

Outlook for liberalization of the domestic gas market and potential for restructuring of the gas sector

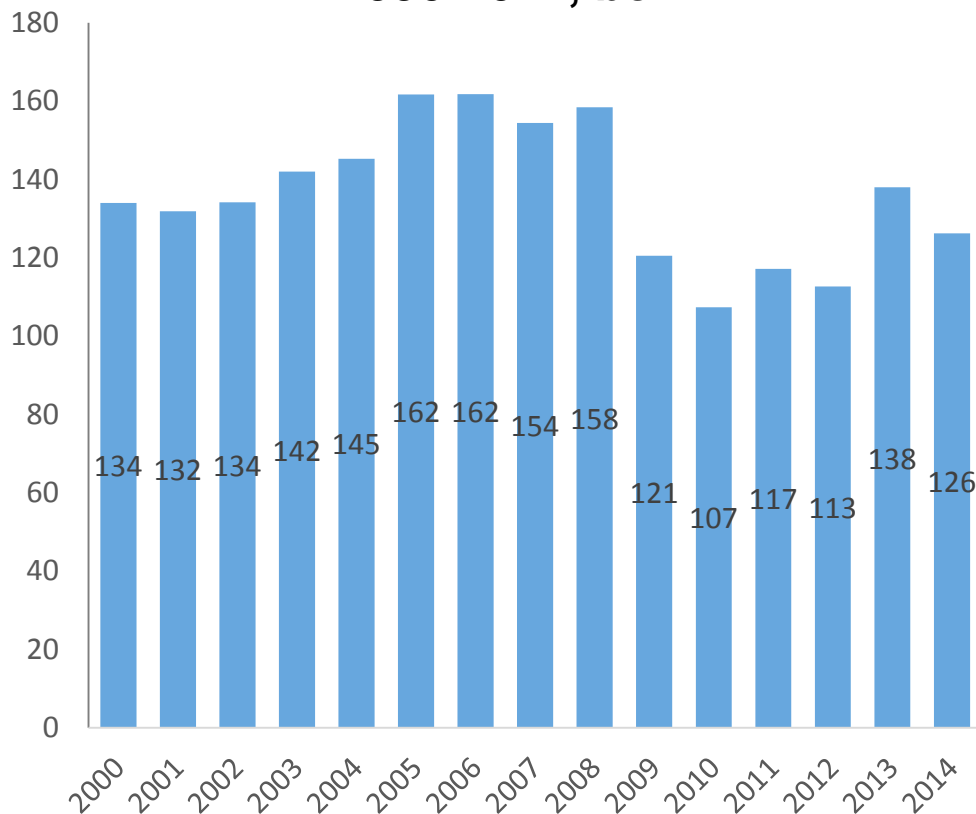
Dr. Tatiana Mitrova
Head of Oil and Gas Department
Energy Research Institute of the Russian Academy of Sciences



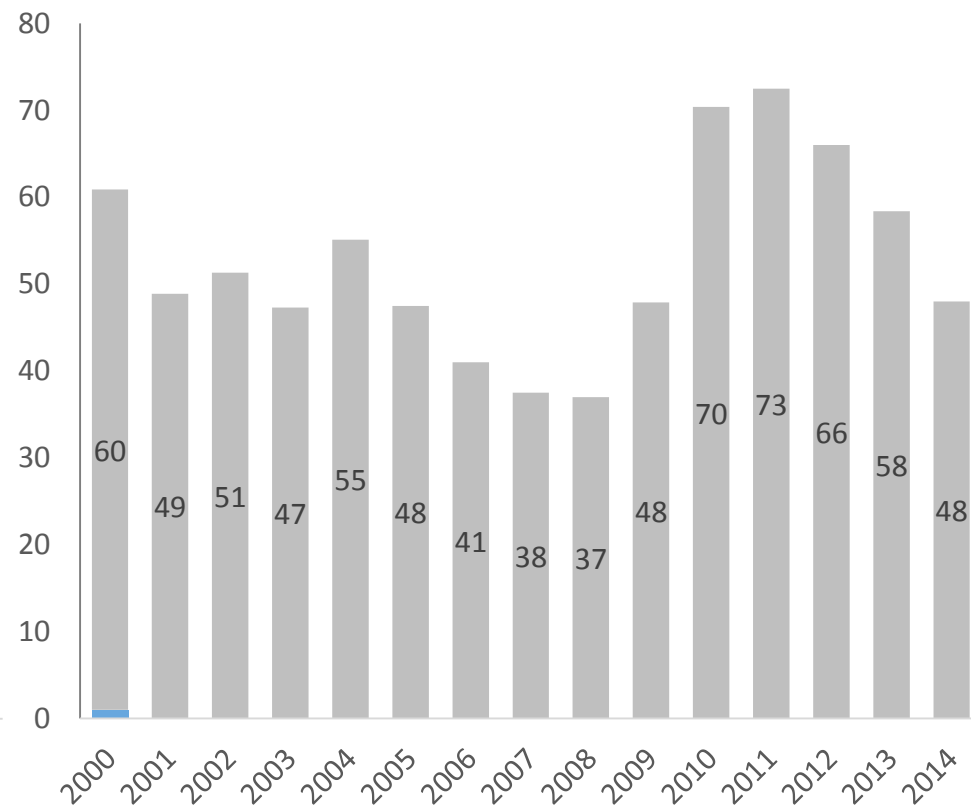
Moscow
30 Septemeber, 2015

During the last 5 years Russian export opportunities to Europe and CIS did not increase, while Asian exports will start to expand only after “Power of Siberia” construction is completed

Russian gas export to Europe in 1990-2014, bcm



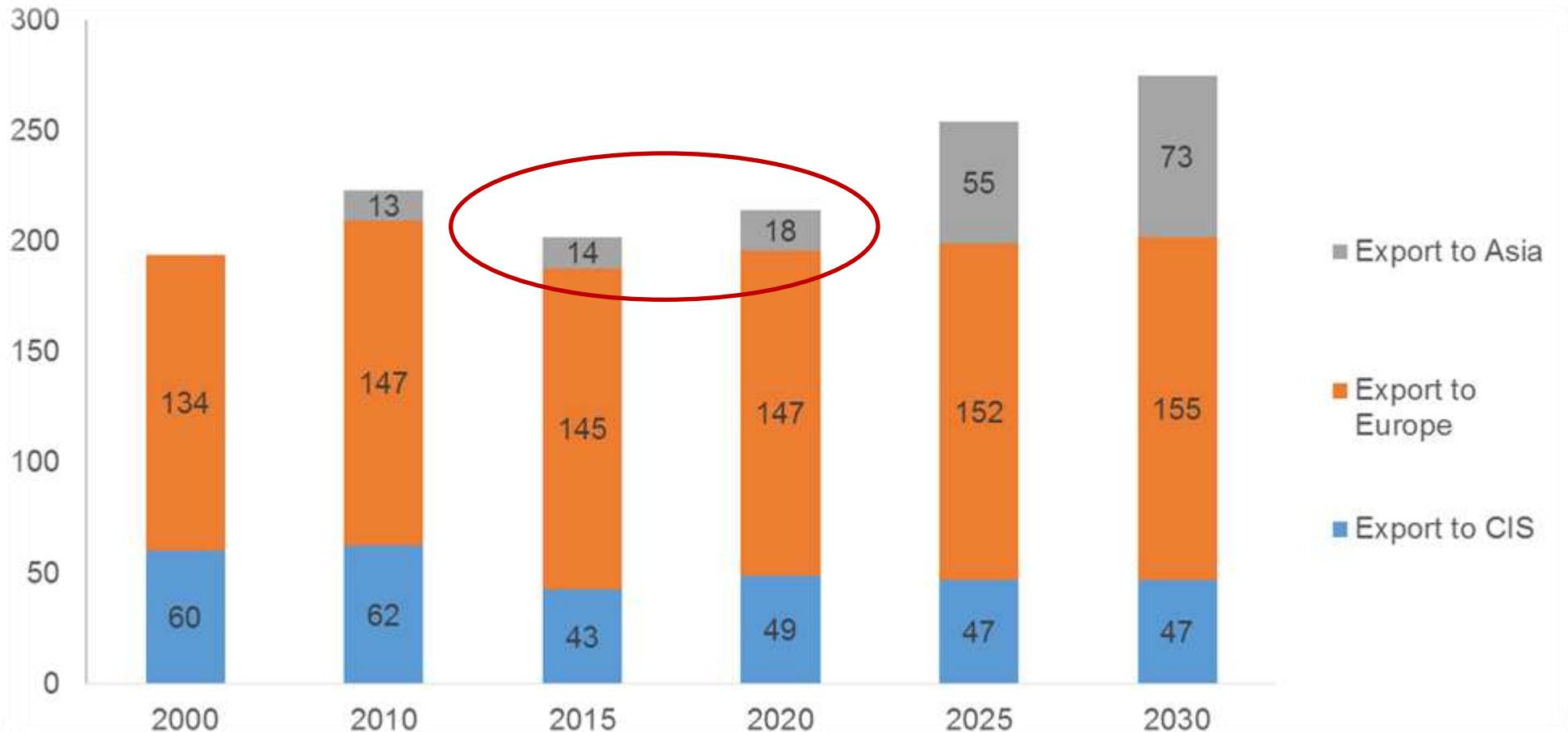
Russian gas export to CIS in 1990-2014, bcm



Sources: Central Bank RF (http://www.cbr.ru/statistics/print.aspx?file=credit_statistics/gas.htm), Minenergo, Gazprom

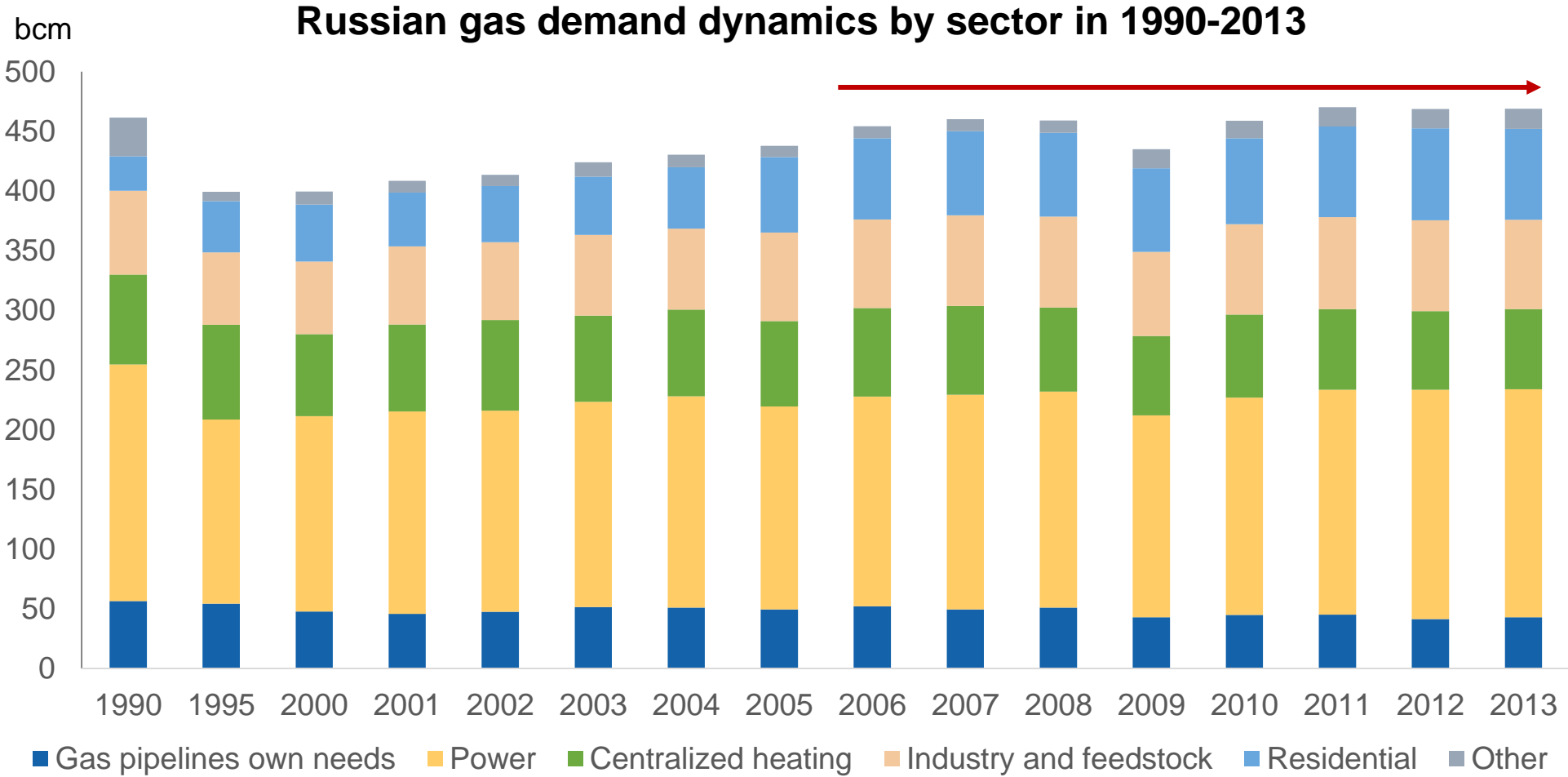
Russian gas export volume estimations for 2030 are now reviewed significantly downward, especially during the next 5 years

Russian gas export dynamics forecast up to 2030 by destination, bcm



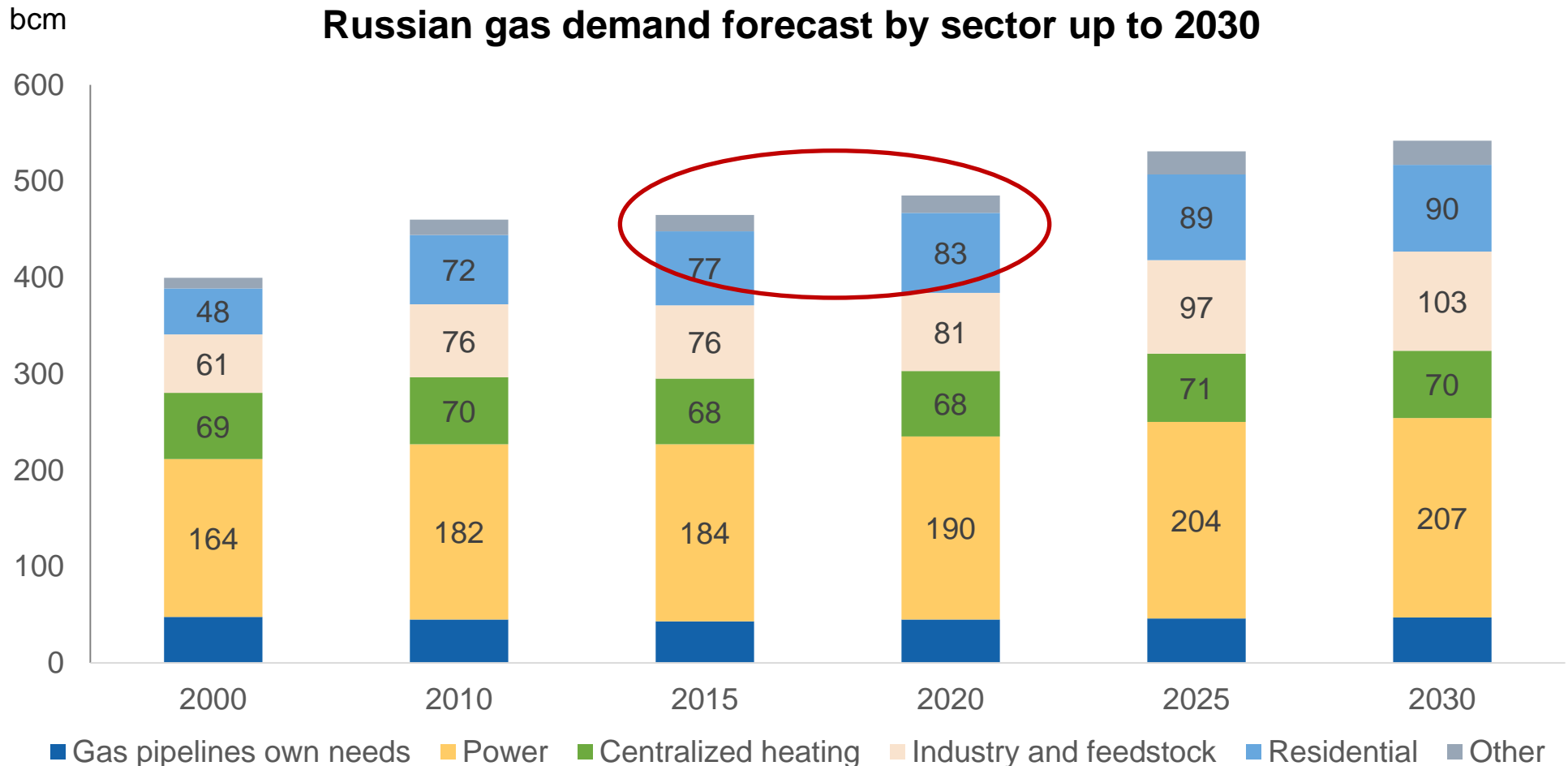
Source: T.Mitrova, G.Molnar "Russian Gas Market: Entering New Era", Cedigaz 2015

Domestic consumption of natural gas, which demonstrated steady growth outpacing that of GDP before the crisis, had almost ceased to grow in the recent years



Source: T.Mitrova, G.Molnar "Russian Gas Market: Entering New Era", Cedigaz 2015

In a paradoxical way, the economic recession will sustain and slightly increase the levels of domestic gas consumption, but during the next 5 years this growth will be very limited



Source: T.Mitrova, G.Molnar "Russian Gas Market: Entering New Era", Cedigaz 2015

Increasing pressure in the domestic market

**Bovanenkovo
+70-80 bcm by
2020**



**Novatek
production
+60 bcm by
2020**



**Rosneft
production
+40 bcm by 2020**

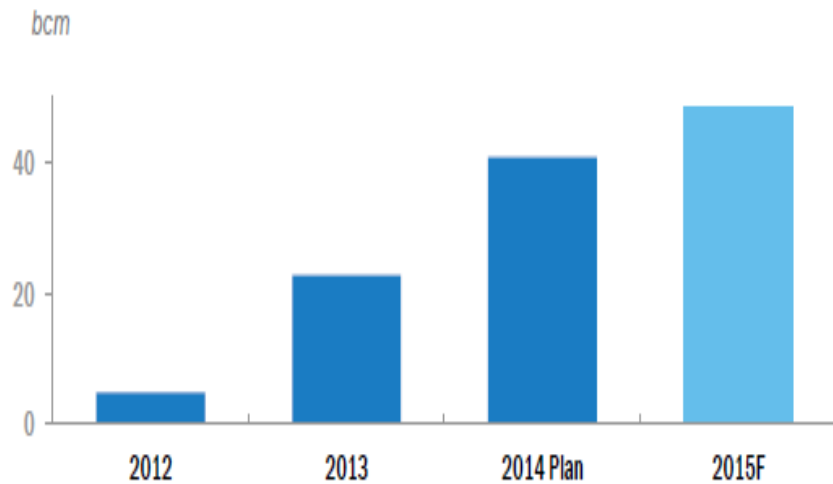


**APG production
growth by VIOCs
+15 bcm by 2020**

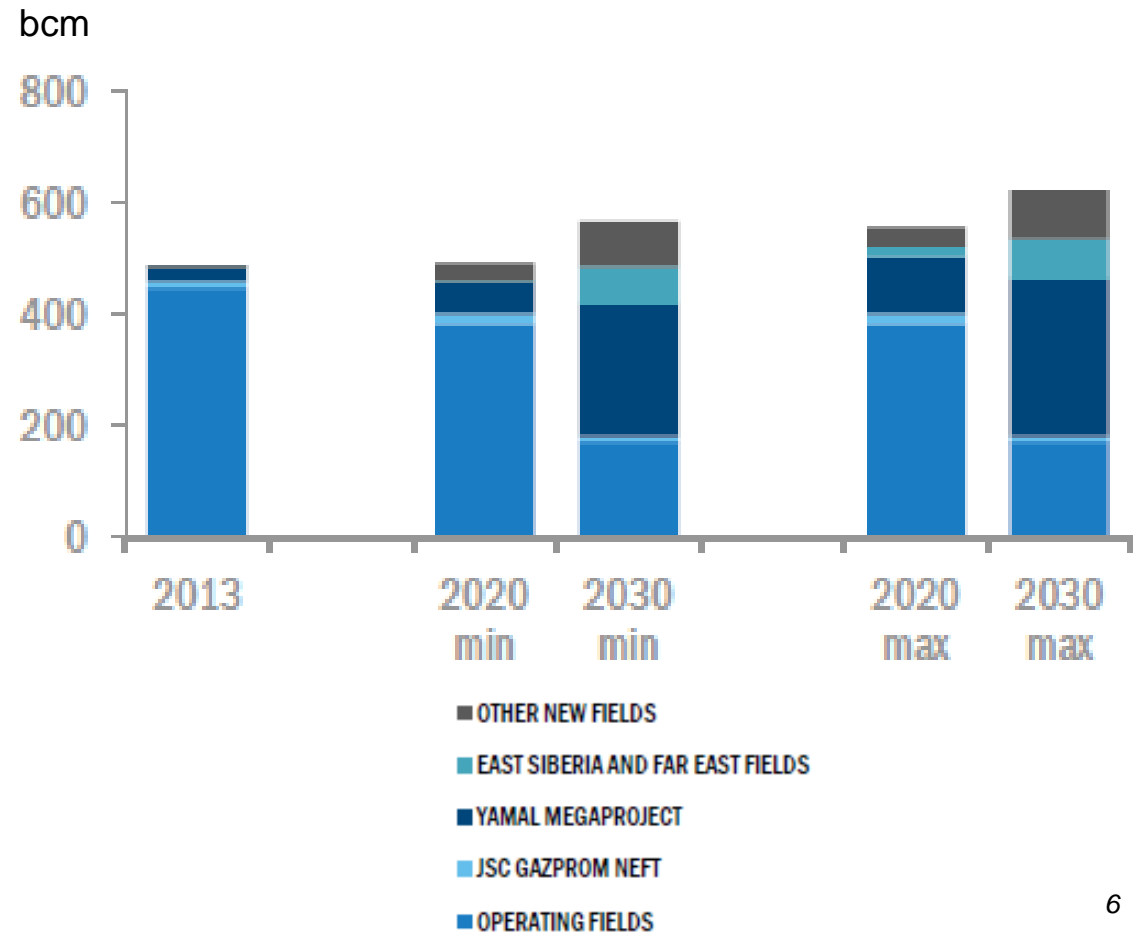


Gazprom`s Bovanenkovo production growth up to 130 bcma

Bovanenkovo field production forecast

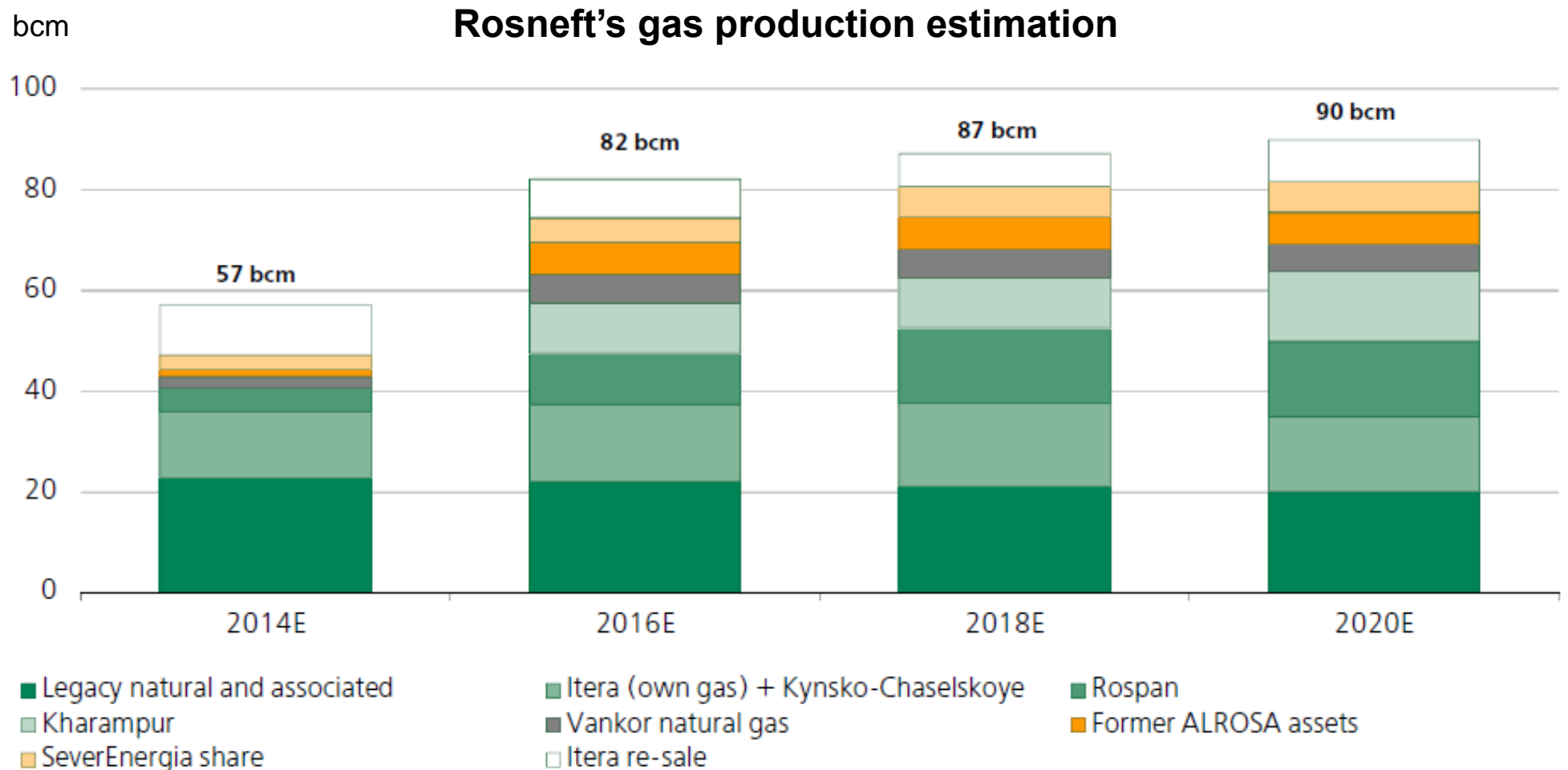


Gazprom`s gas production forecast range



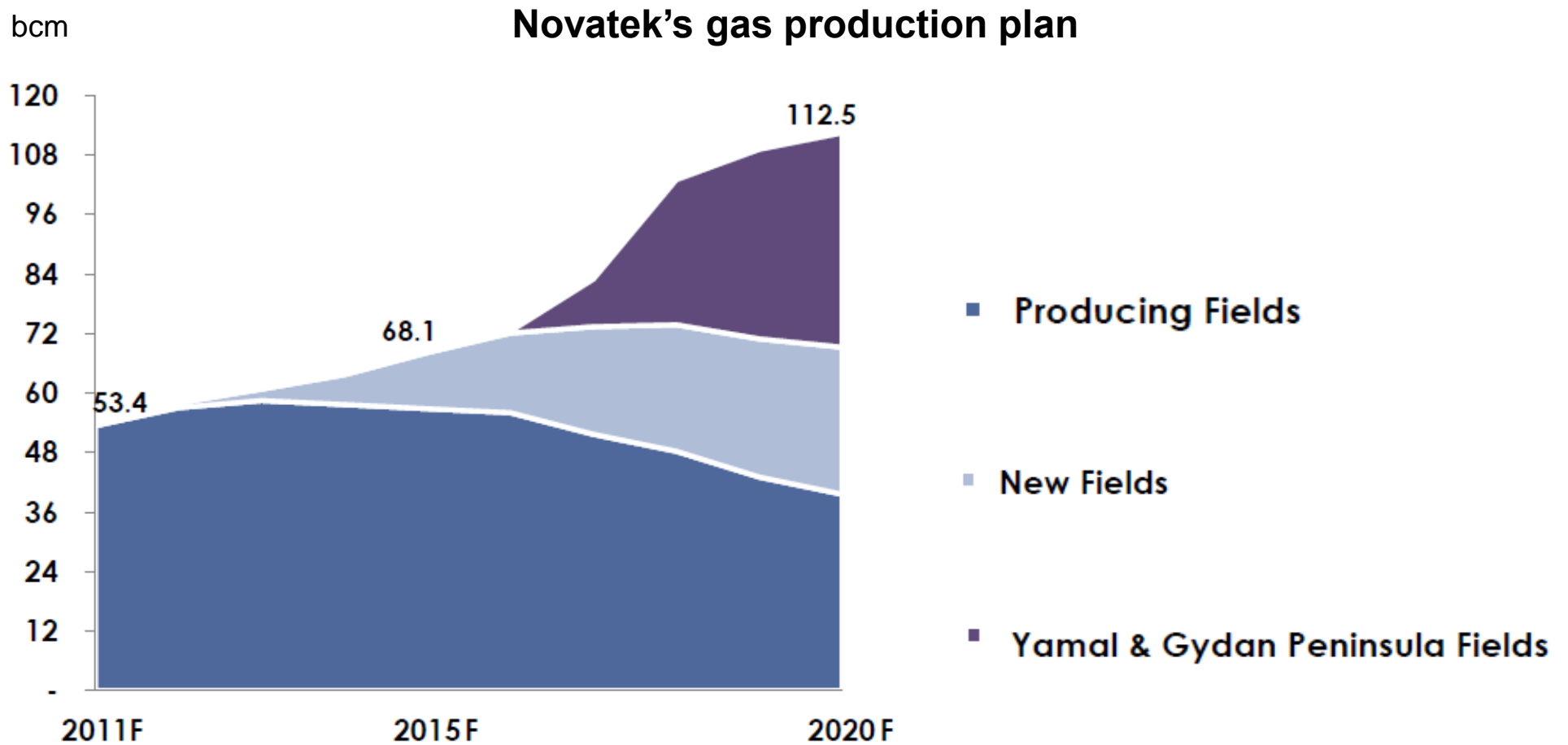
Source: Gazprom Investor Day 2015

Rosneft has extremely ambitious plan on gas production expansion, guiding 100 bcm of output by 2020



Source: Sberbank Investment Research

Novatek plans to double gas production by 2020, bringing it up to 112 bcm

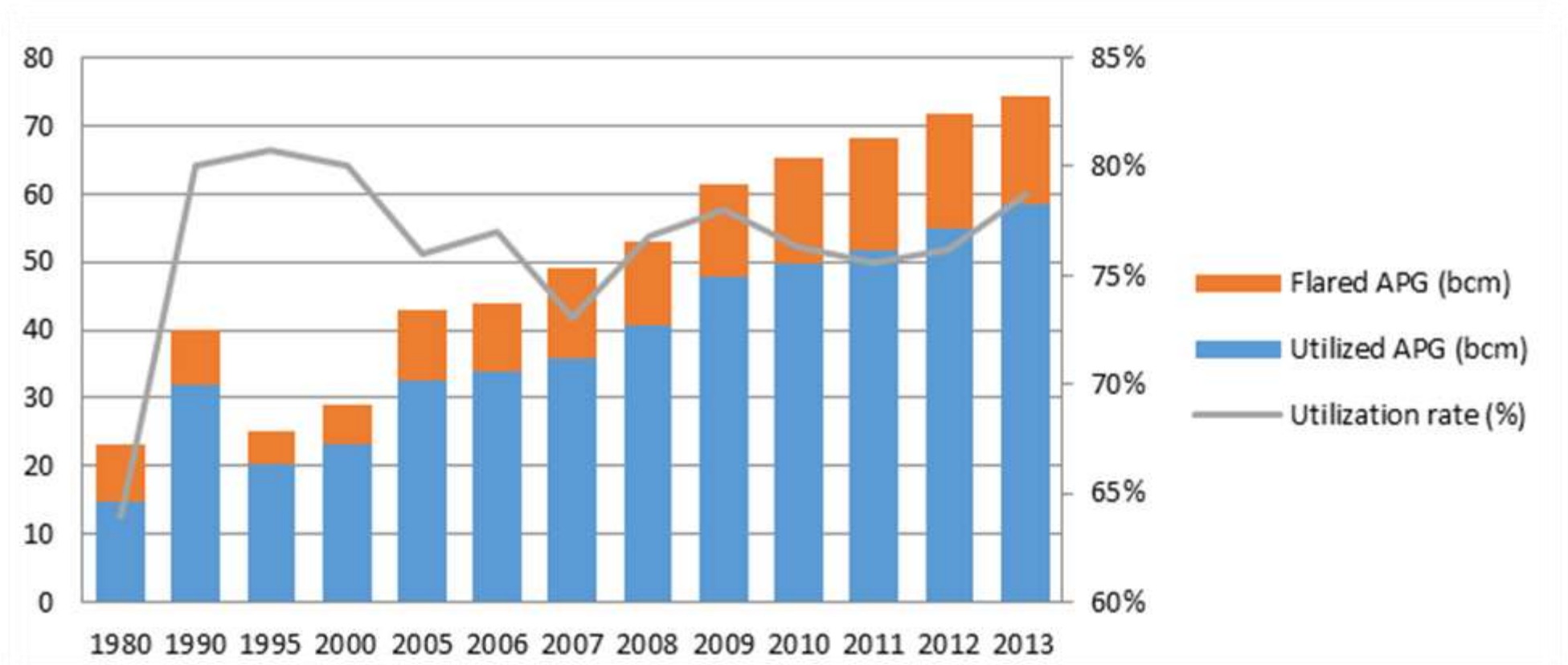


Source: Novatek Investor Day 2011

Obligatory utilization of the associated petroleum gas (APG) and its priority pipeline access stimulates VIOCs gas output growth

APG utilization dynamics in the Soviet Union and in Russia in 1980-2013

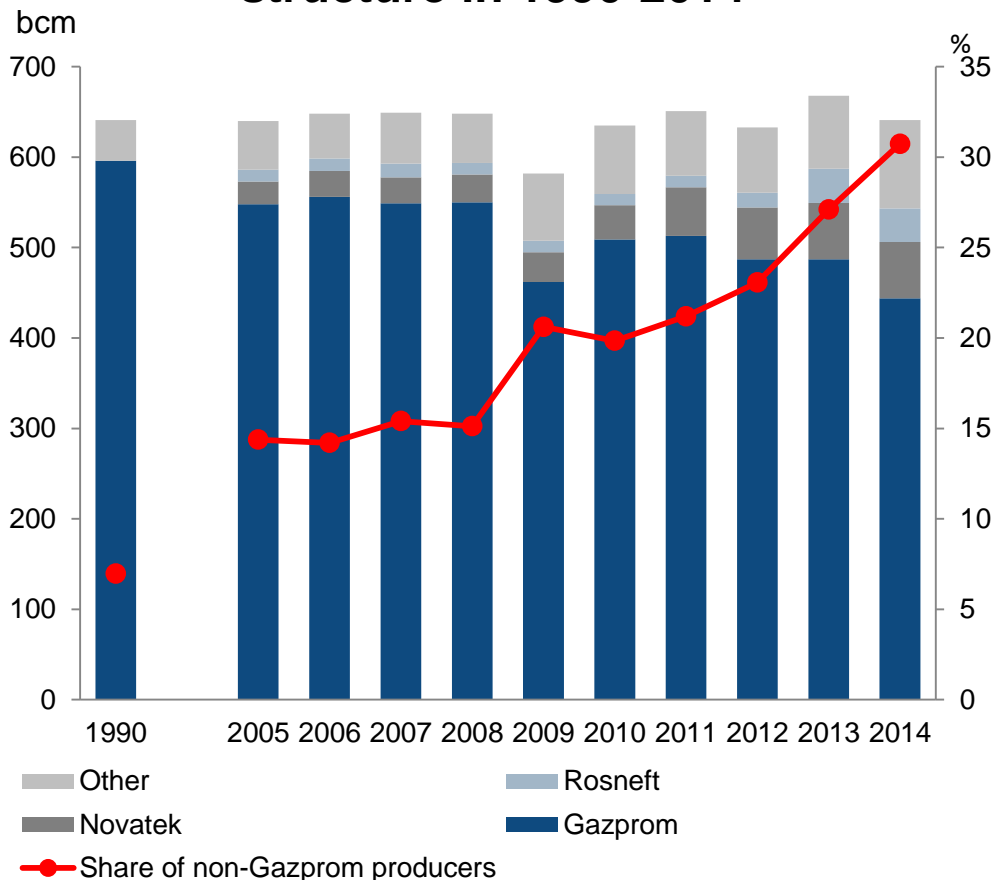
bcm



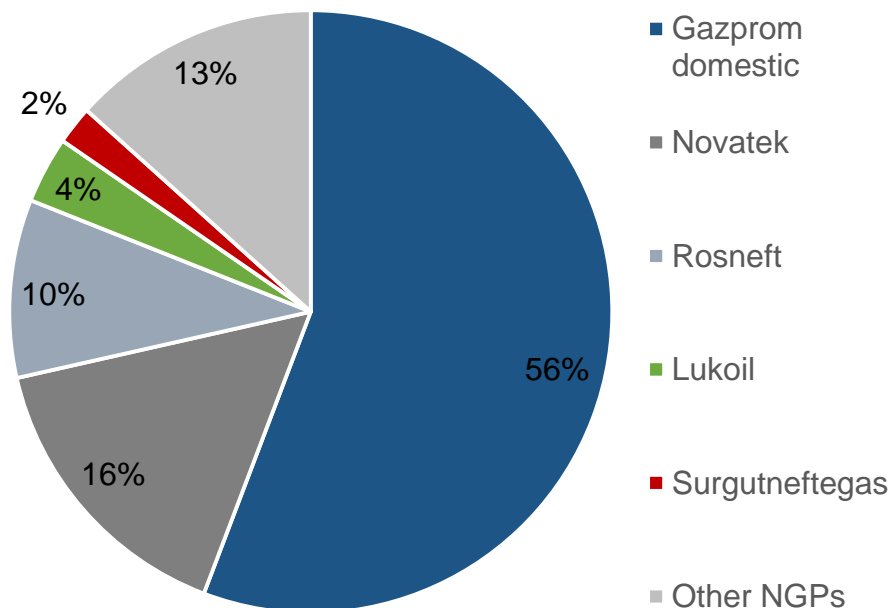
Source: Source: T.Mitrova, G.Molnar "Russian Gas Market: Entering New Era", Cedigaz 2015

Increasing competition: during the last decade IGPs are expanding their market share, providing already for more than 30% of Russian gas production and 50% of domestic gas sales

Russian gas production structure in 1990-2014

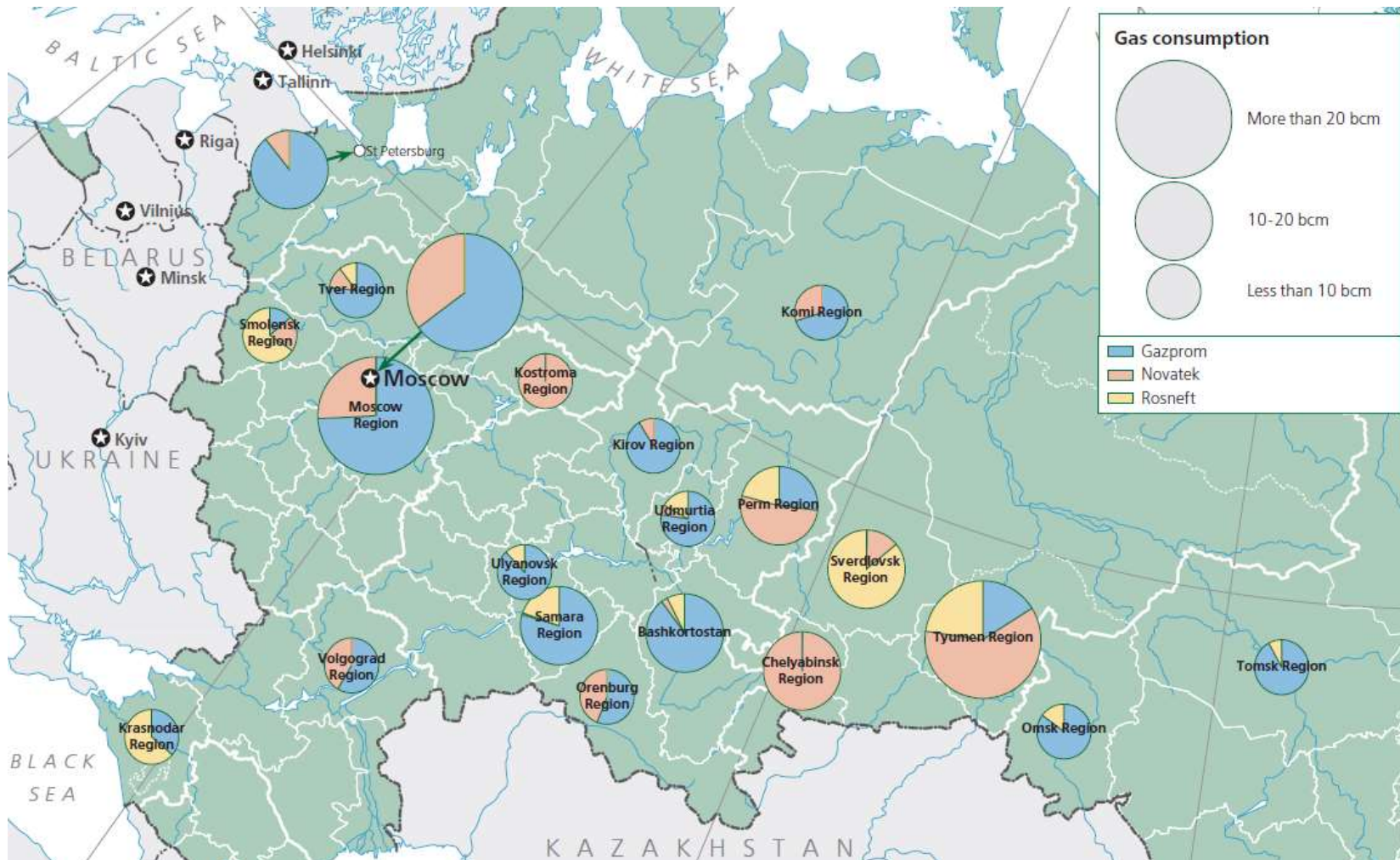


Russian domestic gas sales by company in 2013, bcm



Sources: Rosstat, Interfax, companies data, ERI RAS

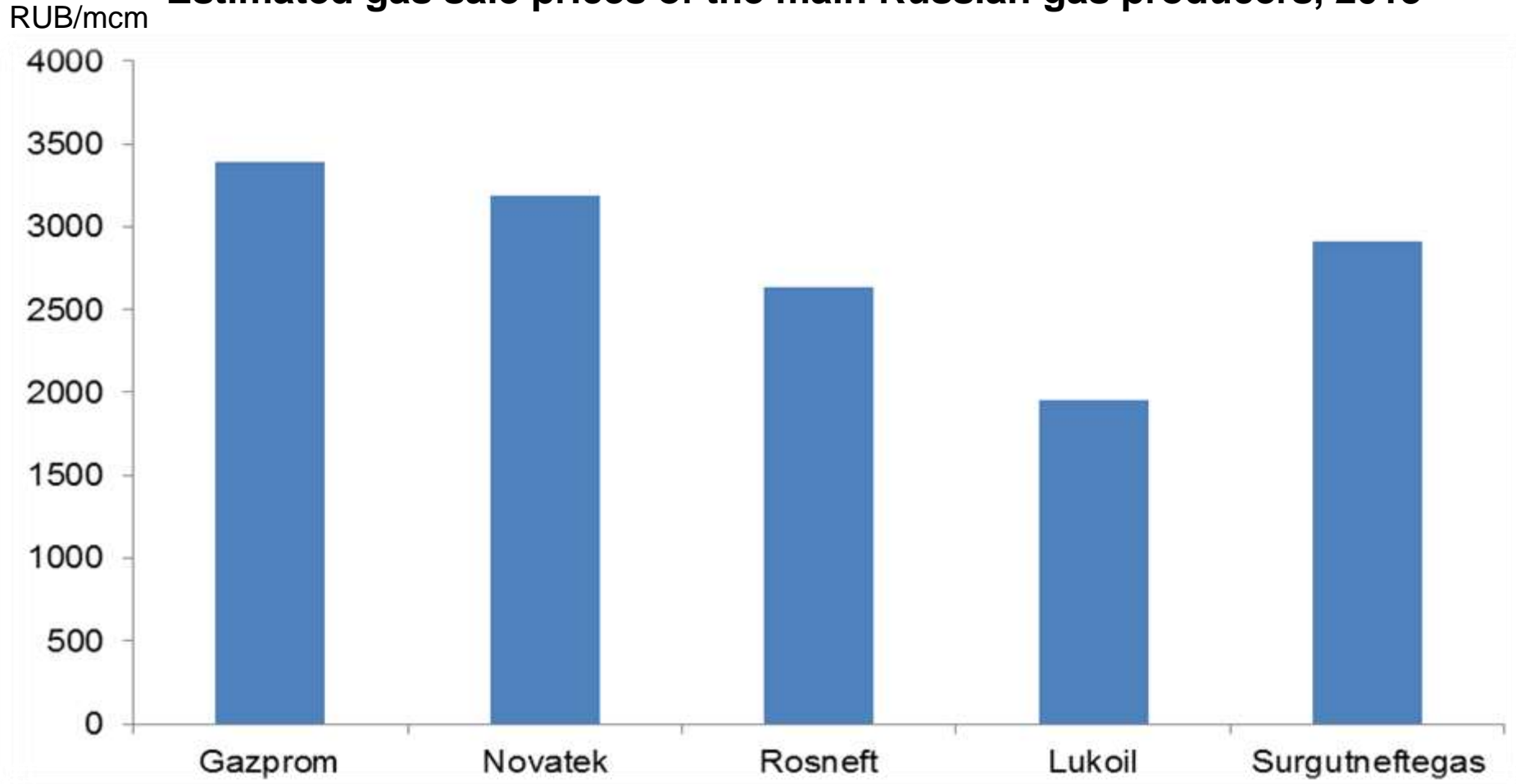
There is now an oligopoly (and regional monopolies), instead of the former monopoly...



Source: Sberbank Investment Research 2014.

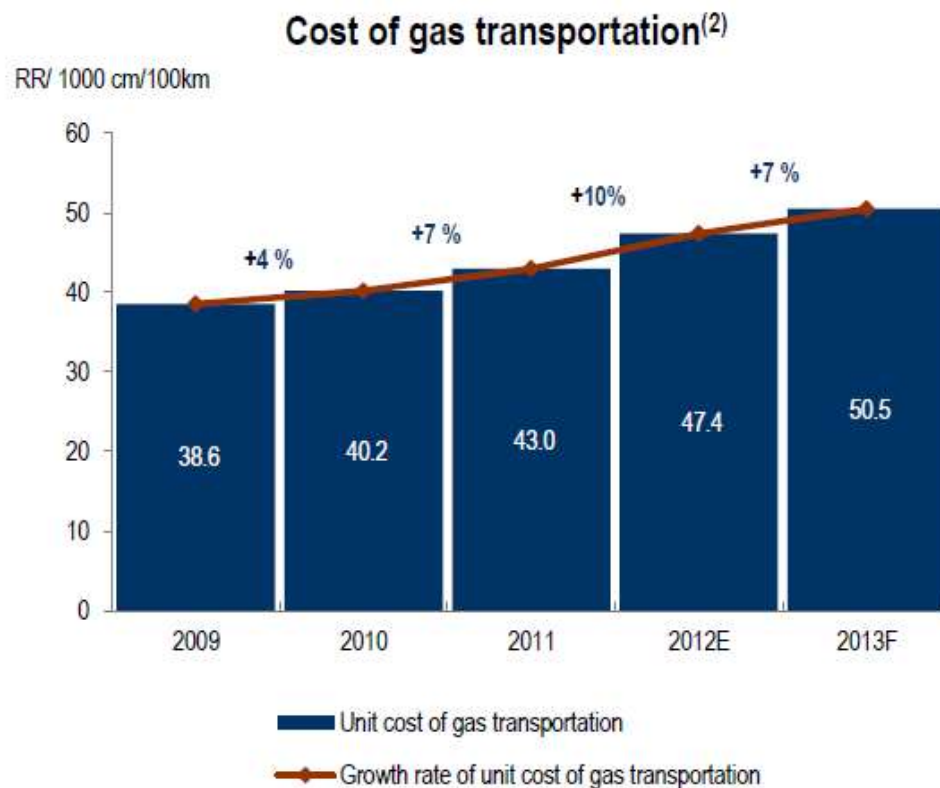
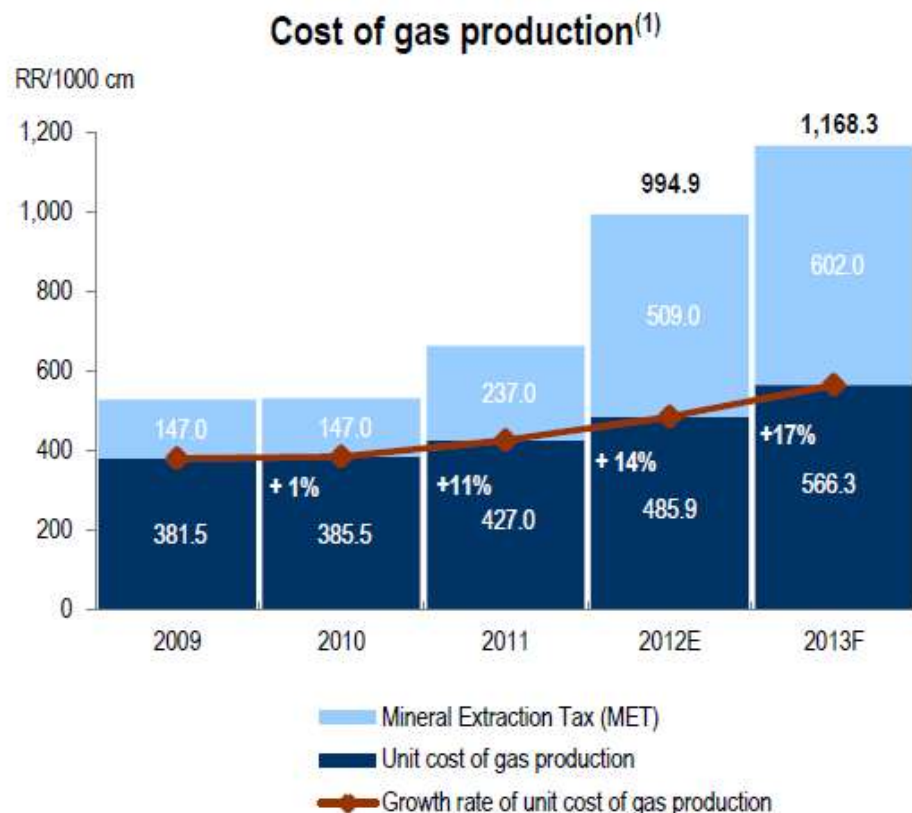
Aggressive price wars are becoming the only way to secure market niche, but Gazprom is obliged to supply at regulated prices

Estimated gas sale prices of the main Russian gas producers, 2013



Source: Source: T.Mitrova, G.Molnar "Russian Gas Market: Entering New Era", Cedigaz 2015

Gas production and transportation costs



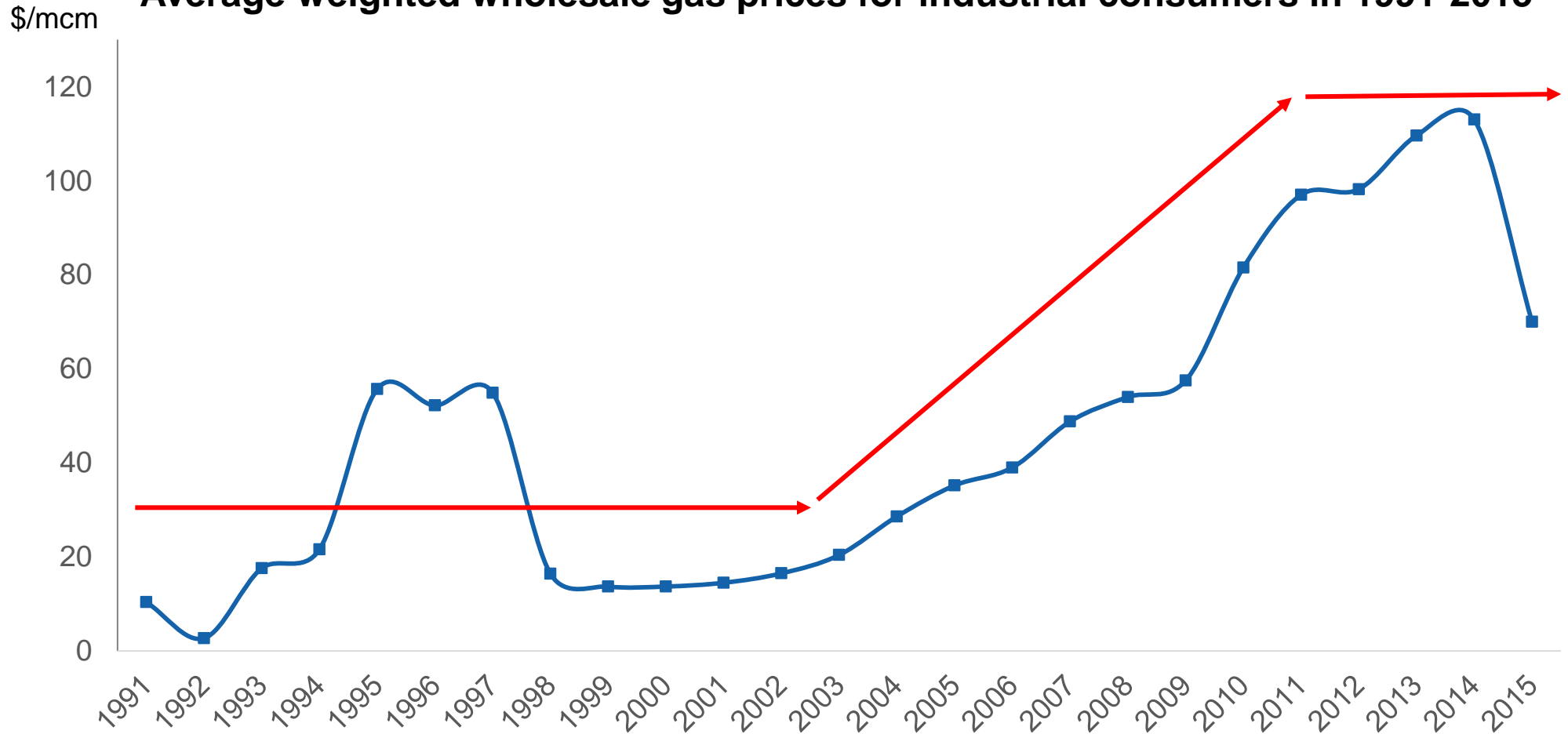
1. Unit cost of gas production per 1000 cm of sale gas among 7 majors Gazprom's subsidiaries. Excludes cost of OAO Gazprom

2. Unit cost of gas transportation includes cost per 1000 cm of gas transported 100 km by Gazprom's gas transportation subsidiaries. Excludes cost of OAO Gazprom

Source: Investor Day presentation, 2013

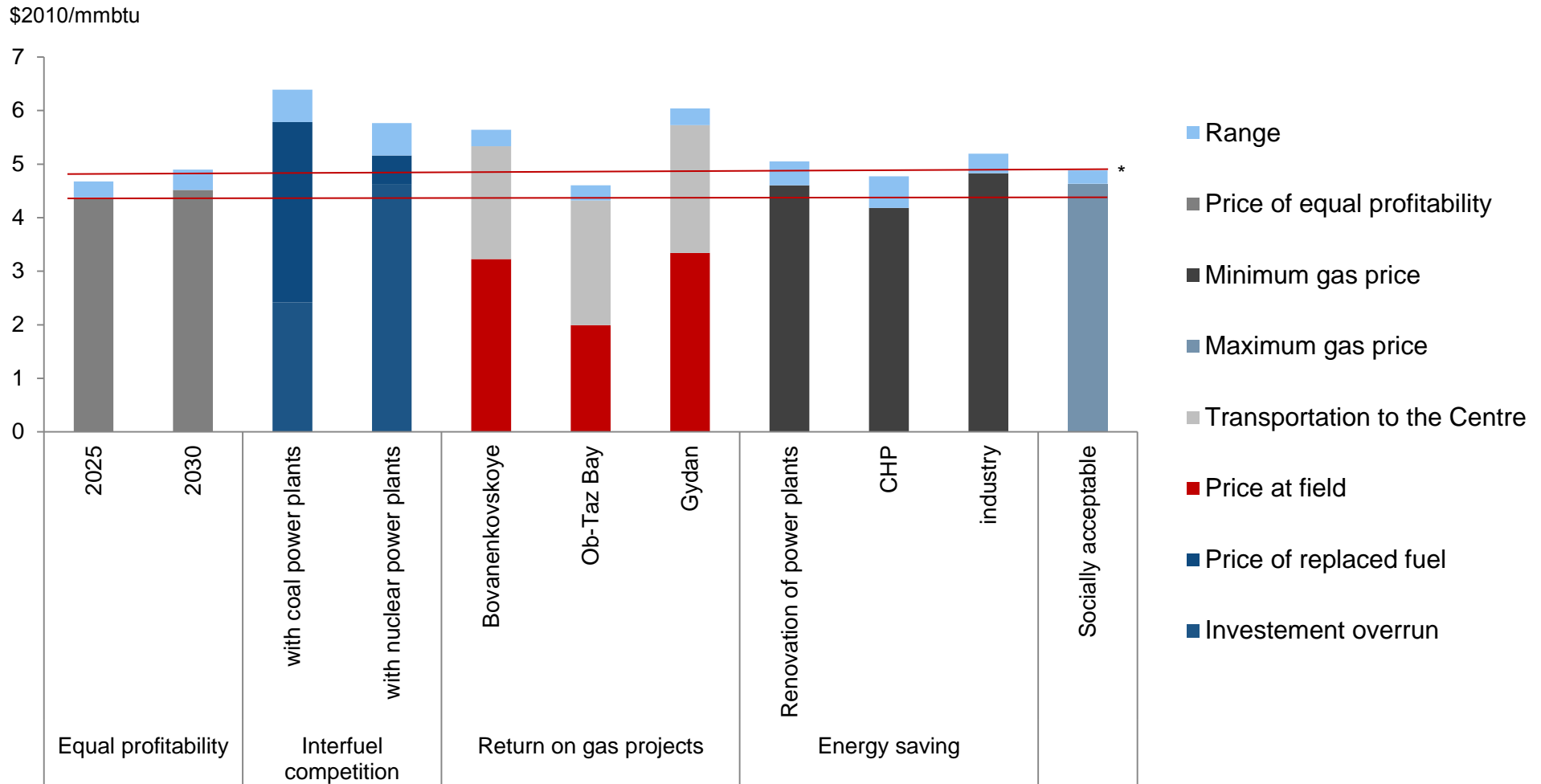
Gas prices were frozen in 1991-2002, then they were growing by 15-25% pa to reach netback parity and now they are frozen again, making export even more attractive alternative for the IGPs

Average weighted wholesale gas prices for industrial consumers in 1991-2015



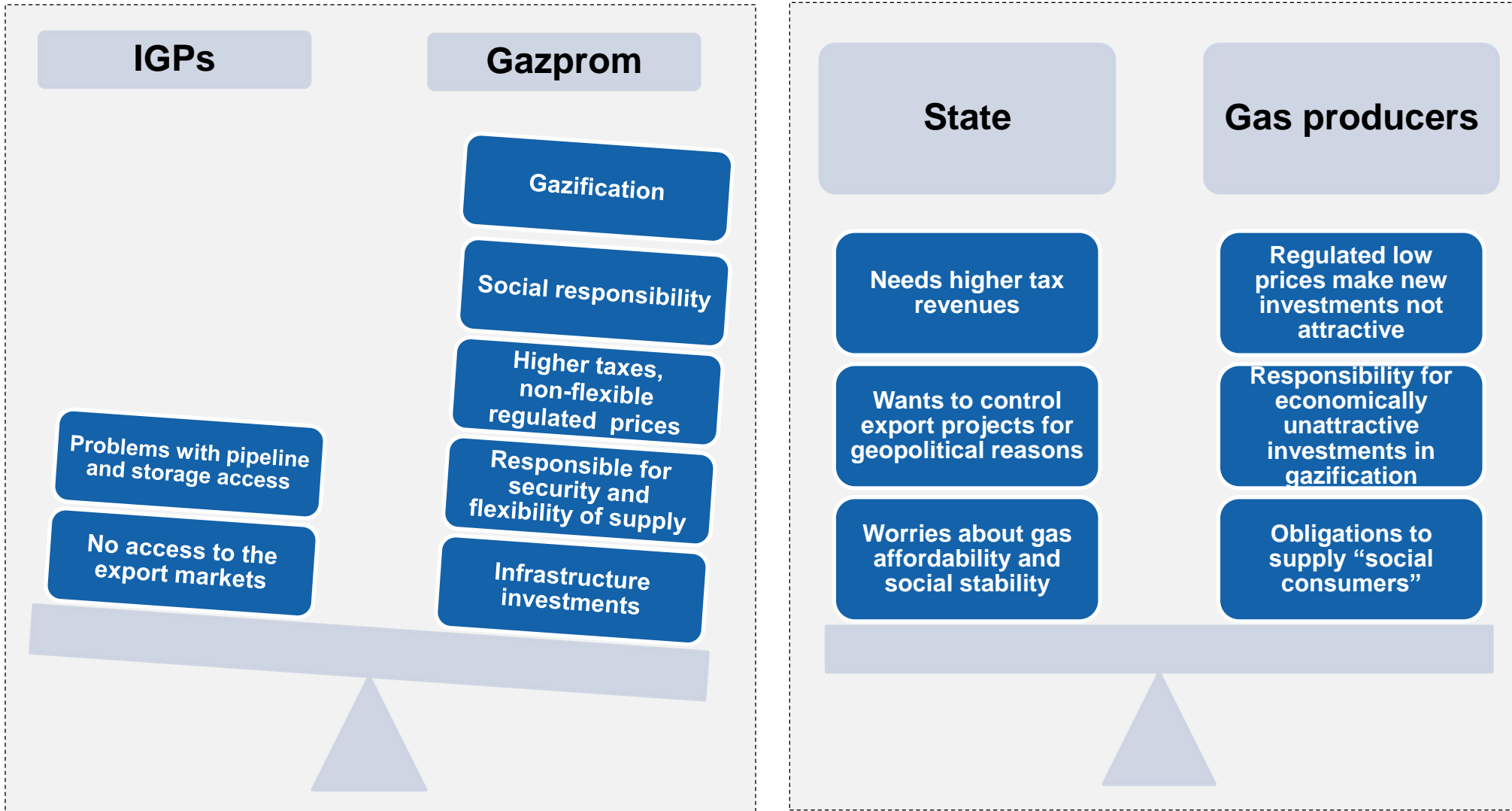
Sources: ERI RAS, Gazprom, Rosstat

The range of acceptable domestic prices (Center of Russia)



Source: ERI RAS calculations

There are increasing imbalances in the stakeholders positions



Stakeholders interests: Russian State is the major stakeholder with extensive agenda, regarding gas as an important domestic and international political tool

State	Gazprom	IGPs	Consumers
<ul style="list-style-type: none"> ❑ Security of gas supply for the domestic consumers including sensitive regions and social groups ❑ Low transportation tariffs ❑ Low gas prices affordable for the industry and for the population ❑ Ensure politically important infrastructure projects and external gas policy ❑ Ensure tax revenue growth from the gas industry 	<ul style="list-style-type: none"> ❑ Company`s profitability and financial sustainability ❑ Stable production volumes 	<ul style="list-style-type: none"> ❑ Company`s profitability and financial sustainability ❑ Access to the new markets domestically and abroad ❑ Non-discriminatory pipeline and storage access ❑ Stable production volumes 	<ul style="list-style-type: none"> ❑ Acceptable (low) gas and electricity prices ❑ Reliable supplies (including for the non-payers) ❑ Gazification ❑ Transparent and easy access to gas supply services

Gas market reform options

Nationalization of the gas industry

- All national gas production, transportation, sales and export under control of a single national gas company

Status quo

- No changes

Gradual improvement of the market mechanisms

- Gradual improvement of the transportation tariff methodology, access to the underground storages, liquidation of the most obvious contradictions.

Upstream competition with centralized transportation, storage, domestic sales and export

- UGSS unbundling into a number of competing private gas producers, selling their gas on the wellhead and a separate state-controlled company, responsible for domestic and export supplies and being the “guarantying supplier”.

Transportation unbundling

- UGSS as a separate state-controlled company, production and supply performed by the competing private companies. Proportional export (through a single export channel?).

Complete Anglo-Saxon type gas market liberalization

- Complete Gazprom`s unbundling, complete gas export liberalization. Pricing at the gas exchange.

All gas market reform options seem unattractive and risky, especially in the crises environment, so any profound changes are postponed

Inefficiency

- ❑ Complete gas industry nationalization
- ❑ Competition in production and state-owned company responsible for transportation, supply and export



- ❑ Status-quo and minor adjustments of the institutional framework

Supply security threats

- ❑ Gazprom's unbundling and creation of "Transneft"-type transportation company
- ❑ Complete Anglo-Saxon type market liberalization

Contacts

Energy Research Institute of the Russian Academy of Sciences

Vavilova 44/2, 119333, Moscow,
Russian Federation

phone: +7 499 137 60 30

fax: +7 499 135 88 70

web: www.eriras.ru

e-mail: mitrovat@me.com