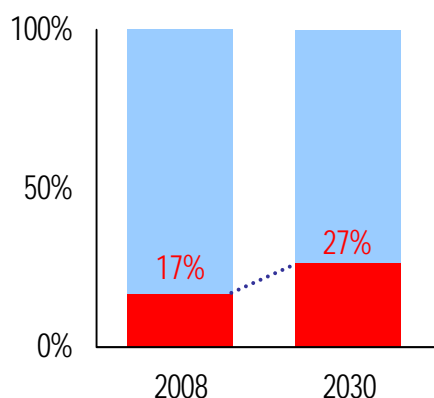


■ Share of new pipelines

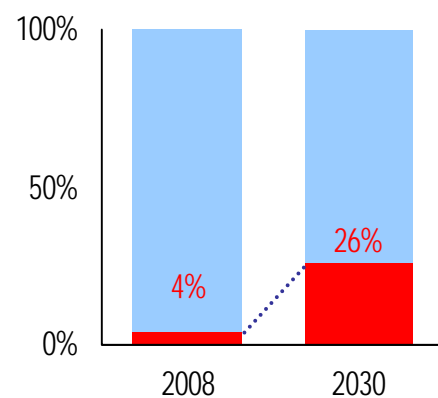
Export



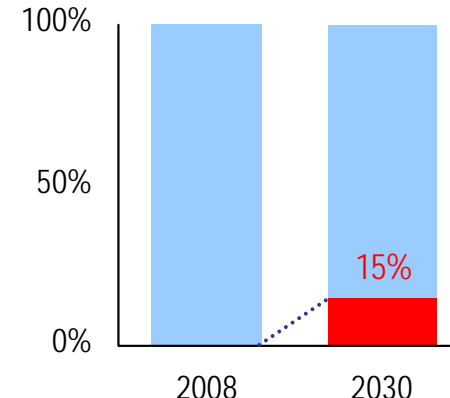
■ Share of Asia



■ Share of independent producers

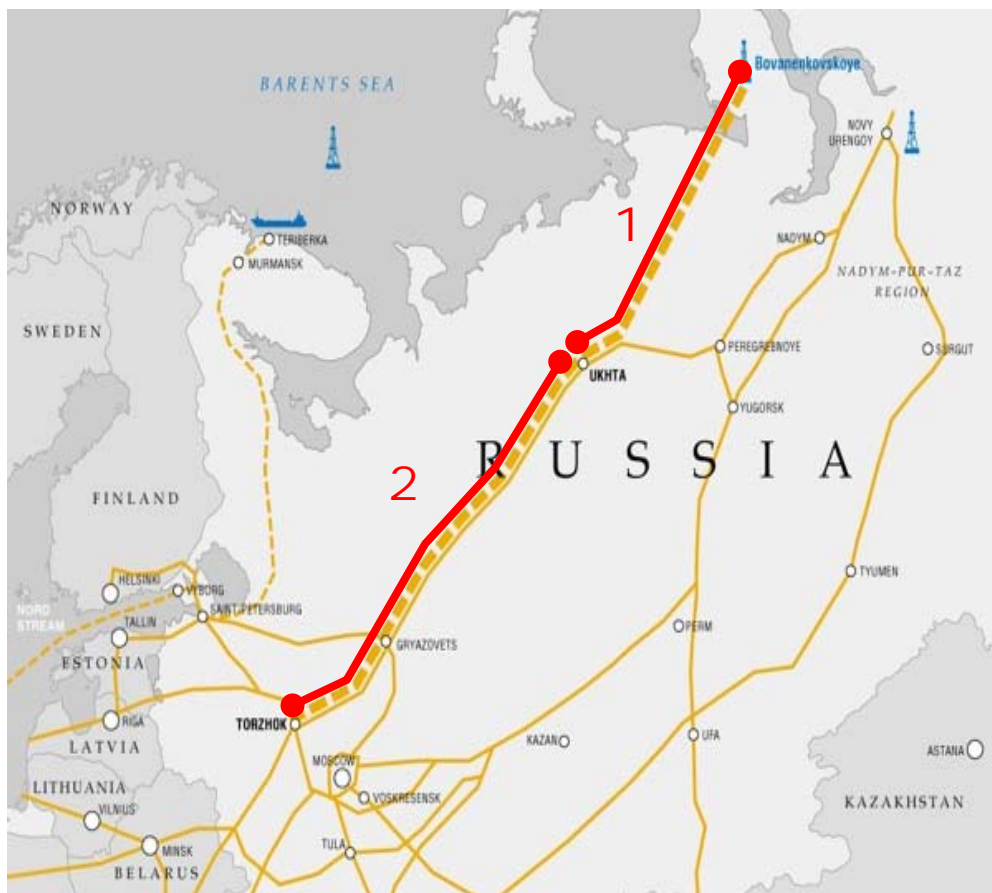


■ Share of reconstructed length



■ Share of LNG

Bovanenkovo – Ukhta – Torzhok



Total length, km	Over 2400
Total capacity, bcmpa	115-140

Bovanenkovo – Ukhta (1)

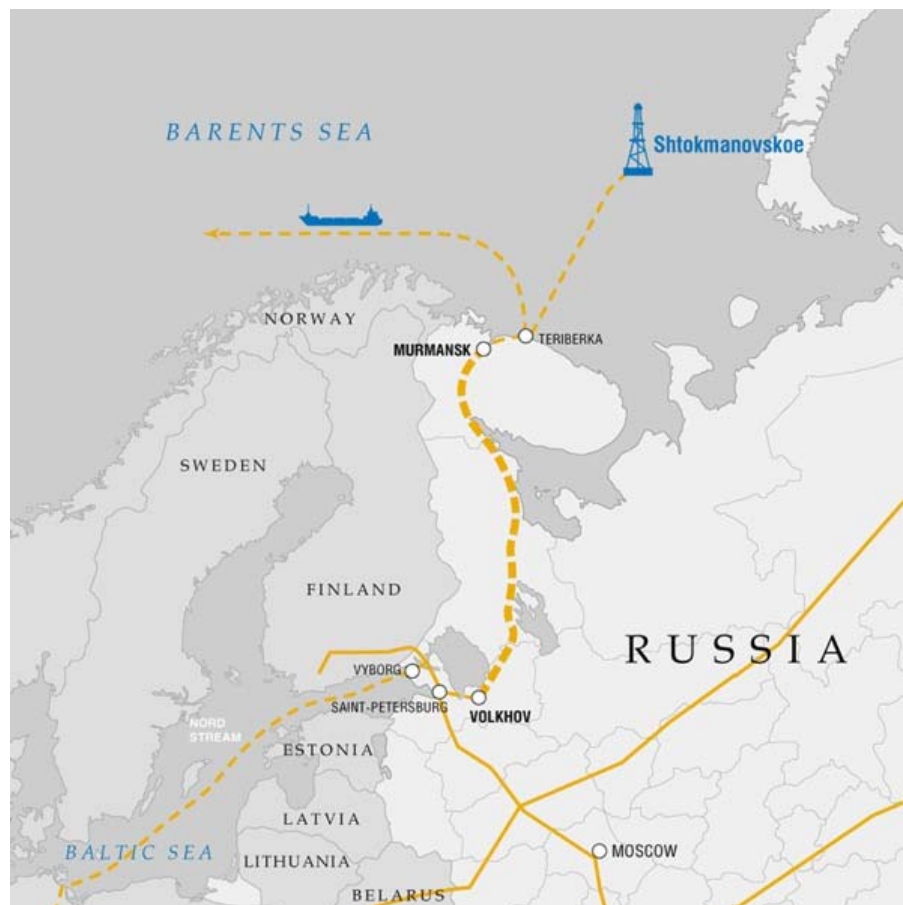
Total length of two lines, km	2487
Compressor station:	
unit	9 (double)
MW	1854

Ukhta – Torzhok (2)

Length, km	1389
Compressor station:	
unit	7
MW	785



Length, km	917
Capacity, bcmpa	55
Diameter, mm	1420
Working pressure, MPa	9,8
Compressor station:	
unit	7
MW	1180

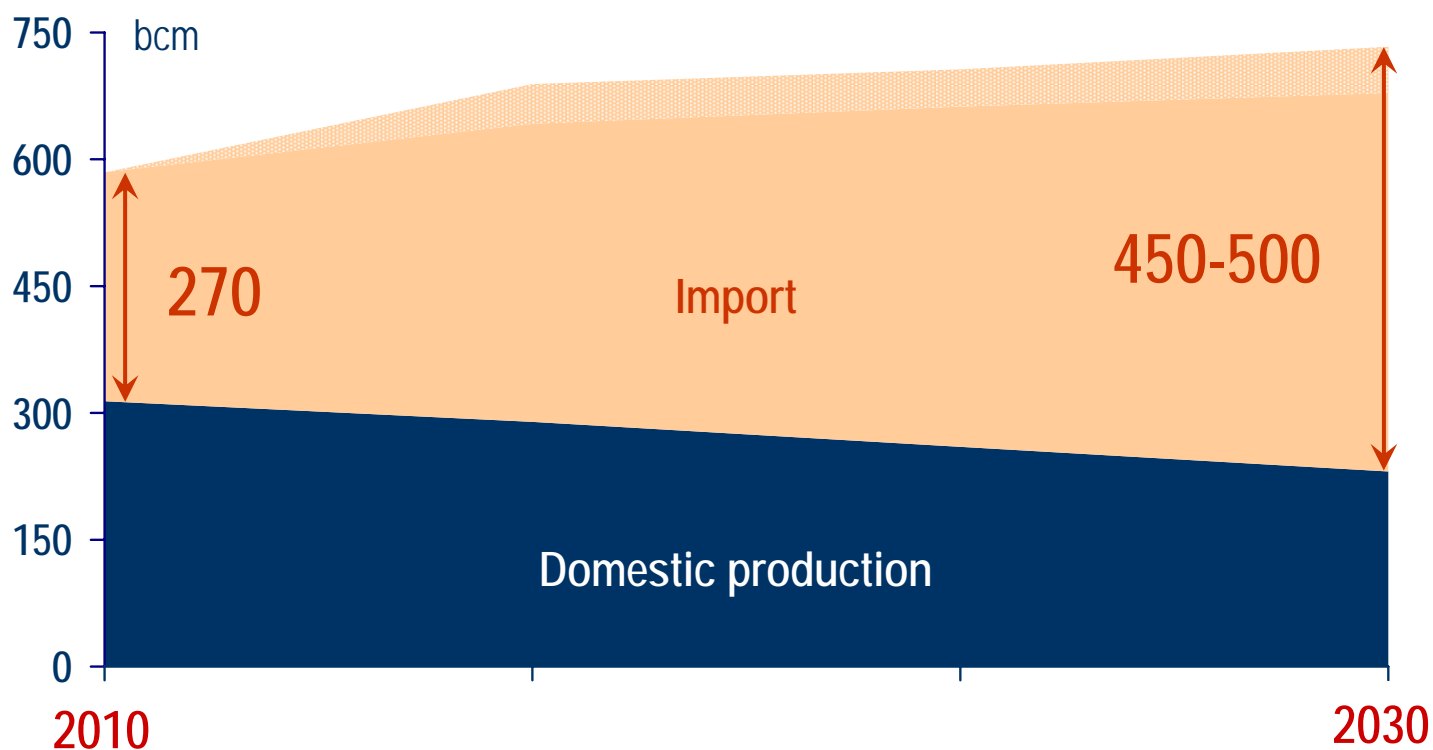


Length, km	1365
Capacity, bcmpa	28-50
Compressor station:	
unit	3
MW	250

**Shtokman project
is not only about LNG**

**Murmansk – Volkhov start
up date and build up will be
determined after Shtokman FID**

Structure of gas supply to European market*



* - including Baltic States



Nord Stream: Offshore Part	
Participants	Gazprom (51%), BASF (15,5%), E.ON (15,5%), Gasunie (9%), GDF Suez (9%)
Length	1223 km
Capacity	55 bcm (Phase I – 27,5 bcm + Phase II – 27,5 bcm)
Operational Start	2011 - Phase I 2012 - Phase II



South Stream: Onshore Part

Agreements	Bulgaria, Hungary, Greece, Serbia, Slovenia, Austria, Croatia
Length	~1300 km to Austria, + 970 km to Italy

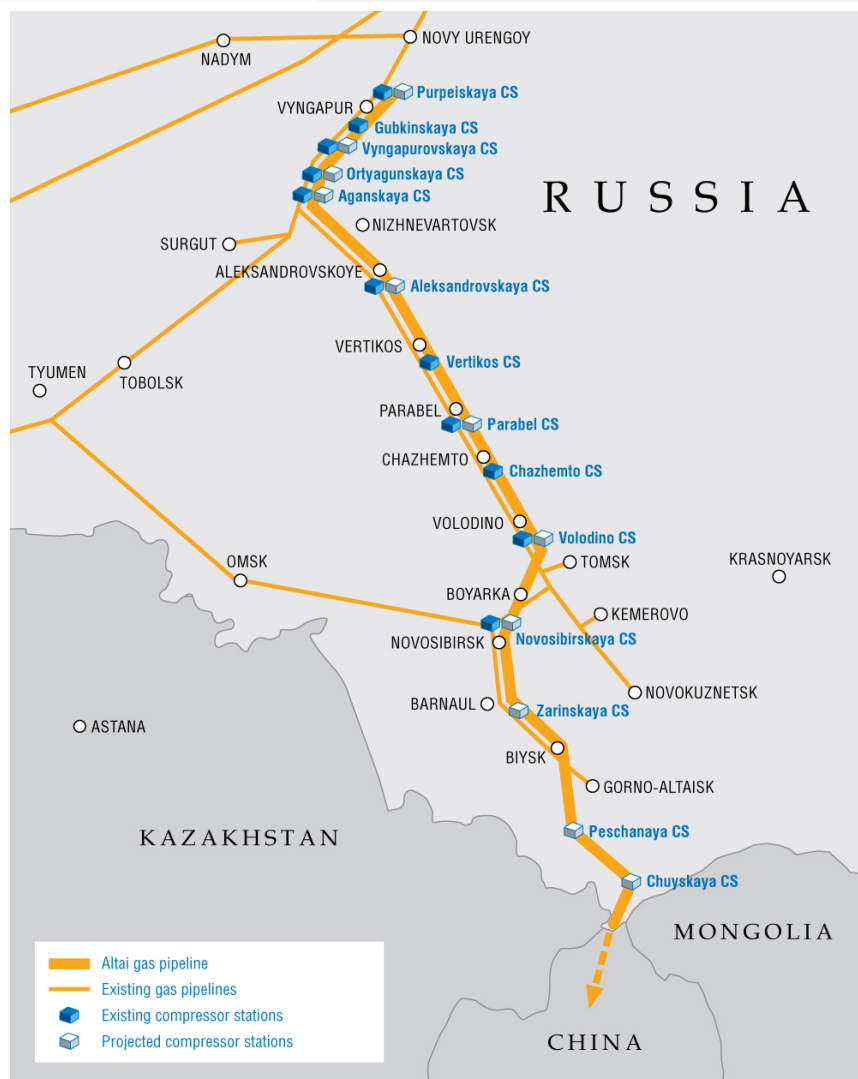
South Stream: Offshore Part

Participants	Gazprom (50%), ENI (50%)
Length	920 km
Capacity	31 bcm with potential increase up to 63 bcm based on FEED

PRINCIPLE SCHEME OF THE UNITED SYSTEM OF GAS PRODUCTION AND TRANSPORTATION

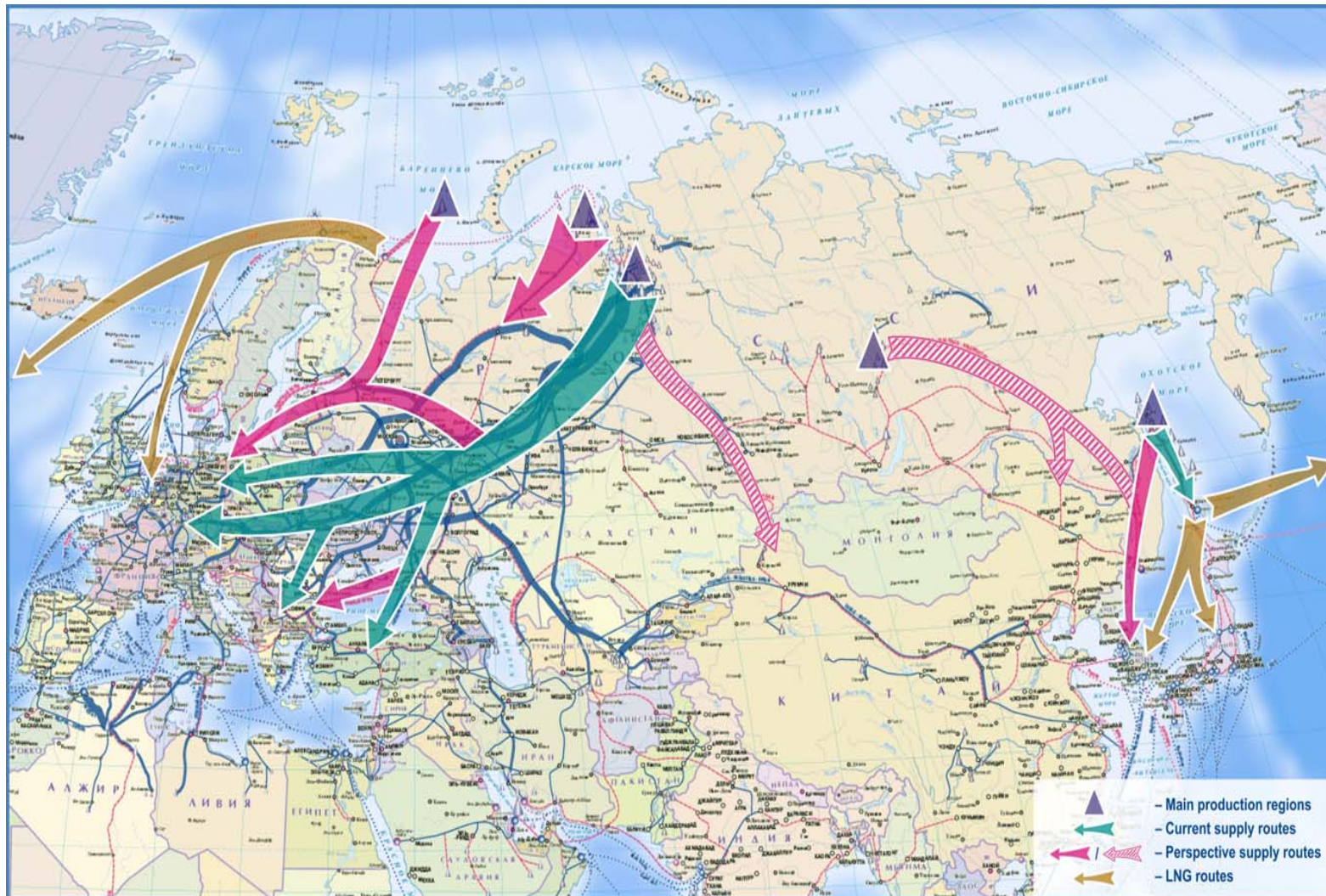


***DEVELOPMENT PROGRAM OF GAS INDUSTRY IN EASTERN REGIONS OF RUSSIA
APPROVED BY GOVERNMENT IN SEPTEMBER 2007***



Length, km	Over 2600
Diameter, mm	1420
Working pressure, MPa	7,4 / 9,8
Capacity, bcmpa	30
Compressor station:	
unit	10
MW	896

Russian Gas Pipeline System is the Key for Eurasian Gas Security



Thank you for your attention