

The Transformations and Challenges Facing the Russian Gas Industry

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THE ROLE OF OIL AND GAS FOR THE RUSSIAN ECONOMY

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CHANGING GLOBAL GAS MARKETS: IMPLICATIONS FOR THE RUSSIAN GAS EXPORTS

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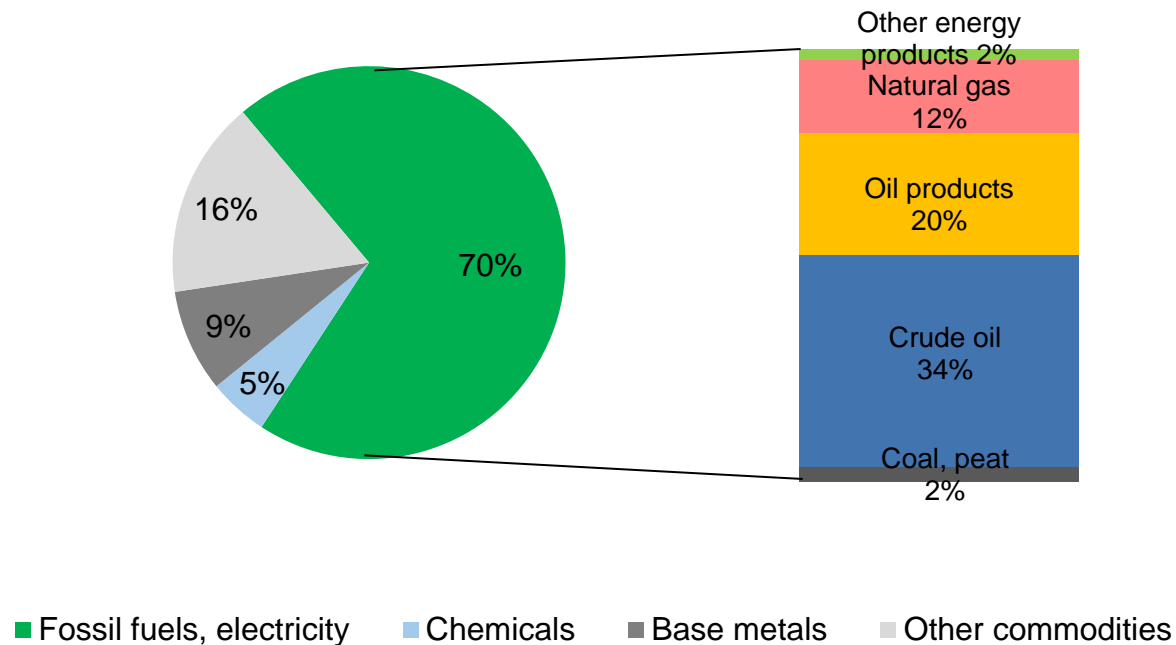
LNG AND DOMESTIC GAS MARKET DEVELOPMENT

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HOW TO BREAK THE DEADLOCK?

Energy resources are providing the major part of the Russian export

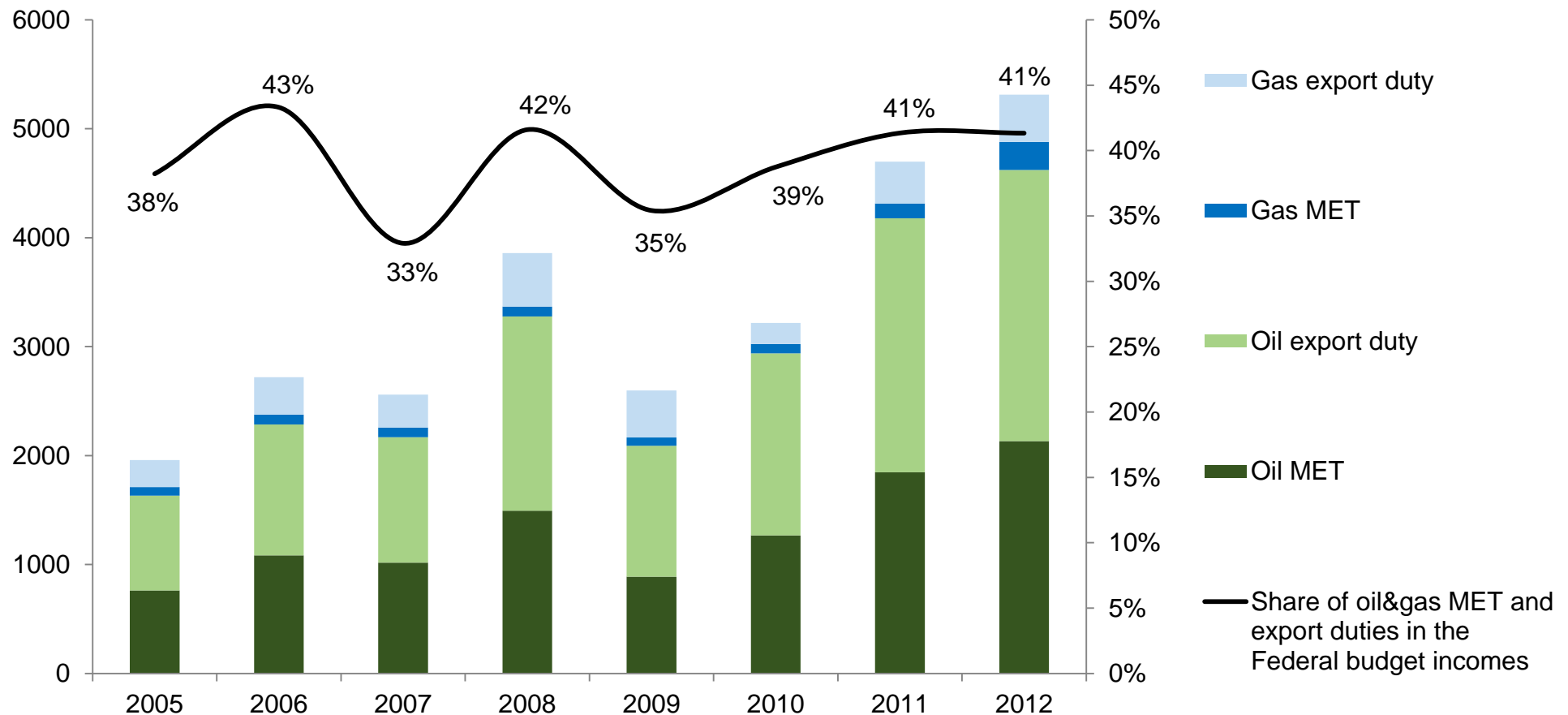
Russian exports by commodity in 2012



Source: Russian Customs Service

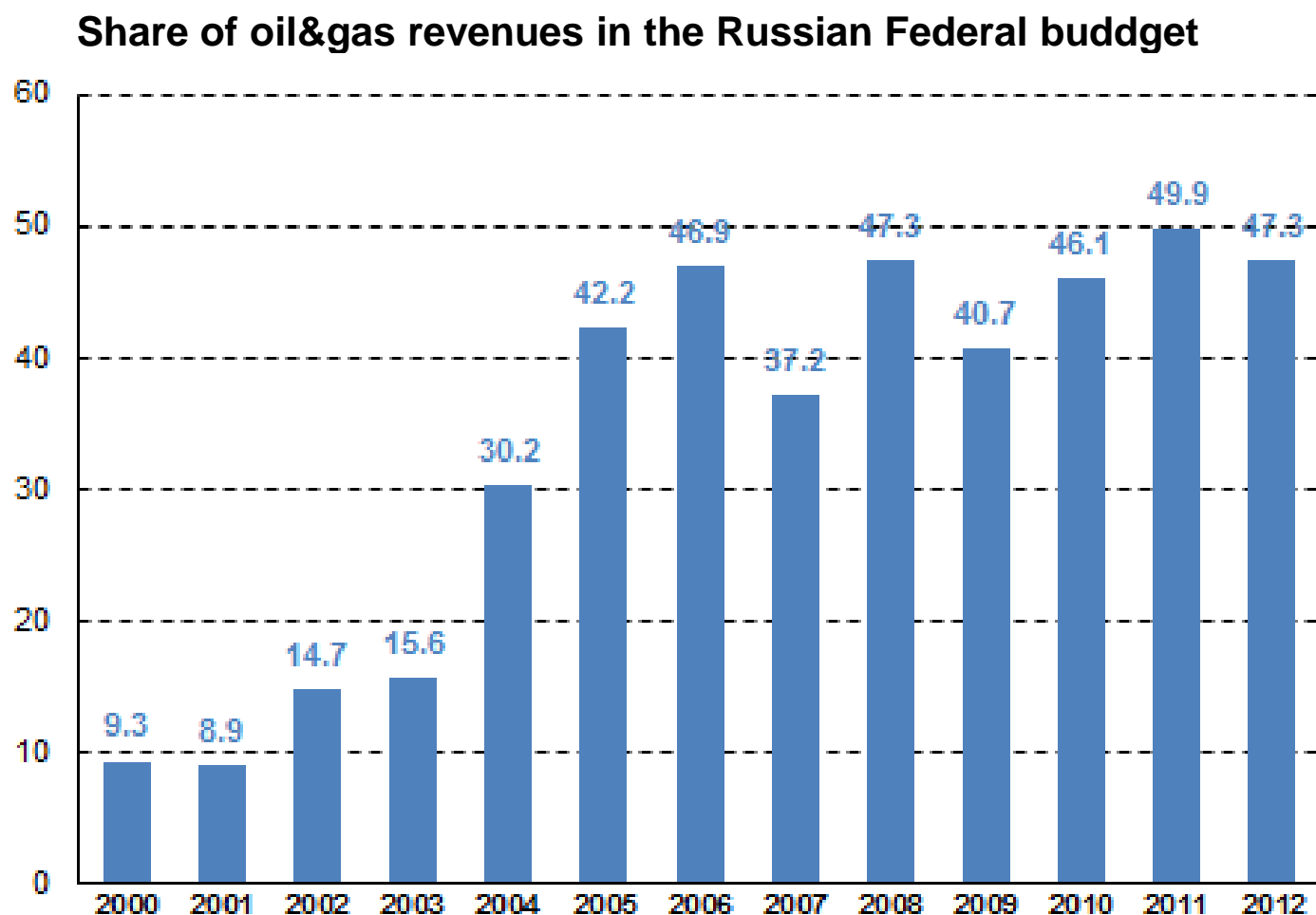
The role of oil and gas for the Russian Federal budget is huge

Oil and gas taxes and duties in the Federal budget



Source: <http://www.roskazna.ru/reports/fb.html>

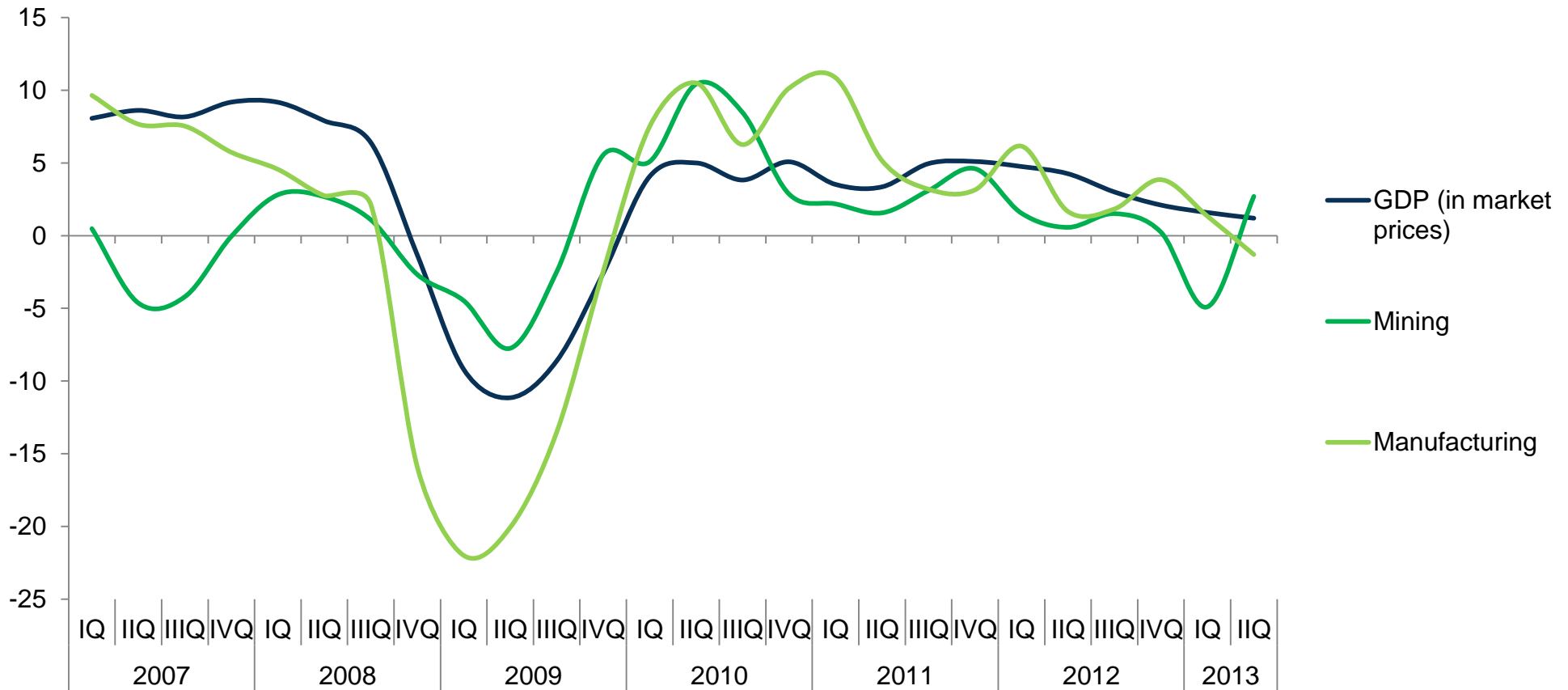
But it has not always been like that...



Source: Energy Ministry

Currently Russian economy is facing recession

GDP and industrial value added growth (as % to the corresponding quarter of the previous year)



Source: Rosstat

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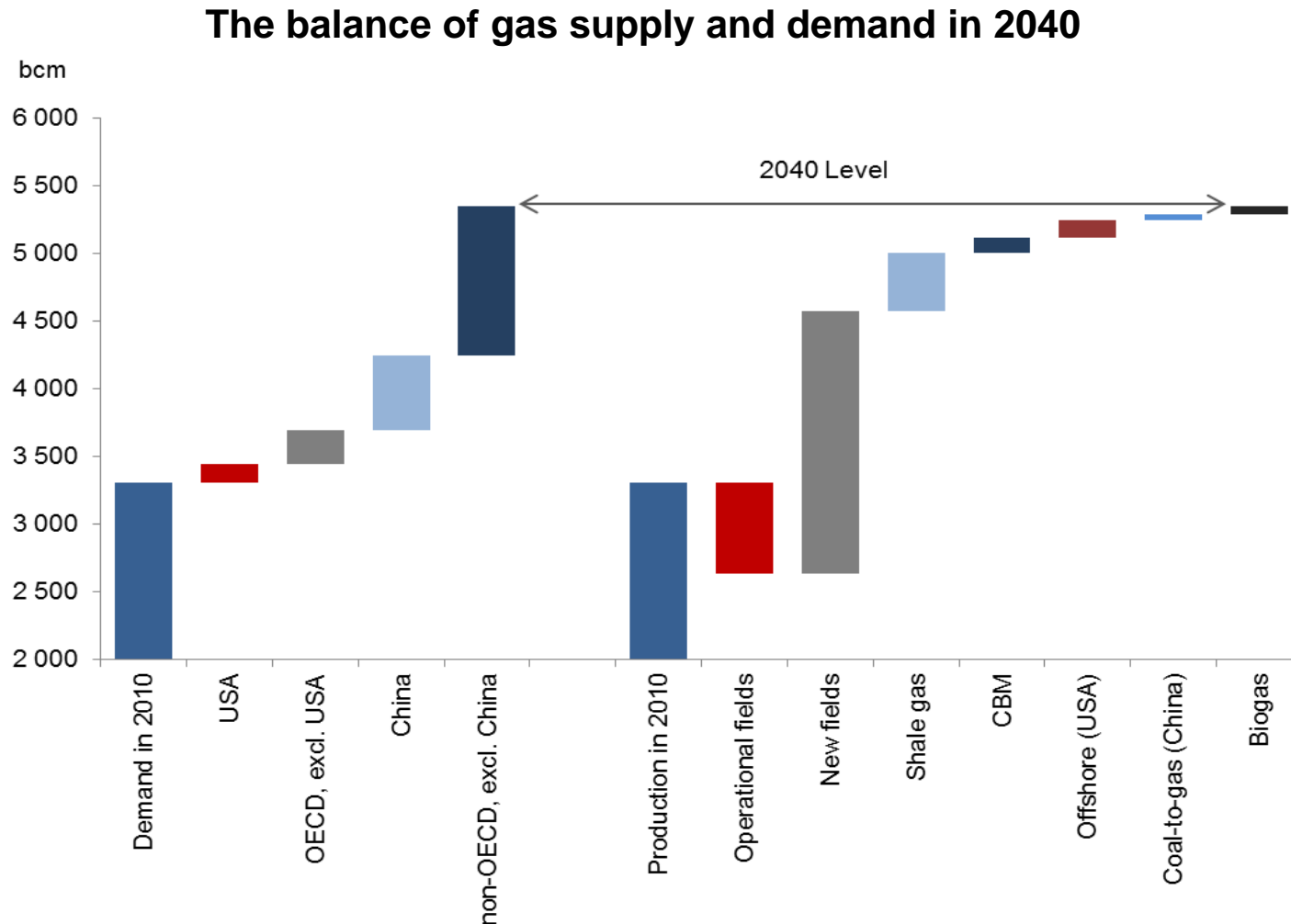
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HOW TO BREAK THE DEADLOCK?

Global markets transformations are unfavorable for Russia

- ❑ **Slowing demand** (crises, structural changes, energy efficiency) **and shrinking market niches for the traditional suppliers** (shale revolution, new market participants).
- ❑ **Growing supply and increasing competition** with Australia, Brazil, East Africa and North America, which will target Russian core markets in Europe and Asia.
- ❑ **Stagnant prices** – shale revolution has already decreased prices in North America and Europe, additional shale oil will limit oil prices growth. In all scenarios oil prices do not exceed 100-130 \$/bbl, gas prices stay at the current levels.

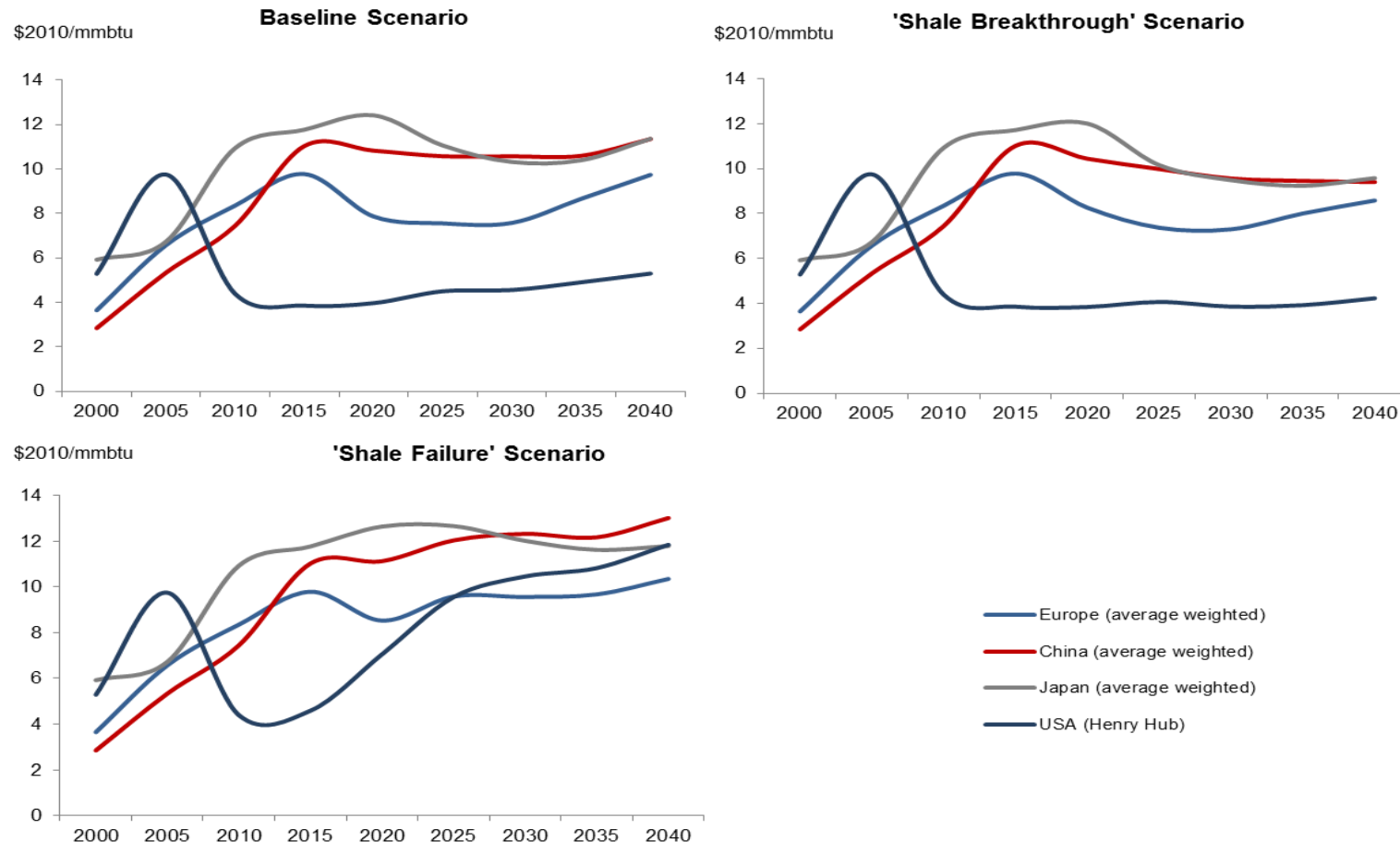
Global gas market development: incremental demand will be concentrated in the non-OECD countries



Source: Global and Russian Energy Outlook up to 2040. ERI RAS-AC. 2013.

In the long-term average weighted regional gas prices are not expected to increase significantly on the Russian main export markets

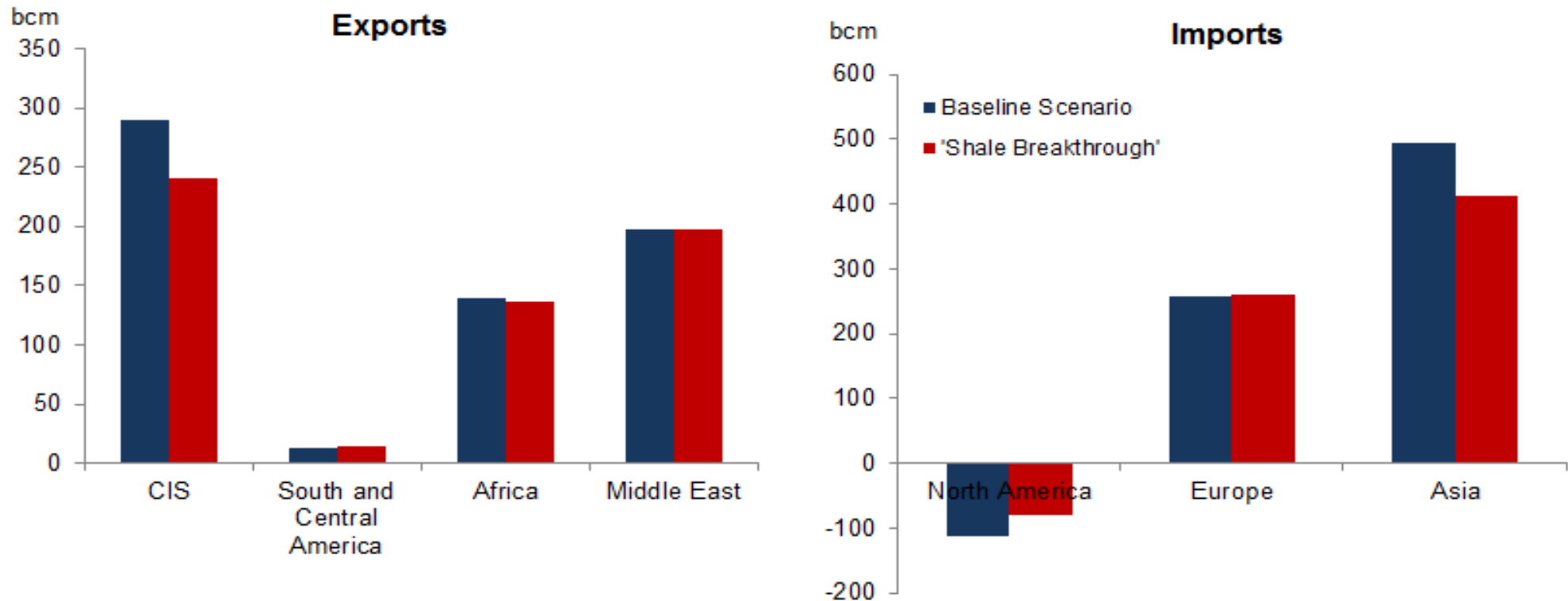
Equilibrium gas prices in the three scenarios



Source: Global and Russian Energy Outlook up to 2040. ERI RAS-AC. 2013.

Russian gas export might be 70 bcma lower if there would be new breakthroughs in the shale technologies

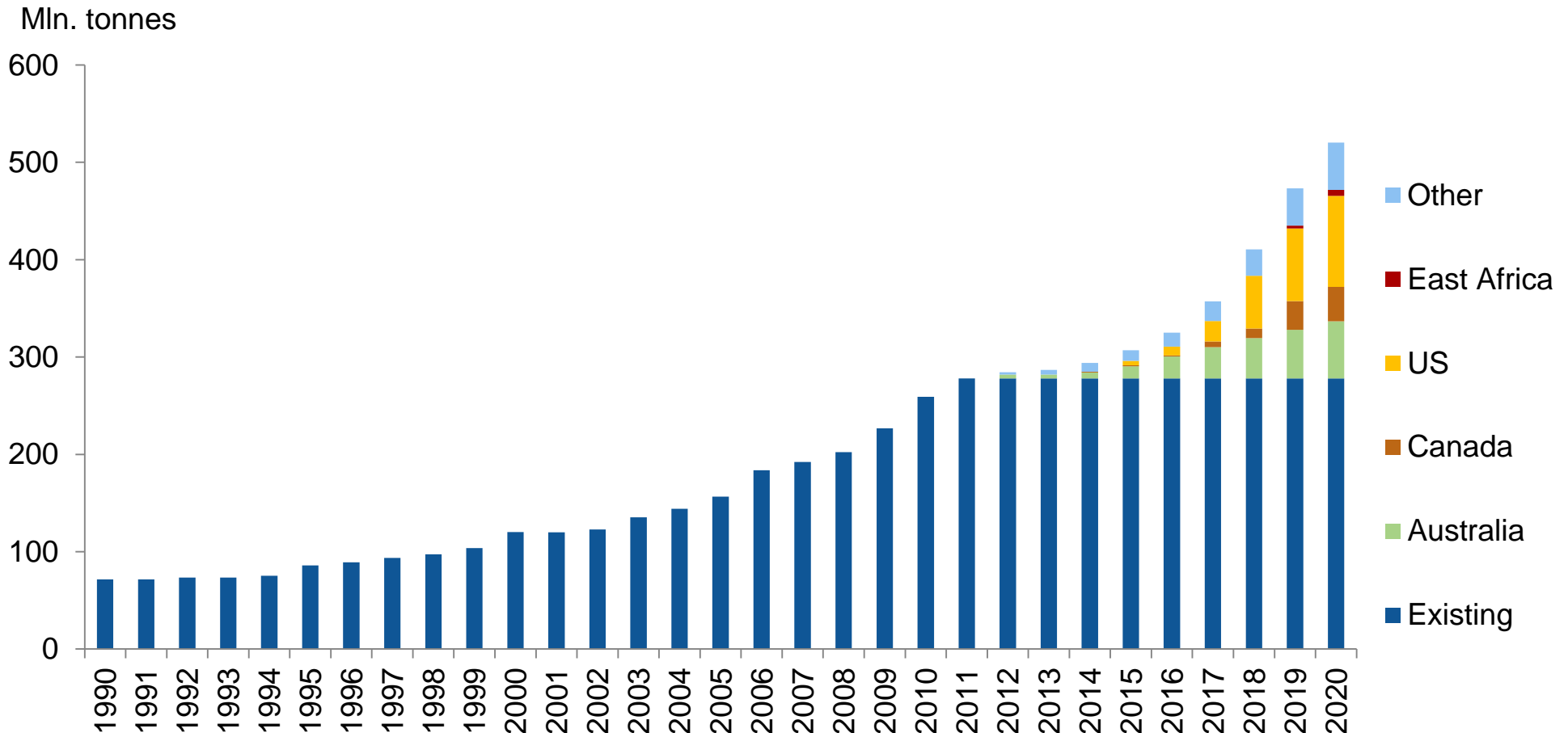
Changes of gas net export and import volumes in 2040 relative to 2010, Baseline and 'Shale Breakthrough' Scenarios



Source: Global and Russian Energy Outlook up to 2040. ERI RAS-AC. 2013.

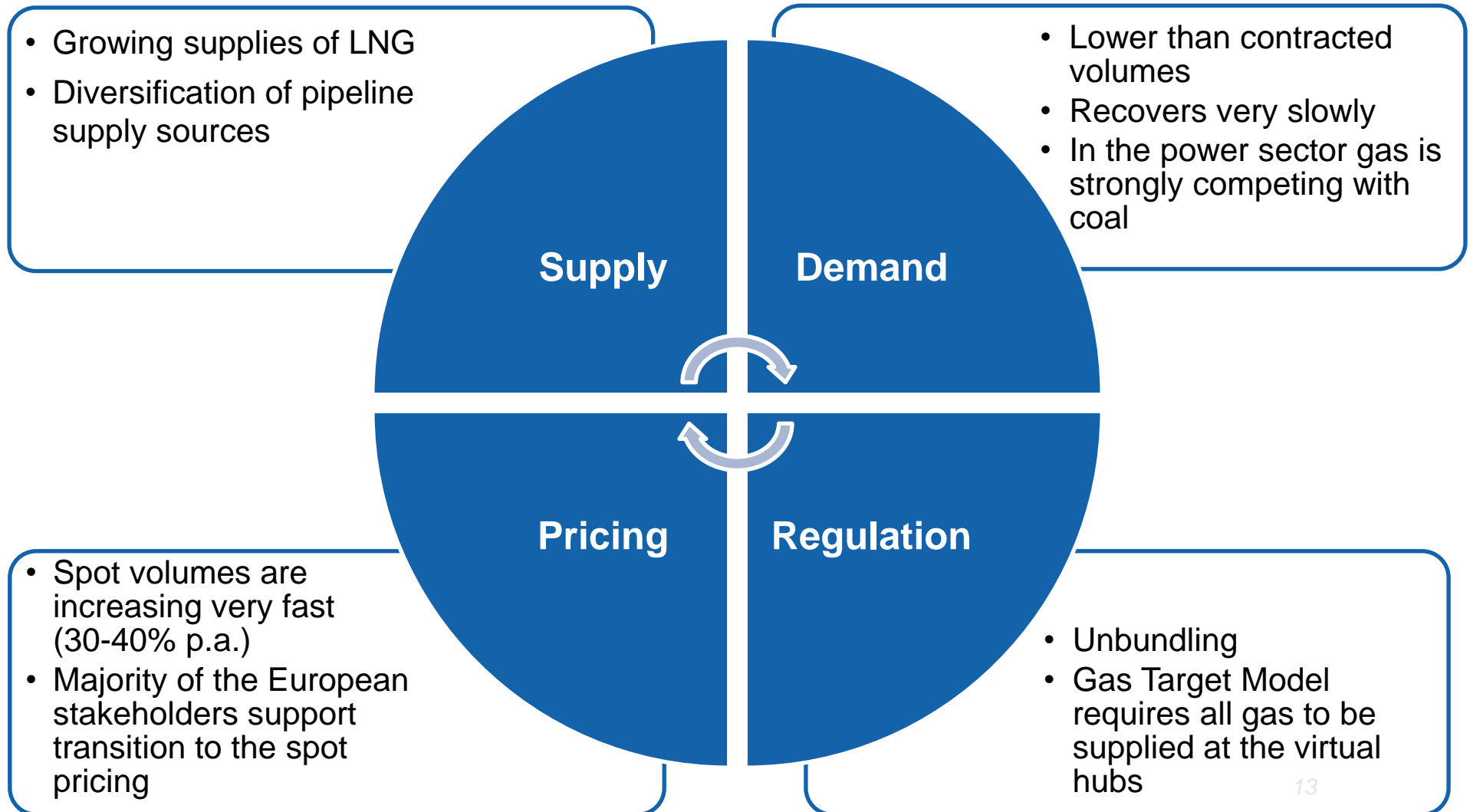
Global LNG supply is expected to boom by the end of this decade with Australia, USA and Canada becoming the largest market players

Global liquefaction capacities (existing and planned)



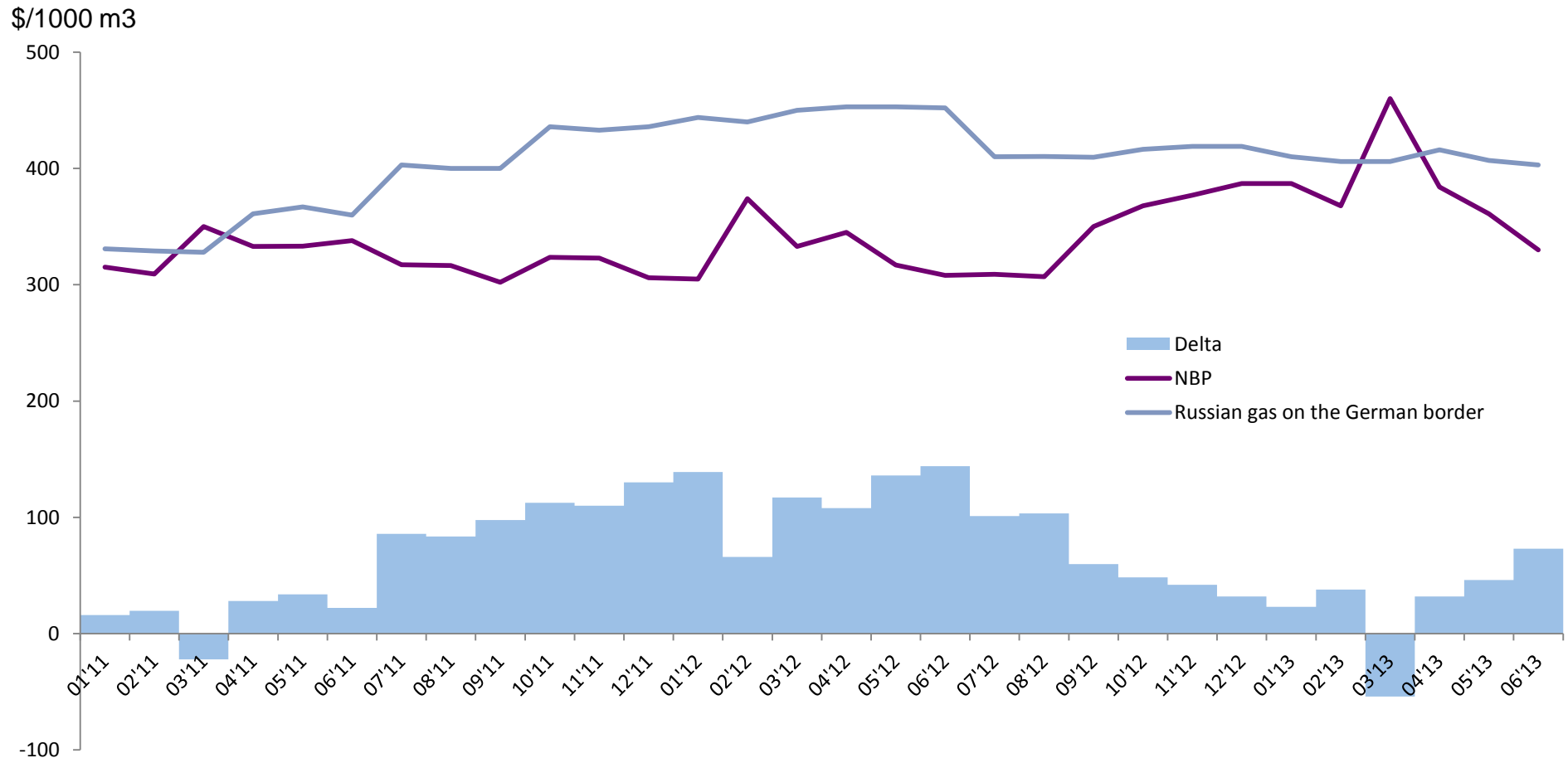
Source: ERI RAS

Situation on the European gas market during the last years did not favor Russian exports...



Russian position in Europe will largely depend on gas pricing: traditional “Groningen” model is questioned now, as even renegotiated oil-linked contract prices are higher than spot-based

European spot and oil-linked gas prices



Source: Bloomberg; ERI RAS.

Gazprom could give further price discounts and increase its market share, but Russia's strategic choice is in favor of the short-term profit maximization...



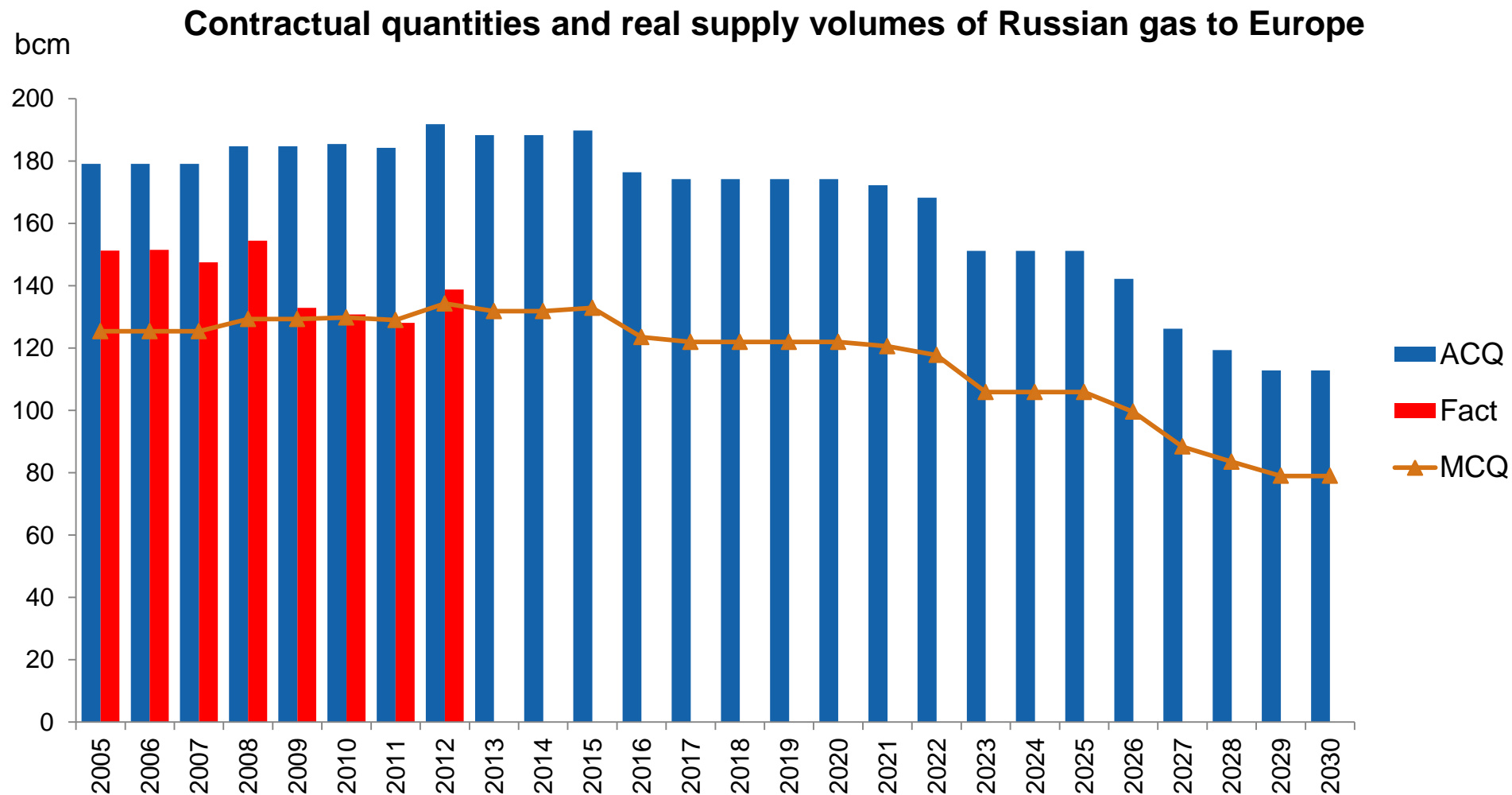
We were faced with the choice of whatever was **to maintain the supply volumes and the market share, or make the profit our high priority.**

As a public and commercially oriented company, Gazprom is interested in increasing profits to provide income to shareholders. Therefore, **the choice was made, the correct one, in favor of the revenues,** and the year results confirmed that.



*Alexander Medvedev,
Gazprom Export*

...ensured by the existing portfolio of the long-term contracts, which guarantees stable sales volumes for Russia until at least 2022



Sources: Cedigaz, Gazprom, ERI RAS.

Oil indexation vs. gas indexation: "a bird in hand is worth two in the bush" approach

Oil indexation

- Disappearing gas glut on the European gas market in the medium term – gap between oil-indexed and spot prices already started to narrow
- Gazprom will face next price reopening only after 2015, and contract expiration – only by 2022
- With high oil prices even lower volumes are providing high revenue
- New projects demand high prices (they have negative margins under spot prices, given that they have to pay export duties) and oil indexation is more convenient for the project financing
- Russian Government needs the money right now

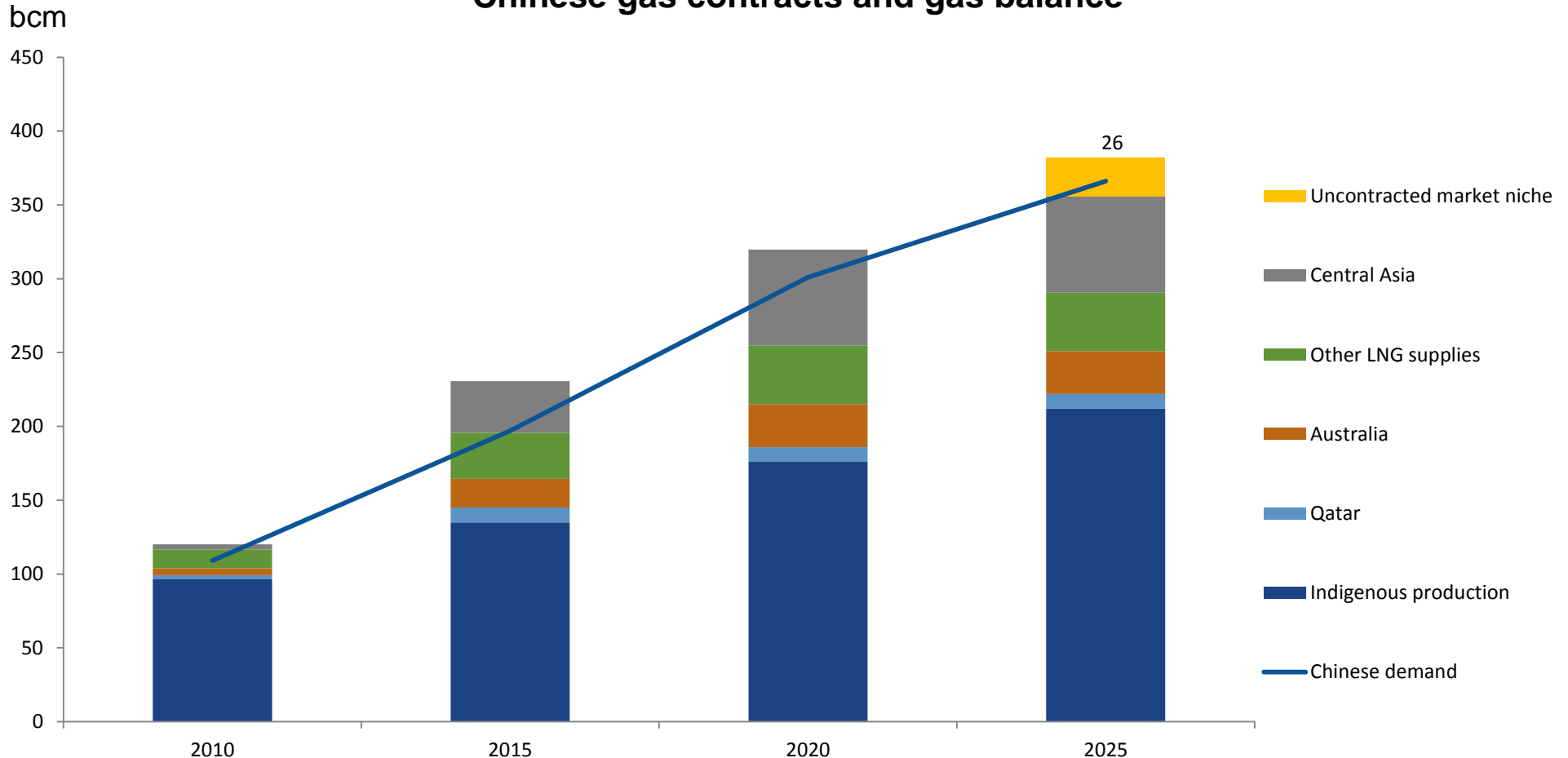
Spot indexation

- Strong pressure from the customers side
- Investigation of the European Commission against Gazprom's pricing
- Gazprom could demand financial compensation for contract review + 3rd Package exemption for the South Stream and NEL + transitional period for price adjustments + European-level financial support for its mega-projects (like EBRD and other European financial institutions)
- Gazprom could become a dominant player manipulating the spot market by adjusting its supply volumes

There are strong reasons for Gazprom to protect the oil indexation at least during the next 3-5 years, but it means that export volumes will not increase significantly

Everybody is expecting new opportunities on the booming Asian gas markets, but by 2020 there is already no market niche in China...

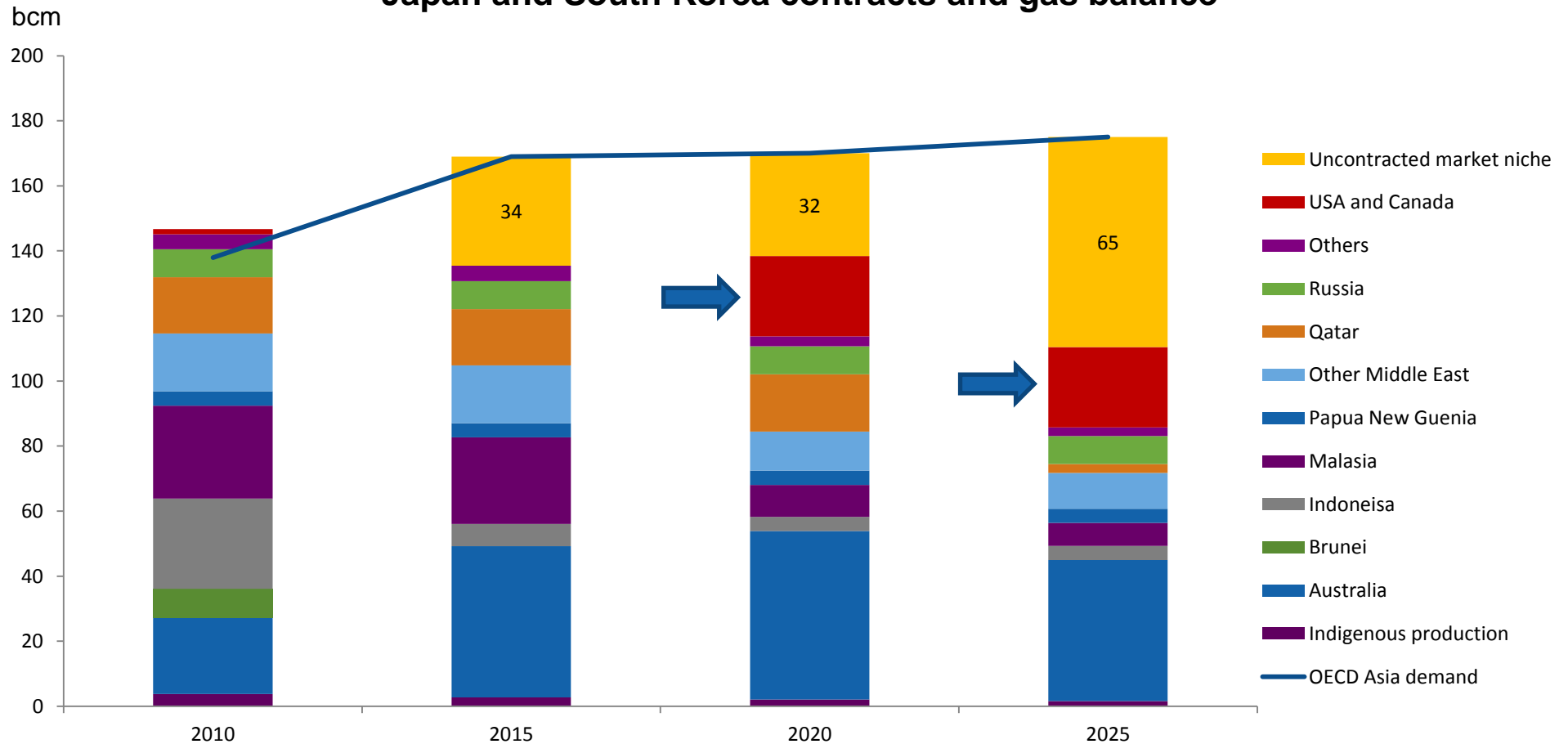
Chinese gas contracts and gas balance



Sources: IEA, Cedigaz, Enerdata, ERI RAS.

...and OECD Asia is quickly contracting the North American LNG

Japan and South Korea contracts and gas balance



Sources: IEA, Cedigaz, Enerdata, ERI RAS.

Russian “Eastern Gas Program” is moving on, but as there are still no SPAs, the window of opportunities is becoming smaller and price negotiations have now to take into account Henry Hub pricing of the potential US LNG



Sources: Gazprom

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LNG in the Governmental policy

- ❑ Increasing export volumes
- ❑ Geographic diversification, access to the new markets in (South America, South-West Europe, Asia Pacific, Africa and Middle East)
- ❑ No transit risks with strong control over transportation to the final customers
- ❑ Arbitrage opportunities
- ❑ Regional development (sensitive regions - Arctic, Far East)
- ❑ New technologies (including shipbuilding)
- ❑ Northern Sea Route development
- ❑ Securing geopolitical position in Arctic and in Asia Pacific

Share of LNG in gas exports, according to ES-2030, %

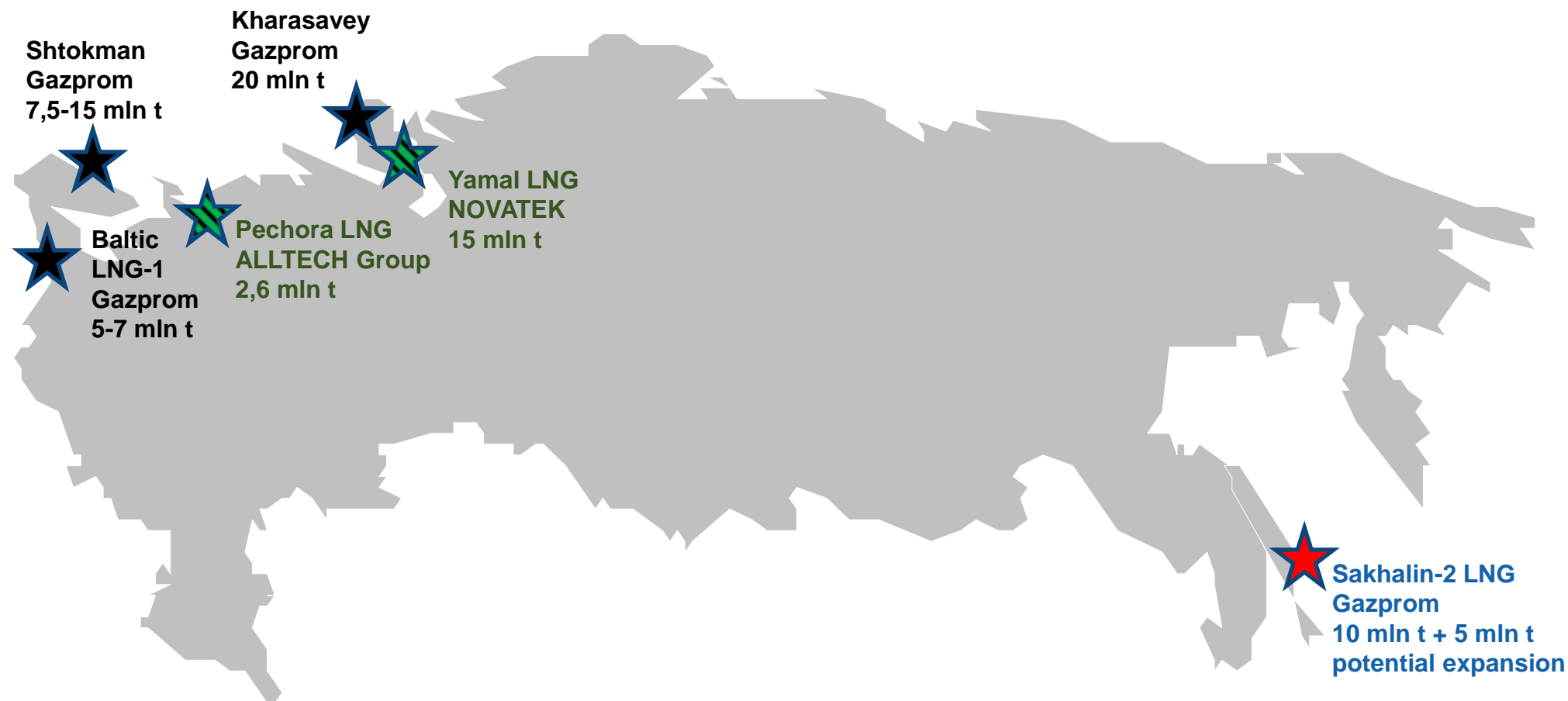
	1 stage	2 stage	3 stage
LNG share	6-7	10-11	14-15

Source: ES-2030.

LNG in Russia: Stage 1. Disappointments

- ❑ **Sakhalin-2.** “Foreigners project”, PSA compromised.
- ❑ **Kharasavey.** Abandoned due to very high costs.
- ❑ **Baltic LNG-1.** Economically inefficient
- ❑ **Shtokman.** Postponed for unclear period of time
- ❑ **Independents (Pechora and Yamal-LNG).** In limbo without export permission

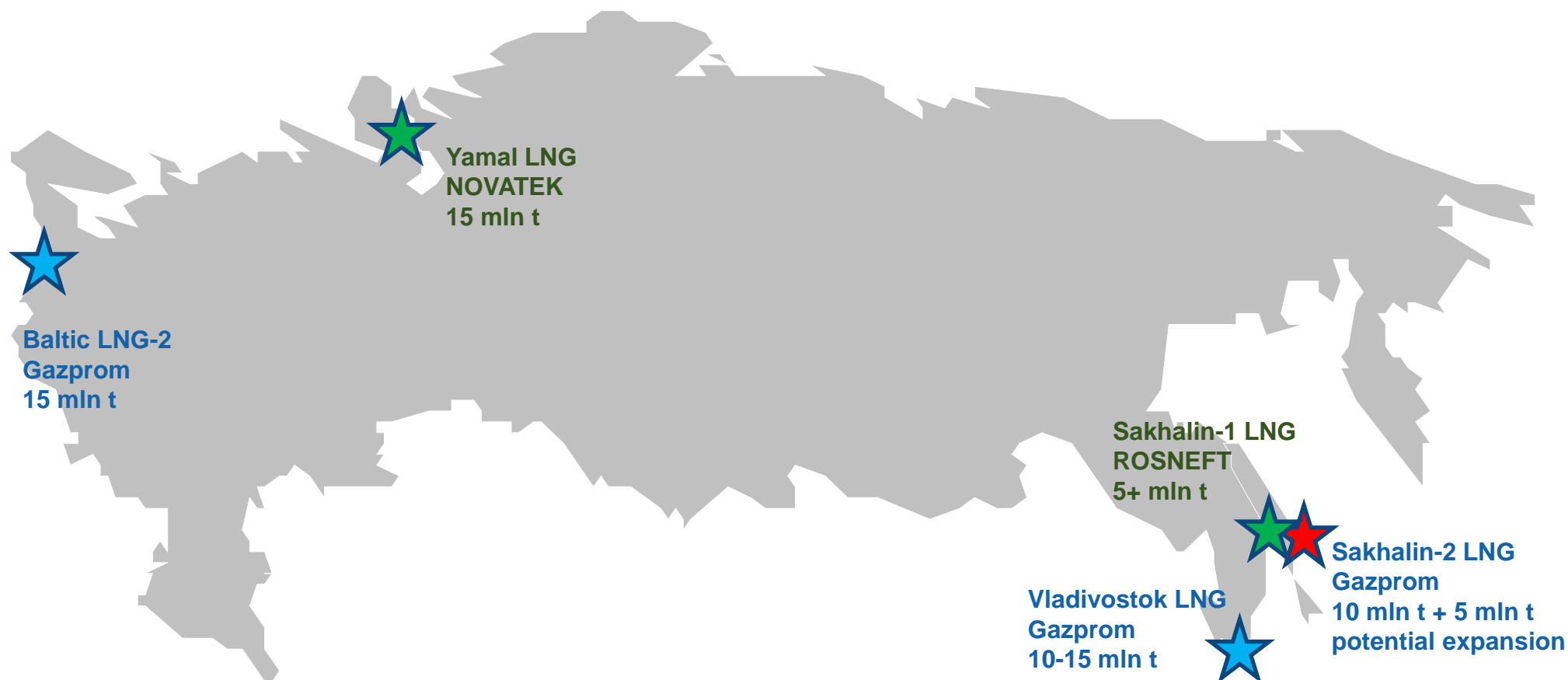
First 5 Russian LNG projects were not able to develop in the existing economic conditions and regulatory framework



LNG in Russia: Stage 2. Trying to catch the last train

- ☐ **Vladivostok LNG**
- ☐ **Sakhalin-2 expansion**
- ☐ **Baltic LNG-2**
- ☐ **Yamal-LNG**
- ☐ **Sakhalin-1**

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

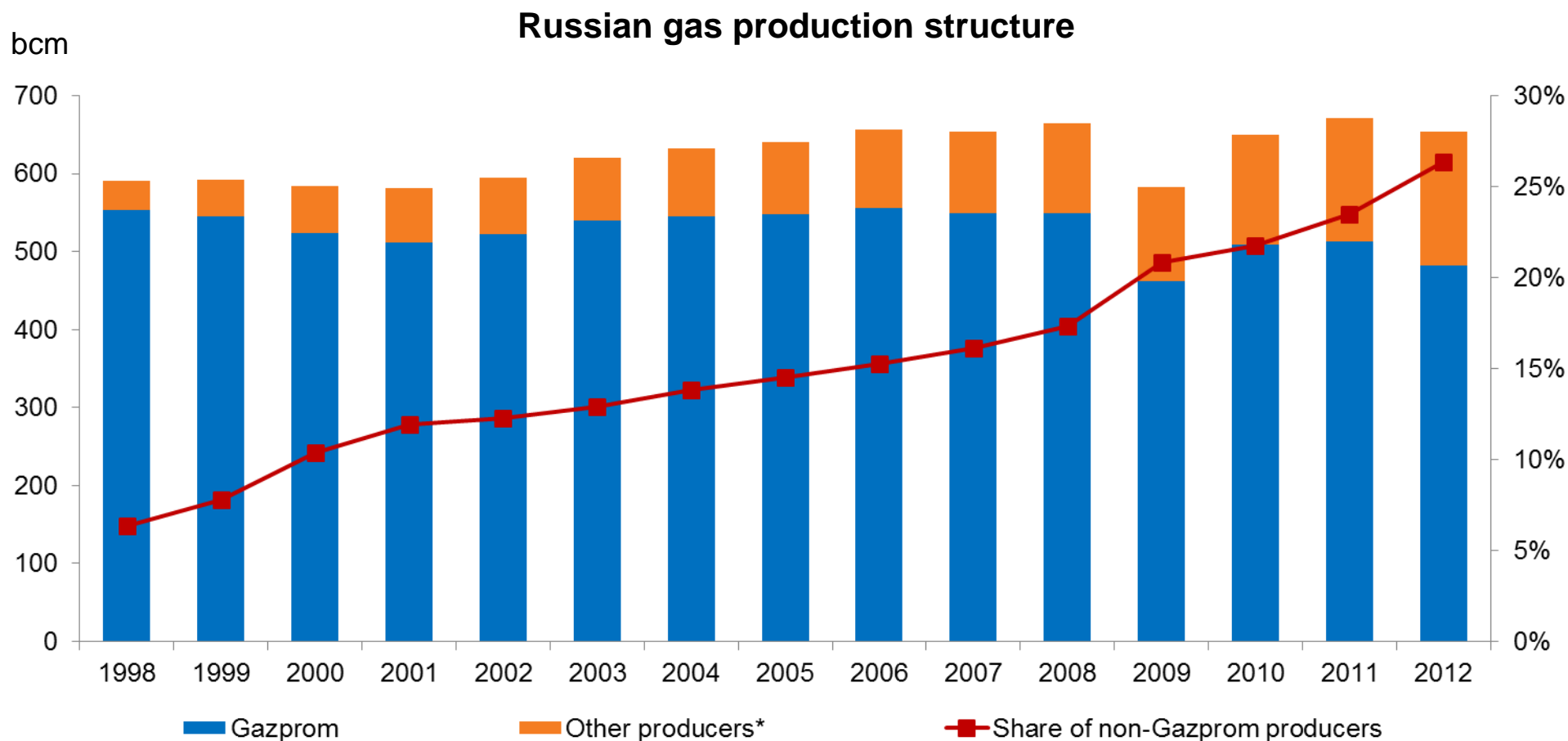


LNG export permissions might be approved only for special cases and only under very strict control of the State. Due to the limited volumes and long lead time these LNG projects will not significantly affect Russian and global balance during this decade. In the longer term Russian LNG export could reach up to 50-70 bcma.

LNG export liberalization – just a part of a power game



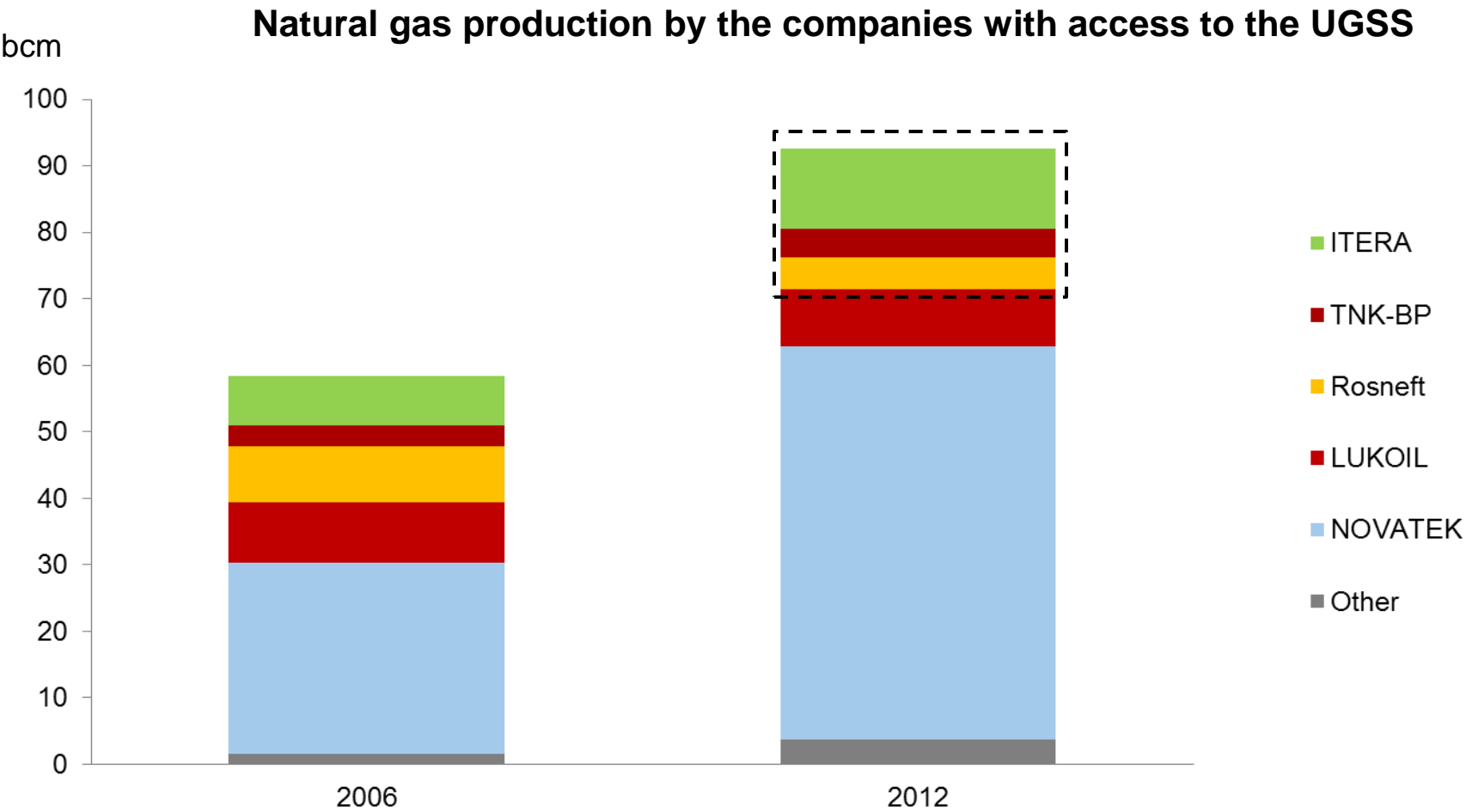
Independents are improving their positions on the domestic market, though complete market liberalization and Gazprom's ownership unbundling are not currently under discussion



* Other producers include PSA and APG

Sources: CDU TEK, ERI RAS

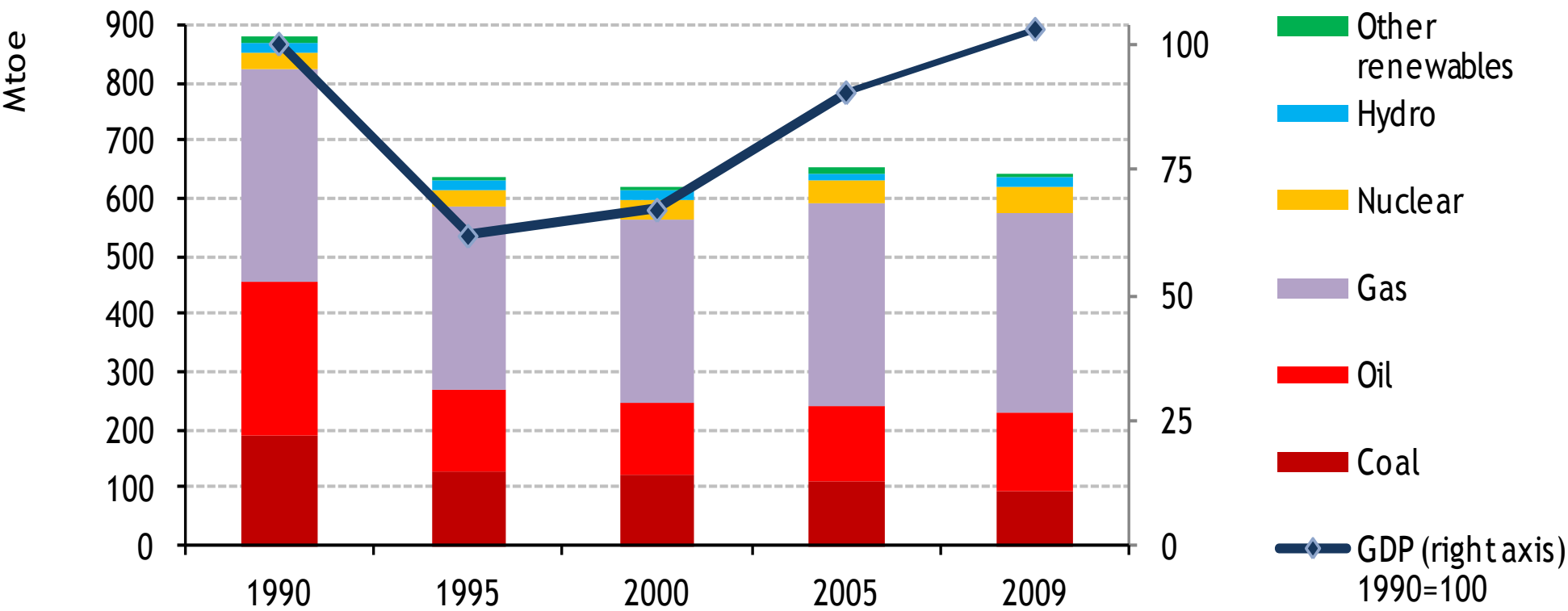
But at the same time the industry is consolidating, now there are only three major non-Gazprom players left on the market: NOVATEK, Rosneft and LUKOIL



Sources: CDU TEK, ERI RAS

Gas is strongly dominating Russian primary energy demand

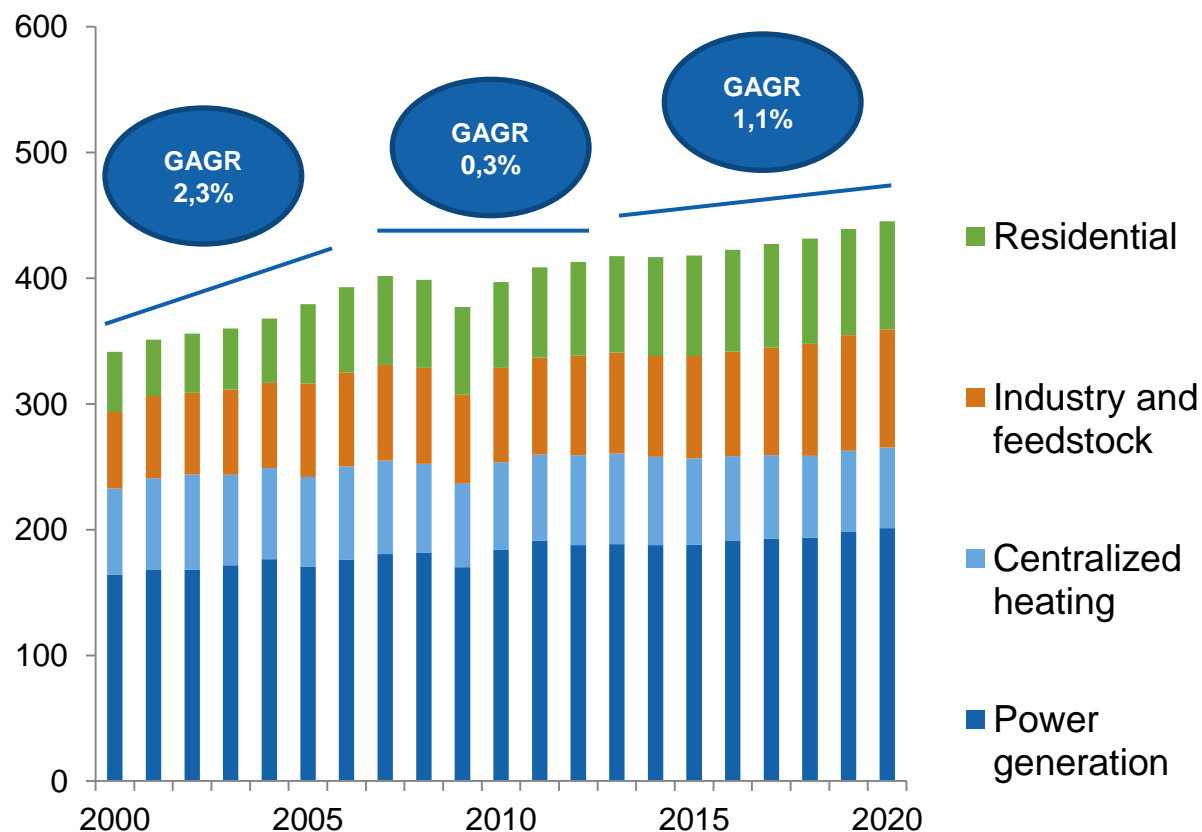
Structure of the Russian primary energy demand



Source: IEA

Limited demand growth on the domestic market enforces competition between major players for the most attractive market segments

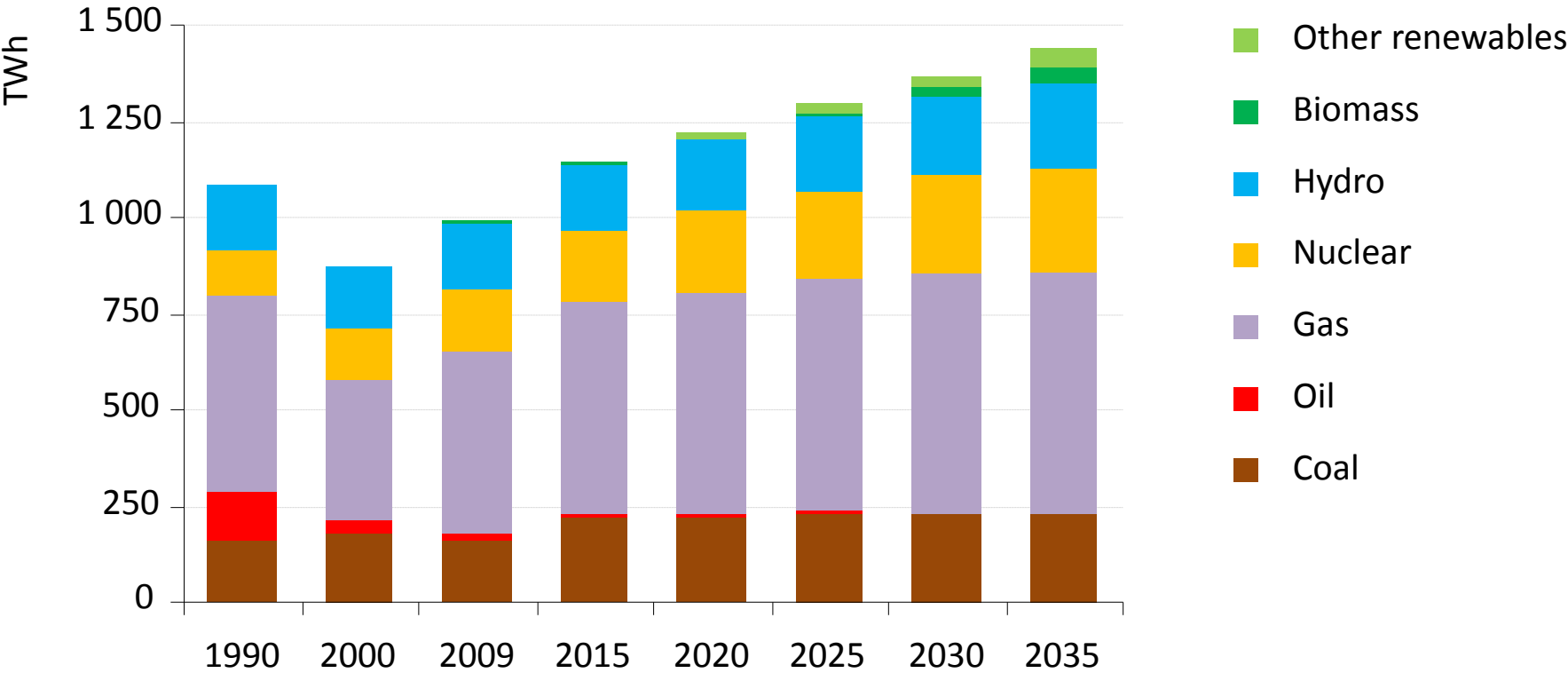
Russian gas demand by sector until 2020 (optimistic scenario)



	2012	2020	Δ	AGR 2012- 2020
Total consumption	428	468	40	1,12%
Power generation	188	201	14	0,88%
Centralized heating	72	64	-7	-1,36%
Industry and feedstock	79	94	15	2,17%
Residential	75	86	11	1,78%

Gas remains the backbone of Russia's power sector

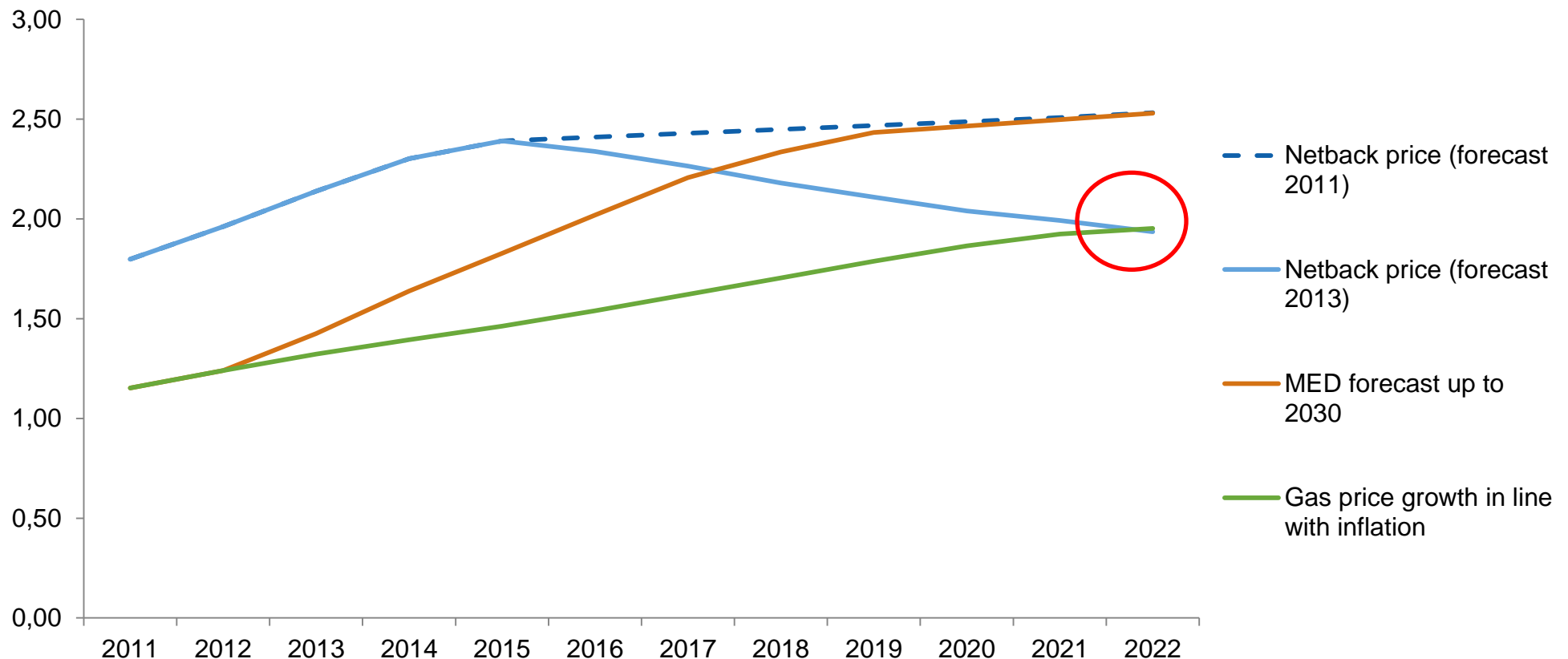
Electricity generation by fuel in Russia



Source: IEA

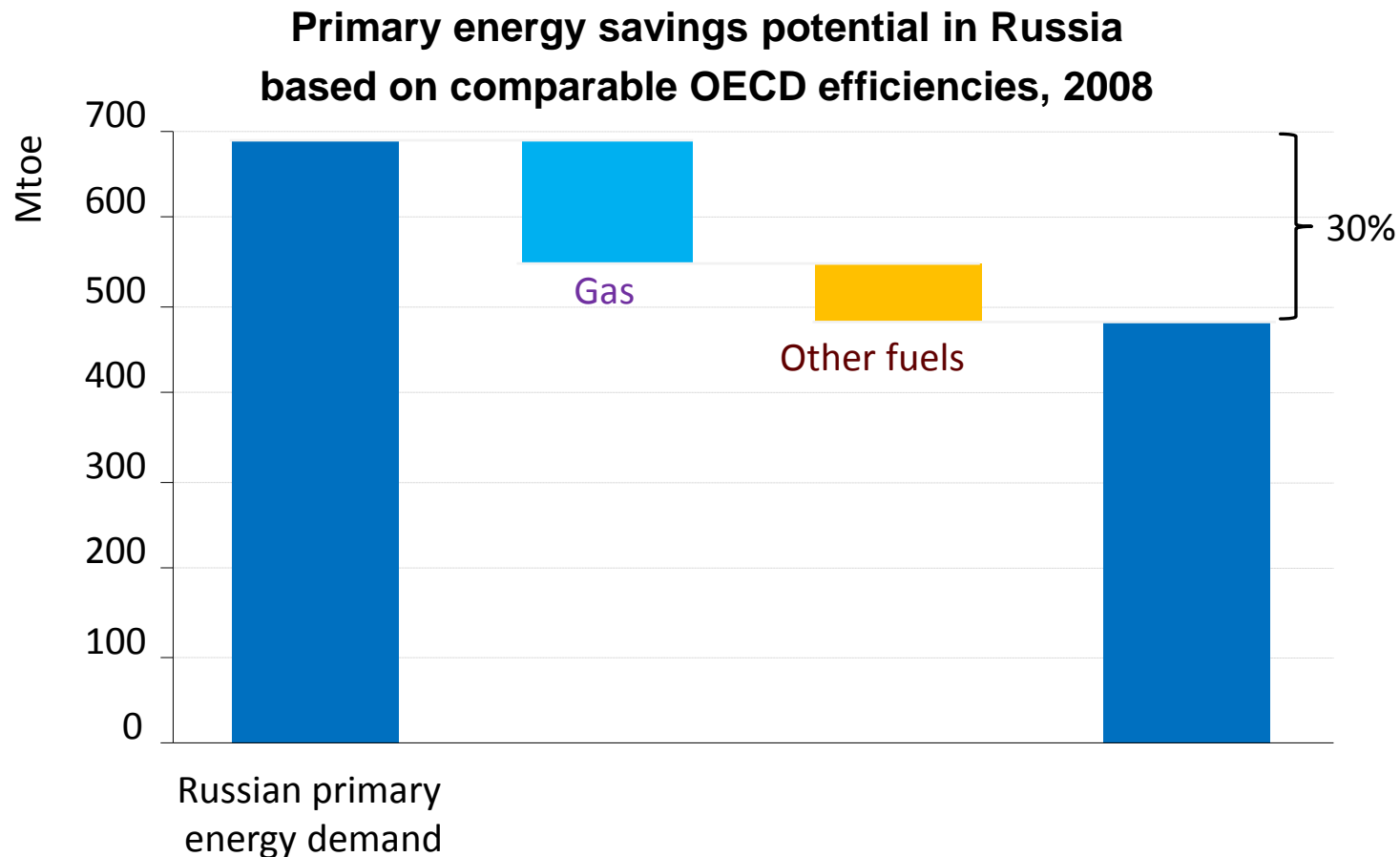
Government frightened by the industrial output decline is ready to slow gas and electricity prices growth down to the rate of inflation, which is justified by lower European prices and weak domestic demand

Different proposed dynamics of the domestic gas price increase (compared to 2010 = 1)



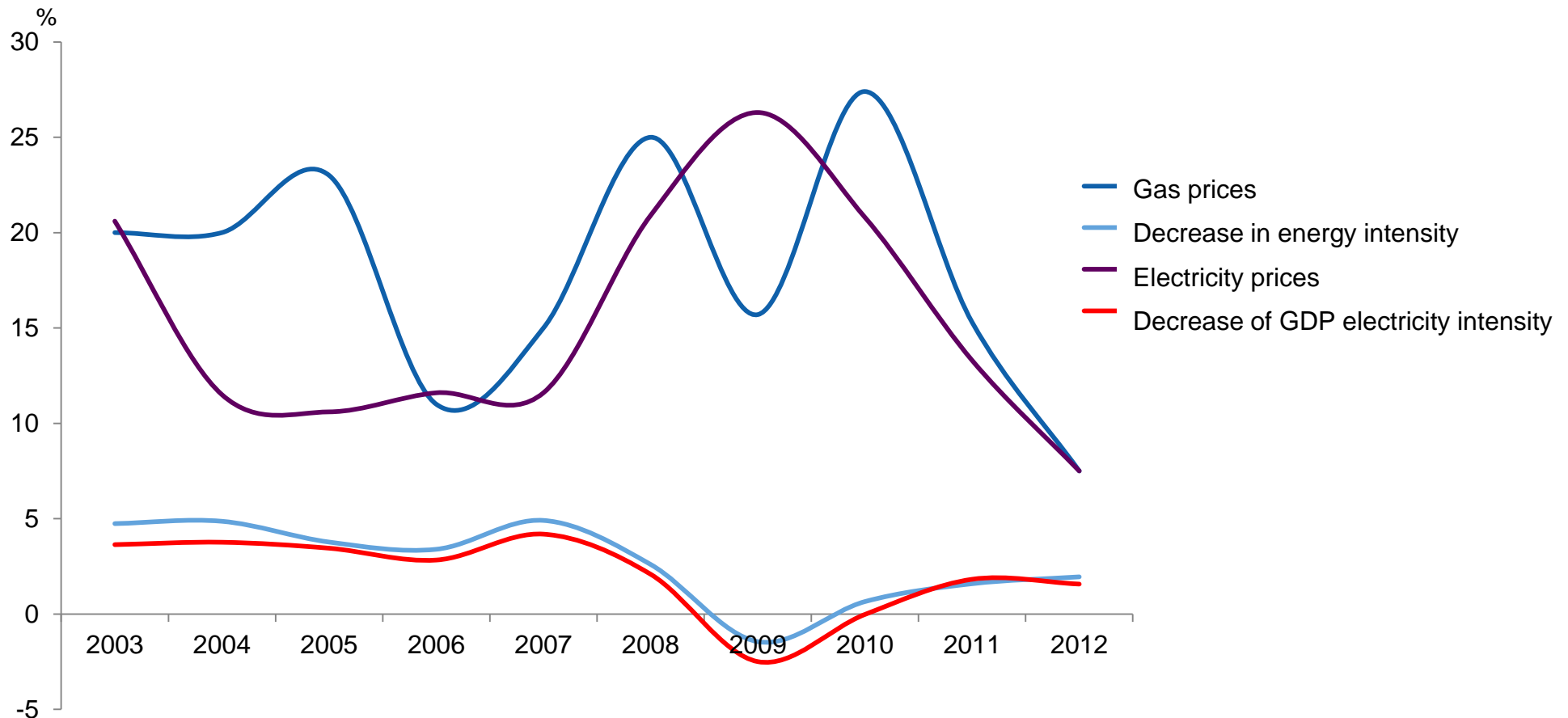
Sources: MED, ERI RAS.

Russia has huge potential to use energy more efficiently: energy consumption could be decreased by 30%; There is much real concern for improving efficiency in government plans, but...



...it is not working, moreover even higher prices do not lead to stronger energy saving due to administrative barriers, high cost of the capital and overall investment climate

Gas and electricity prices growth rates and rates of energy and electricity intensity reduction



Sources: Rosstat, ERI RAS

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Main measures to support competitiveness of the Russian energy resources

- ❑ **Cost control together with a thorough evaluation of cost-effectiveness of the new projects and huge investment programmes and their potential risks.**
- ❑ **Taxation system reform:** currently an efficient break-even point for the Russian upstream oil projects is fixed at 25 \$/bbl due to outdated volume-based taxation.
- ❑ **Energy saving.** Russia has a huge potential, but it is limited by inappropriate regulatory framework and lack of access to financing.
- ❑ **International consortia development** – attracting foreign partners into the consortia engaged in resource development (this refers especially to the eastern part of the country, the coastal shelf, and deposits of unconventional hydrocarbons). If properly managed, it would enable the country to:
 - attract foreign investment and apply advanced technology;
 - develop types of business activities with potential, under new conditions;
 - ensure tight control over costs and other business results;
 - obtain additional assurances for product sales; and
 - facilitate access to logistics and adapt to the rules of international markets.

Conclusions

- ❑ More competitive external environment and domestic challenges are creating less favorable conditions for the Russian oil and gas industry. It will hardly be able to provide the same high share of the budget incomes in the future. EIRAS estimates show, that unfavorable situation on the export markets could lead to lower export volumes and slow down Russian GDP growth by 1% p.a.
- ❑ Russian gas industry still has a huge potential for export growth, but without strict costs control, cautious evaluation of the export projects and more flexible pricing system these opportunities could be lost.
- ❑ LNG is Governmental priority, but due to technological, economic and regulatory problems and also increasing competition between main market players, the massive supplies seem to be postponed to post-2020.
- ❑ Competition is also increasing at the oversupplied domestic market, though Gazprom remains dominant player.

Contacts

Energy Research Institute of the Russian Academy of Sciences

"Global and Russian Energy Outlook up to 2040"

http://www.eriras.ru/files/Global_and_Russian_energy_outlook_up_to_2040.pdf

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