

# Prospects for Development of LNG in Russia

---

**KONSTANTIN SIMONOV**

National Energy Security Fund

LNG 2008

London

April, 23

2008

# Difficulties of Developing LNG Projects in Russia

- LNG and export of gas by tankers is very unusual for Russia
- Two “habits”: “land and pipes”
- So LNG is like psychologic revolution for Russian gas industry
- The idea to consider LNG exports seriously was born inside Gazprom only after the second trip of the new company’s head Aleksey Miller to the World Gas Congress in Tokyo in 2003, where competitiveness and attractiveness of LNG market was one of the main subjects
- Almost immediately after Miller’s return, a meeting was held in Gazprom, at which the first order to develop an LNG strategy was given. It was decided to organize a committee that would prepare LNG project

# LNG as a new opportunity for Russia

**Development of LNG production and export will allow:**

- fulfill gas reserves potential with a maximum economic effect, including supplies to distant consuming markets
- gain foothold in new regions (North America, Spain, Pacific Rim, in a more distant future – South America and India)
- turn into a center of world rather than regional energy supply and guarantor of world energy security

# Aims of Gazprom

**Strategic goals of Gazprom in the LNG production and supplies sphere are:**

- organize an effective LNG production and supplies system using up-to-date technologies
- diversify supplies and work with a larger number of consumers
- establish itself as a leader in the LNG market

# First Steps

- Gazprom executives claim that the company has been implementing a phased strategy aimed at boosting Gazprom's share of the LNG market since 2004, counting from the start of speculative (and later spot) operations with outsourced liquefied gas by Gazprom's lower-tier subsidiary Gazprom Marketing & Trading
- For the four years Gazprom made one off transactions and swap operations (LNG – pipeline gas) with BP and Gaz de France and supplied LNG to the USA, Great Britain, South Korea and Japan. In all, Gazprom sold around 1 bcm of LNG
- The goal of these projects that were on the edge of profitability was to gain experience of real trade in this unique market and run the full chain (apart from LNG production) from transportation to regasification.

# First Steps

Date	Source	Volume	Terminal	Customer
September 2005	British Gas Group	Around 80 million cubic meters of natural gas	Cove Point (US)	Shell Western BV
December 2005	Gaz de France (Egypt)	Around 80 million cubic meters of natural gas	Cove Point (US)	Shell Western LNG
April 2006	Gaz de France	Around 85 million cubic meters of natural gas	Isle of Grain (UK)	BP
August 2006	Mitsubishi Corporation (Oman)	Around 92 million cubic meters of natural gas	Chita	Chubu Electric Power
August 2006	Mitsubishi Corporation (Oman)	Around 92 million cubic meters of natural gas		Tokyo Electric Power Company
September 2006*	BP (Trinidad & Tobago)	Around 80 million cubic meters of natural gas	Cove Point (US)	
October 2006	Mitsubishi Corporation (Oman)	Around 92 million cubic meters of natural gas	Pyeongtaek	Kogas

*\* A medium-term contract was signed with BP for 2006-2007, including sale of rights for several tanker shipments from Trinidad & Tobago to the USA.*

*Source: Gazprom*

# LNG in Gazprom Strategy

**Gazprom believes that Russian LNG will open the following opportunities:**

- participation and commercial use of remote gas reserves
- opportunity to reduce export risks by combining pipeline technologies and LNG
- increase flexibility of gas exports
- positioning of Gazprom in the new high-yielding markets, such as the USA, Japan and Spain that are inaccessible for the Russian grid gas
- positioning of Gazprom in all elements of the LNG price chain, including carrier shipping and regasification
- increase of LNG demand that in the past 10 years has been increasing 2.5% per year on average

# Lawmaking in the LNG Segment

- Economic Development and Trade Ministry and Gazprom proposed and the government passed lifting of LNG export customs duty
- While pipeline exports are subject to 30% tax of the gas price for the customer, lifting of customs duty for LNG makes LNG projects very attractive and reduces financial burden on their owners (which looks like a great deal considering high capital intensiveness of LNG projects)



# Lawmaking in the LNG Segment

- The second decision resulted in a Gas Export Federal Law enacted in summer 2006. The law says that the owner of the unified gas transmission system (Gazprom, that is) has the monopoly on exports of natural gas, including in liquefied state. Only projects regulated by PSAs do not fall under the law (only Sakhalin-2 in the LNG case)
- LNG export projects not affiliated with Gazprom were officially banned, whereas 2-3 years prior to that such projects were actively discussed (for example, LNG plant based on South-Tambei deposit)

# Shelf Sovereignty

- In new version of Subsoil Law there is the new term: "federal field"
- Federal is the field with mineable resource
  - Gas – 50 bcm
  - Oil – 70 mln tons
- **All shelf fields also have federal status**

# Shelf will be the Property of Gazprom and Rosneft

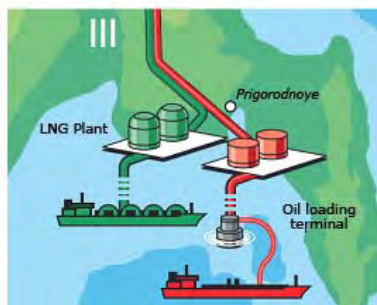
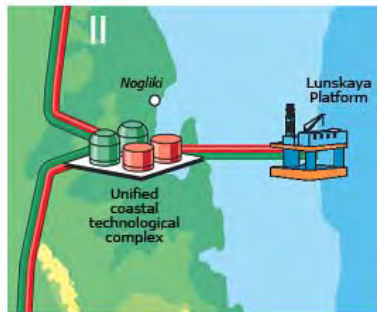
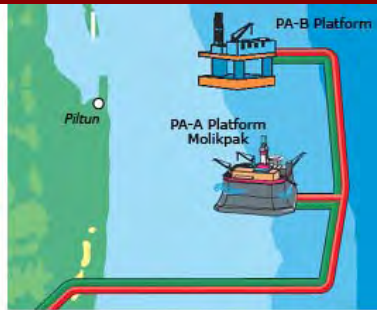
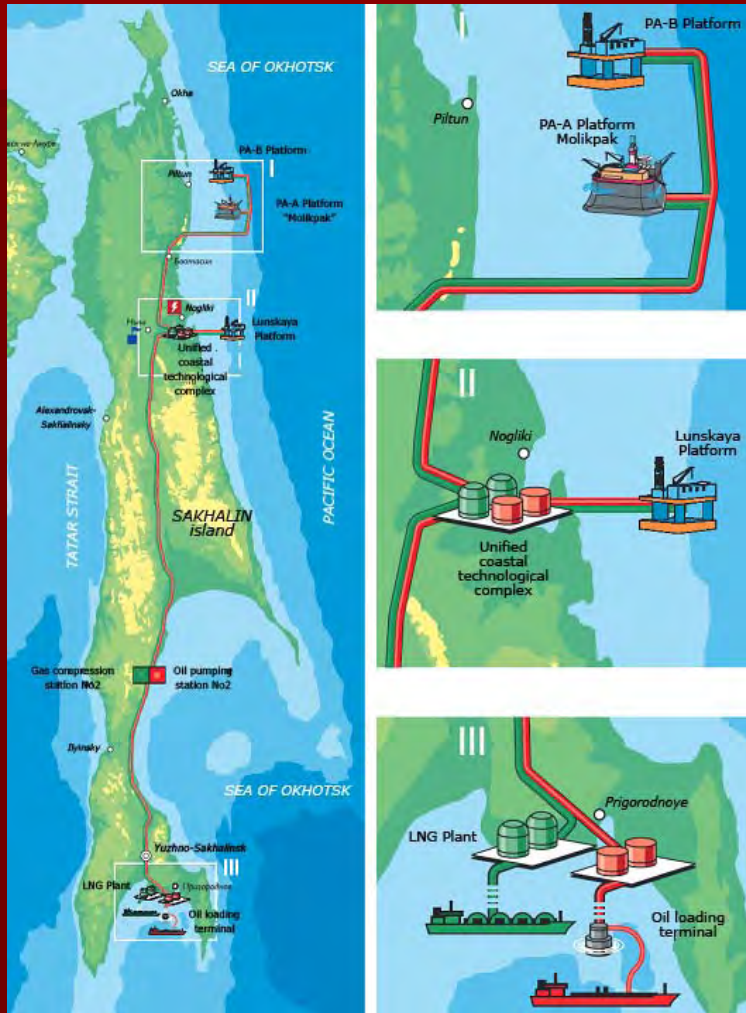
If you want to be the nominee of shelf fields you must satisfy the following requirements

- to have an experience of work on Russian shelf more than 5 years
- to have the Share of Russian Federation not less than 50%+1

# **But State Companies will need foreign Partners**

- Sharing of investment risk: Rosneft said that investment to shelf project will be \$2,44 trillion until 2050 – it's two times higher than Russian GDP in 2007. Now the share of o&g production on shelf in Russia is 2.7% - it can be 10% in 2020
- Technologies
- Markets

# Sakhalin-2



- The project's design was to produce around 15 bcm of gas per year at the Lunskeye deposit, lay down gas pipeline across the island, from the north to the south, and build a LNG plant (with a capacity of 9.6 million tons a year) and a LNG export terminal.
- By the time Gazprom was brought in, 98% (9.4 million tons) of gas was contracted under long-term agreements (15+ years) with the consumers in the USA, Japan (two thirds of all gas contracted) and South Korea
- after Gazprom's arrival new possibilities may open before the project – another LNG plant with the capacity of 4.8 million tons. S2 facilities may be expanded in order to receive gas from the Sakhalin-1 project (6-7 bcm a year that are currently non-demanded in the domestic market and may become resource base for the second plant)

# Baltic LNG

- In February 2008 Gazprom executive board that had previously put off a decision on the project that was named Baltic LNG announced that it was found economically inadvisable
- But it doesn't mean the decline of Gazprom's interest to LNG business – Baltic project from the very outset was problematic - e.g. there was no reliable recourse base

# Shtokman

## **Shtokman project has the following advantages:**

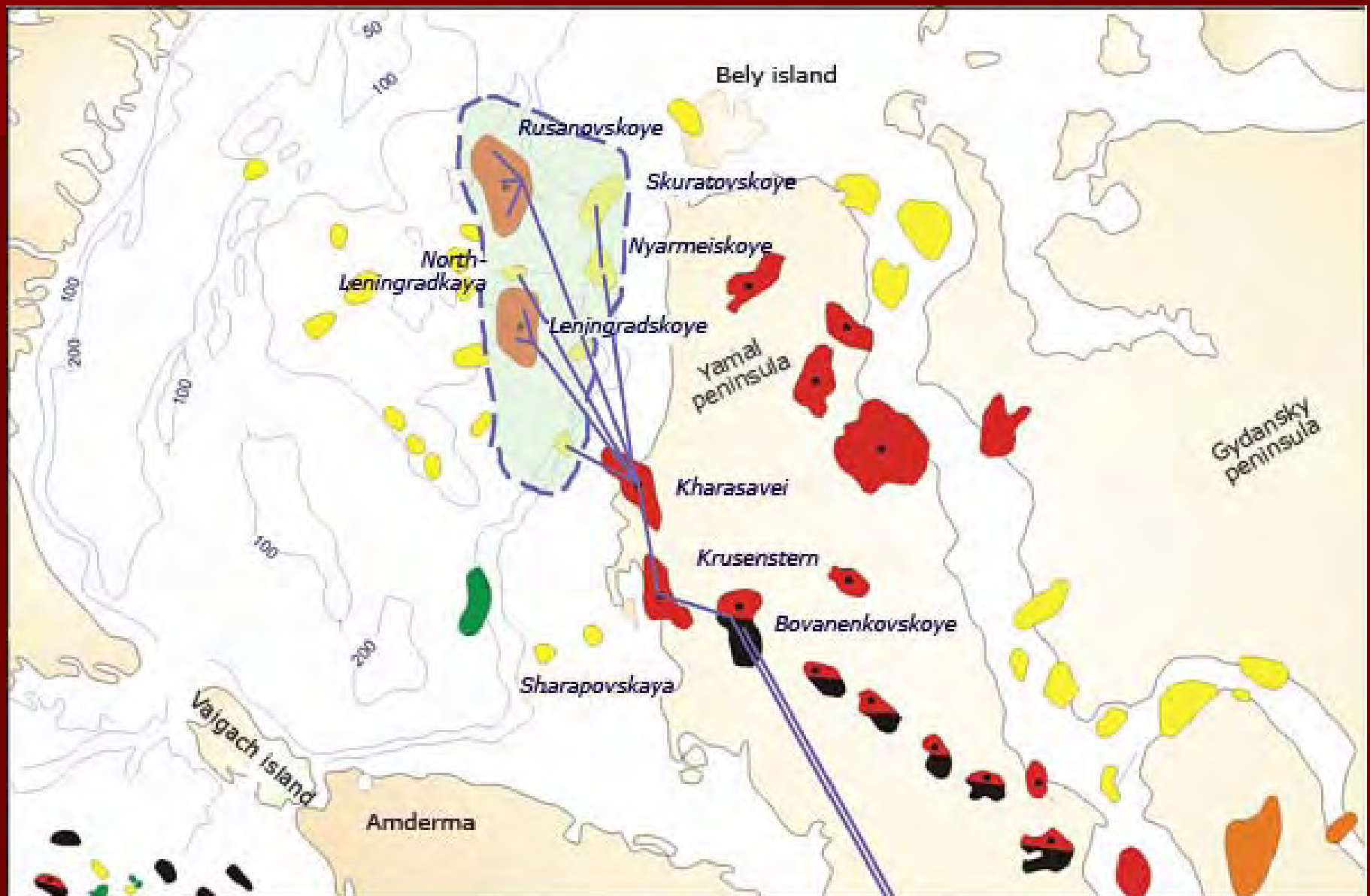
- large reserves of gas, which will secure stable long-term LNG production
- possibility to expand production depending on the market climate
- expansion of LNG production increases economic effectiveness
- favorable gas composition
- favorable geographical location in relation to existing and proposed receiving terminals in consumer markets (Canada, Mexico, eastern coast of the United States);
- possibility to diverse supplies – simultaneous supplies to Europe and the USA, varying destinations depending on market conditions
- absence of ice and permafrost

# Shtokman as the new model of cooperation with foreign companies in shelf projects

- In 2006 Gazprom told that there will be no partners in Shtokman
- But in 2007 the blocking stake of the Shtokman's first phase was won by Total, 24% more went to Norway's StatoilHydro
- Project's owners are expected to approve investment program by mid 2009
- The question whether foreign owners will get Shtokman reserves on their balance (in proportion to their stakes) remains uncertain. After the announcement of the transition of 25% to Total, the French side said it planned to put the reserves on its balance sheet. However, the managers of the Norwegian company questioned such possibility in public
- Taking into account annual output and 25 years life of the project, the share of Gazprom's partners is 140 bcm of gas for each partner. But they will not have a right to export this gas. The partnership company that Gazprom, Total and StatoilHydro will establish will be selling the entire gas (both meant for pipelines and LNG) to Gazprom under a special formula that will depend on export climate. Gazprom Export will be in charge of marketing policy



# Yamal Shelf



Source: VNIIGAZ

# Conclusion

- Russia has vast gas reserves on the continental shelf, which is logical to use to develop LNG projects
- Massive development of the oil and gas potential of the Russian northern seas is distant because of the lack of own technologies
- Governmental regulation of access to subsoil made it impossible for private companies to organize partnerships and develop independent LNG projects. Gazprom's monopoly on LNG exports and plans to give the company offshore licenses without tenders mean that the state company will be dominating in every promising LNG project

# Conclusion

- Even by 2015-2020 probability of successful launch of such projects depends on Gazprom's partnership with foreign partners. Basic pattern of partnership will probably be the model used over Shtokman. However, its effectiveness is yet to be confirmed in the course of feasibility study and consultations of foreign participants in the project with the US SEC on the possibility to put first phase reserves on the balance sheets of Total and StatoilHydro in proportion to their stakes in the operator company (that does not formally own any reserves)
- The main target market for new Russian LNG (except for the already divided Sakhalin's gas) is the rapidly developing North American market. Supplies to remote parts of Europe do not seem economically sound in the current conditions. But in the future this may change if LNG pricing principles change or price arbitrage is used (exchange of supply rights with producers in the Middle East)



# Thank you!

[simonov@energystate.ru](mailto:simonov@energystate.ru)