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

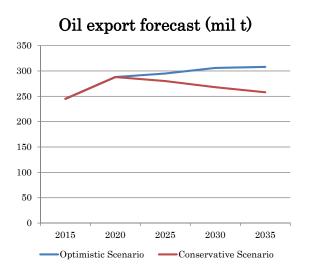
November 14, 2017

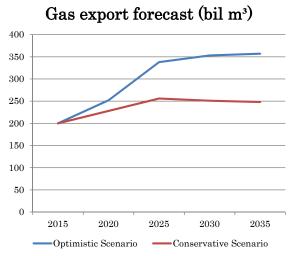
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Forecasts of Russia's oil and gas export by a draft of "Energy Strategy of the Russian Federation to 2035"

- The "Energy Strategy of the Russian Federation to 2035" (hereinafter "the Strategy") has not been approved yet by the government.
- The latest draft version of the Strategy is as of February 1, 2017 (https://minenergo.gov.ru/node/1920), and no change in forecasts of Russia's oil and gas exports from those of the version in 2016.





Will the optimistic scenarios of the Strategy become a reality?

According to the Optimistic scenarios of the Strategy:

- Currently 15% of the total energy resources exports is directed to Asia-Pacific regions, and this share will be increased to 20-22% in 2020 and 30-40% in 2035.
 - 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.
- Crude oil export will be increased by 6-25% to 2035. The export to Asia-Pacific regions may be 1.7-2.3 times more than now (to 110 mil t/y).
- Gas export will be 1.2-1.8 times more than that of 2015 thanks to rapid increase of the export to Asia-Pacific regions (5-9 times more) and building-up of new LNG production capacities (3-6 times more).

Apparently, the Russian government assumes Russia's oil and gas exports in future will largely depend on its "East-bound policy", reflecting Asian countries' strong demand for energy resources and the worsened relations with western countries.

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In 2017, things seem to be progressing towards what is forecasted by the government.....

Crude Oil

- Export to China amounted to 34.22 mil t for January-July and Russia became the largest exporter of oil to China, followed by Angola (31.03 mil t) and Saudi Arabia (30.59 mil t).
 - For the same period, oil export to APEC countries increased by 33.1% in value, while the same to European direction 27.2%.
 - (China imported roughly 320 mil t of oil for January-September, 12% increase over the same period of previous year.)
- Rosneftj plans to increase its oil export to China to 50 mil t in 2018 (via VSTO/28.3 mil t, via Kazakhstan/10 mil t, and?)
 It also plans to increase the export to China through Kazakhstan up to 18 mil t.
- Beijin Gas acquired 20% of Verkhnechonskneftegaz's shares, a daughter company of Rosneftj in the East Siberia.
 CEFC China Energy purchased 14.2% of Rosneftj's shares.
 - Reportedly, CIC shows an interest to buy some portions of Transneftj's preference shares.

Gas

- Gazprom declared that it had constructed half (1095km) of the planned Sila Sibiri-1 gas pipeline, and reconfirmed that the first gas would reach China in December of 2019.
- Yamal LNG starts its 5 mil t/y LNG production in November of 2017, while the planned total production capacity will be 16.5 mil t/y (or 17.5 mil t/y) in 2019. Some portions of the output will come to the Asian market, among others, to China.
- Both of Gazprom and Novatek accelerate their LNG marketing activities for new gas-importing countries of Asia Thailand, Pakistan and others.

How about beyond 2017?

- ●Russia's East-bound policy must be correct, as IEO2017 (International Energy Outlook 2017 by IEA) says:
 - \bigcirc Fossil fuel will share 77% (Oil/31%, Gas/25%) of the world energy consumption in 2040
 - \bigcirc 64% of the world energy consumption in 2040 will be of non-OECD countries.
 - \bigcirc 60% of the incremental volume of world energy consumption from 2015 to 2040 will be attributed to non-OECD countries of Asia.

●Eastbound oil exports:

- OThere are many arguments on "Peak oil demand", partially because EV-related technology development and its application are expected to progress quicker than they were, while IEO2017 indicates the world demand for liquid fuel will increase from 95 mil b/d in 2015 to 112 mil b/d in 2040.
- OThe assumptions put by the optimistic scenario of the Strategy oil prices of \$50-60/bl to 2020 and \$95-105/bl by 2035 do not seem absolutely unrealistic, as even some supply shortage might be within this time frame due to the current decrease of investments by oil companies into new oil fields developments.
- OMeanwhile, the economy (costs) of Russia's oil production and transportation for exports can be problematic.

Though further shale oil/gas production and off-shore/on-shore fields developments of East Siberia/Far East may be possible by Russia's newly-developed technologies, their investment and operational costs are uncertain at the moment.

The transportation costs are also unforeseeable, as we do not know yet where will be the main new production sites inside Russian territory.

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●Eastbound gas exports

ONo doubt that the world will head towards low carbonization which increases the demand for gas. IEO2017 asserts that the total gas consumption of the world will be 177 TCF (5 trillion m³) in 2040, a 43% increase from that of 2015.

In Asian non-OECD countries the demand for gas will increase to 36.9 TCF (1 trillion and 45 billion m³) in 2040 from 14.1 TCF (399.3 billion m³) in 2014, according to IEO 2016.

Thailand, Indonesia, Malaysia, Singapore and Pakistan started LNG imports and they will be followed by Vietnam and Philippines in future.

ORussia's shares of gas supply to the Asian markets depend on, first, its export of gas to China by pipelines, and secondly its LNG exports to Asian countries.

China seems to have got out of an uncertain time of 2014-2016 for its energy mix policy and resumed to increase the gas consumption. The Chinese government says the share of gas in primary energy consumption of China in 2030 will be 15%, while IEO 2017 says China's gas demand will be 17.5 TCF (495.6 bil m³) in 2040 from 5.7 TCF (161.4 bil m³) in 2015.

However, China has not decided yet if it goes ahead for the gas import from Russia via Sila Sibiri-2, though that by Sila Sibiri-1 can not be canceled any more. The gas pricing matters between Russia and China also seem remain unsettled yet, namely, the price level and pricing formula.

OAs for LNG exports to Asian countries, the decisive factor is to what extent the Russia's LNG can be competitive against other LNG suppliers, especially the US which became a LNG exporter only recently – in 2016, but may be the third largest LNG exporter of the world in 2020 after Australia and Qatar. The US increased its gas production by 43% for only 10 years from 2006

Russia's LNG production plan amounts to 74 mil t/y by 7 projects, but only 2 of them have been realized and many of the others are on unclear implementation schedule. So clear contrast between Russia and the US in changes and their speed!

As for pricing, the situation of the markets may turn to be favorable for LNG exporters in 5-6 years time, as investors' FID's for new LNG production projects are currently at minimum level which may result in supply shortage in the market after 2022-2023.

However, the competition with the US LNG is not only in trade volume but also the LNG sales conditions. Currently many LNG importers prefer short or medium term contracts to the traditional long term contracts, and this is what the US exporters can offer.

The development of the gas production of Russia largely depends on its export increase, as domestic consumption of gas remains stagnant. Here Russia has no other alternatives than to follow changes of trade conditions in the market, simply because it is and will be further not a price maker, but a price taker.

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