



LNG Supply & Demand after the Great East Japan Earthquake and Japan-Russia Cooperation

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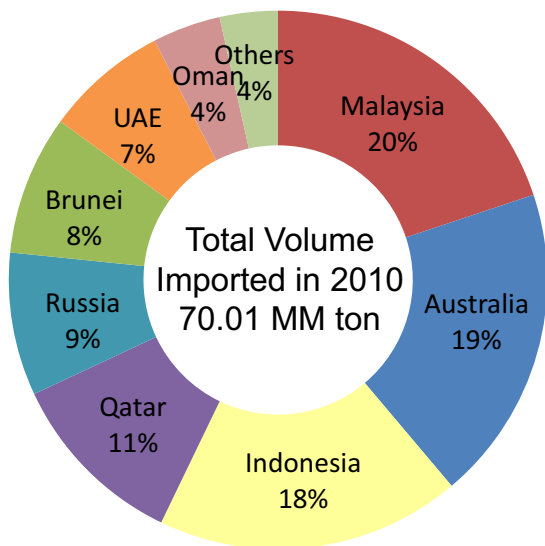
Agency for Natural Resources and Energy,
Japan

1. LNG Supply & Demand after the Great East Japan Earthquake

Japan's LNG Imports

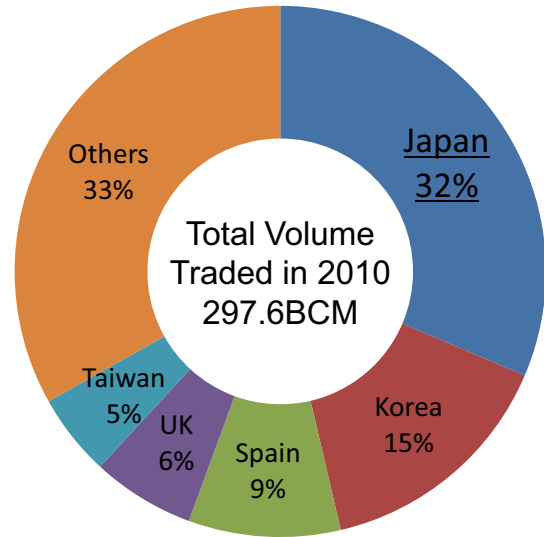
- ✓ The world largest importer, accounting for one-third of the global trades
- ✓ Imported more than 70 million tons in 2010

Japan's LNG Imports (2010)



(Source) Trade Statistics of Japan

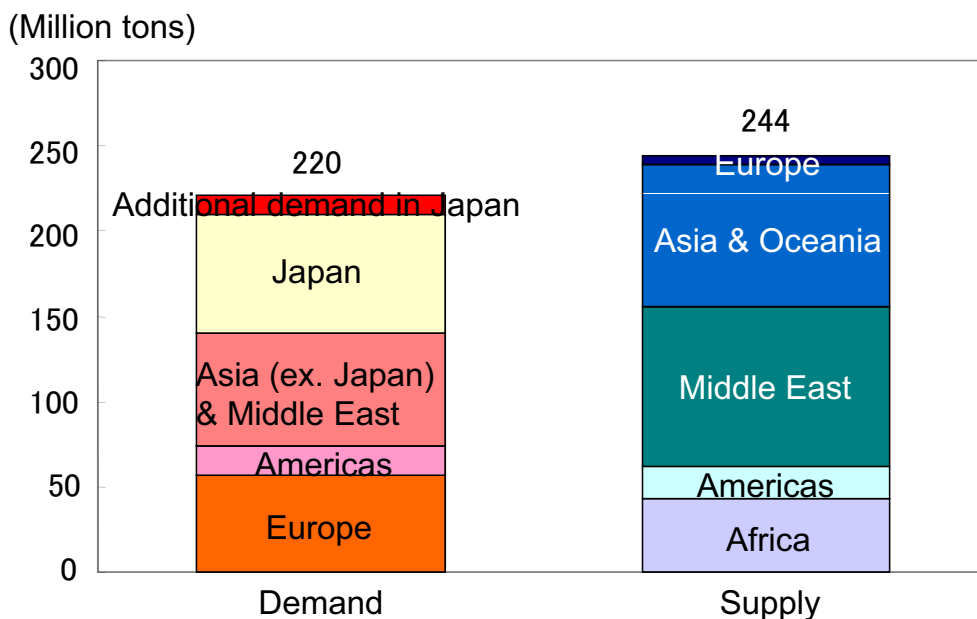
Global LNG Trades (2010)



(Source) BP Statistical Review of World Energy 2011

Global Supply & Demand after the Great East Japan Earthquake

- ✓ Additional LNG demand after the Great East Japan Earthquake in Japan for the year is expected to be about 10 million tons
- ✓ Global supply capacity still exceeds global demand



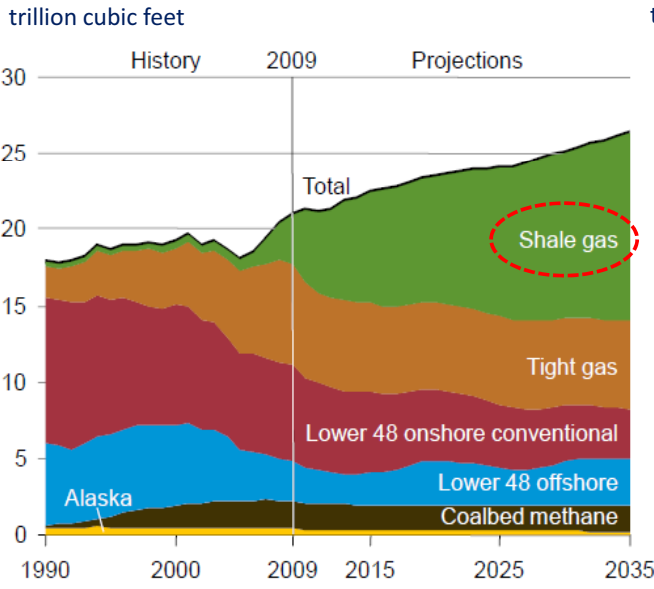
(Source) The Institute of Energy Economics, Japan (IEEJ)

Expansion of shale gas production in the U.S.

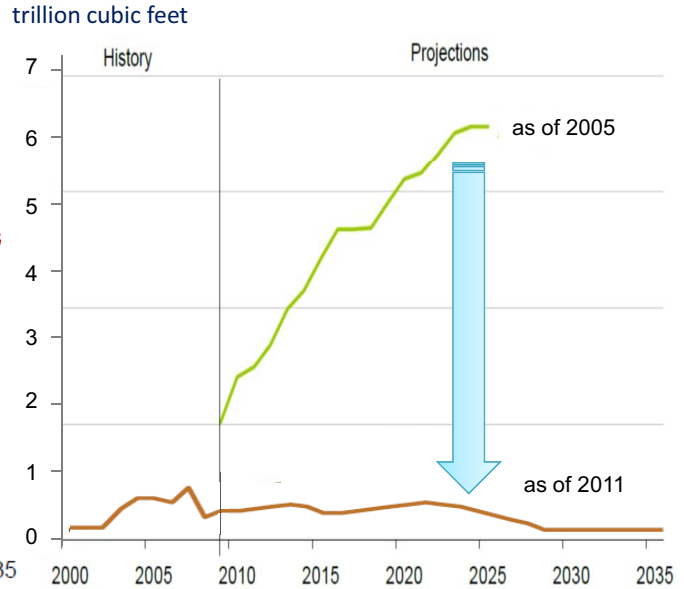
- ✓ Behind this sufficient global supply capacity lies the expansion of shale gas production in the U.S.
- ✓ Expected volume of LNG imports in the U.S. has decreased dramatically

U.S. Natural Gas Production, 1990-2035

Outlook for U.S. LNG imports



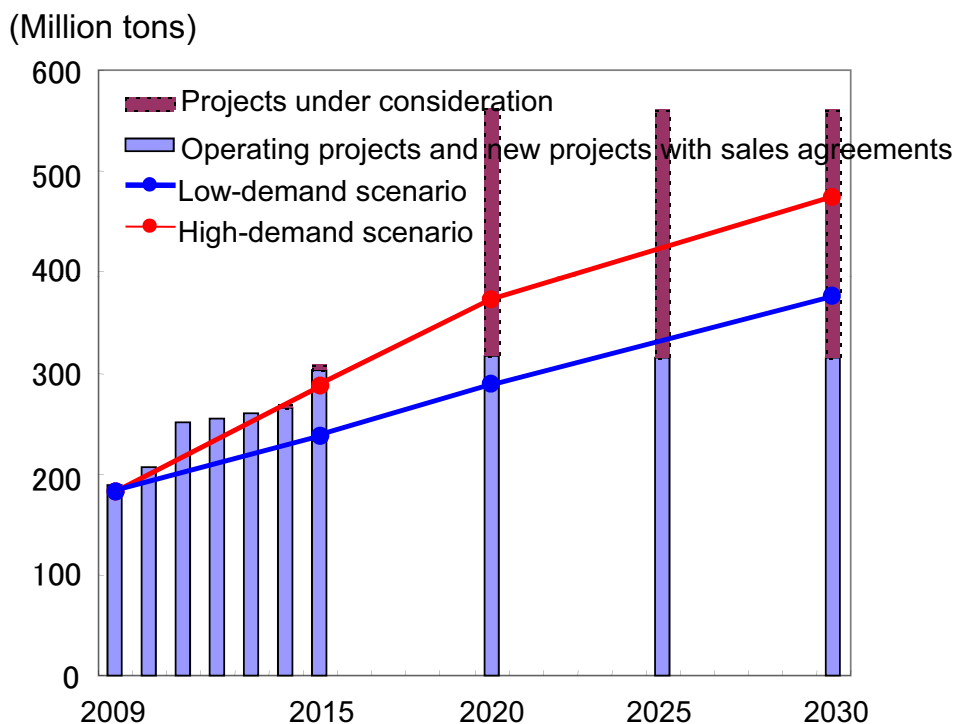
(Source) EIA, Annual Energy Outlook 2011



(Source) EIA, Annual Energy Outlook 2011

Global Supply–Demand Balance in the Long-term

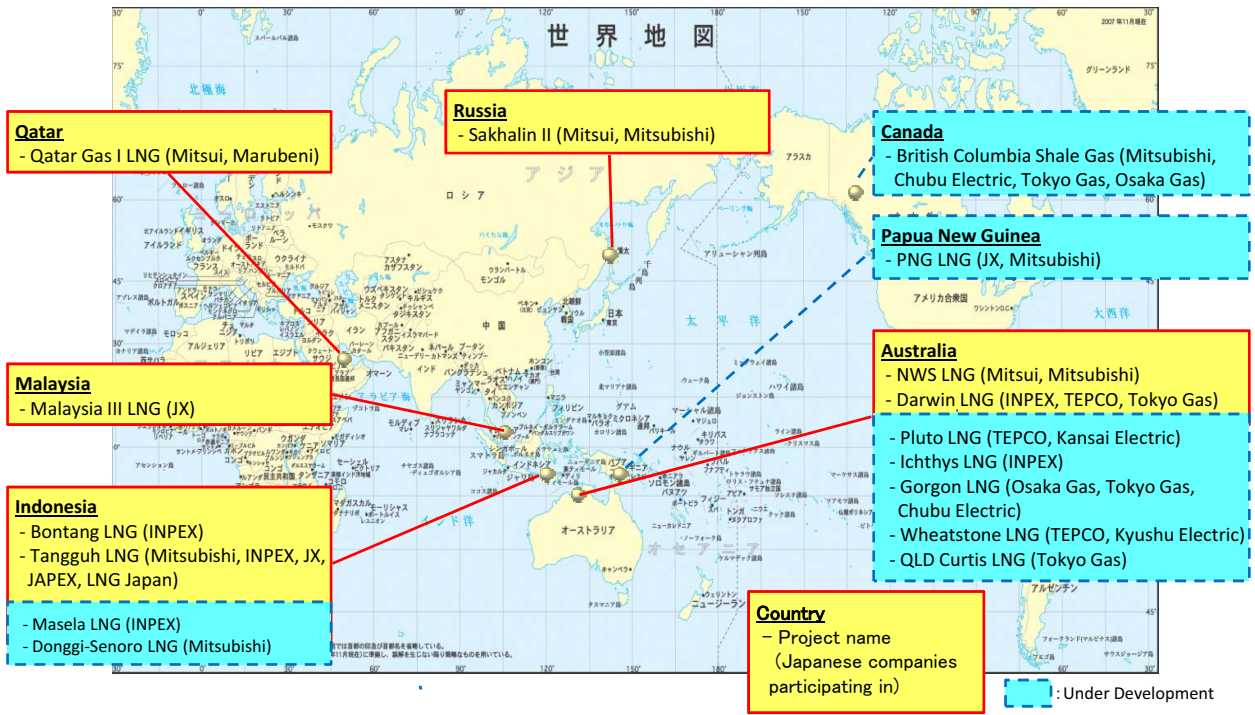
- ✓ Supply capacity will continue to exceed demand until 2030, as far as projects under consideration will start up smoothly



(Source) The Institute of Energy Economics, Japan (IEEJ)

The Role of “Self-Developed” Gas

- ✓ Additional supply of LNG from projects where Japanese companies participate in (Sakhalin II, Bontang LNG, etc.)
- ✓ Importance of further participation in the upstream developments

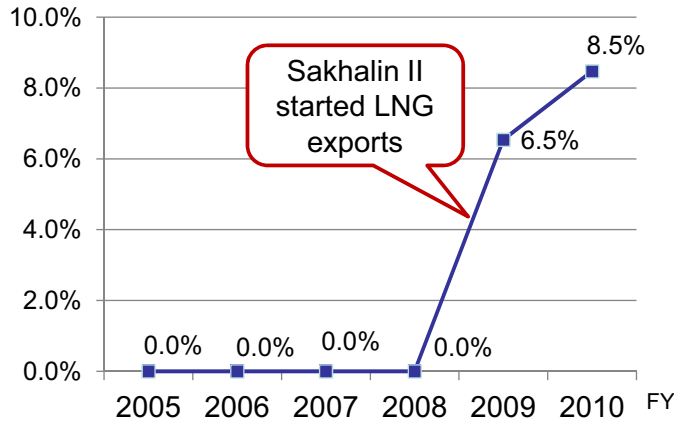


2. Japan-Russia Cooperation in Oil & Gas Sector

Expansion of LNG Imports from Russia

- ✓ LNG supply from Russia surged after Sakhalin II Project started LNG exports in Mar. 2009

Share of Russia in Japan's LNG Imports



(Source) Ministry of Finance, Trade Statistics of Japan



(Source) Sakhalin Energy

Cooperation with Gazprom

- ✓ Signed the MOU on cooperation with Gazprom in Nov. 2005 and have been holding regular meetings
- ✓ Agreed to implement Feasibility Study on constructing LNG plant near Vladivostok in Jan. 2011



Cooperation with Gazprom

- Jan. 2005 Signed the MOU on cooperation with Gazprom
- Jan. 2007 Held the 1st Joint Coordination Committee(JCC)
- Mar. 2009 Signed the MOU on Sci-Tech Cooperation
- May 2009 Signed the MOU on implementing Pre-FS on Vladivostok LNG Project
- Jul. 2010 Held the 5th JCC
 - Reported the result of the Pre-FS, agreeing to move onto detailed FS
 - Signed the Sci-Tech Cooperation Program
- Jan. 2011 Signed the MOU on implementing FS on Vladivostok LNG Project

Vladivostok LNG Project

- ✓ Gazprom and Japanese consortium (Itochu, JAPEX, Marubeni and INPEX) jointly conducting Feasibility Study
- ✓ Expected to be completed by the end of this year

SKV Pipeline
(Sakhalin-Khabarovsk-Vladivostok)



(Source) Gazprom

Completion of the SKV Pipeline
(in September)

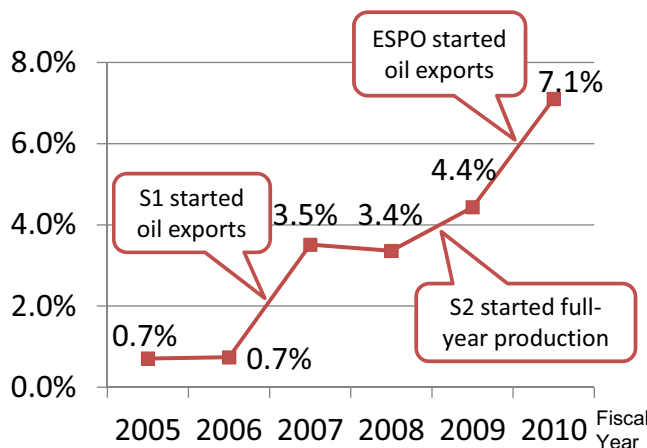


(Source) Gazprom

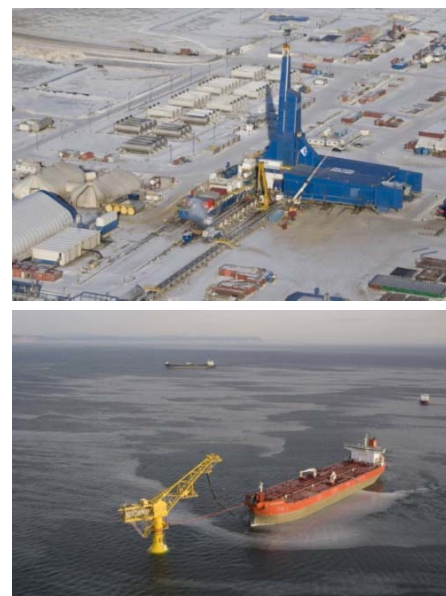
Expansion of Oil Imports from Russia

- ✓ Oil supply from Russia surged due to the exports from Sakhalin I & II as well as the completion of the first phase of ESPO (East Siberia – Pacific Ocean) pipeline

Share of Russia in Japan's Oil imports



(Source) Natural Resources and Energy Statistics, METI



(Source) Rosneft

Cooperation with Rosneft

- ✓ Signed the MOU on cooperation with Rosneft in Mar. 2008
- ✓ Held the 1st Joint Coordination Committee in May 2011, agreeing to accelerate comprehensive cooperation including joint E&P

ROSNEFT OPERATING REGIONS



(Source) Rosneft

Joint Exploration in East Siberia

- ✓ JOGMEC and Irkutsk Oil Company (INK) jointly conducting exploration in 3 blocks in East Siberia
- ✓ Announced the discoveries of oil & gas in Oct. 2010

Severo-Mogdinsky Block

- INK51%, JOGMEC49%
- Started exploration in 2007
- Discovered oil from exploration well in 2010 (recoverable reserves estimated to be 110 million barrels at the moment)

Zapadno-Yaraktinsky Block & Boshetirsky Block

- INK51%, JOGMEC49%
- Started exploration in 2009
- Discovered oil & gas from exploration wells in each block



(Source) JOGMEC