

# The Role of Russia in the “Golden Age of Gas”

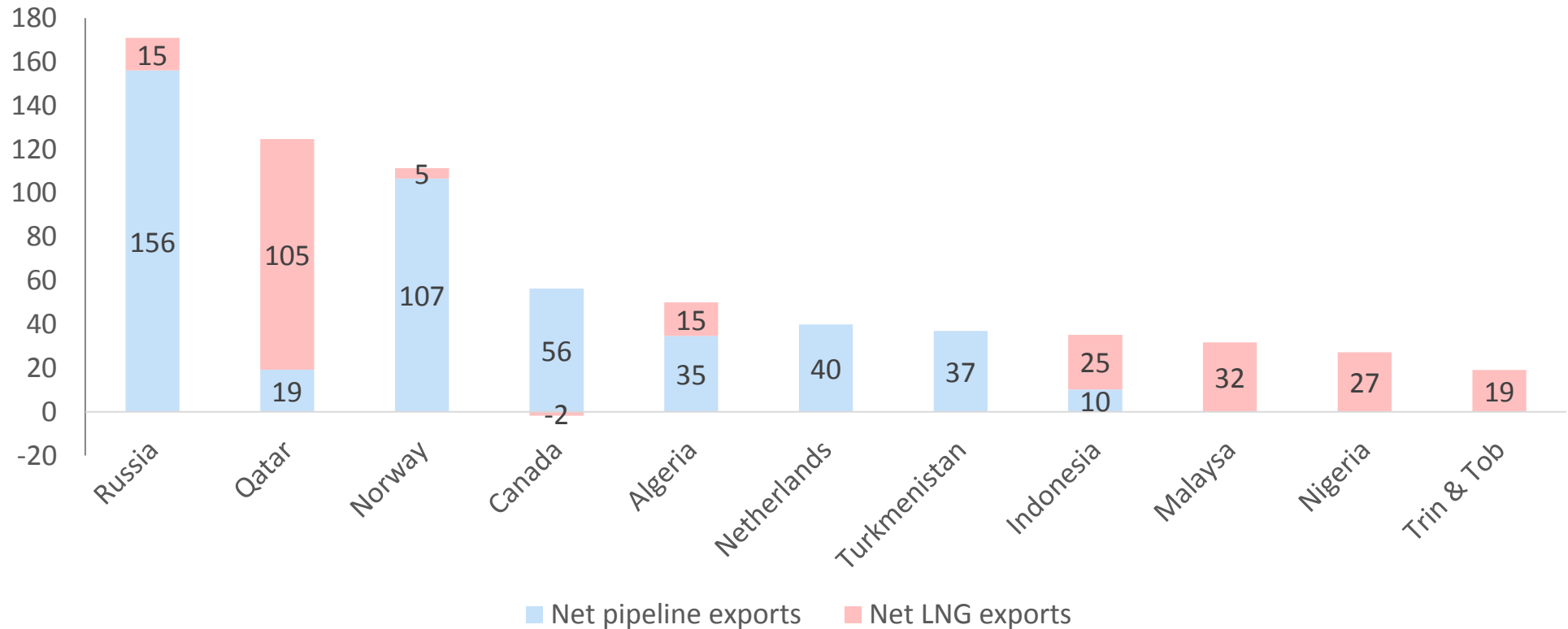
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Houston  
February 21, 2014

# Russia is the world's largest net exporter of gas, utilizing gas as an important geopolitical tool

**Main net exporters of gas (pipeline and LNG) in 2012, bcm**

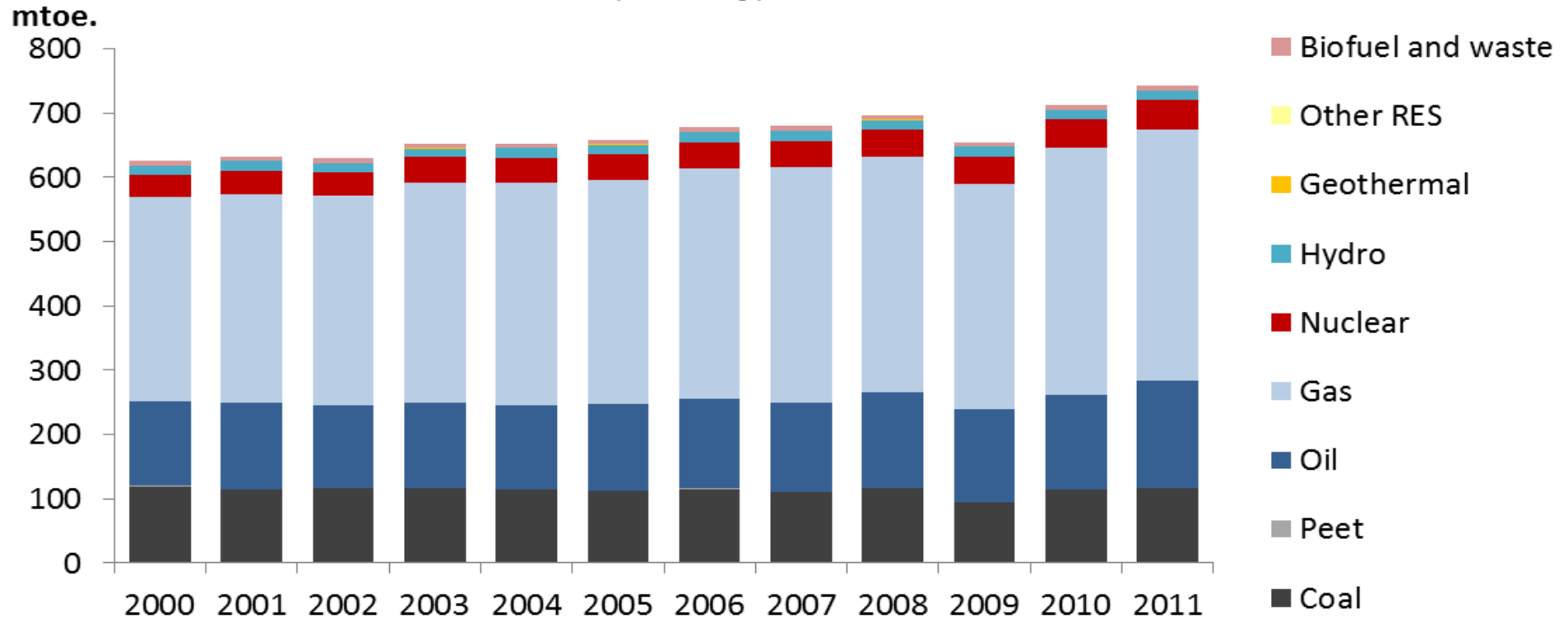


Source: BP Statistical Review of World Energy 2013

***Russia provides for about 20% of the international gas trade. Being dominant supplier both on the European and on the CIS gas markets, Russia has a huge influence on the prices and on the “rules of the game” in these markets. For many years it uses gas as an important geopolitical tool.***

**Gas also plays the key role in the Russian domestic energy sector development: it accounts for 53% of the domestic primary energy consumption and is an important domestic political tool**

**Russian primary energy consumption in 2000-2011**

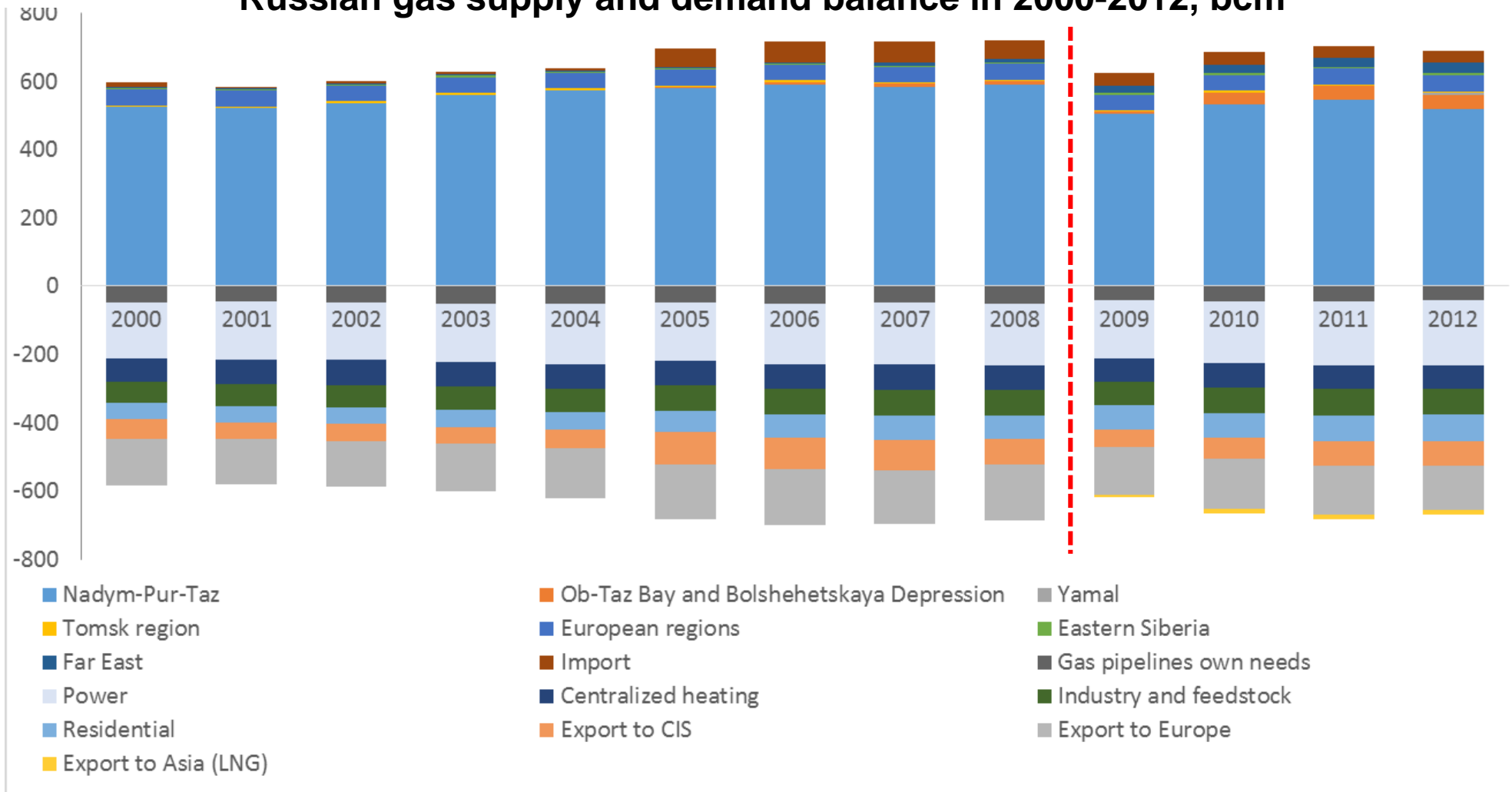


Source: IEA statistics, September 2013

***While the oil sector is the revenue provider for the Russian budget, the gas sector has a much broader political agenda, including social issues, influence over the regions, low energy prices for the domestic industries, providing financing of the “projects of state importance”, as well as a source of revenue for vested interest groups and the political elite. Given the importance of gas sector, key decisions about gas policy are made by the President personally.***

# Russia enjoyed the “Golden Age of Gas” until the crises in 2008

Russian gas supply and demand balance in 2000-2012, bcm



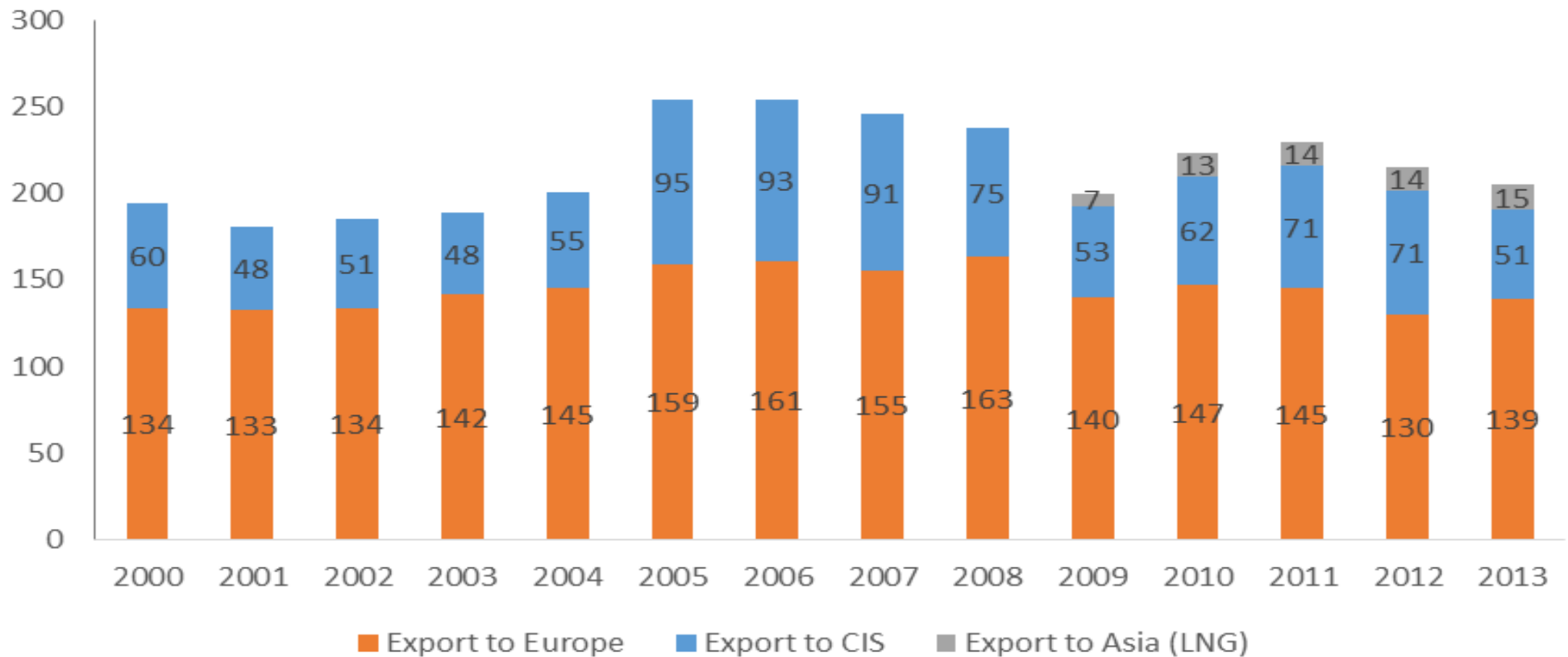
Sources: Rosstat, ERI RAS

# Major post-crises transformational changes in the Russian gas market

- Start of Bovanenkovo by Gazprom and fast growth of IGPs production resulted in gas oversupply on the domestic market
- Main transportation bottlenecks were expanded (SRT0-Torjok, Urengoi hub, Bovanenkovo-Ukhta)
- Slower economic performance resulted in domestic gas demand stagnation in all sectors, with the main consumers - power sector and industry – being strongly affected by the crises and higher prices
- There is nearly no export alternative for the Russian gas now:
  - Gas demand in **Europe** was strongly affected by the crises and it is unlikely to return to pre-crisis levels prior to 2020. Due to Gazprom's price maximization strategy in Europe it still cannot restore its pre-crises export volumes, and there is nearly no room for exports growth
  - Russian gas exports to **CIS** were gradually falling due to falling gas consumption and inability of the consumers to pay such high prices
  - Start of the Sakhalin-2 **LNG** export could not compensate for the decline of exports to the West
  - Exports **to China** are still in limbo: in 2013 the parties agreed on supply route and declared gas price to be defined by an oil linkage formula, but the SPA still is not finalized
  - Imports of **Central Asian** gas fallen dramatically after 2009 explosion on Turkmen pipeline, China emerged as a key gas consumer to replace Russia

## The crises was accompanied with dramatic changes on all Russian export markets...

Russian gas exports in 2000-2013, bcm

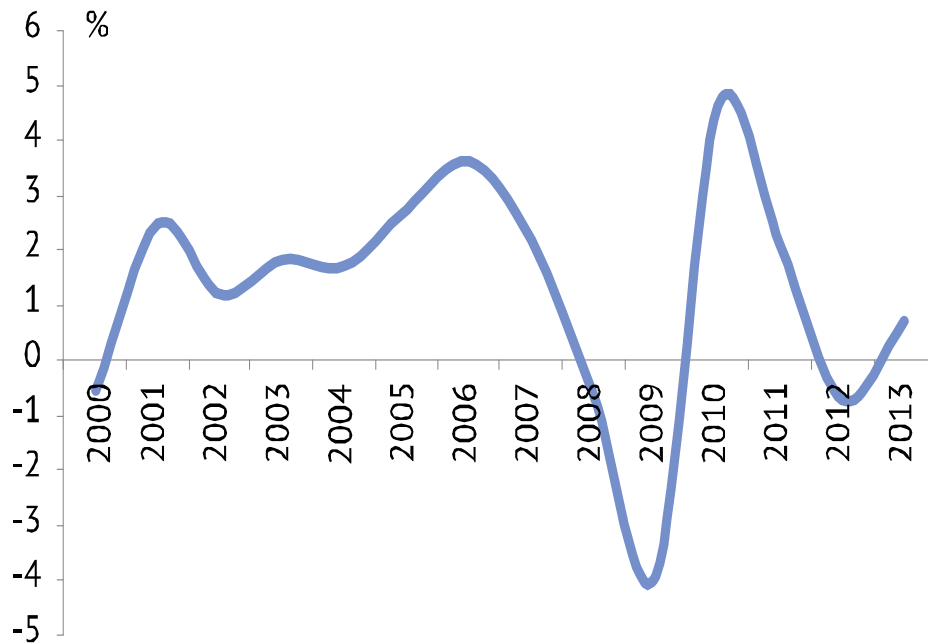


Sources: Rosstat, ERI RAS

***Gazprom, which has legal export monopoly for the pipeline gas, chose gas price maximization strategy, so the room for Russian gas export volumes growth is very limited now.***

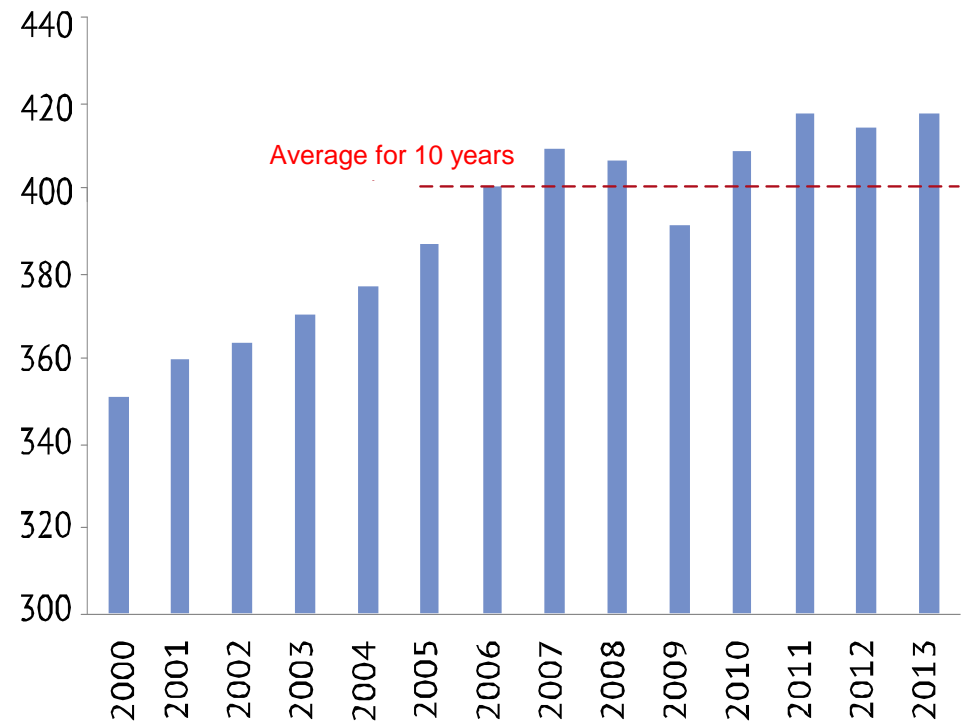
## ... and Russian domestic gas consumption stagnates on the back of weak economic growth

**Average annual gas demand growth rates in Russia, %**



Sources: Rosstat, ERI RAS

**Gas consumption in the Russian economy, bcm**



**Economic slowdown and higher gas prices limit gas demand growth in all sectors, and even lead to its reduction in centralized heating**

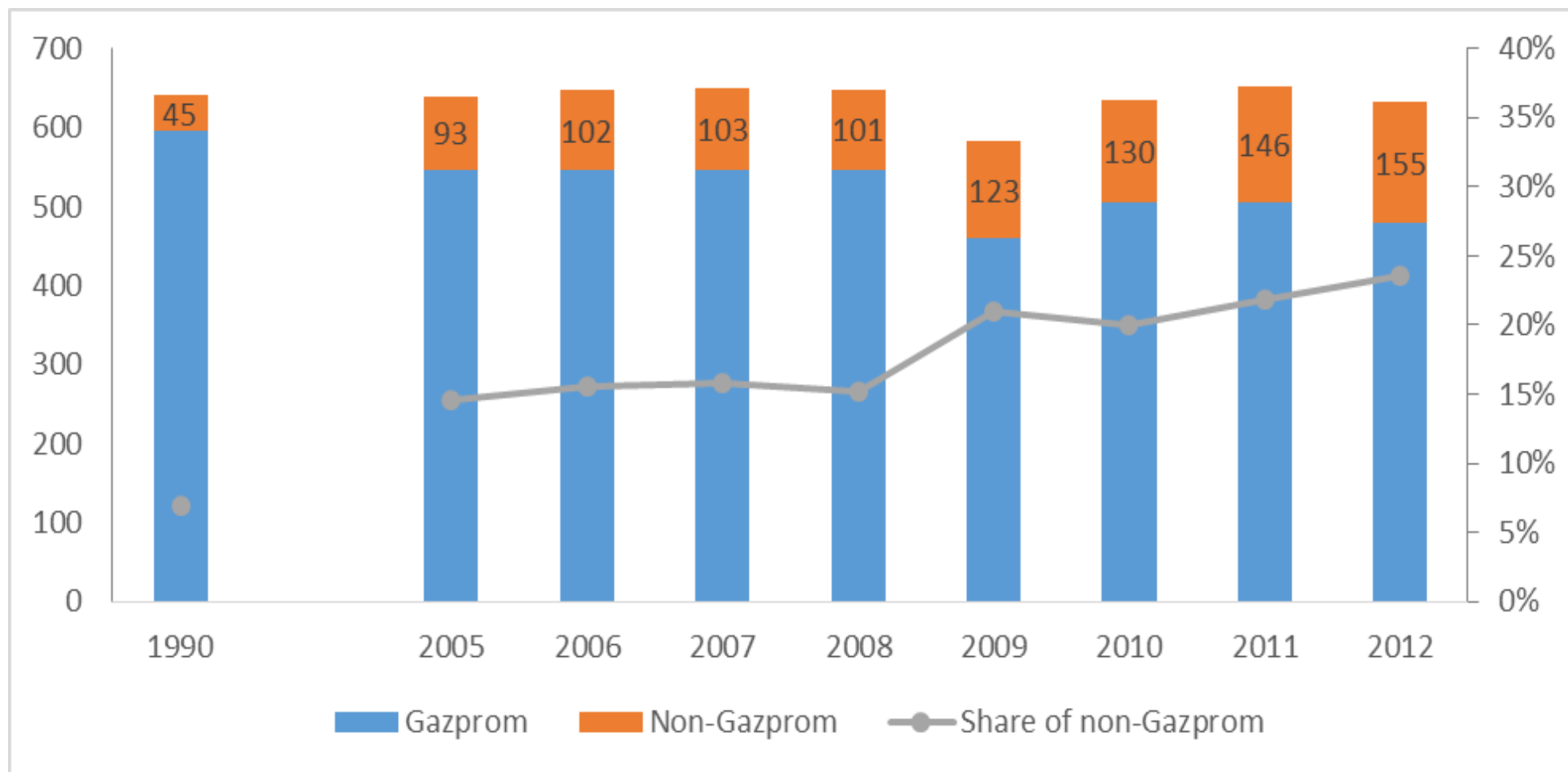
## Major shifts: adapting to the new environment

- Russian gas production tries to adjust to the weak internal gas consumption growth rates and sluggish export gas markets
- Booming independent production against stagnation at Gazprom and increasing output by all producers of more profitable and tax generative wet gas against a drop in the output of traditional dry gas.
- Since 2006, Gazprom tends to constrain its own supplies, while independents actively expanded into end users market
- IGP's production growth does not guarantee development of the competitive internal market: on opposite, there is unprecedented wave of upstream consolidation and uprise of the new regional monopolies
- Partial breakup of the gas export monopoly (for LNG)
- Despite the rapid growth of domestic prices, wholesale market prices are still below net-back price and it is unlikely to be achieved in the medium term. Furthermore, the low rate of consumption growth and the worsening situation in the industry forced the government to freeze gas price growth.



# Increasing role of the IGPs at the expense of Gazprom

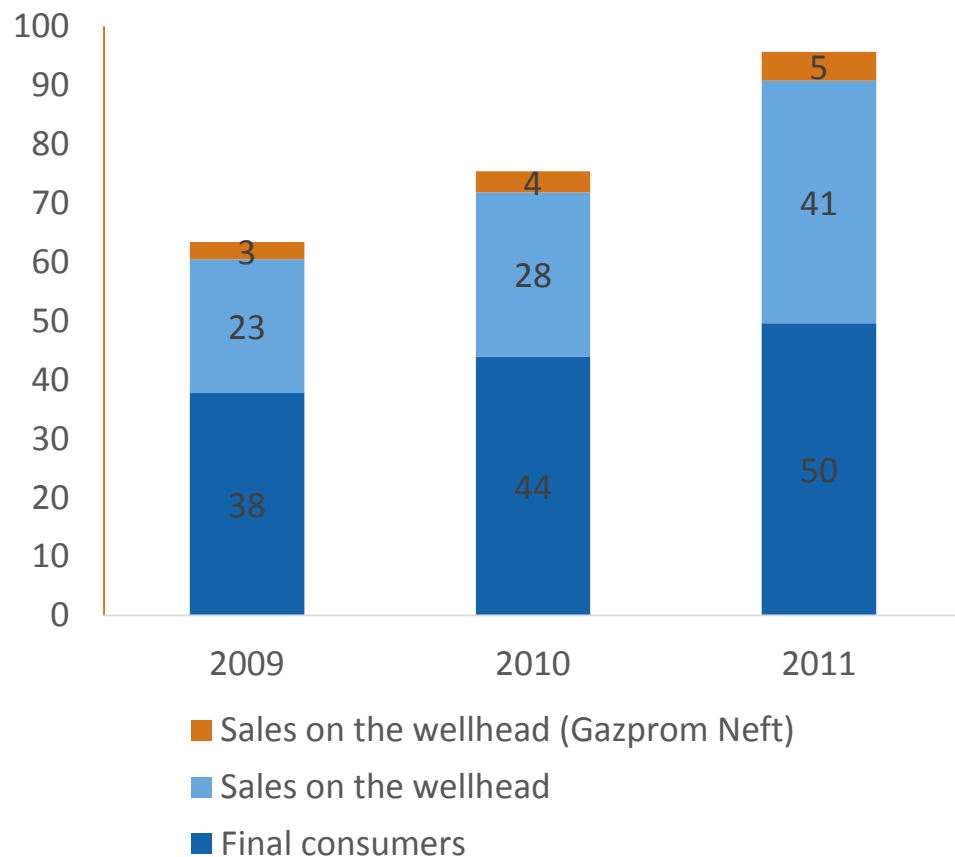
Russian gas production structure in 1990-2012, bcm



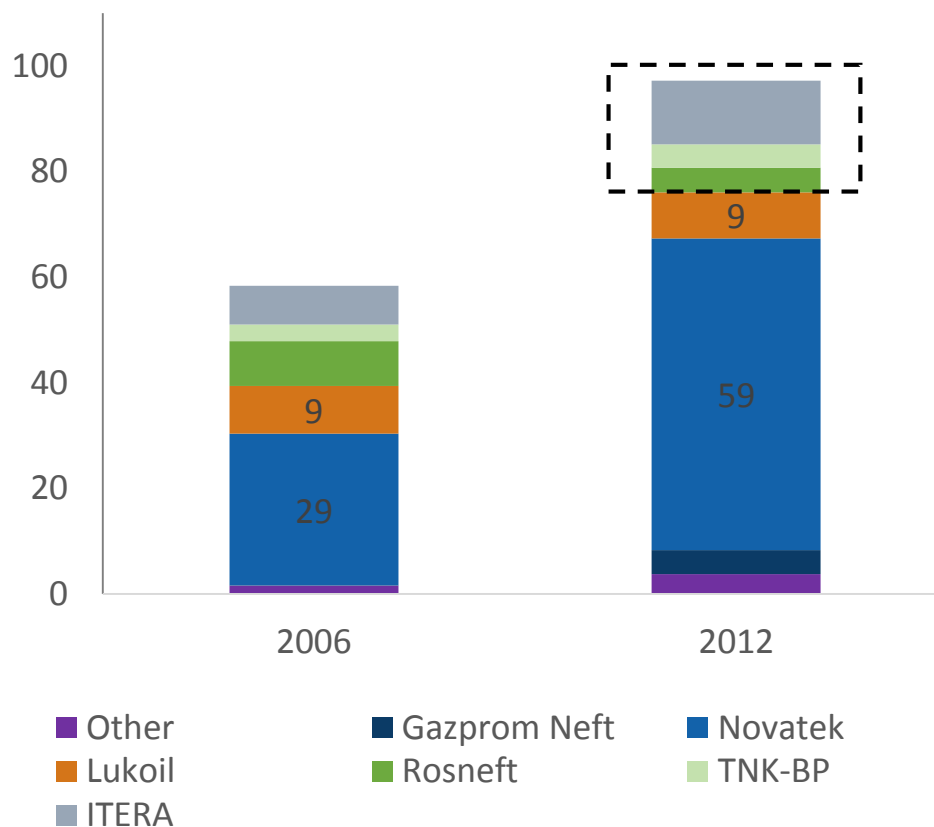
Sources: Rosstat, ERI RAS

# Growing role of IGPs on the final markets and their consolidation increase pressure on Gazprom

## Sales by the major independents, bcm

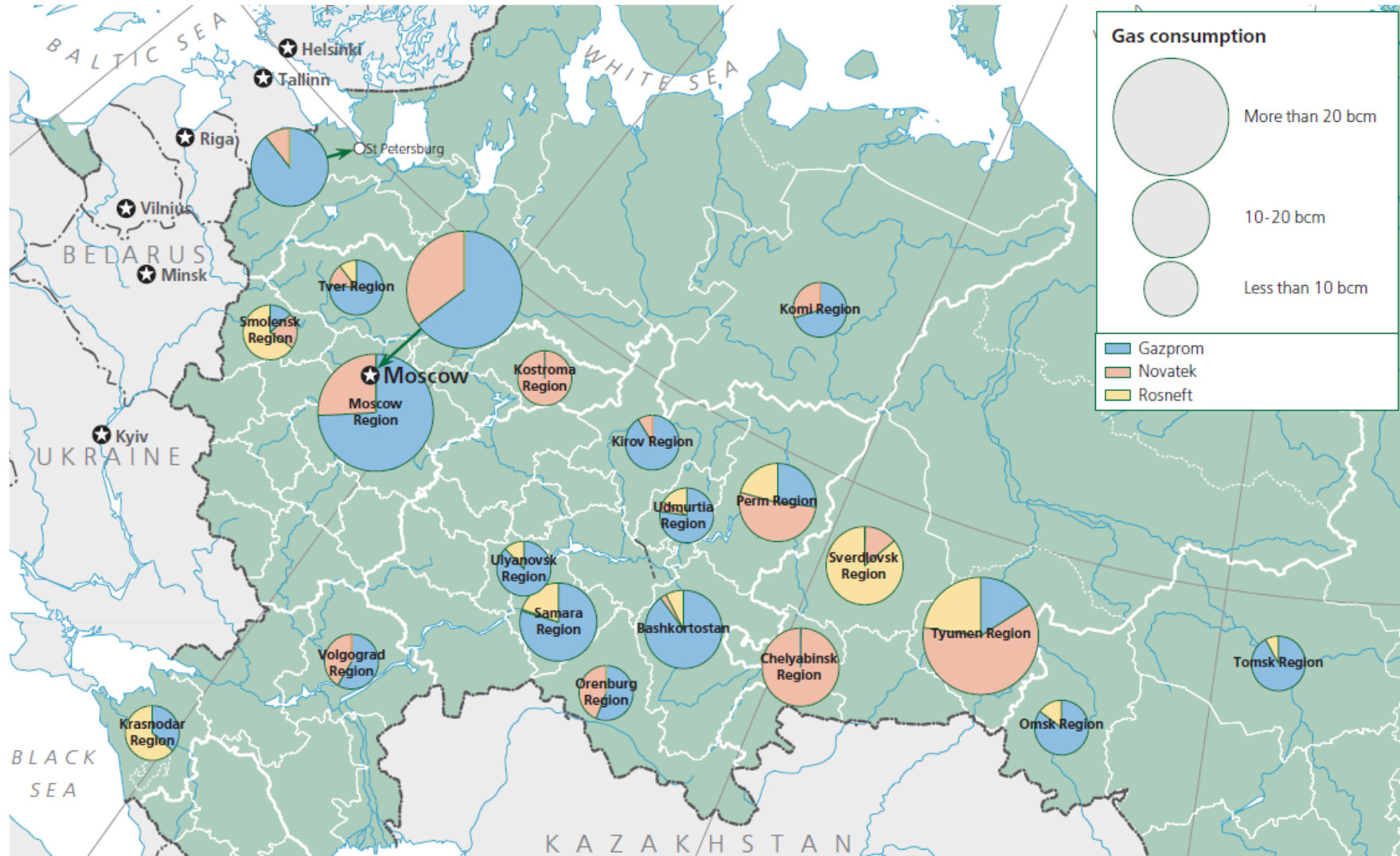


## Major independents gas production, bcm



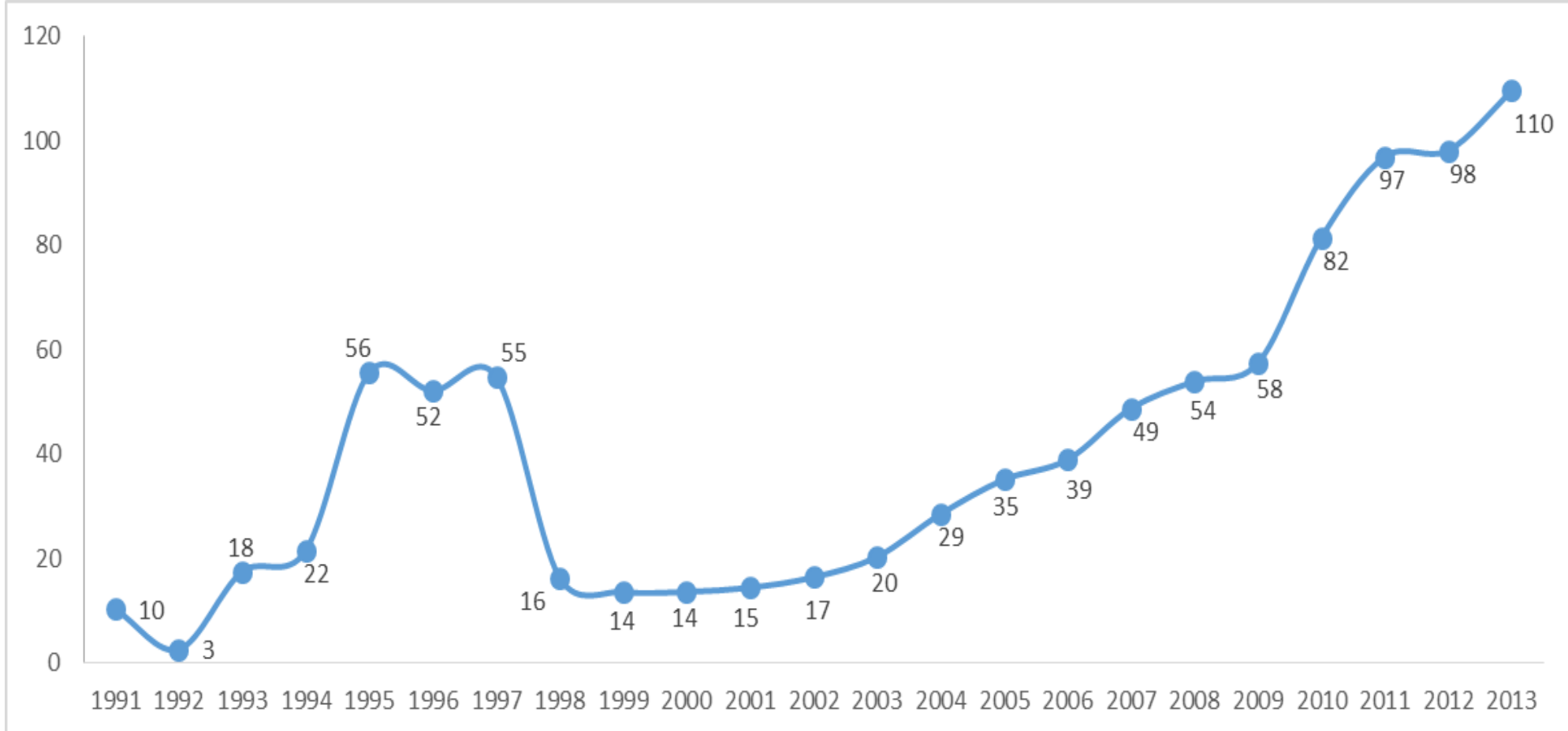
Sources: Rosstat, ERI RAS, CDU TEK

# New regional monopolies evolve



**Russian 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...**

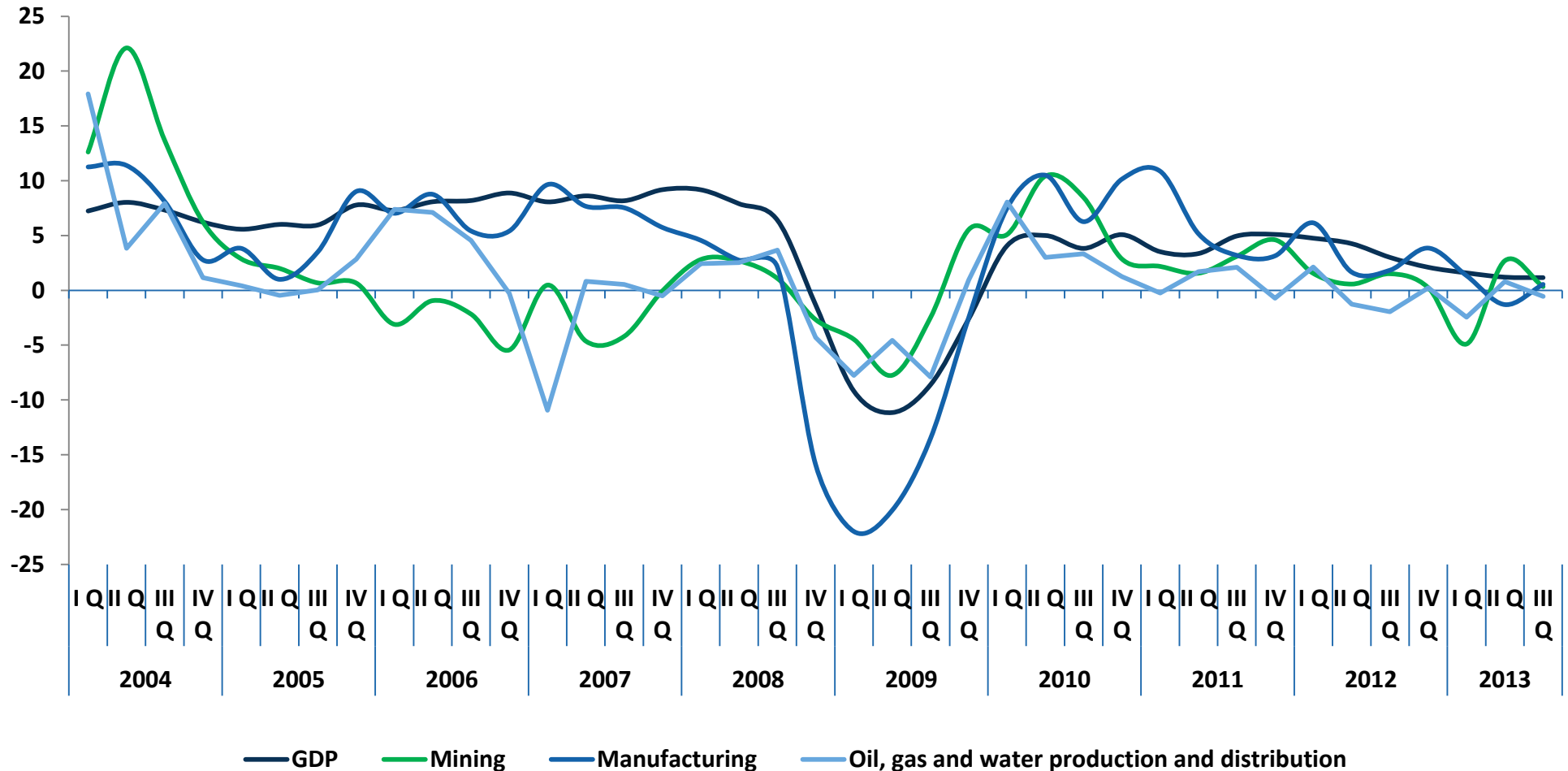
**Average weighted wholesale gas prices for industrial consumers in 1991-2013, \$/mcm**



Sources: ERI RAS, Gazprom

## ...as economic slowdown forced Government to end the decade of double-digit domestic price growth

**GDP and industrial output (% to the corresponding quarter of the previous year)**

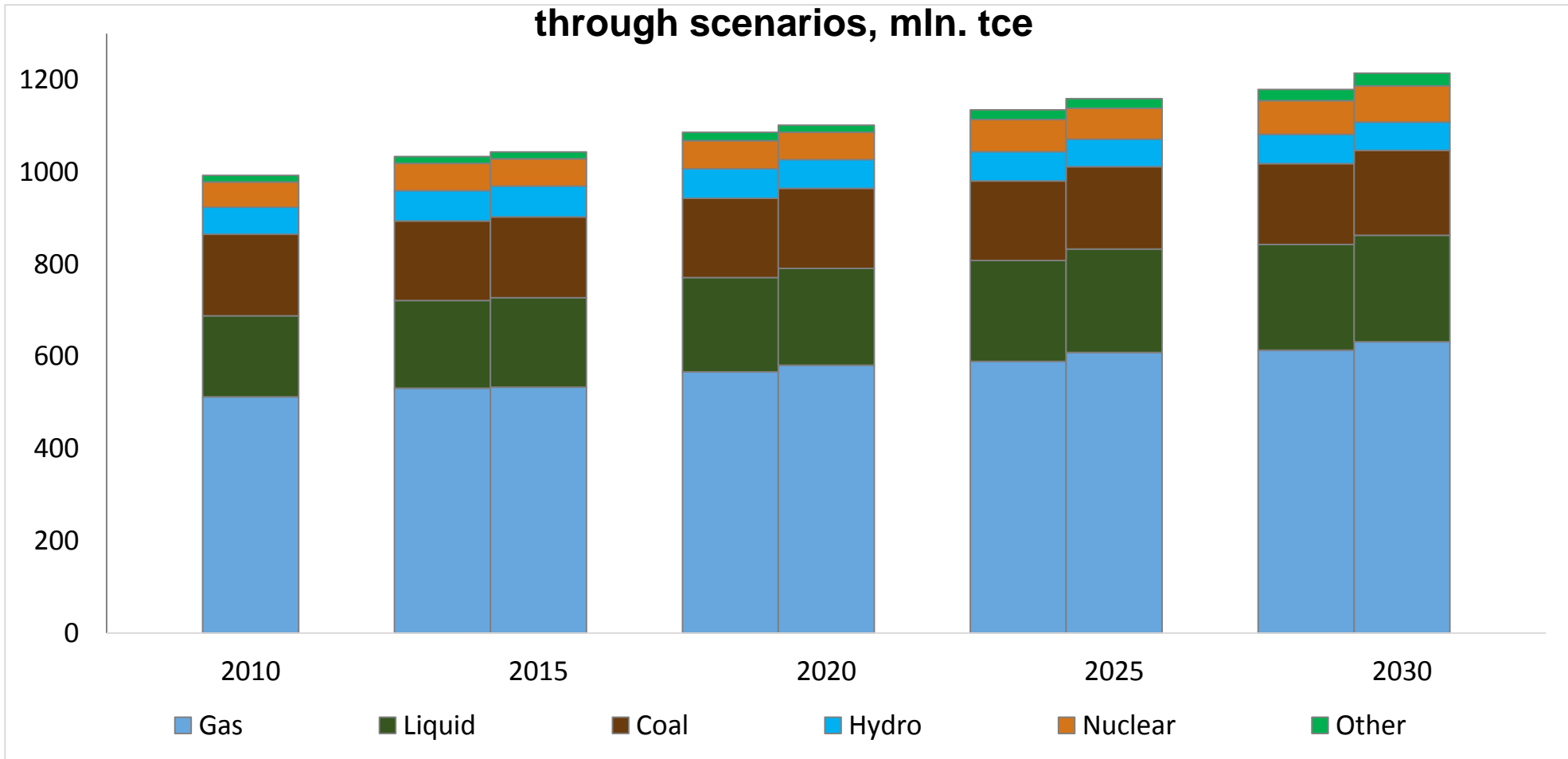


# Future transformations of the Russian gas balance in all scenarios

- Russian gas production will remain essentially demand constrained
- Domestic gas demand growth will be constrained by the modest GDP and industrial output growth rates
- Russian exports in the coming years will stay under pressure, though tight gas market in Europe will allow Gazprom to restore its position for several years (until new massive LNG supplies come).
- The role of the Asia-Pacific market in the medium term will remain low until new pipeline deal with China is secured
- In the longer term the dynamic transformation of North American unconventional gas, the coal to gas competition in Europe, booming supplies of Central Asian gas to China, a massive buildup of LNG in Australia, discoveries offshore in East Africa and rising demand in Asia are deeply affecting for Russia's export
- Challenge for Russian gas is to remain competitive in the key export markets

# Natural gas will dominate in the Russian fuel mix with 51-53% of total primary energy consumption by 2030

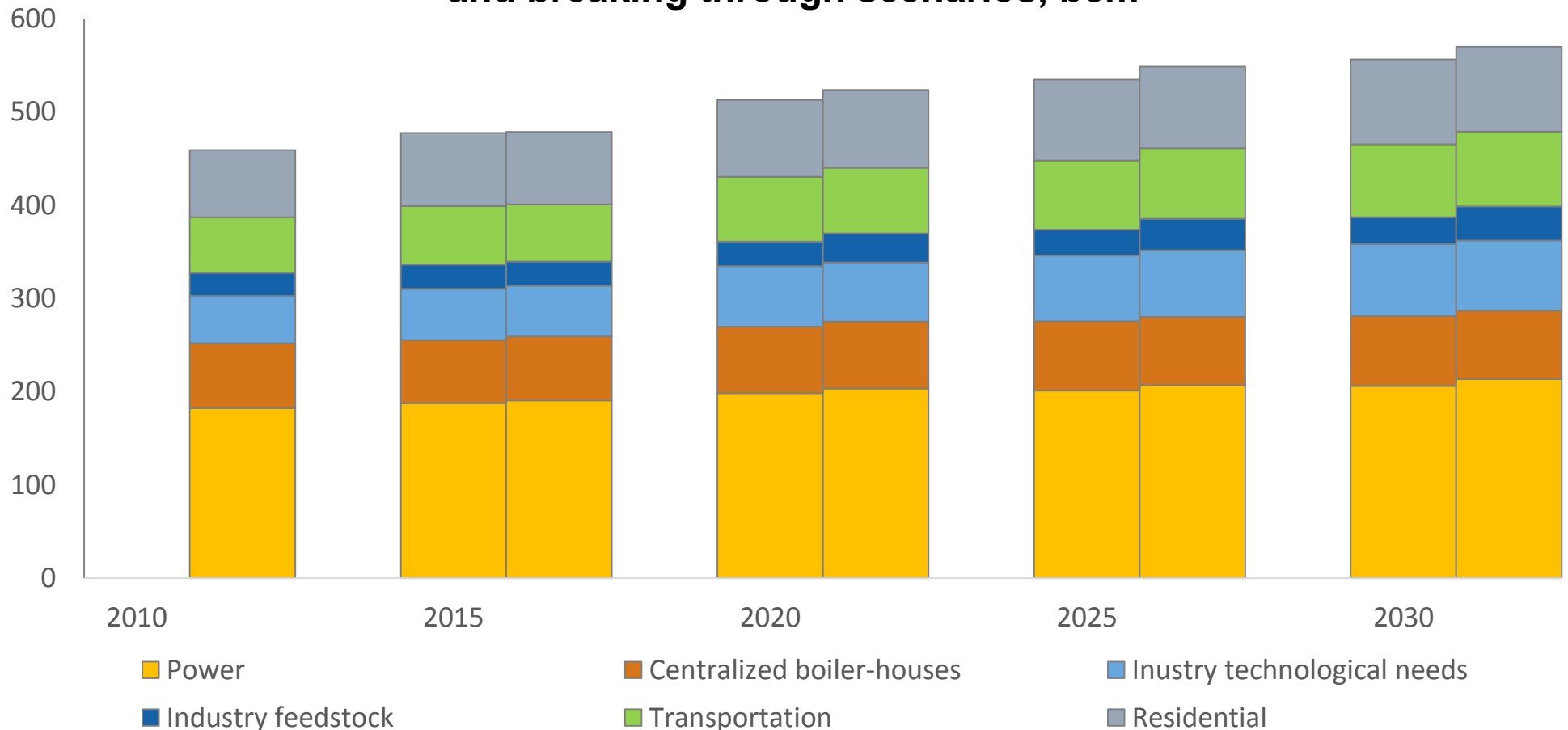
Primary energy consumption structure by fuel in the stagnation and breaking through scenarios, mln. tce



Source: ERI RAS calculations

# Russian domestic gas demand will increase by 21-24% by 2030 mainly due to the increase of gas use in the industrial and transportation sectors, with the share of power plants declining from 44% to 41%

## Russian gas demand structure by the main groups of consumers in the stagnation and breaking through scenarios, bcm



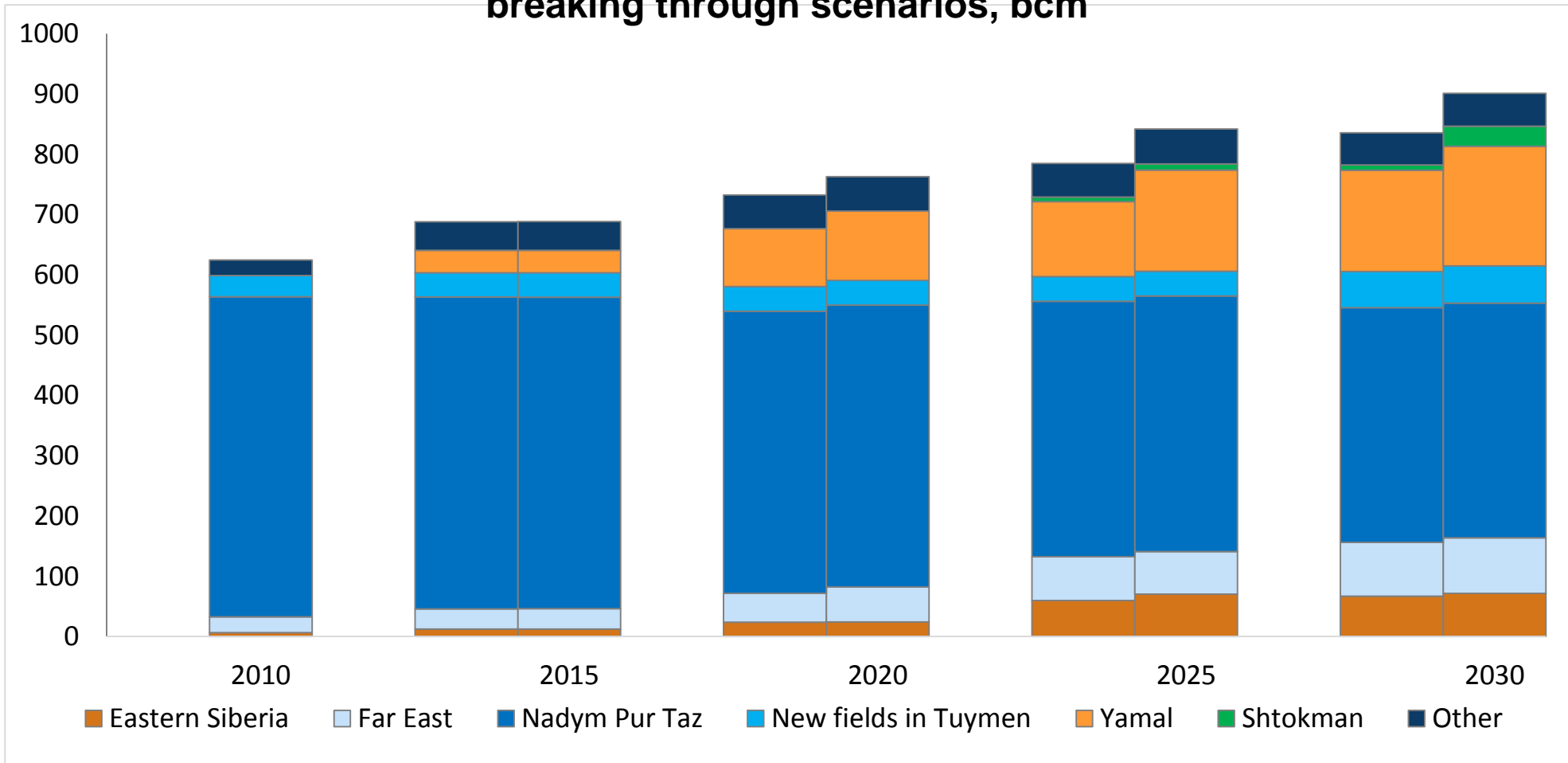
Sources: ERI RAS calculations

Transportation includes own needs of the pipelines and compressor stations



# Natural gas production decline in traditional Nadym-Pur-Taz area will be compensated by Yamal, new production provinces will be developed in the Eastern part of the country

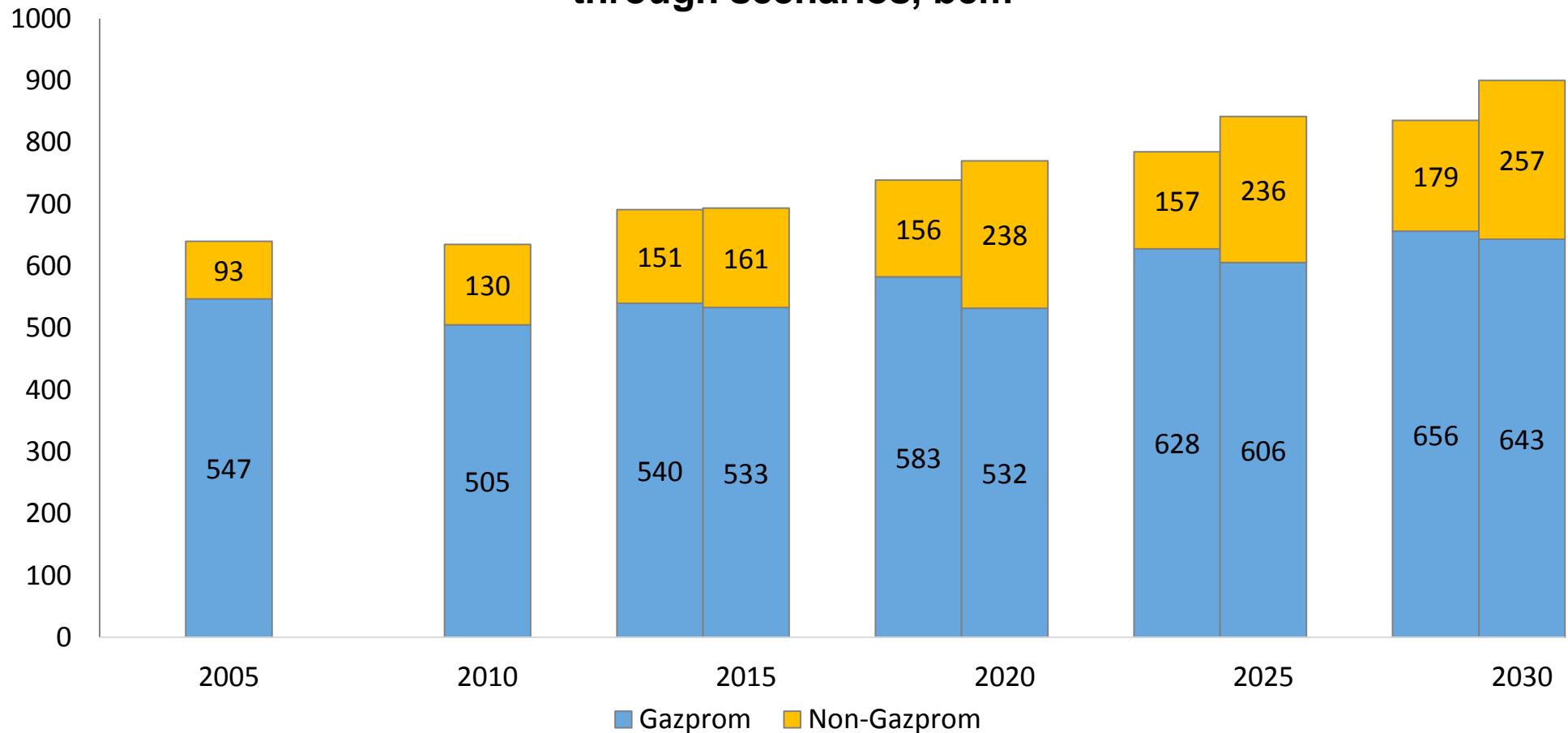
**Russian gas production structure by the main regions in the stagnation and breaking through scenarios, bcm**



Sources: ERI RAS calculations

# Strong growth of IGPs production is expected, though it is supported by real reserves only until 2025, which creates some risks for the sustainability of their longer-term supplies

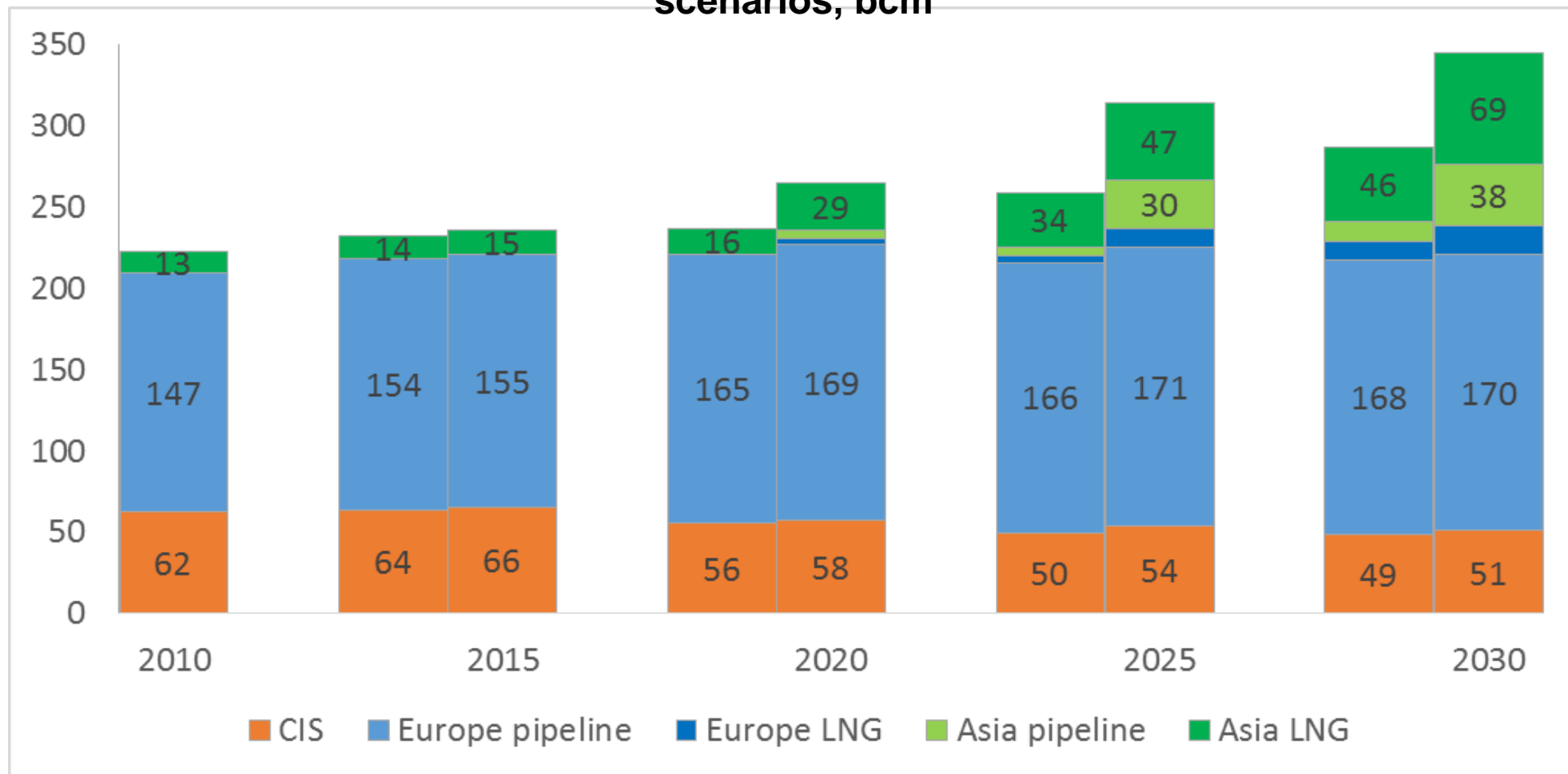
**Russian gas production structure by companies in the stagnation and breaking through scenarios, bcm**



Sources: ERI RAS calculations

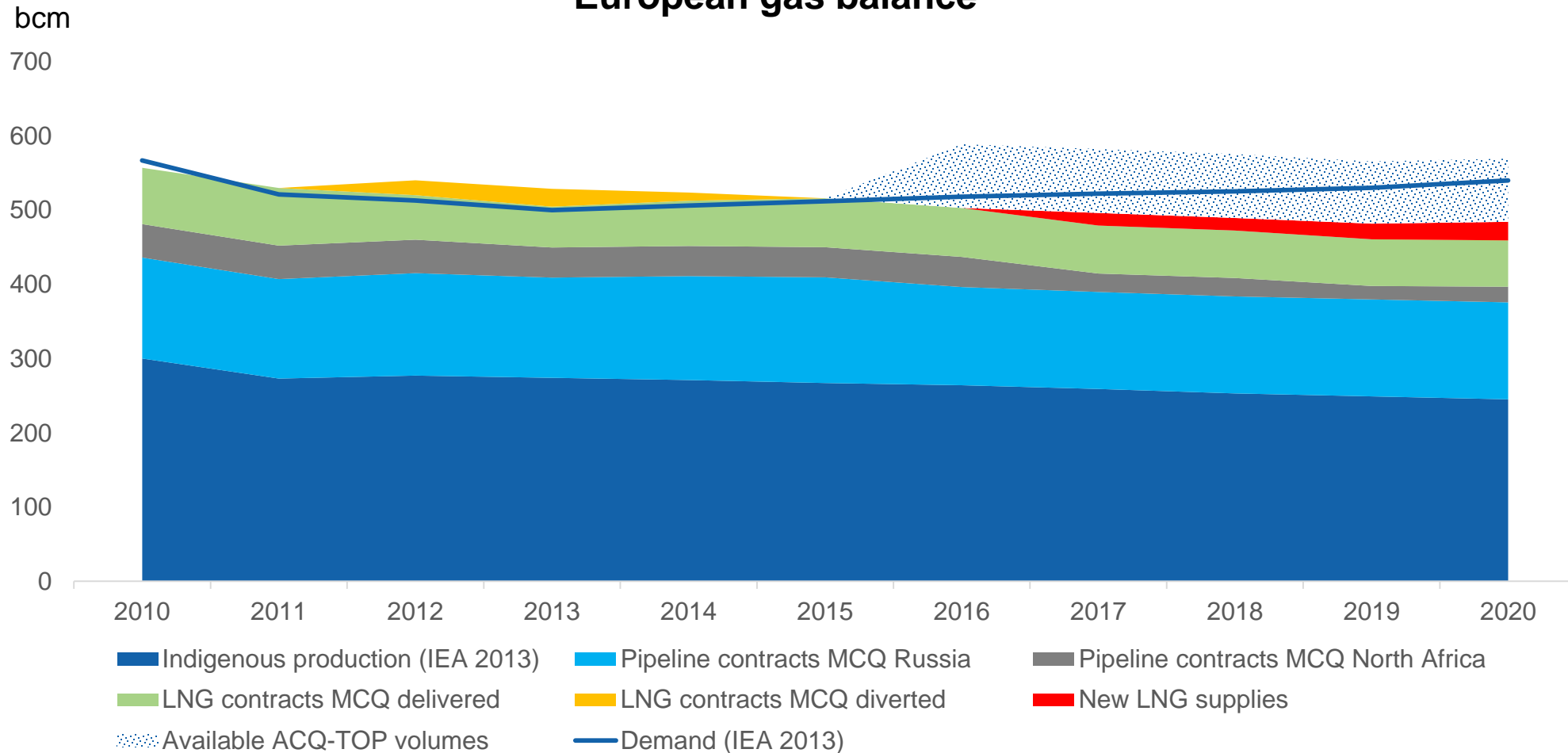
# Russian export volumes could differ by more than 50 bcm depending on the scenario and on the success of the Eastern programme

**Russian pipeline and LNG exports in the stagnation and breaking through scenarios, bcm**



**European gas market is going to be tight until at least 2015-2016 as LNG is diverted to Asia; in 2016-2018 very limited new supplies will become available and there will be an additional call on the over-take-or-pay volumes: good opportunity for Russia to enhance its position**

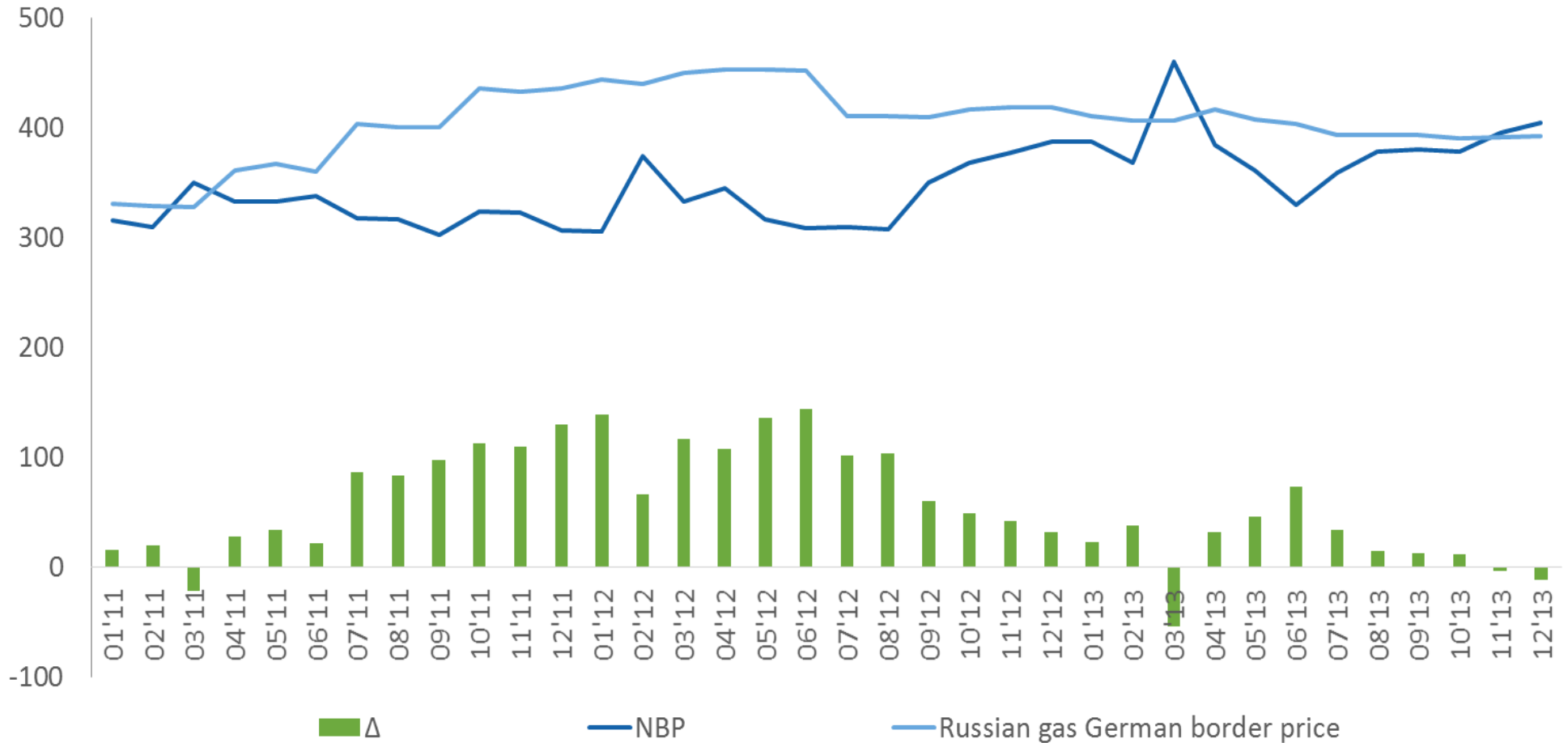
### European gas balance



Sources: IEA; Cedigaz; ERI RAS.

# Renegotiated Gazprom's oil-linked contract prices start to converge with the spot-based

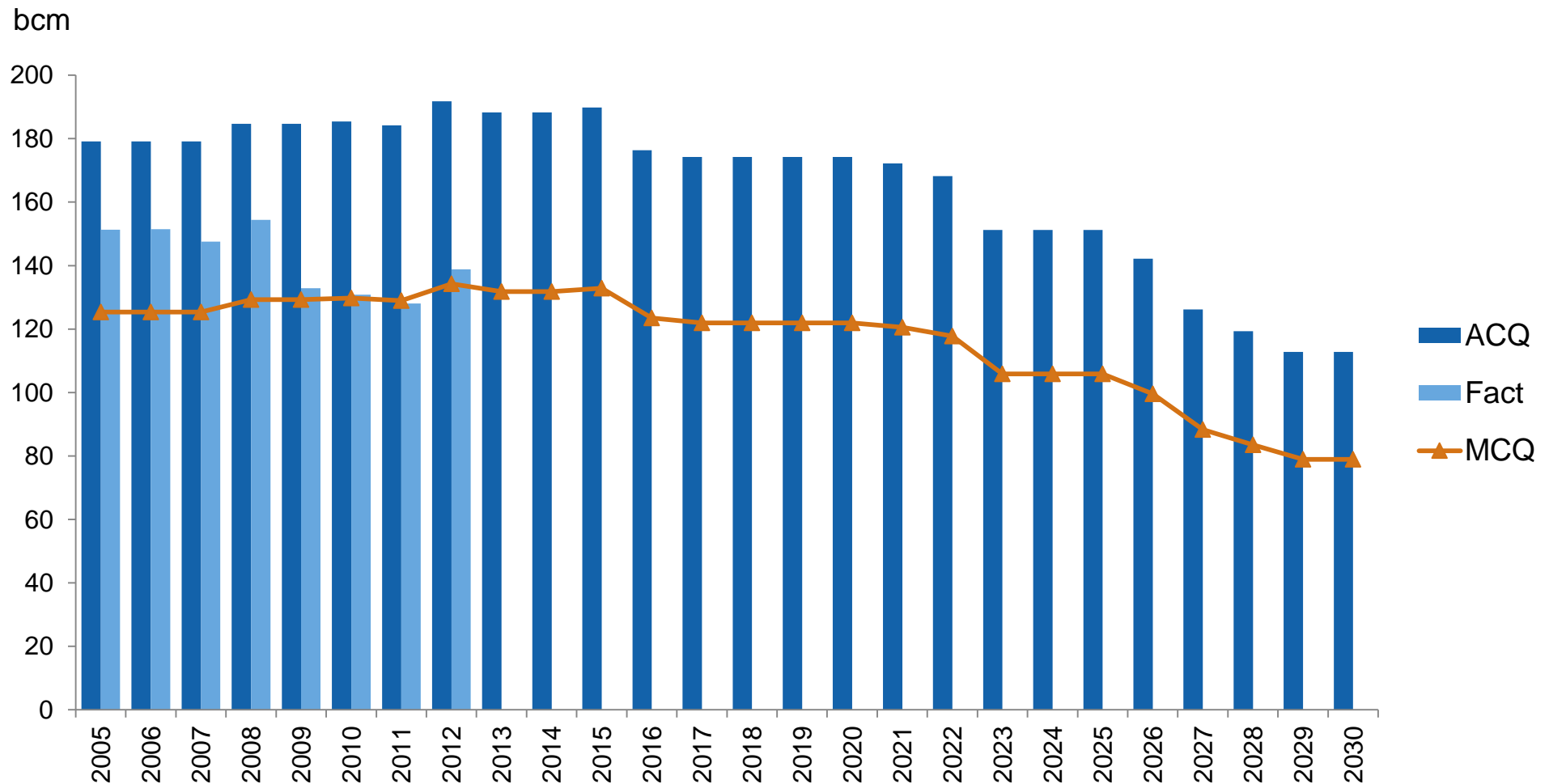
## European spot and oil-linked gas prices



Source: Bloomberg; ERI RAS.

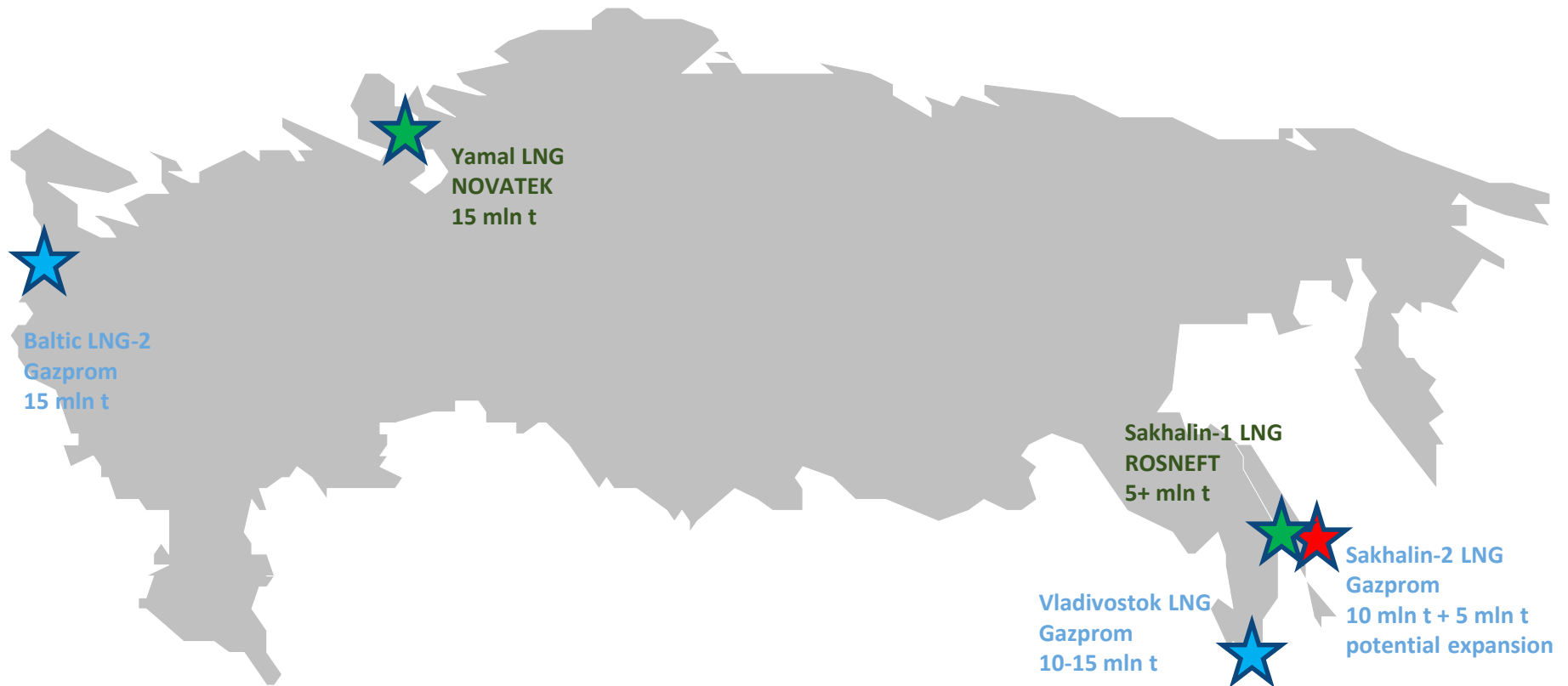
# Existing long-term contracts guarantee stable sales volumes for Russia until at least 2022

## Contract volumes and supply volumes of Russian gas to Europe



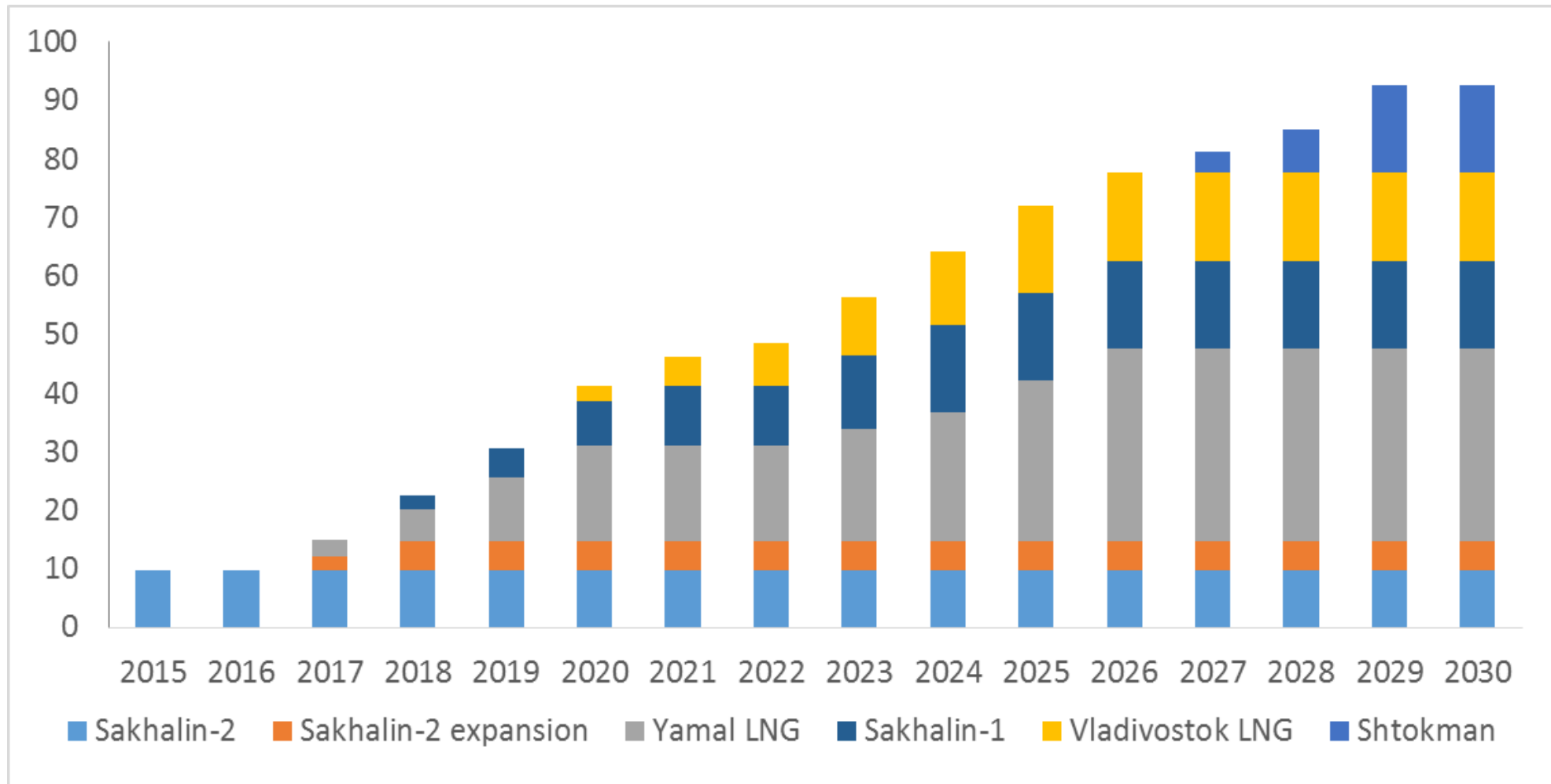
Sources: Cedigaz, Gazprom, ERI RAS.

There are 4 Russian LNG projects under consideration currently, all of them still face commercial, technical and regulatory challenges



# Main Russian LNG will become available only post 2020

Russian potential LNG capacity expansion, mln. t





## LNG export liberalization – just a part of a power game



Igor Sechin

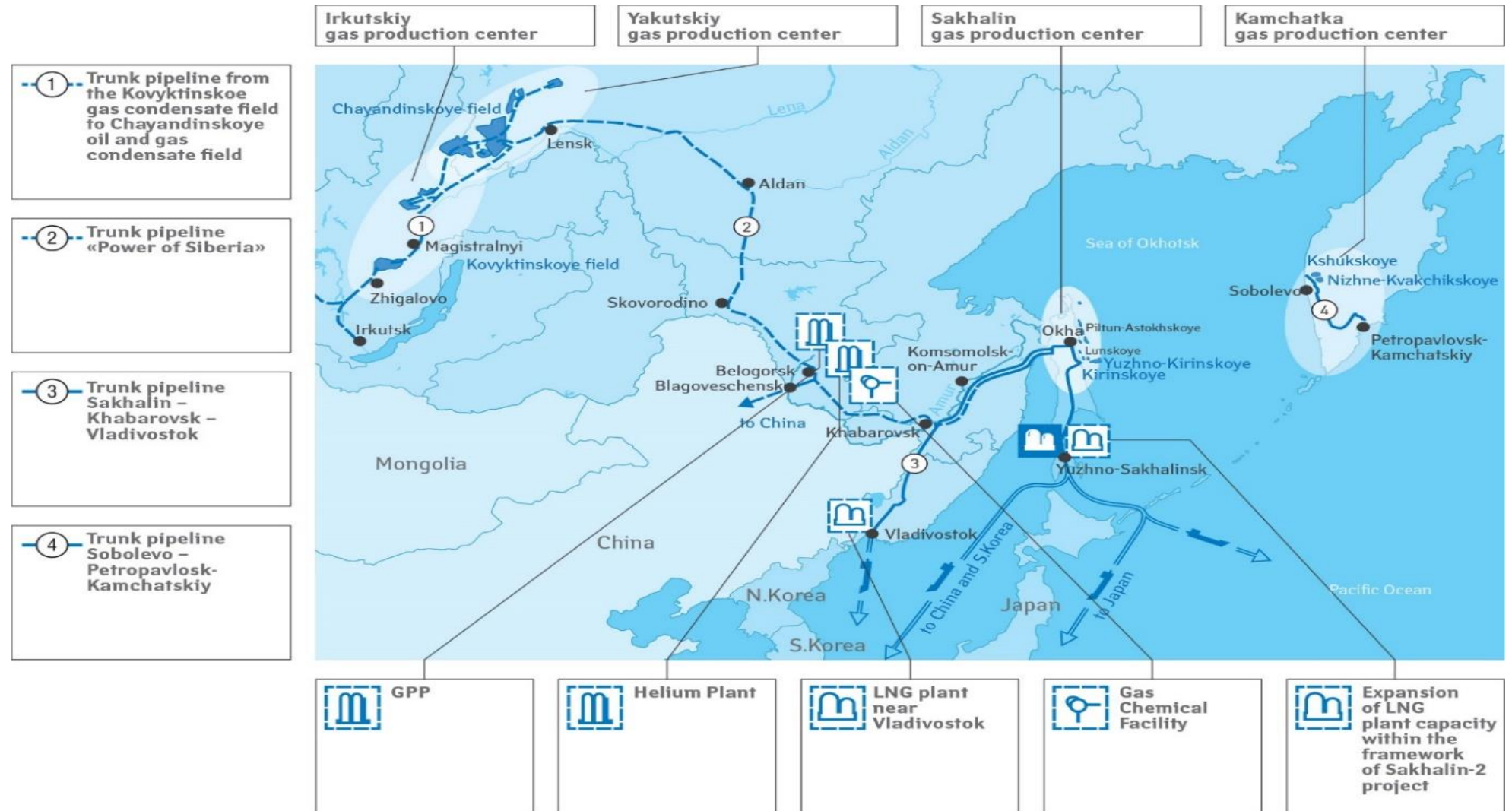


Alexey Miller



Gennady Timchenko

Eastern gas programme discussion also demonstrates increasing rivalry,, but as there are still no SPAs, recent negotiations with China failed again and were postponed until the end of 2014



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