

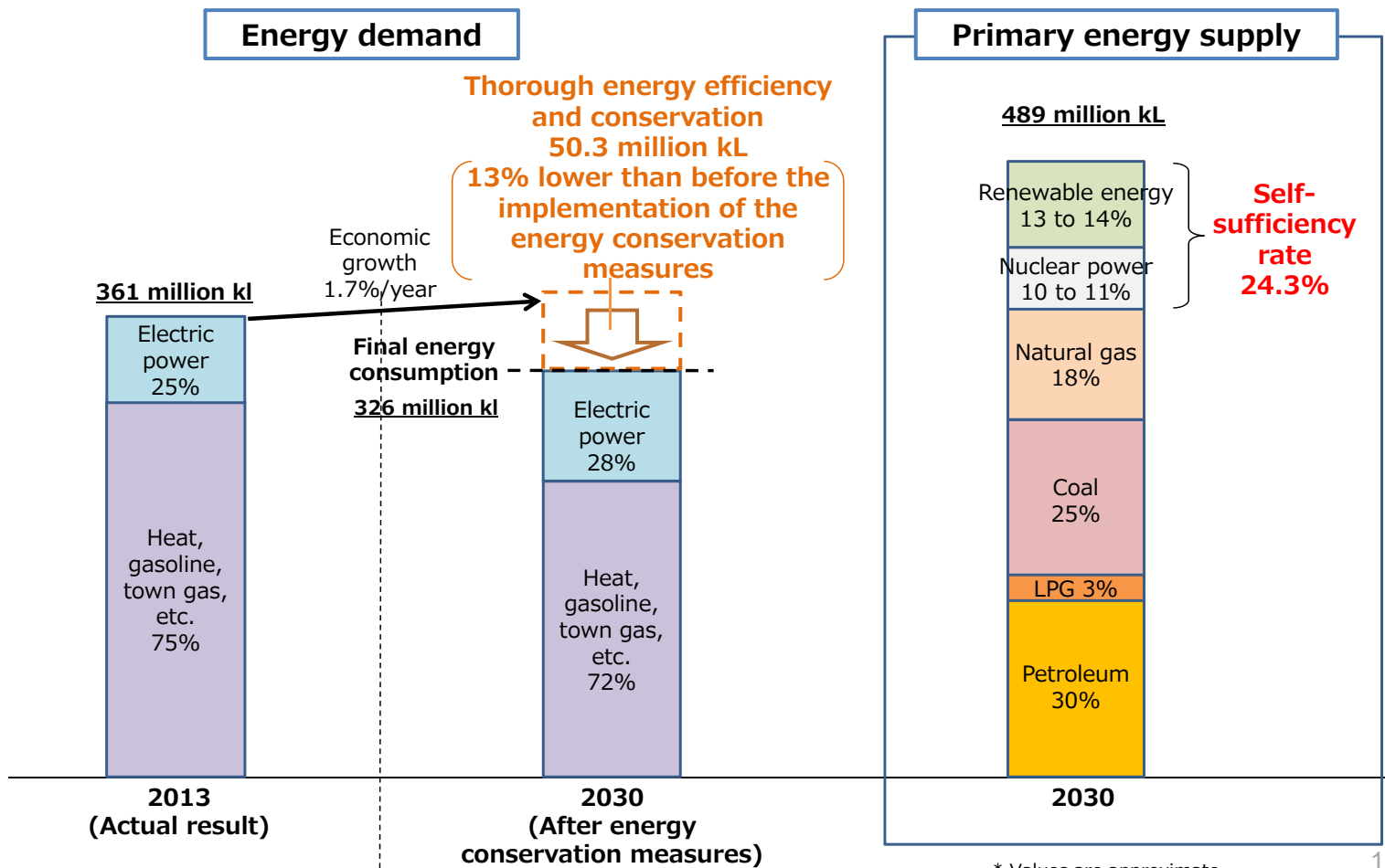


Japan's Energy Policy

2nd November, 2016

Ministry of Economy, Trade and Industry,
Japan

1. Energy Demand and Primary Energy Supply Outlook (2015)

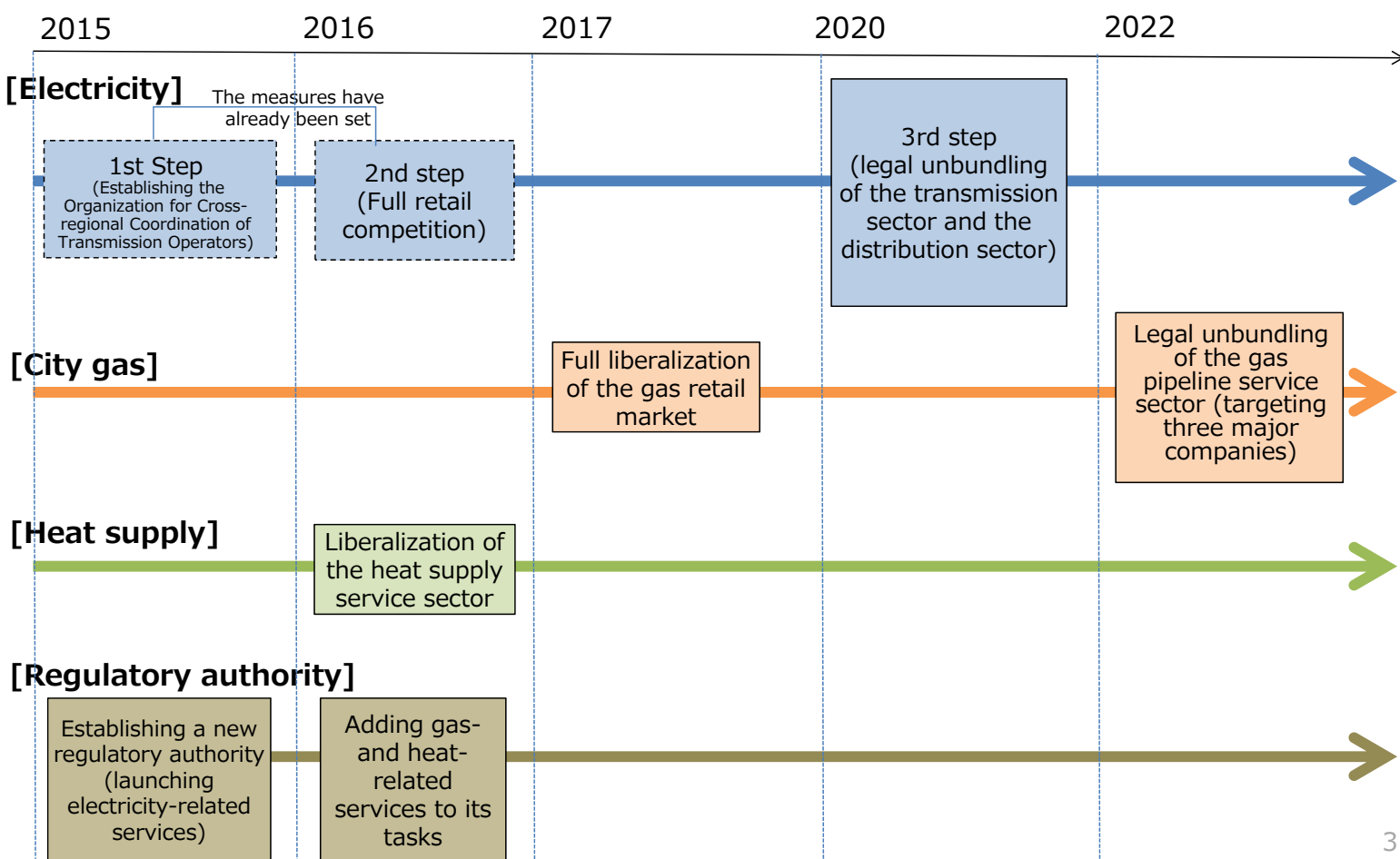


2. Ratio of Each Energy Source in Primary Energy Supply

	1970	2010	2012	2030
Fossil Fuel	92%	82%	92%	76%
Others	8%	18%	8%	24%
	1970	2010	2012	2030
Oil	70%	40%	44%	33%
Coal	21%	23%	23%	25%
Natural Gas	1%	19%	25%	18%
	1970	2010	2012	2030
LNG	1 million ton	71 million ton	90 million ton	62 million ton

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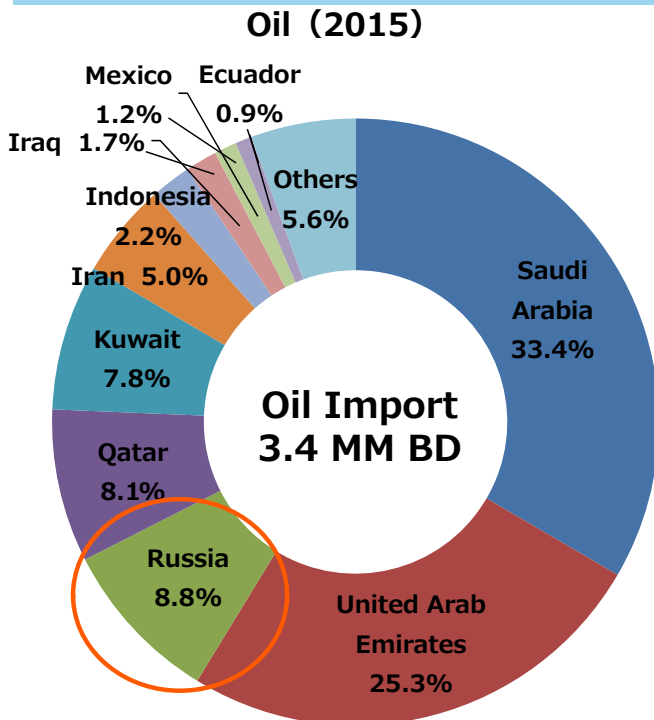
3. Energy Market Reform in Japan: Roadmap



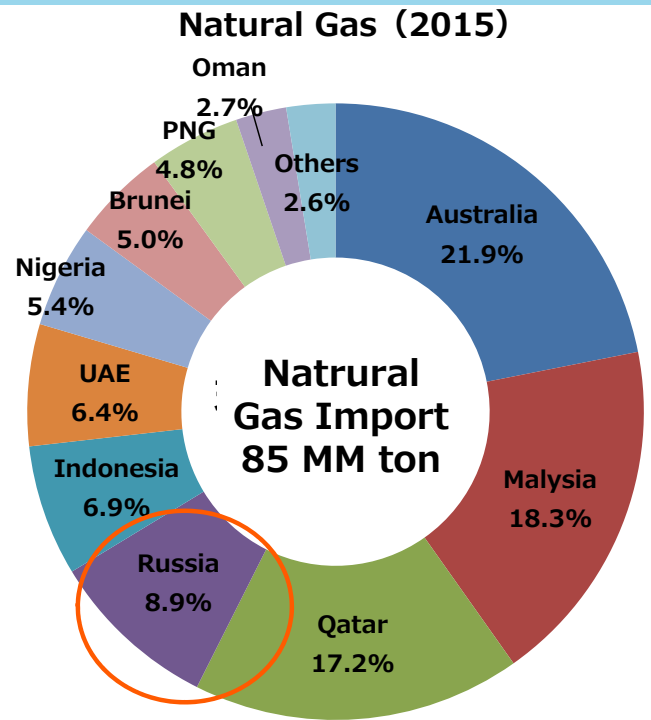
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4. Japan’s Oil and Gas Import (2015)

- Japan depends on import from overseas almost of its oil and gas demand.
- Middle-East countries dependency is 82% on oil and 27% on natural gas.



Middle-East countries Dependency : 82.0%
(Hormuz Dependency : 81.4%)

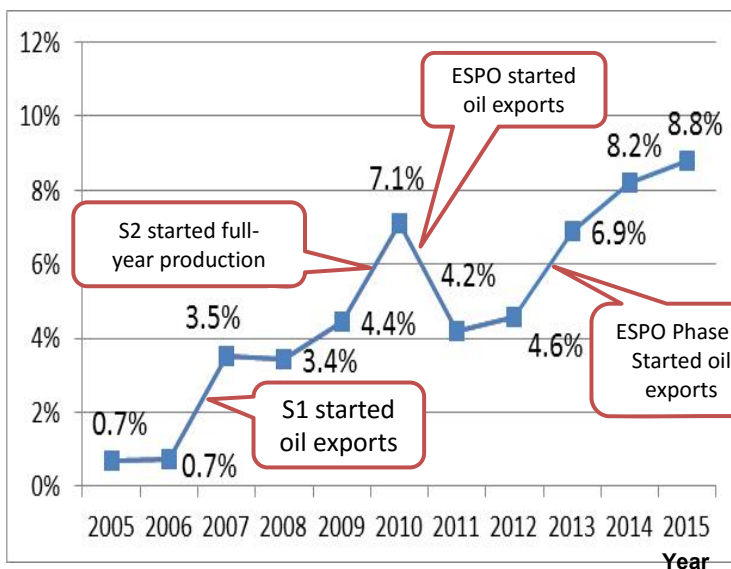


Middle-East countries Dependency : 26.5%
(Hormuz Dependency : 23.6%)
(Resource) Trade Statistics, Ministry of Finance

5. Increased importance of Oil & LNG import from Russia

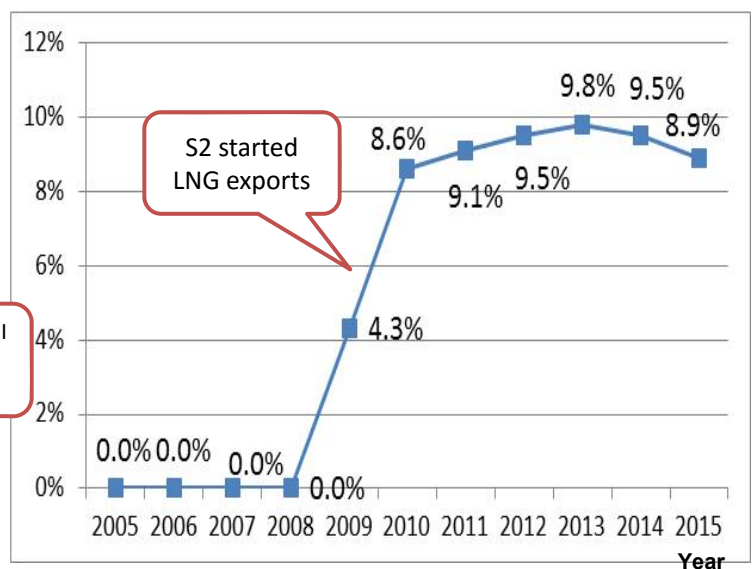
- In addition to oil imports from Sakhalin I (2005) and Sakhalin II (1999), the construction of ESPO (2009, 2012) has led to the increase of oil imports from Russia. Currently, Japan imports 8% of its oil from Russia.
- Japan imports 10% of its LNG from Sakhalin II, which started LNG exports to Japan from March 2009.

Russian shares in Japan’s total oil imports



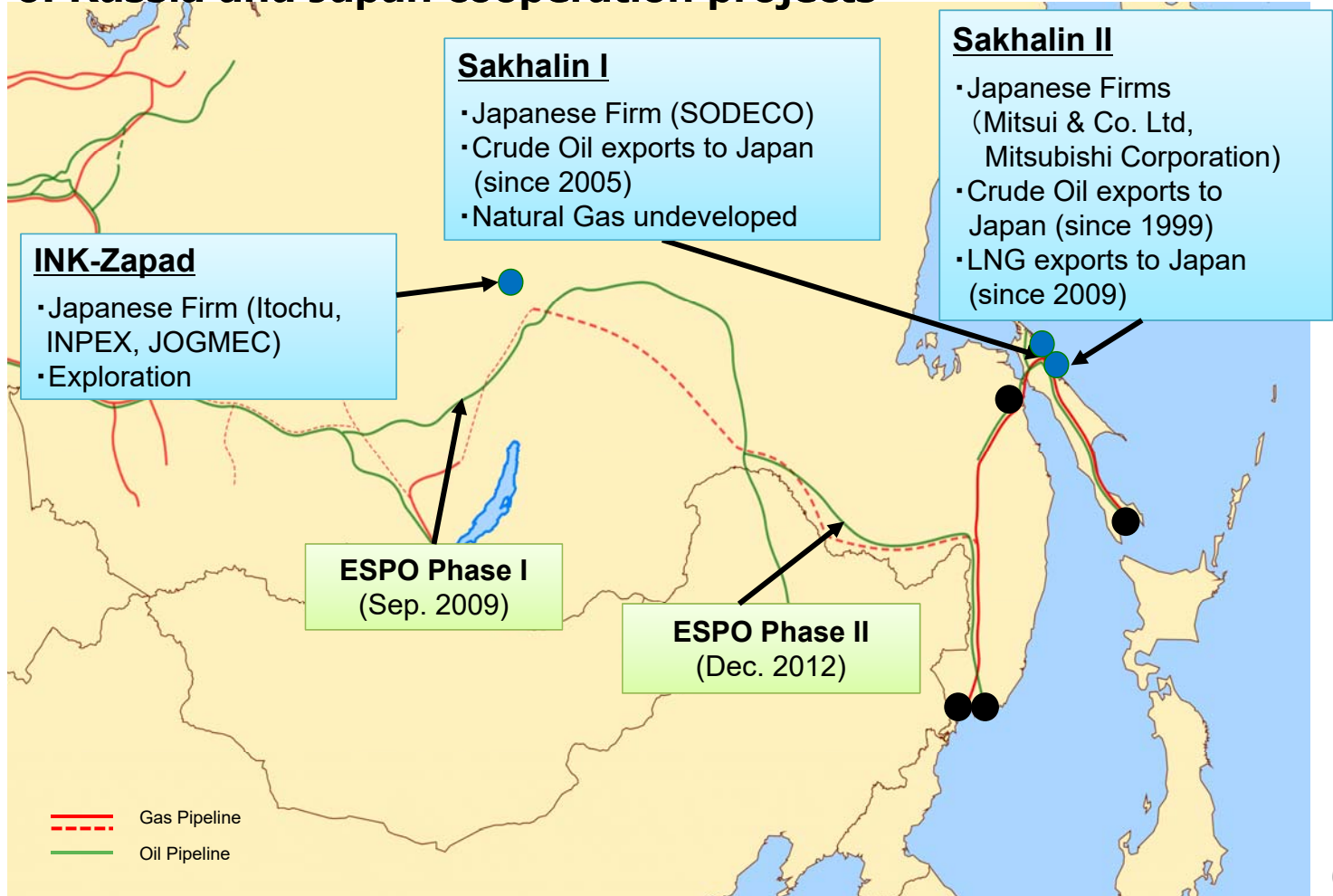
Source : Natural Resources and Energy Statistics

Russian shares in Japan’s total LNG imports



Source : MOF Trade Statistics
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6. Russia and Japan cooperation projects



6

7. Eight-Point Cooperation Plan

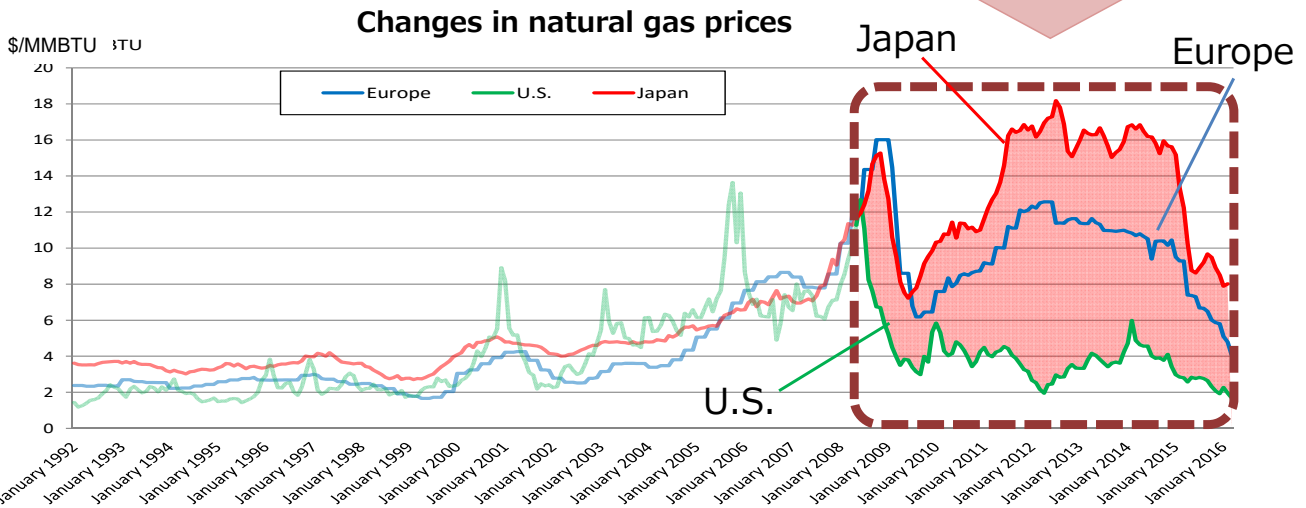
- Prime Minister Abe introduced steps to materialize the eight-point cooperation plan presented at the Summit Meeting in Sochi on May.

- (1) Extending healthy life expectancies
- (2) Developing comfortable and clean cities easy to reside and live in
- (3) Fundamentally expanding exchange and cooperation among SMEs
- (4) Energy**
- (5) Promoting industrial diversification and enhancing productivity in Russia
- (6) Developing industries and export bases in the Far East
- (7) Cooperation on cutting-edge technologies
- (8) Fundamentally expanding people-to-people

7

8. Trends in LNG Price Gap between Japan and the West

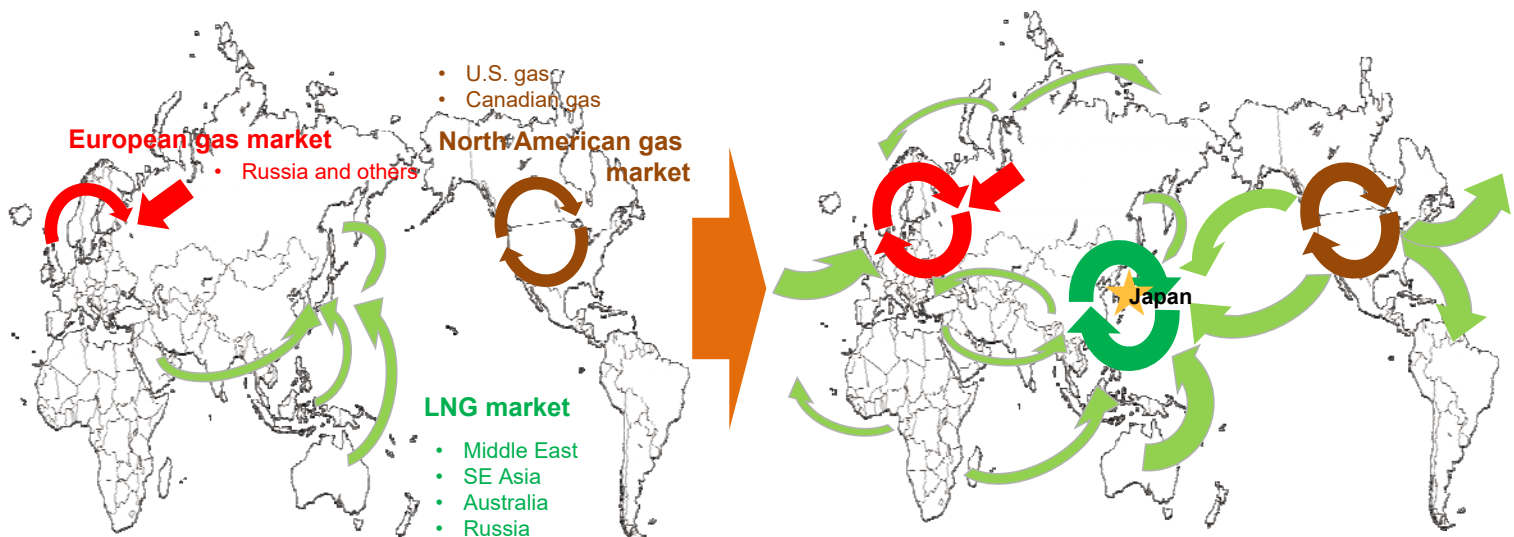
	Before 2008	Since approx. 2008
Japan vs. Europe	Small price gap (mainly in natural gas liquefaction and freight costs)	Large price gap (lower in Europe and higher in Japan) (European gas market liberalization, the revolution of gas price indices ⇔ Crude oil-linked prices, crude oil price hikes)
Japan vs. the U.S.	Small price gap (mainly in natural gas liquefaction and freight costs)	Large price gap (lower in the U.S. and higher in Japan) (Price drops mainly in the wake of the Shale Revolution) ⇔ Crude oil-linked prices, crude oil price hikes)



Source: trade statistics, IMF Primary Commodity Prices, Japan: JLC, the U.S.: Natural Gas spot price at the Henry Hub, Europe: Russian Natural gas border price in Germany

9. Integration of Asian, North American, and European Gas Markets

- The global natural gas market have been isolated from each other.
- The Asian, European, and North American LNG markets will become multi-directional.
- This position would give Japan the best opportunity to serve as a LNG hub and contribute to world LNG market development.



10. Three Pillars of the "LNG Market Development Strategy" (May, 2016)

