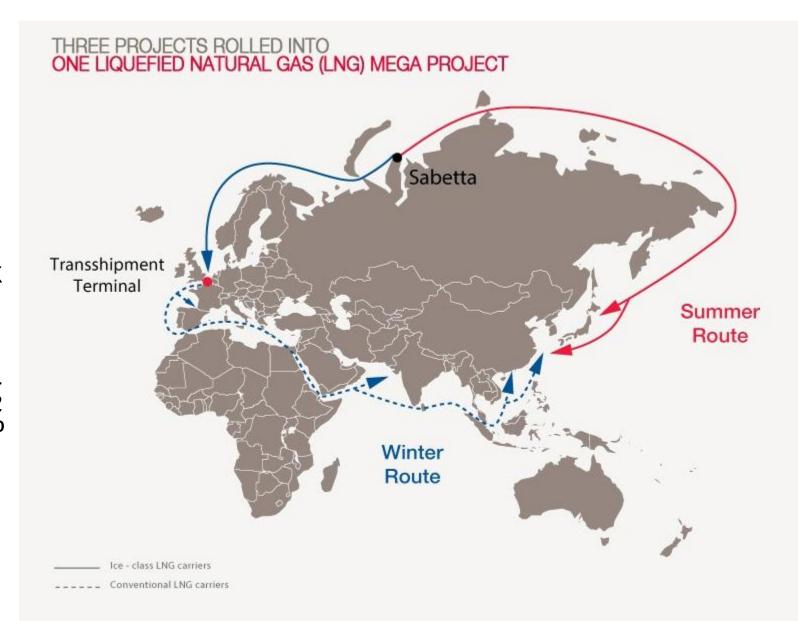
Sino-Russian Arctic offshore extraction cooperation in the light of One Belt One Road Initiative



The current Sino-Russian offshore cooperation

Yamal LNG:

- 20% owned by CNPC and 9.9% by Silk Road Fund;
- 15-year loans from Export-Import Bank of China (10.6 billion \$) and China Development Bank (1.5 billion \$);
- Interest rates: EURIBOR 6M + 3.3% margin during construction and + 3.55% after; SHIBOR 6M + 3.30% and 3.55%



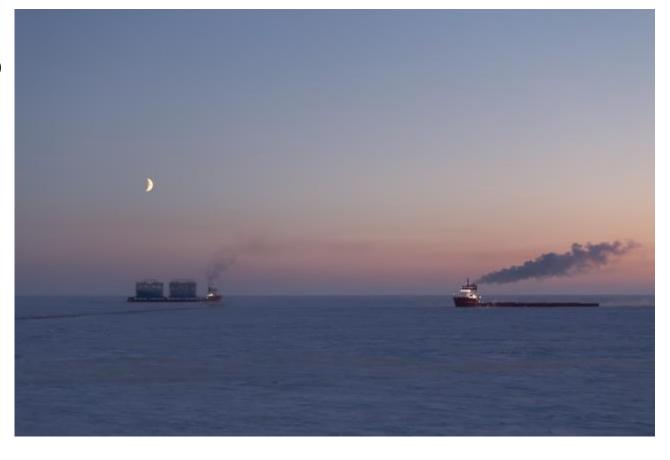
 Financial support of "ARCTIC LNG" project if Novatek is not inclined to contract all gas.

Construction costs – 10 - 23 billion dollars (company and expert estimations), where 80% - plant and relevant infrastructure. Preliminary volumes of "Arctic LNG" – 3 trains, 5-6,5 million tons each.



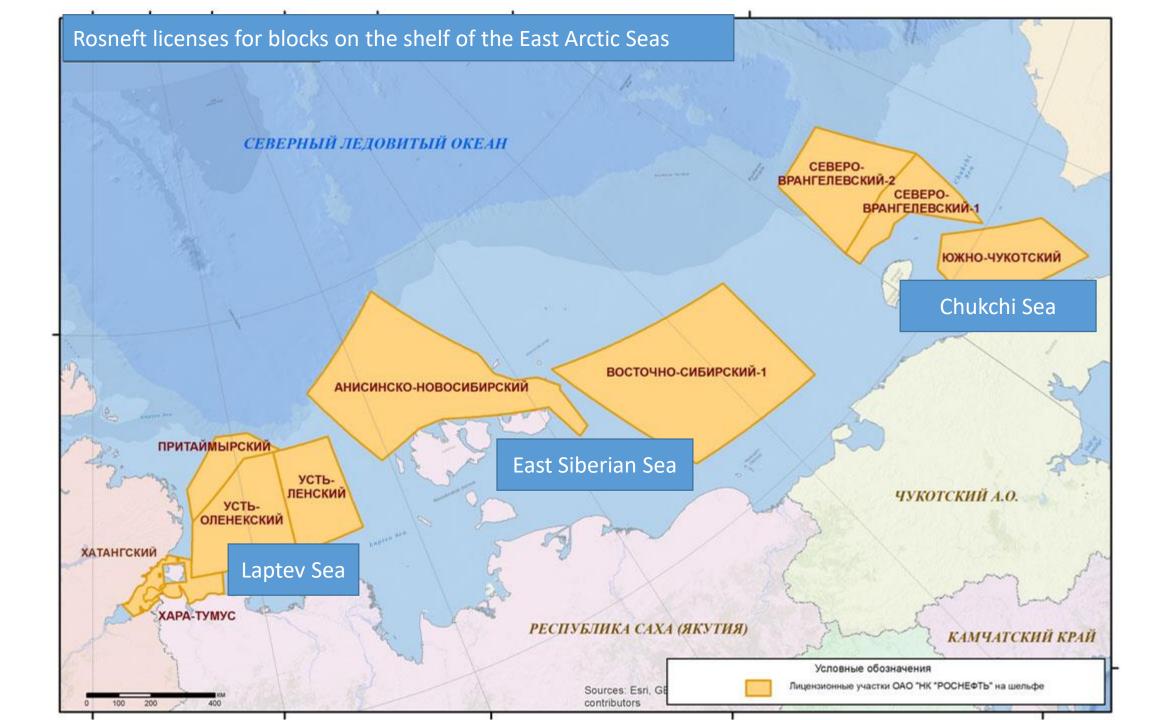
 Icebreaker capacity for new offshore deposits to support transfer of LNG to customers all year round.

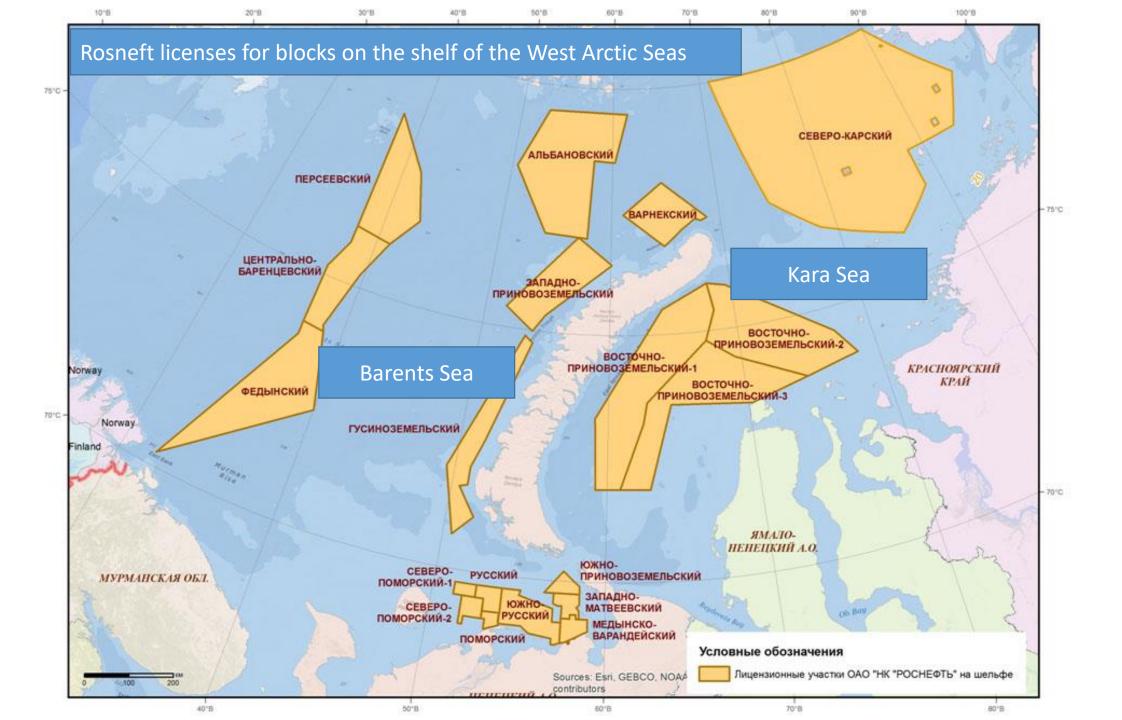
2021 year: cargo traffic by Russian nuclear icebreaker fleet - 18 million tons of LNG ("Yamal LNG"), 8,5 million tons of raw oil ("Gazprom neft'") and 1,3 million tons of rear and precious metals ("Norilsk Nickel") apart from planned 7,3 of raw oil from Payakhskoe deposit, potential 8 million tons of coal ("Vostokugol"").

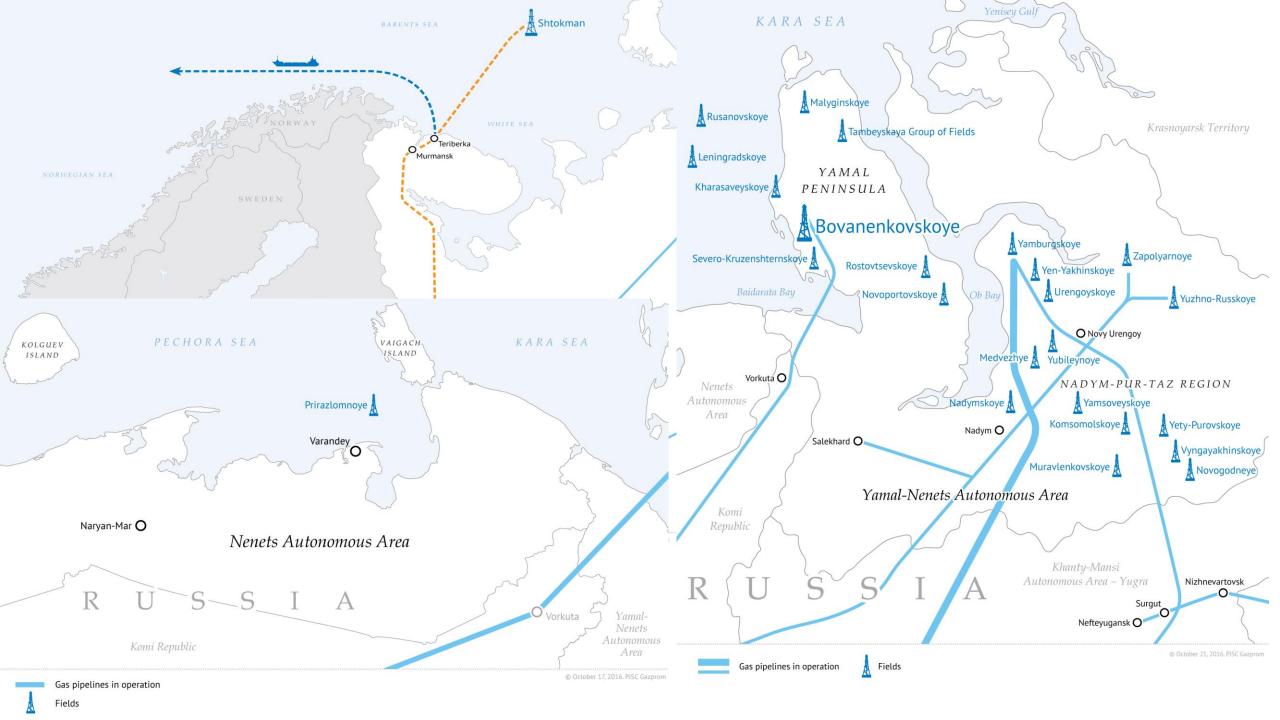


• No approach has been made yet to intensify any kind of investments or other participation with "Rosneft" or "Gazprom" in offshore projects.

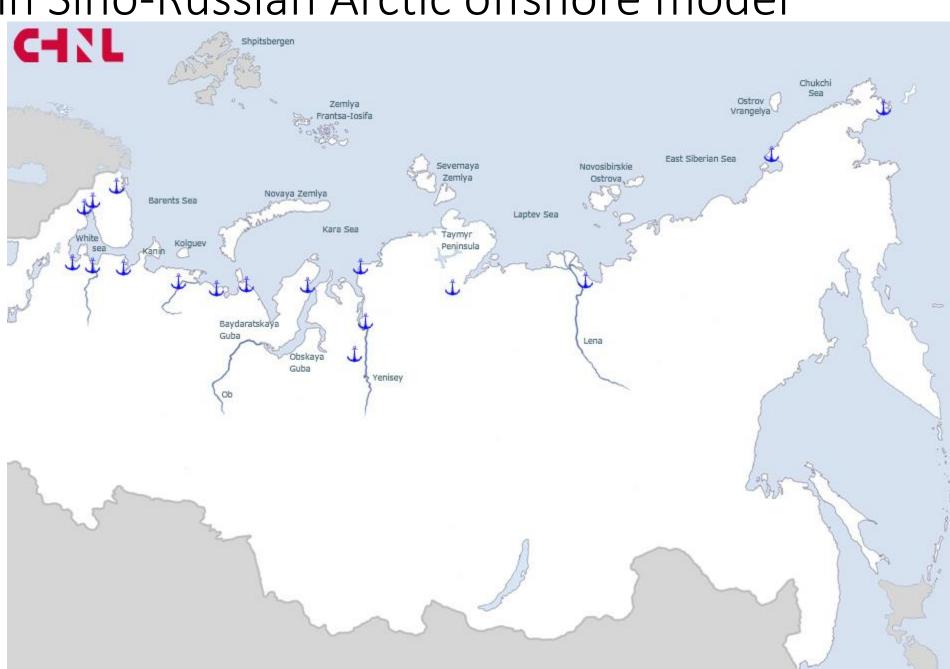
- No agreement for "Novatek" resourse base expansion;
- "Rosneft" owns 28 licenses in the Arctic. Company has 19 blocks in the Barents, Pechora and Kara Seas, 9 in Laptev, East Siberian and Chukchi Seas. "Gazprom" possesses 27 licenses on the Russian Arctic shelf: 20 in Kara Sea and 7 in the Barents Sea.



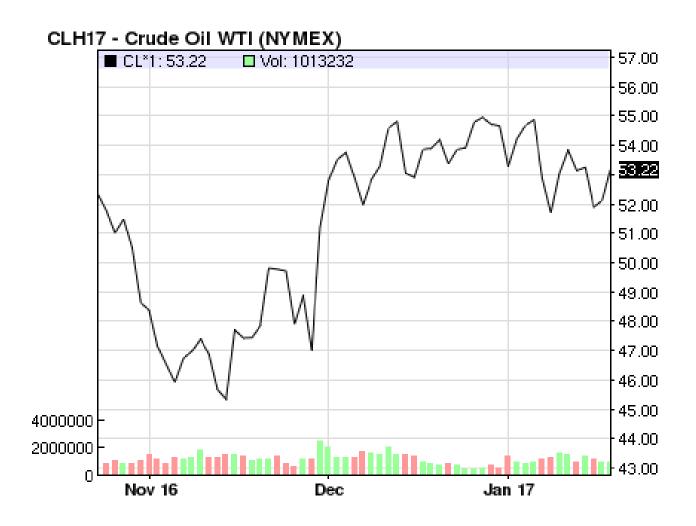




 Lack of supportive infrastructure



 Russian Arctic can be given a green light only after 2020 and oil price level at around 90\$ per barrel?

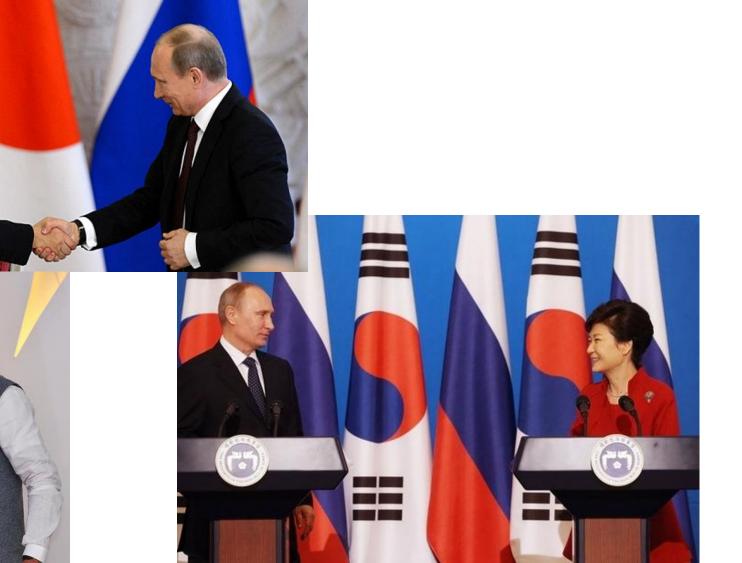


- Long payback time
- Representatives of Ministry of Finance and regional authorities numerously stated about financial complexity of providing investments to several projects simultaneously (in particular, Murmansk, Arkhangelsk and "Belkomur" development).

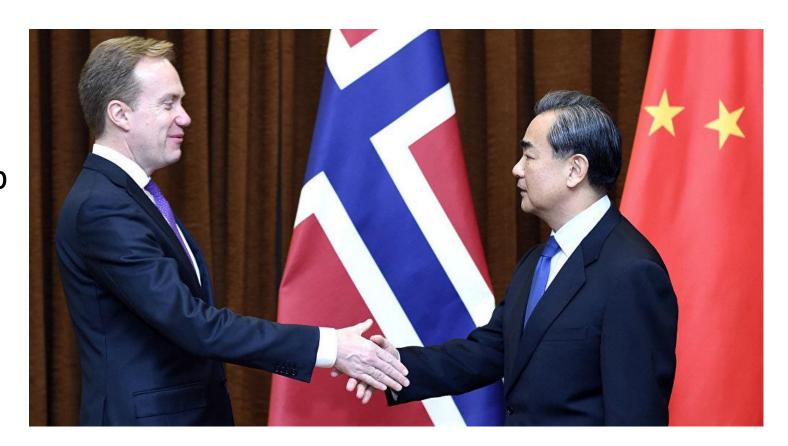
 The budget plans for a deficit of 3.2 percent GDP for 2017, reducing the figure to 2.2 percent and 1.2 percent in the subsequent years (2018-2019)

- Not enough 3D exploration activity.
- Unexplored mineral potential in the Russian Arctic – 91%, onshore – 53%.
- Under current speed of exploration activity Russian existing resource bases will dry up in 28 years.
- Russia can fully cover its needs in 2D seismic works whereas 3D is available only on 20-30% because national companies and state desperately need construction of its own scientific fleet
- Moscow secured only 1,3 billion rubles (~20 million dollars) for the period 2016-2017 to support seismic cluster in shipbuilding for offshore purposes.

 Other actors investment interest in Russian offshore projects: India, Japan, Italy, South Korea.



- Chinese ambitions to have more control in mutual offshore projects.
- Beijing's intention to keep two-track Arctic policy: towards Russia and Nordic states in order to acquire necessary competences.



Recommendations for Russia-China cooperation on the NSR

- 1) Set up consultations (with "Sovfraht", "Rosatom", NSR administration) to find mutual understand what types of cargo Beijing is ready to transfer;
- 2) Logistics companies in Russia and China should intensify bilateral efforts to choose transport hubs on East and West of Russia to reduce risks for commercial caravans on the NSR;
- 3) Launch an exchange process of ice conditions information, navigation charts and weather conditions;
- 4) Attention to financial support of Northern Latitudinal Railway;
- Consulting mechanism between ports administrations of Russia and China

