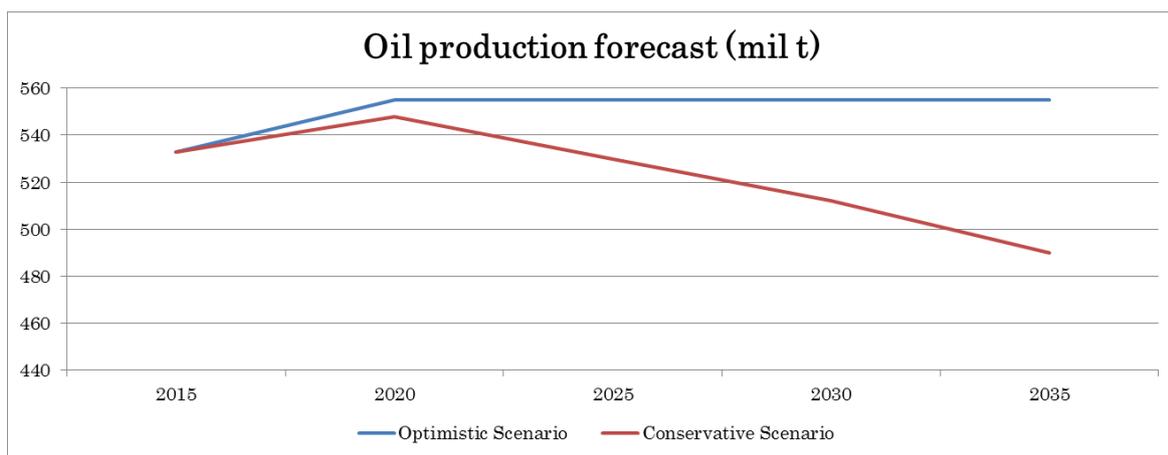


## Oil and Gas Export by Russia to the Asia-pacific Region

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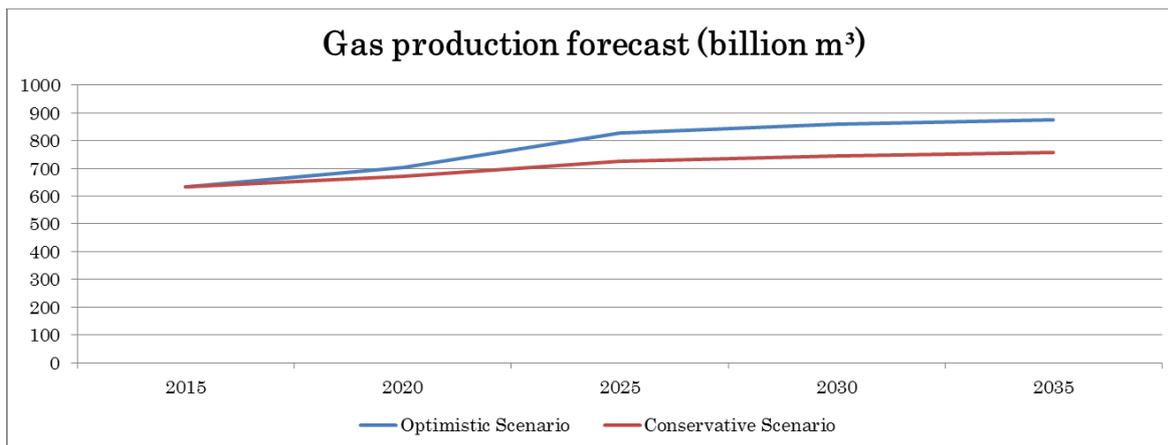
Forecasts of Russia’s oil and gas production by a draft of “Energy Strategy of the Russian Federation to 2035”



<http://minenergo.gov.ru/node/1920>

- The optimistic scenario expects the oil production level will be kept at the level of 550 mil t/y for 2020 – 2035. Both of the optimistic/conservative scenarios stand on an assumption : oil prices of \$50-60/bl to 2020 and \$95-105/bl by 2035.
- The optimistic scenario foresees , for the periods, developments of advanced technologies indigenous to Russia, instead of imported Western technologies/equipments, for shale oil and gas exploitation, off-shore/on-shore fields developments of East Siberia/Far East.

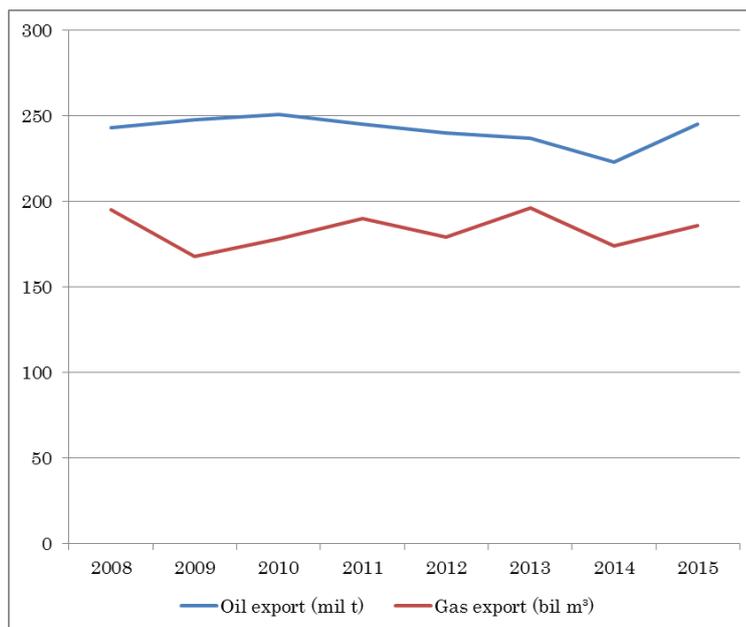
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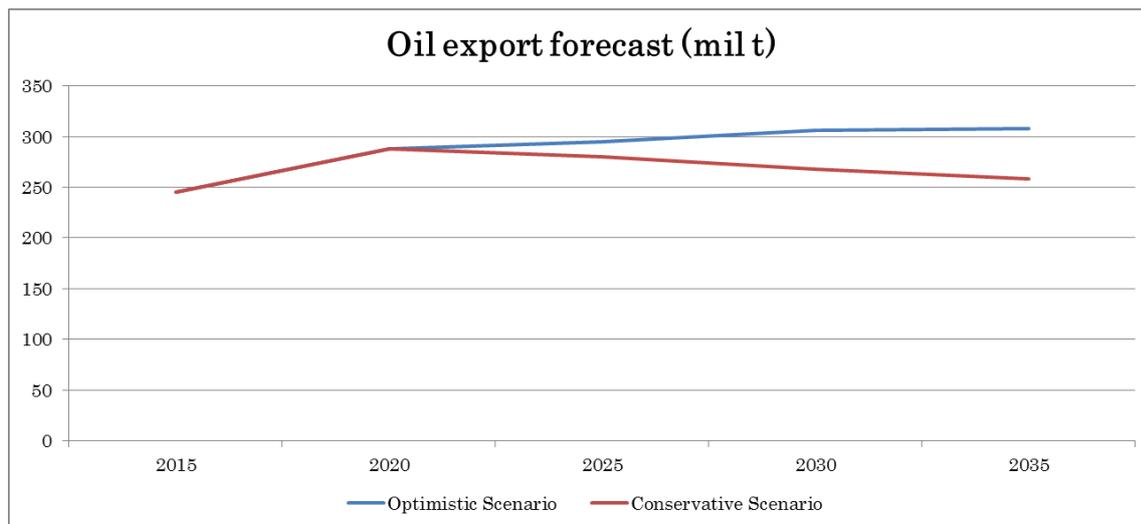
- The Optimistic scenario assumes the gas production (natural gas and associated gas) may increase from 633 bil m³ in 2015 to 702 bil m³ in 2020 and 875 bil m³ in 2035. These figures can be achieved by production increases in Obsko-Tazovkaja Bay area, and by new productions in Jamal Peninsula/East Siberia/Far East, and of off-shore gas fields to be developed by advanced technologies.
- The authors of the “Strategy” stress the importance of gas processing for production of higher value-added commodities. They specify that ethylene production output by Russian petrochemical and gas chemical industries will be 8 mil t/y in 2020 and 15 mil t/y in 2035 from 2.4 mil t/y of 2015.

Russia’s oil and gas exports for 2008-2015



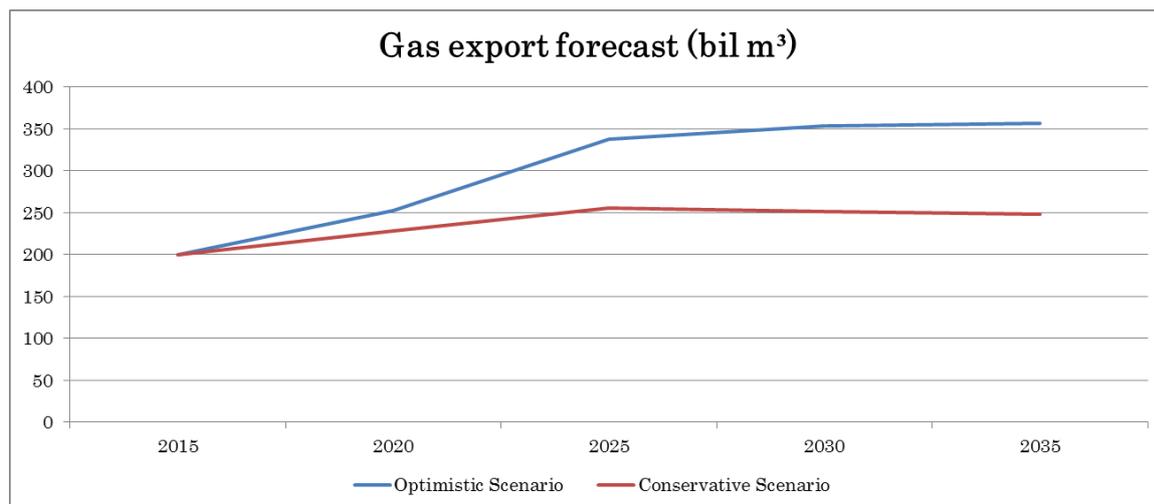
露中銀 Data (<http://www.cbr.ru/statistics/?PrId=svs>)

Forecasts of Russia’s oil and gas exports by a draft of “Energy Strategy of the Russian Federation to 2035”



- The Optimistic scenario wishes crude oil export will be increased by 25% to 2035. The export to Asia-Pacific regions, among others, may be 2.3 times more than now (to 110 mil t/y).
- Currently 15% of the total energy resources export is directed to Asia-Pacific regions, and this share will be increased to 20-22% in 2020 and 30-40% in 2035.

Forecasts of Russia’s oil and gas exports by a draft of “Energy Strategy of the Russian Federation to 2035”



- The Optimistic scenario estimates the gas export will be 1.8 times more than that of 2015 thanks to rapid increase of the export to Asia-Pacific regions (9 times more) and building-up of new LNG production capacities (6 times more).
- As a result, the authors of the “Strategy” expect the share of gas in the total energy resources exports will be 25-27% in 2020 and 30-33% by 2035 from 24% in 2015.

**Will the optimistic scenario become a reality ?**

- The oil and Gas industries of Russia currently are under the adverse circumstances :
  - The economic sanctions by Western countries against Russia due to the conflicts in Ukraine
  - Crude oil price fall in the international markets
  - Increasingly widely-spread preference to non-fossil energy resources to encounter climate changes
  
- The economic sanctions imposed by Western countries restrict directly or indirectly acquisitions of western advanced technologies, finances and reliable partners by the Russian oil and gas industries.  
This is a serious problem, in particular, for development plans of future off-shore fields and shale oil/gas productions.  
The matter is, however, purely political and no way is left for the industries to solve it.
  
- Oil price tumble may jeopardize economics of Russian oil and gas green field projects and their long-distance transportation.  
It also complicates formulation of gas export prices, as no one can judge, at least for short/medium term, which should be advantageous for sellers and buyers, oil-linked prices or hub-linked prices.  
Besides that, the Russian gas industry sooner or later may have to accept gas price liberalization in the domestic market, which ultimately will touch upon the issue of Gazprom's monopolistic position over trunk pipelines operations and gas exports.
  
- Arguments over the climate change may accelerate industrial utilization of associated gas by its producers and users.

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**Will the optimistic scenario become a reality ? Eastbound oil exports**

1) The economy of Russia's eastbound oil exports is largely dependent on the sales price of oil, as the transportation costs must be high due to large distances between oil fields and ports for oil exports.

4740km for Kozjmino-Tajshet plus around 1000km from West Siberian oil fields and more than 2000km from Vankor oil field.

The crude oil transportation tariff charged by Transneftj for Kozjmino-Tajshet is Rb.2237/t (roughly \$36/t, or \$5/bl) as of 2016, but no data is available to ascertain that this tariff covers actual transportation costs.

We also do not know production costs of oil at East Siberian oil fields which have been newly developed since the collapse of the USSR.

2) The marketing of eastbound oil exports may not be a tough task as far as China can absorb that volume.

But if China takes constantly a major portion of exported ESPO oil, then it may lose a chance to become a popular brand among purchasers of other countries.

In 2014, 36% of total oil exported from Kojimjno was to Japan and 24% to China, 15% to South Korea respectively, but in 2015 48% of it was to China, while 29% to Japan, and 11% to South Korea.

The increase of China's share is explained by the existence of long-term contracts with Russia and rapid business expansions by Chinese "Tea pot refineries".

3) The increase of eastbound oil exports causes an aggravation of the westbound oil quality, as it diverts some of Western Siberian light oils from the western direction to the eastern and leaves the westbound oil with high sulfur content.

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**Will the optimistic scenario become a reality? Eastbound gas exports**

- From 2003, the idea of Russia's eastbound gas exports was under long-time discussions at the level of the government and Gazprom, and once it was fixed by an official plan called "Eastern Programme" in 2007.

But since then there have been rather many changes of it, and as of today the following projects are in the process of realization or negotiations:

To China by pipelines	Sila Sibiri-1 from Eastern Siberian gas fields
	Sila Sibiri-2 from Western Siberian gas fields
	From Sakhalin to the eastern regions of China
LNG	Sakhalin-2/No.3 train
	Far East LNG

- There are two major factors which may delay the realizations of the plans of Sila Sibiri-1 and Sila Sibiri-2.

One is the gas pricing matter and another is the gas demand forecast of China.

- The gas pricing is in issue from two aspects – its level and ways of its formulation.

Gazprom says the ideal level of gas export prices to the European market is \$200-220/1000m<sup>3</sup> (\$5.9/MMBtu) under oil price level of \$80/bl. But it is unsure if and when these prices will appear in the markets after sharp drop of oil prices.

Moreover, as all of new East Siberian/Far East gas projects have to be realized from scratch, it is also uncertain if the price level of \$200-220 /1000m<sup>3</sup> can assure normal investment and operation cost recoveries of them.

Up to now there have been the oil-linked price and spot-based price in the Asian gas market. The gas volume traded under the latter has been increasing, while the trading price can not be independent from the former completely as there is no "Hub-price" yet in the market.

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Other candidates of price formula bases are the US HH and European prices. In short, there are too many alternatives and this is the main reason why Russia and China can not agree to the final price formula between them.

- Under the lowered economic growth rate since 2014, it is not clear what volume of gas China will need in future. It depends on way forward of economic growth, changes of economic structures, domestic gas production and to what extent the Chinese government can succeed in deterring coal consumption growth.
- In addition to the pricing, Asian gas importers nowadays demand revisions of the traditional Sales-Purchase contracts of LNG for wider trade liberalization.

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