

ROLE OF RUSSIA IN THE CHANGING GLOBAL ENERGY LANDSCAPE



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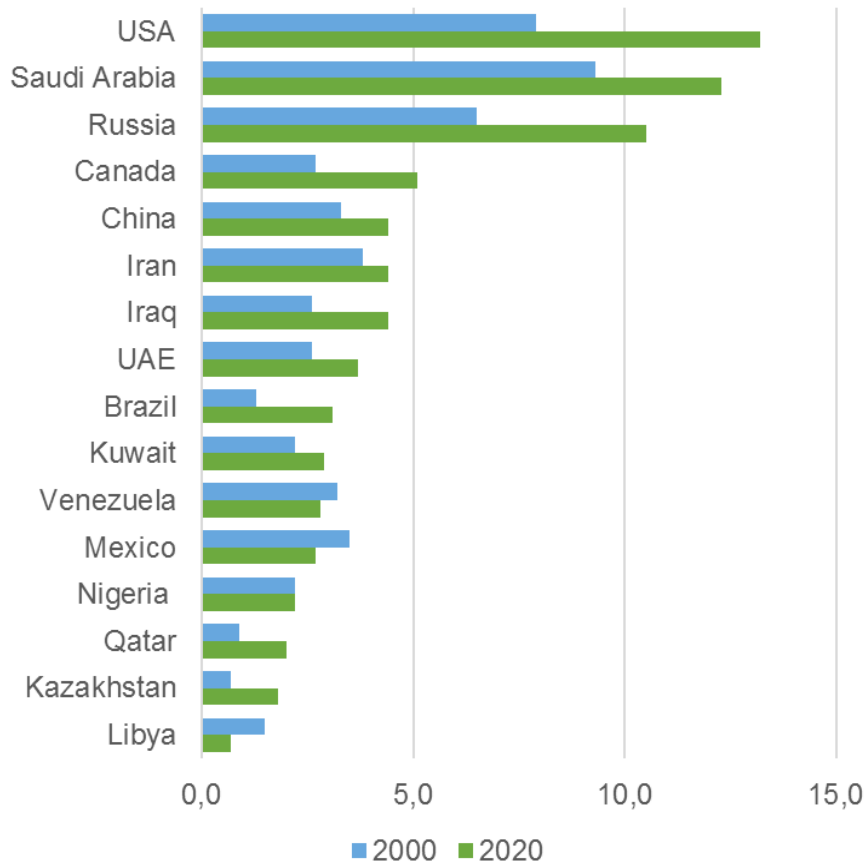
New challenges for Russia: changing global energy and geopolitical landscape

- Hydrocarbon demand stagnation in Russia's main export markets
- Increased global supply of hydrocarbons (including the U.S. shale revolution) with aggressive competition from other traditional and new suppliers entering the market (e.g., the United States, Iran, Iraq, Australia, East Africa, and Brazil)
- Low hydrocarbon price environment
- Geopolitical tensions with the West, including U.S. and EU sanctions introduced against Russia as a reaction to the annexation of Crimea

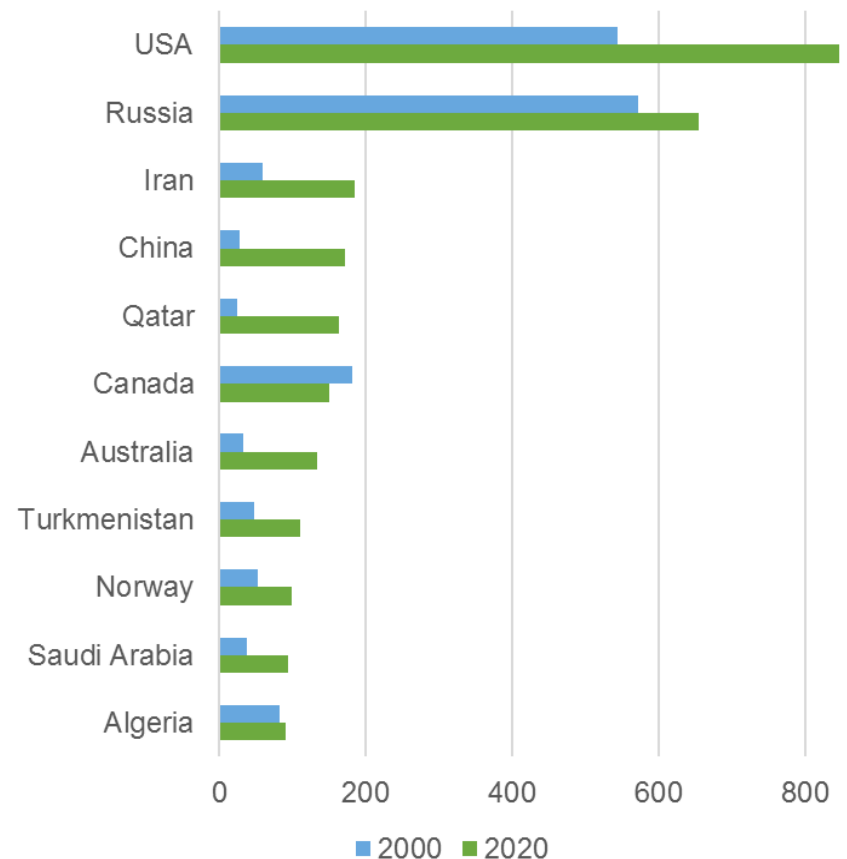


In two decades the number of big oil producers (over 4 mb/d) will double, and the number of big gas producers (over 100 bcma) will increase 3 times

Major oil producers in 2000 and 2020

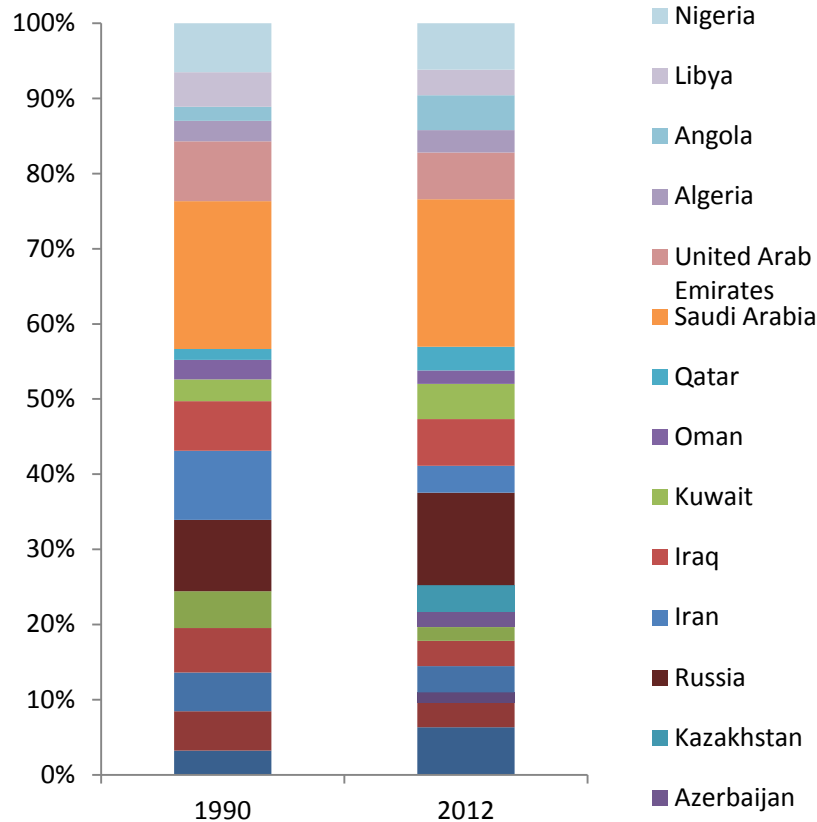


Major gas producers in 2000 and 2020

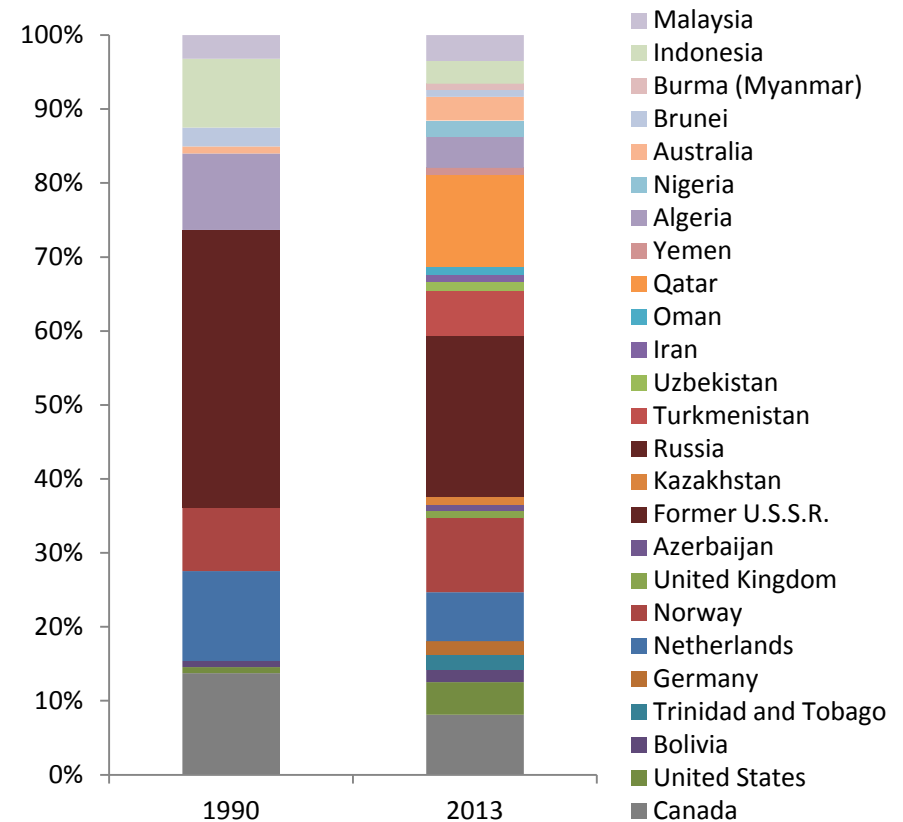


Changing global energy landscape: the number of oil and gas exporting countries is increasing, so the international markets are becoming more competitive than ever

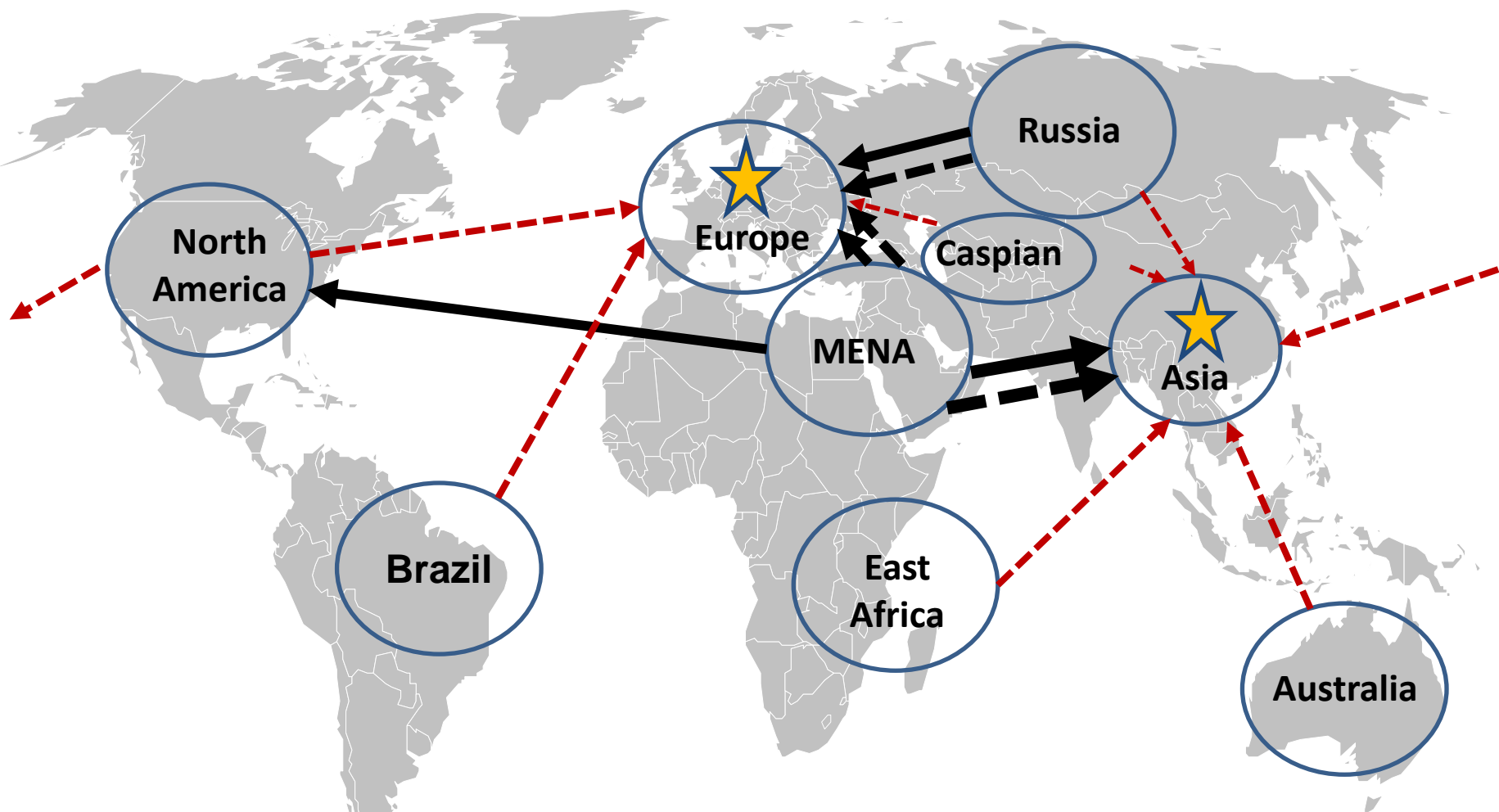
Main exporters of crude oil in 1990 and 2012 (KBPD)



Main exporters of dry natural gas in 1990 and 2013 (BCF)



Changing global energy landscape: “repartition” of the shrinking niches in the buyers` market and changing energy flows



Key elements of uncertainty

- Players strategies (cooperative or non-cooperative)
- Geopolitics
- Investment availability and speed (price elasticity of supply)
- Costs dynamics (learning curves, new technologies, currencies and exchange rates, cost deflation due to the competition between subcontractors, “sweet spots” depletion, development of the drilled but non-fracked wells)
- Policies on taxation and access to the subsoil in the producing states
- Global economic performance and demand prices elasticity

***EVERYBODY AGREE, THAT THE PRICES WILL GO UP AT A CERTAIN POINT,
BUT NOBODY KNOWS WHERE EXACTLY THIS POINT WILL BE***



Russian domestic challenges for the oil and gas industry

- Structural economic crises
- Stagnant domestic energy demand
- Frozen domestic regulated prices for natural gas
- Natural depletion of Soviet legacy fields and the growing need to explore new hard-to-reach and expensive-to-develop oil and gas provinces
- Increasing problems with the access to financing due to the sanctions, low prices and weak domestic financial market
- The institutional framework in the energy sector, which has reached a critical level of inefficiency: high corporate concentration and a lack of market mechanisms are destroying its value



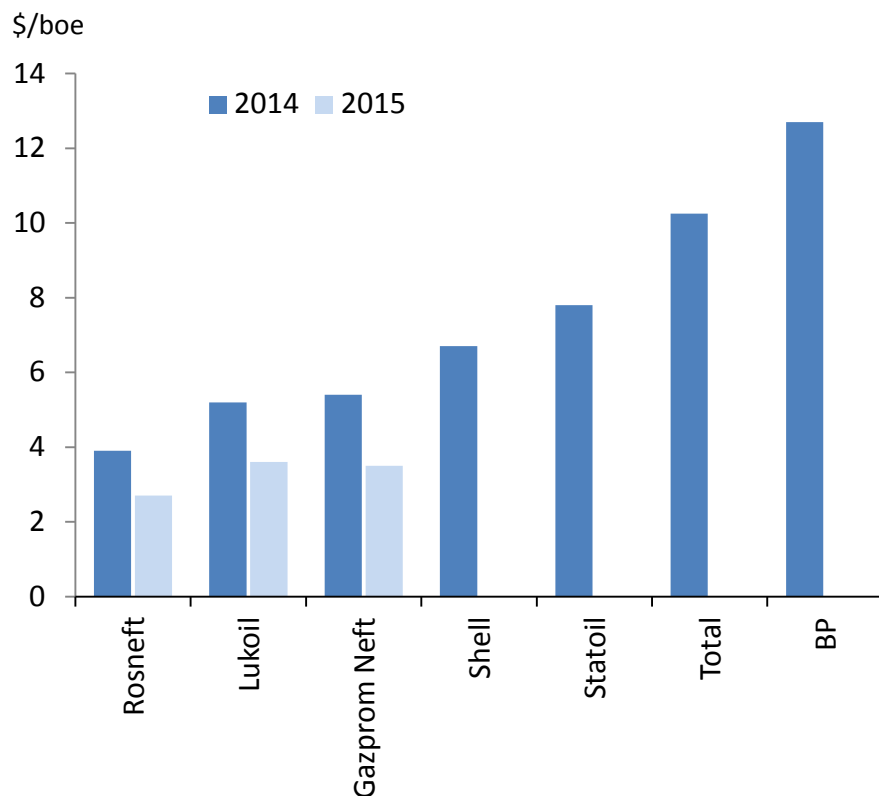
Low oil prices reduce financial sustainability of the oil companies and result into reductions of their investment plans...

- Most of the large upstream and midstream projects are postponed, such as Arctic offshore oil and gas development and shale oil development
- As of the end of 2015, the large oil companies reduced exploration drilling investments by 12% and federal budget financing was also reduced by 20%
- According to the Energy Ministry, major Russian oil companies have already postponed development of the new oil fields with total production capacity of 26 million tons per annum (approximately 5% of the current oil output)
- The inevitable result of these cuts will be long-term reduction of the oil and gas production and processing, slowdown in the renovation of the sector's capital assets, new technologies implementation and efficiency improvements



... but Russian oil companies are still very competitive (especially after devaluation)

Oil production costs comparison, \$/boe



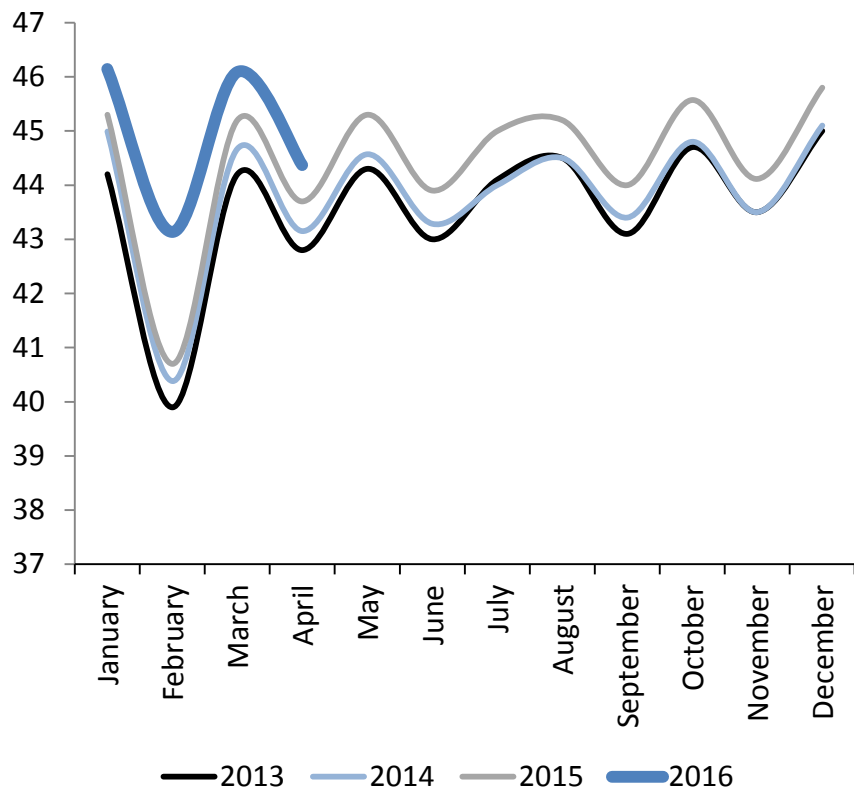
Reasons for the production growth:

- Main contribution was provided by gas condensate and by the new greenfields (Talakanskoe, Verkhnechonskoe, Vankor and Uvat), where major investments were made in the period of high oil prices prior 2014
- Ruble devaluation (as the majority of costs is nominated in rubles)
- Progressive scale of Russian oil taxes, which go down when the crude price falls – so it was mainly the Russian federal budget, which took the heat of the oil price decline
- Tax concessions, provided for the new fields in Eastern Siberia in 2013

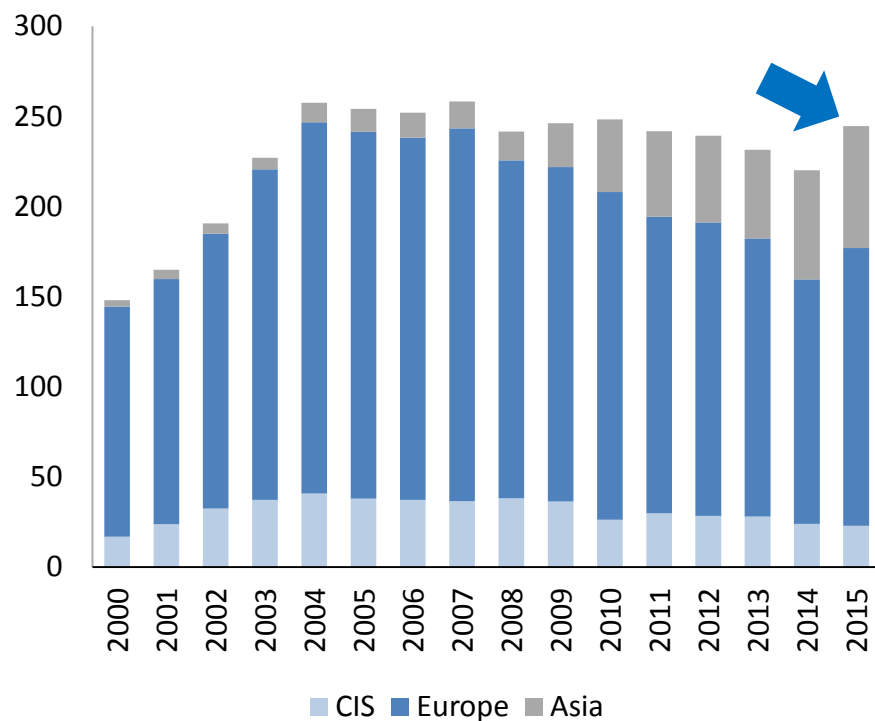


Status quo: oil production and exports are increasing

Monthly oil production in Russia in 2013-2015, mln. tonnes



Russian crude oil export dynamics by destination in 2000-2015, mln tonnes

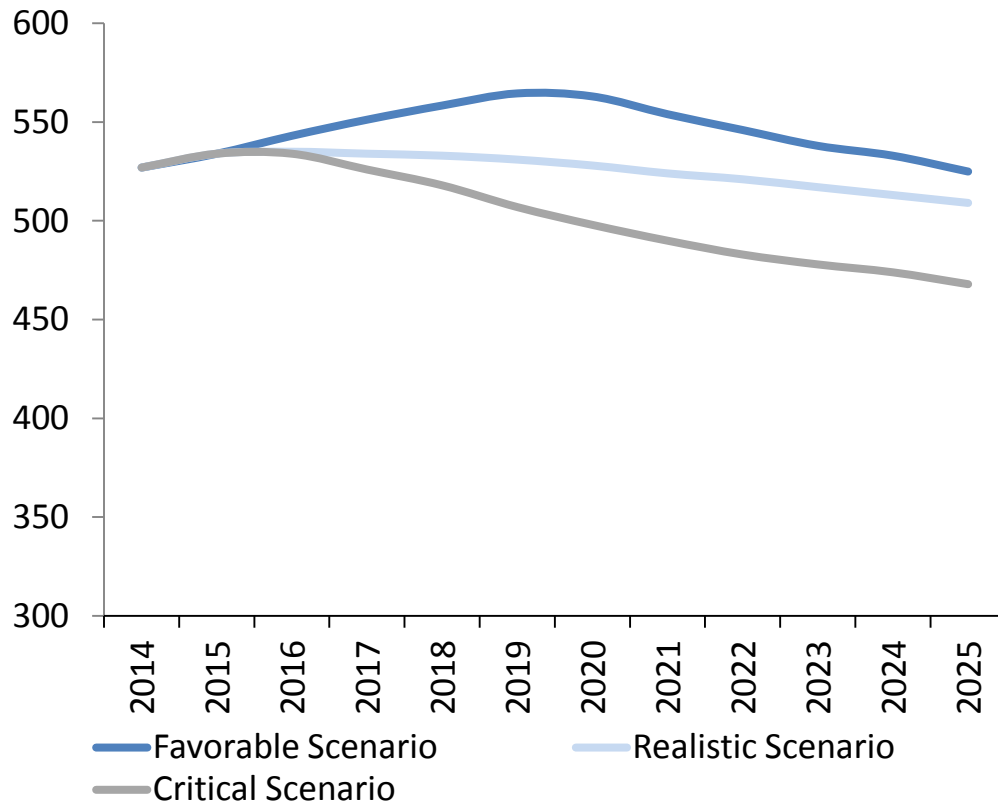


**In 2015 27% of Russian oil exports were going to Asia,
by 2025 this figure is expected to increase up to 40%**



In all scenarios Russian liquids production will increase in 2016 due to past investment, but in the long-term it will decline, though at very different rates

Russian oil and gas condensate production and export, mln. tonnes

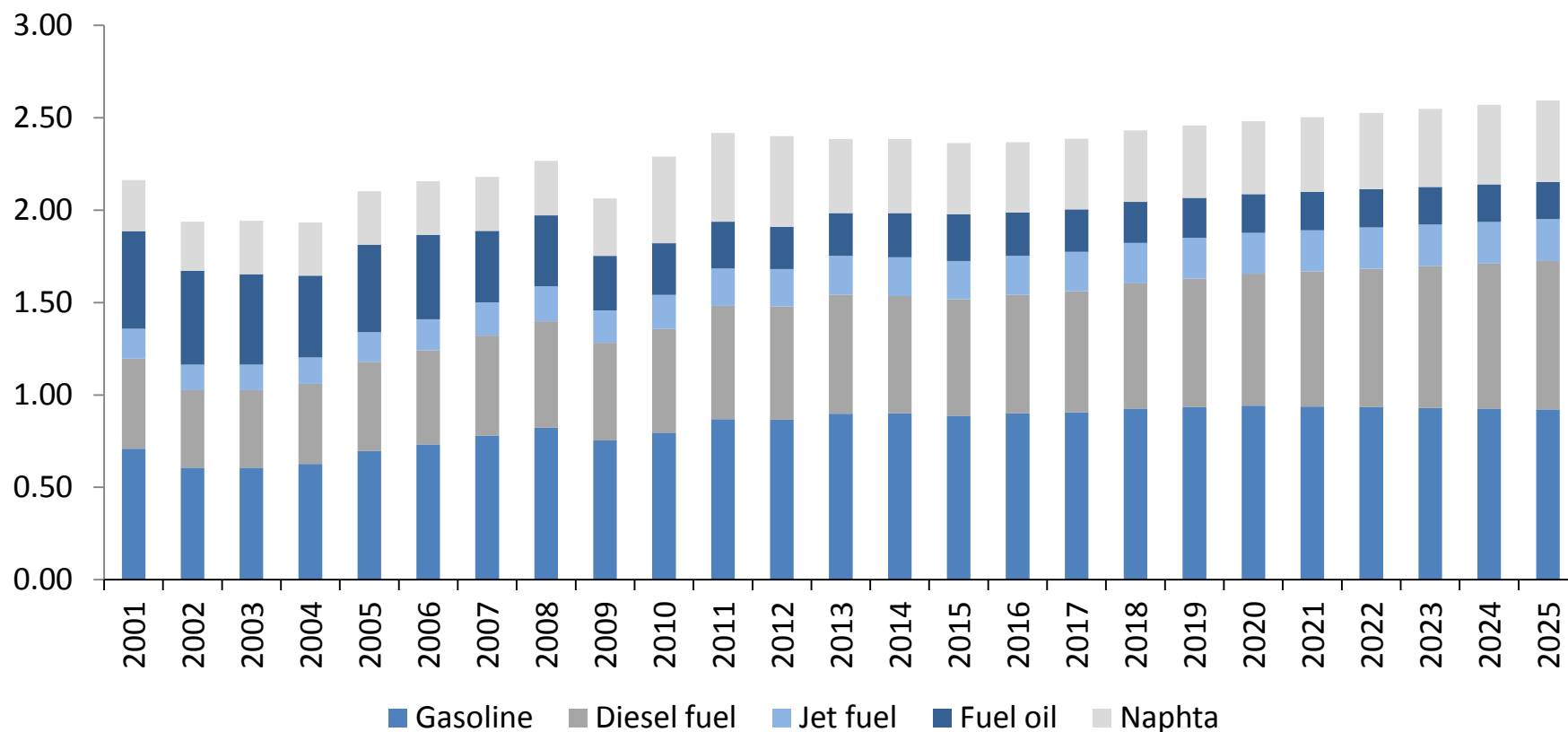


- In 2016 output will continue rising under any scenario driven by past investments - “next generation” fields, such as Novoport and the Prirazlomnoe expansion (owned by Gazprom Neft), Yarudeiskoye (Novatek), Suzun, Messoyakha, Labaganskoye (Rosneft), Trebs and Titov (Bashneft and Lukoil), and others, will sustain production levels in 2016-2017.
- Post 2017 main factors will be:
 - Oil prices
 - Additional tax pressure
 - Sanctions



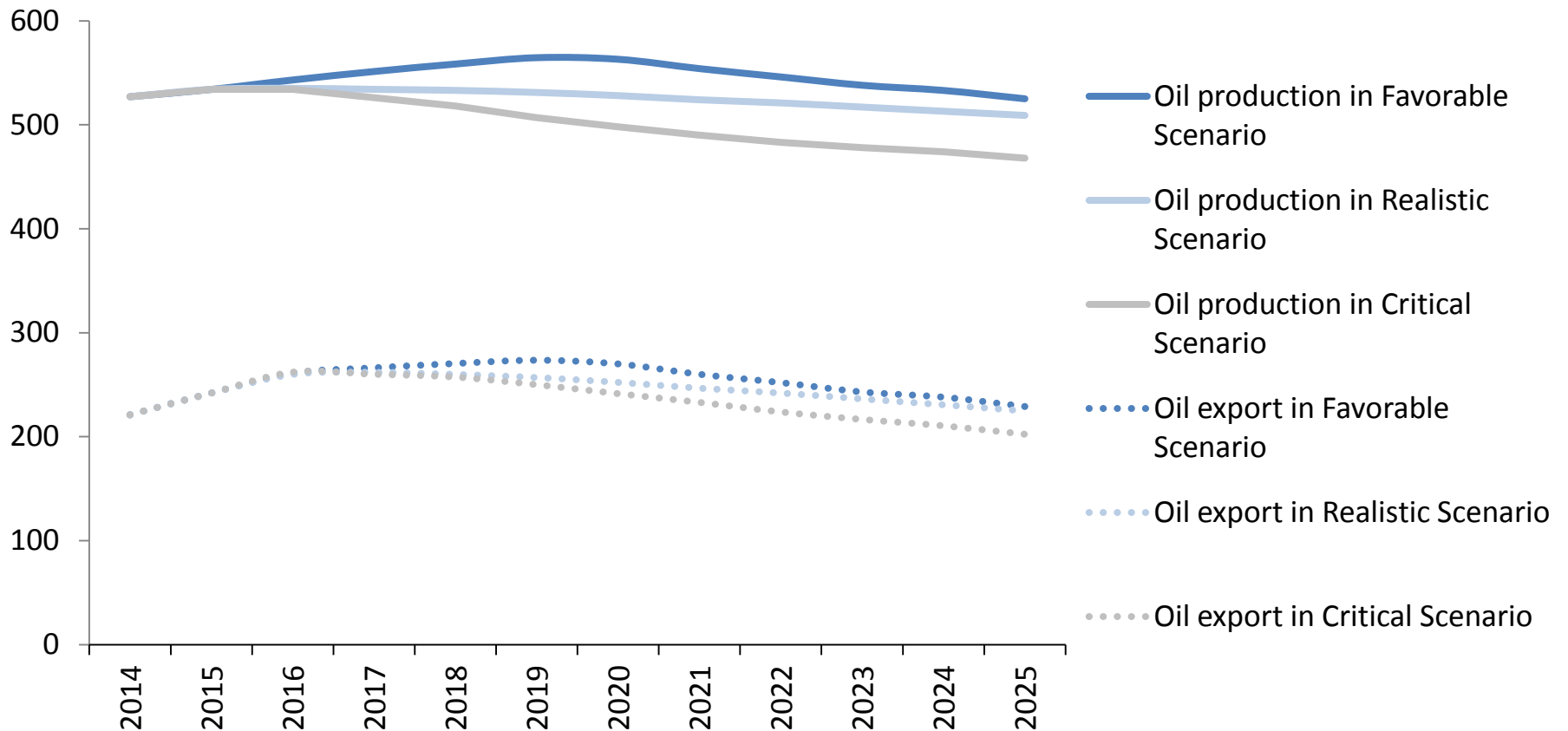
Domestic liquids demand depends on GDP growth rates, it is stagnating, thus becoming a balancing factor for the oil balance

Domestic demand for the main oil products, MMb/d



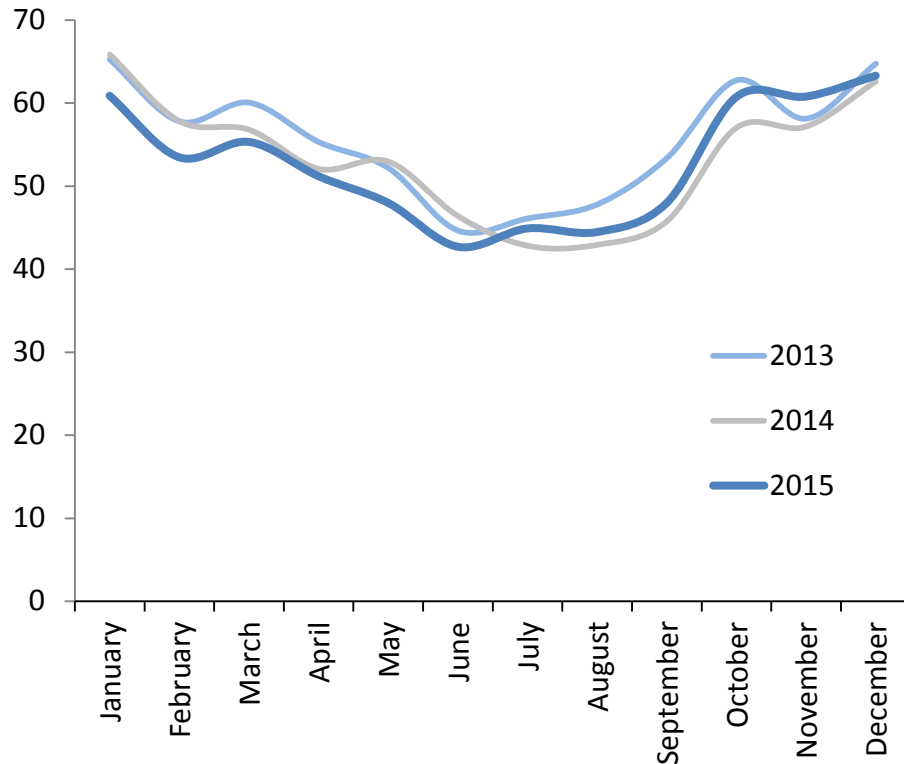
Future Russian export potential is much more stable than production due to stabilizing role of the domestic demand

Russian oil production and export forecast, million tonnes

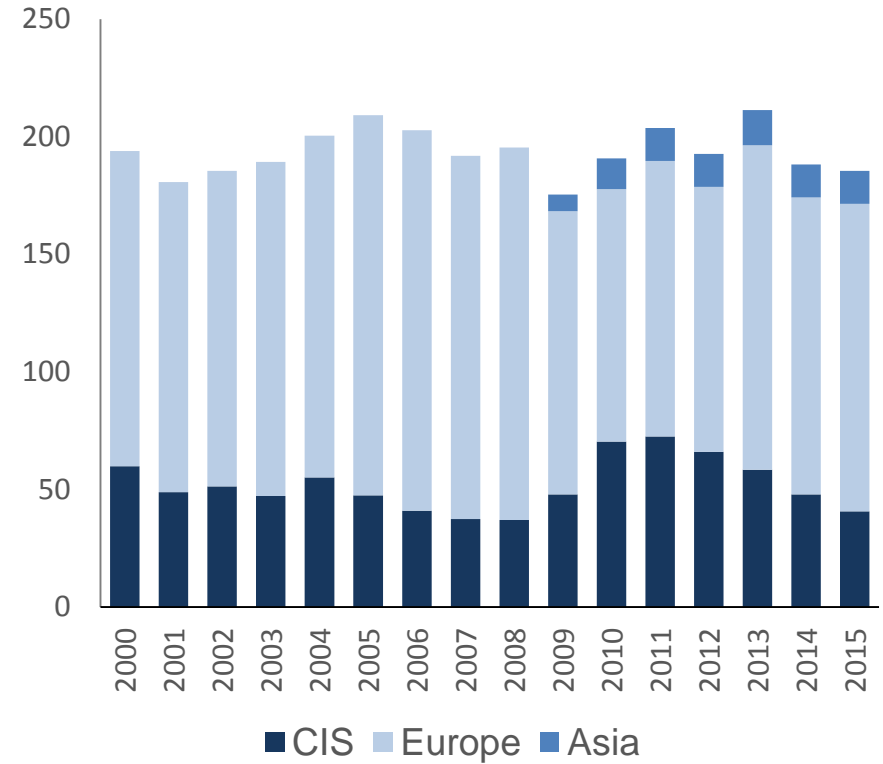


Status quo: gas production and exports are stagnating

Monthly gas production in Russia
in 2013-2016, bcm



Russian gas export dynamics
by destination in 2000-2015, bcm



Increasing gas bubble in the domestic market

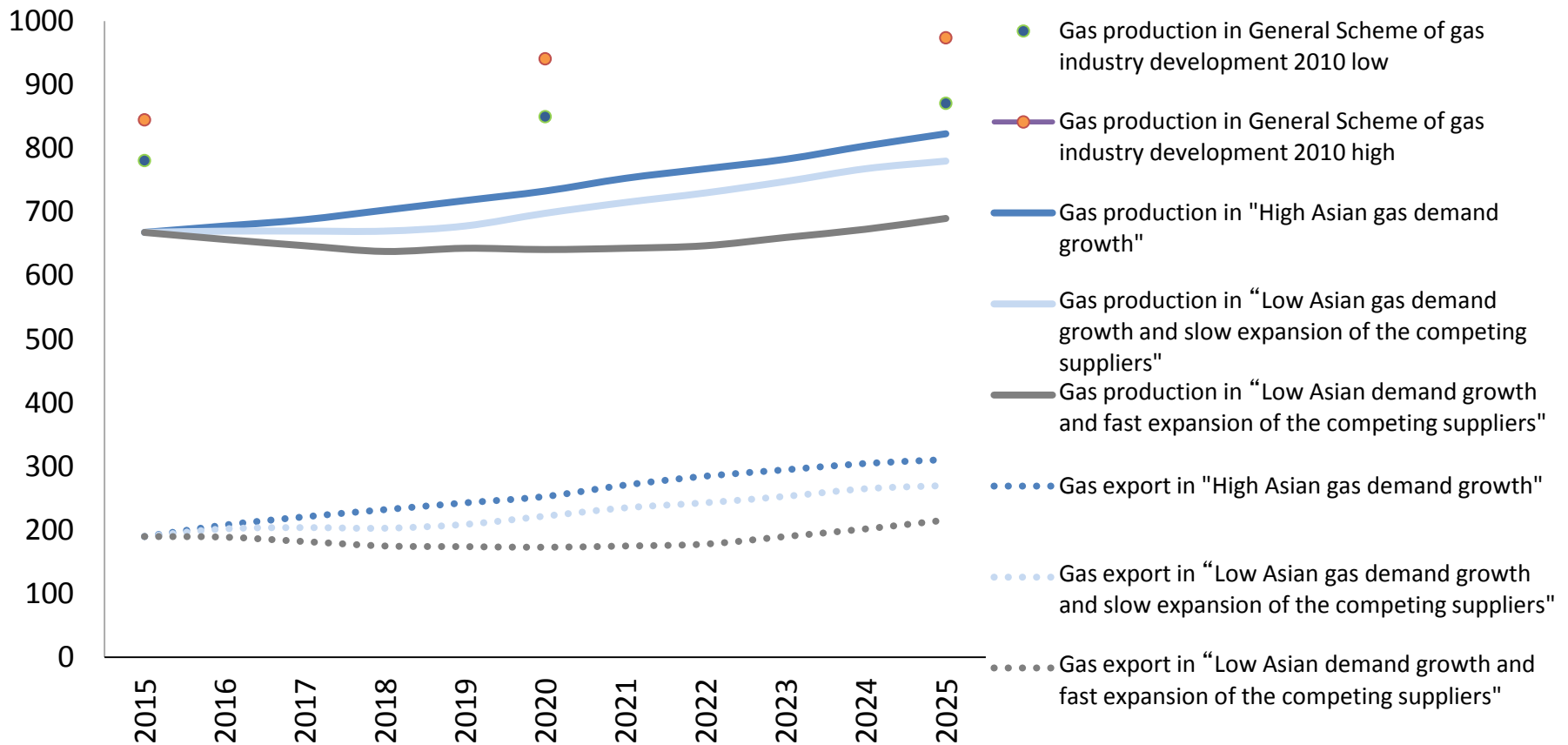
Gazprom has started Bovanenkovo, Rosneft and Novatek have extremely ambitious plans on gas production expansion, while obligatory utilization of the associated petroleum gas stimulates growth of VIOCs gas output

| Company | Production in 2015, bcm | Unutilized potential and capacities additions under development by 2020, bcm |
|--------------|-------------------------|--|
| Gazprom | 406 | ~155 |
| Novatek | 52 | ~48 |
| Rosneft | 42 | ~48 |
| VIOCs (APG) | 46 | ~15 |
| TOTAL | 635,5 | 266 |



Russian gas production and exports are limited by the demand and by infrastructure to transport gas to the East

Russian gas production and export, bcm



Gas development plan for East Siberia and Far East: different export routes are still under discussion



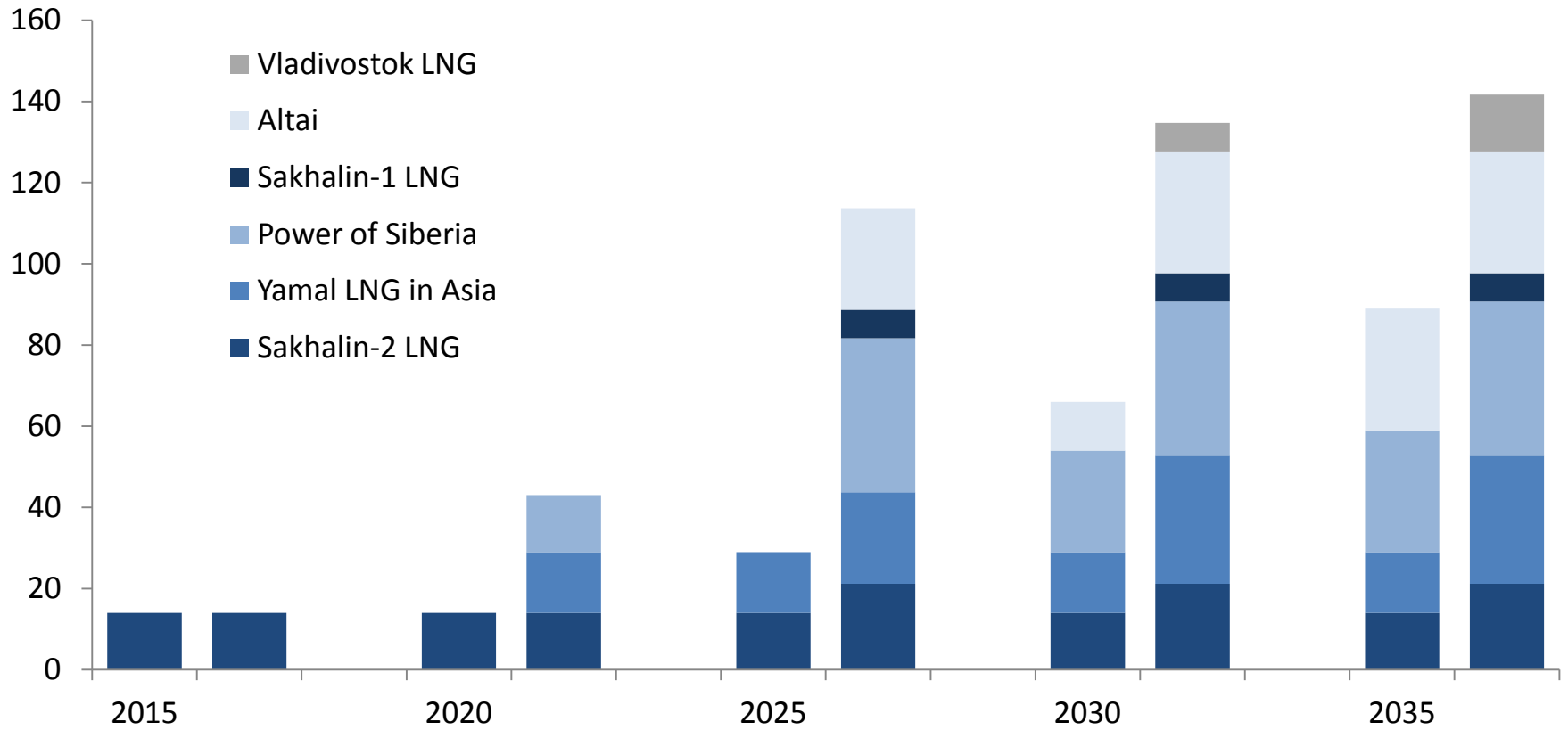
Current status of Russia's Asia-oriented gas export plans

- Energy strategy to 2035 sees rapid growth in hydrocarbon exports to Asia
 - Power of Siberia pipeline appears to be firm – construction has started on both sides of border, but the timing is questionable
 - Flexibility remains in 2019-2021 start date
- Potential for renegotiation remains
- Russia would prefer Altai pipeline, but discussions appear to have stalled given Chinese uncertainties. A level of desperation appears to have emerged on the Russian side, with the proposal of a third pipeline from the Far East a clear example
- LNG plans are going backwards – Vladivostok LNG postponed indefinitely, no Sakhalin 2 expansion before 2021, Far East LNG no longer a priority
- Realistically only one Russian pipeline is needed before 2025 unless Chinese gas demand growth accelerates rapidly



Gas export plans to Asia face huge uncertainty

Scenarios of Russian gas exports to Asia



Conclusions

- The recent entrance of the new players to the global market started to change the traditional energy flows, aggravating competition, creating a lot of tensions. This era of “repartition of the markets” coincided with weak global economic performance and slowing down demand growth not only in OECD, but also in non-OECD countries.
- Russian oil and gas industry has found itself in a real “Perfect Storm”, but despite all negative factors, its performance is quite sustainable. Russia will remain one of the major players on the global oil and gas markets.
- In the medium-term until 2018 no significant changes in production or exports are likely. In the longer term Russian oil production will start to decline , while gas production and exports have huge potential for growth if gas demand is in place.
- Russia tries to diversify to Asia: this strategy was quite successful for oil, less so for gas. LNG plans have been pushed back and pipeline plans are moving slower than hoped.





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