

Japan-Russia Cooperation in the Development of Russian Natural Resources



MITSUI & CO.

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General Manager

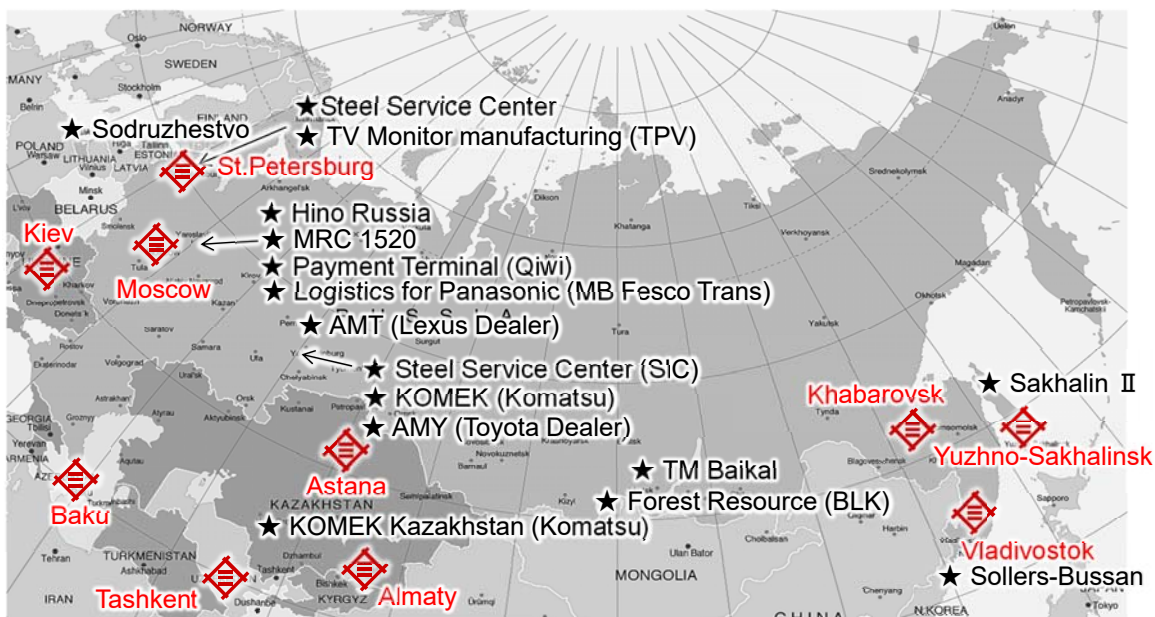
Russia & Australia Gas Business Div.

Energy Business Unit II

The Ninth Japan-Russia Energy and Environment Dialogue in Niigata

Nov 2nd, 2016

Mitsui's Activity in Russia



- ✓ Mitsui established its first office in Russia in 1967. Currently, it has 10 offices in the CIS and invests in 16 projects in various business fields.
- ✓ Mitsui has established solid relationships with its Russian partners and the Russian Government through the cooperation in various projects.



Natural Resources in Russia

Proven Reserves as of 2015

Source : BP Statistic

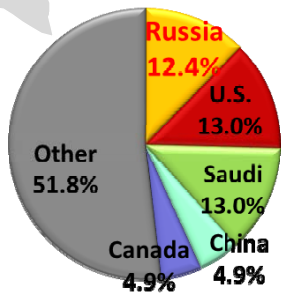
Oil
6th in the world
(102.4 bil bbl)

Natural Gas
2nd in the world
(1,139.6TCF)

Coal
2th in the world
(157bil tons)

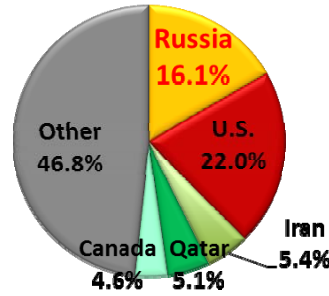
Oil Production

Year 2015: 11.0 mil bbl/d



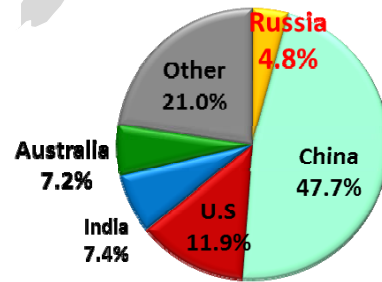
Gas Production

Year 2015 : 20.1TCF



Coal Production

Year 2015: 263.6mil tons

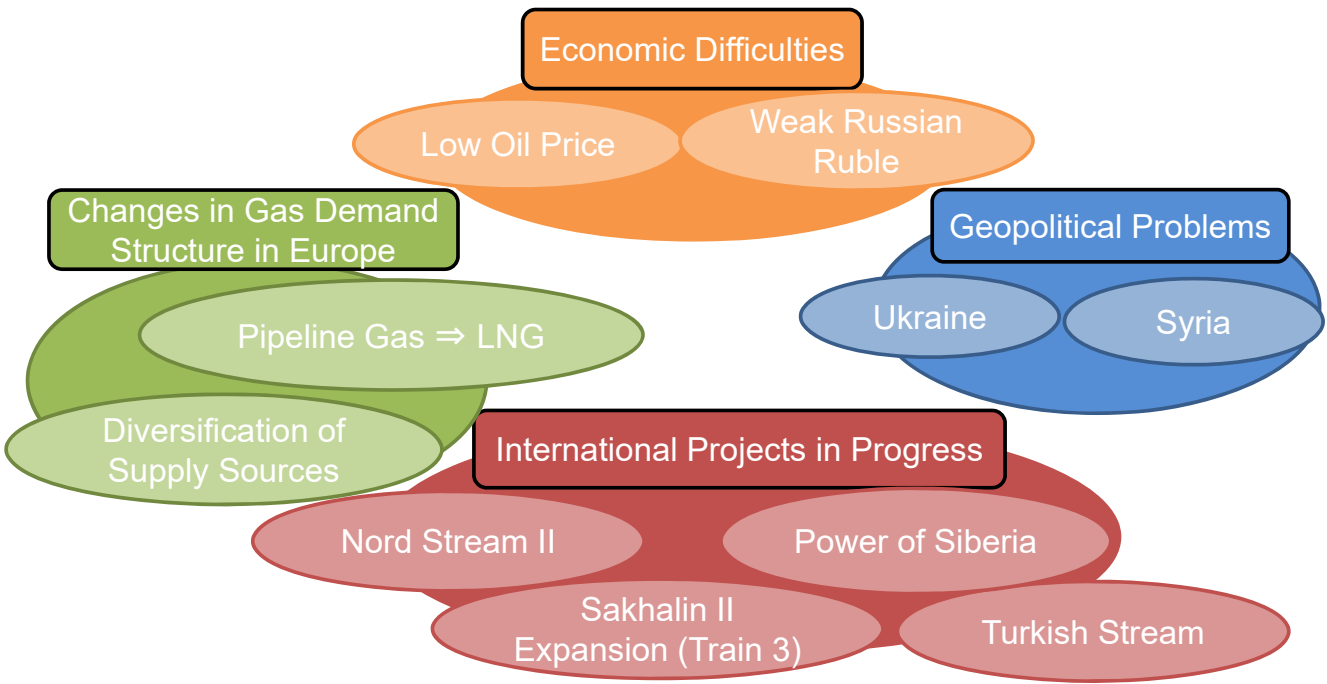


✓ With its vast resources, Russia is a key player in the global energy market.

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Business Environment in Russia



✓ At the moment, the business environment in Russia is rather difficult.
 ✓ However, Russia is pursuing several international projects as the oil and gas industry is critically important for Russia.
 ✓ How to cooperate with Russia during this difficult period is key for Japan.



Projects in Russian Far East and Eastern Siberia



✓ Russian Far East and Eastern Siberia are important regions in the Russian energy development strategy as outlets to the Asian market for gas sales and as vast new sources of energy resources.

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Advantages of Sakhalin Gas for Japan



Abundant Reserves in Sakhalin

Area	Remaining Reserves (Gas)
Sakhalin I	7.1 Tcf
Sakhalin II	8.3 Tcf
Sakhalin III (Kirinsky/South Kirinsky)	11.0 Tcf

Source : Wood Mackenzie

- ✓ There are enormous gas reserves in the Sakhalin region.
- ✓ These gas reserves are located only 1,000km away from Japan (from Niigata to Yuzhno-Sakhalinsk) in a region with limited sea lane risks.
- ✓ Mitsui seeks to establish a win-win relationship between Russia and Japan, by securing the enormous gas reserves for the Japanese market.

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Sakhalin II Project

➤ Operating Company
Sakhalin Energy Investment Company Ltd.

➤ Shareholder

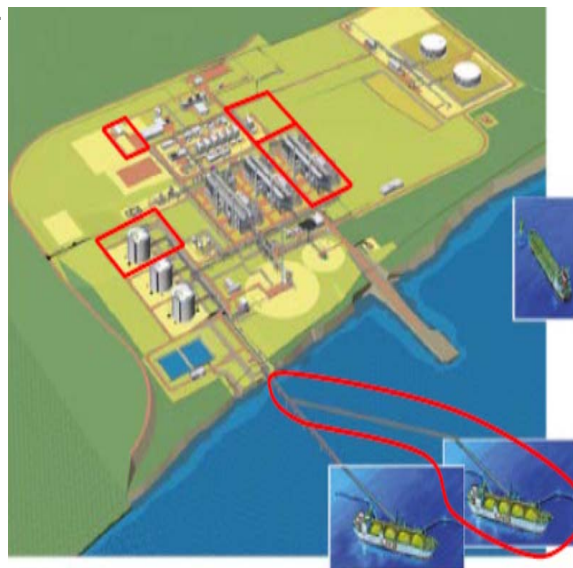
Gazprom	50.0% + 1share
Shell	27.5% - 1share
Mitsui & Co.	12.5%
Mitsubishi Corp.	10.0%

➤ LNG Production Capacity
9.6 mil MT per annum
(4.8 mil MT x 2 trains)

➤ Actual Production (Year 2015)

Crude Oil	40.4 mil bbl
LNG	10.7 mil MT

Train 3



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Diversification of Gas Consumption

LNG Bunkering



Gas Chemical



Natural Gas Vehicle & CNG Trucks



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LNG Bunkering in Russian Far East

Sulfur Emission Caps

- ✓ There is a worldwide trend to further cap sulfur emissions for maritime vessel.
 - EU, International Maritime Organization (IMO)
- ✓ LNG is competitive against Low Sulfur Bunkers in the current market.

➔ LNG demand increase for marine vessels may be expected.

Sulfur Emissions Cap

Current Cap	New Cap
3.5%	0.5%



Comparison of Bunker Fuel Costs

Fuel Type	Sulfur Content	Cost (\$/t)
Sulfur Bunkers (HFO)	3.5%	\$242
Low Sulfur Bunkers	0.1%	\$401
LNG	0%	\$247

- ✓ Mitsui is studying the possibility of LNG Bunkering in the Russian Far East.

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