
The 414th Forum on Research Work

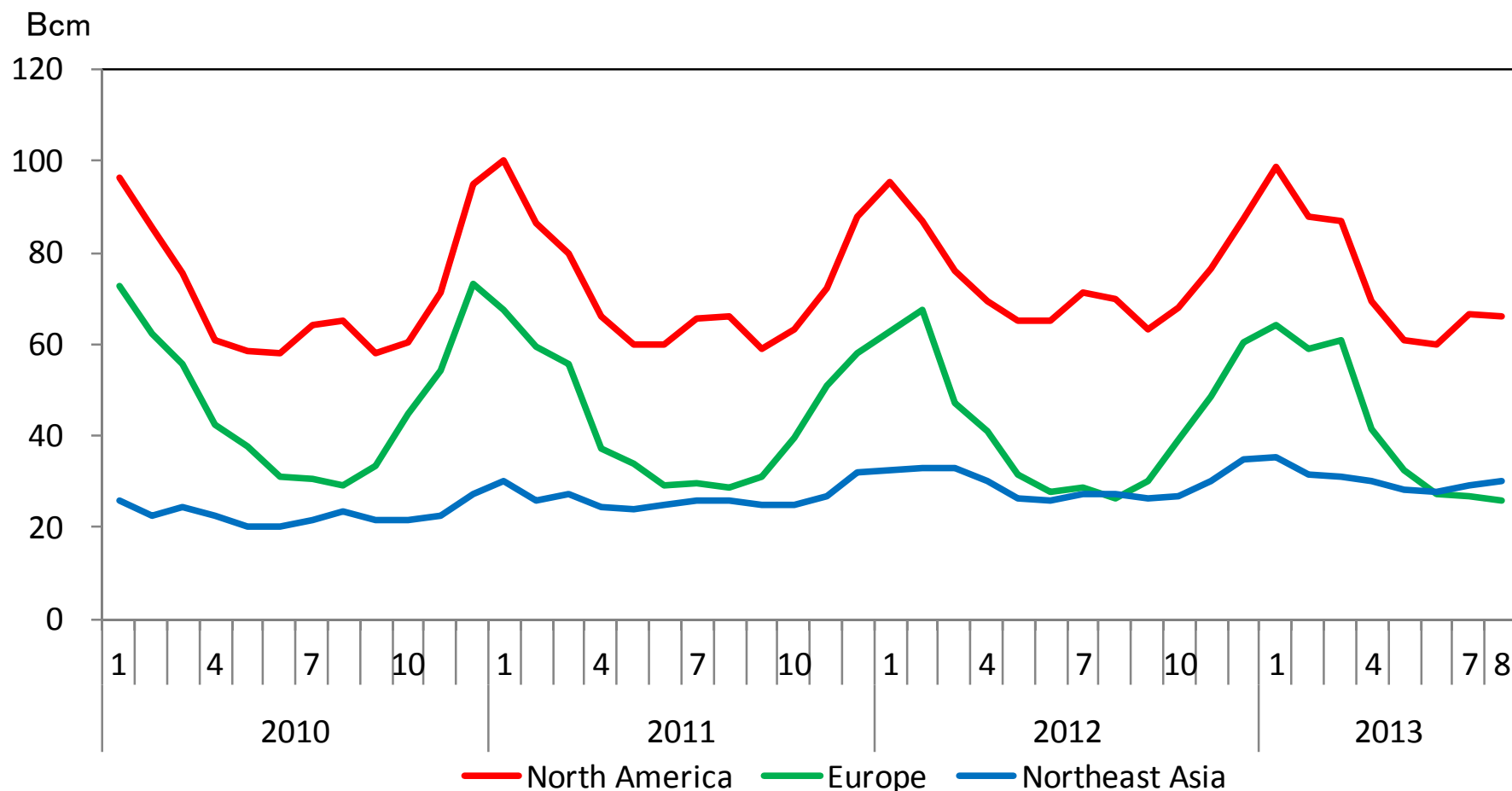
Outlook for the Natural Gas Markets in 2014

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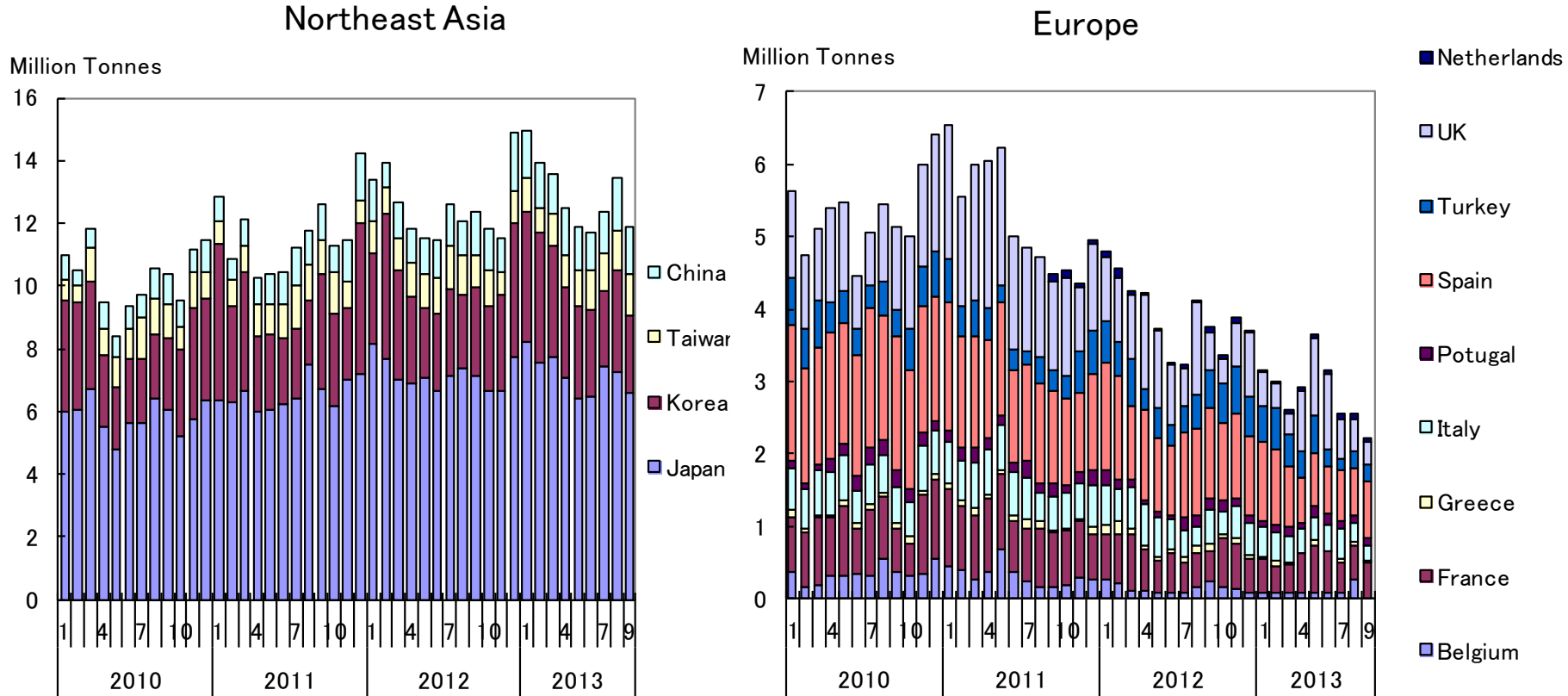
Natural Gas Demand



(Sources) IEA, China OGP, Bureau of Energy, Ministry of Economic Affairs

- Natural gas demand in January–August of 2013: 597Bcm (down 3Bcm, YoY) in North America, 339Bcm in Europe (up 6Bcm; down 4Bcm in LNG importing countries), 244Bcm in Northeast Asia (up 9Bcm)

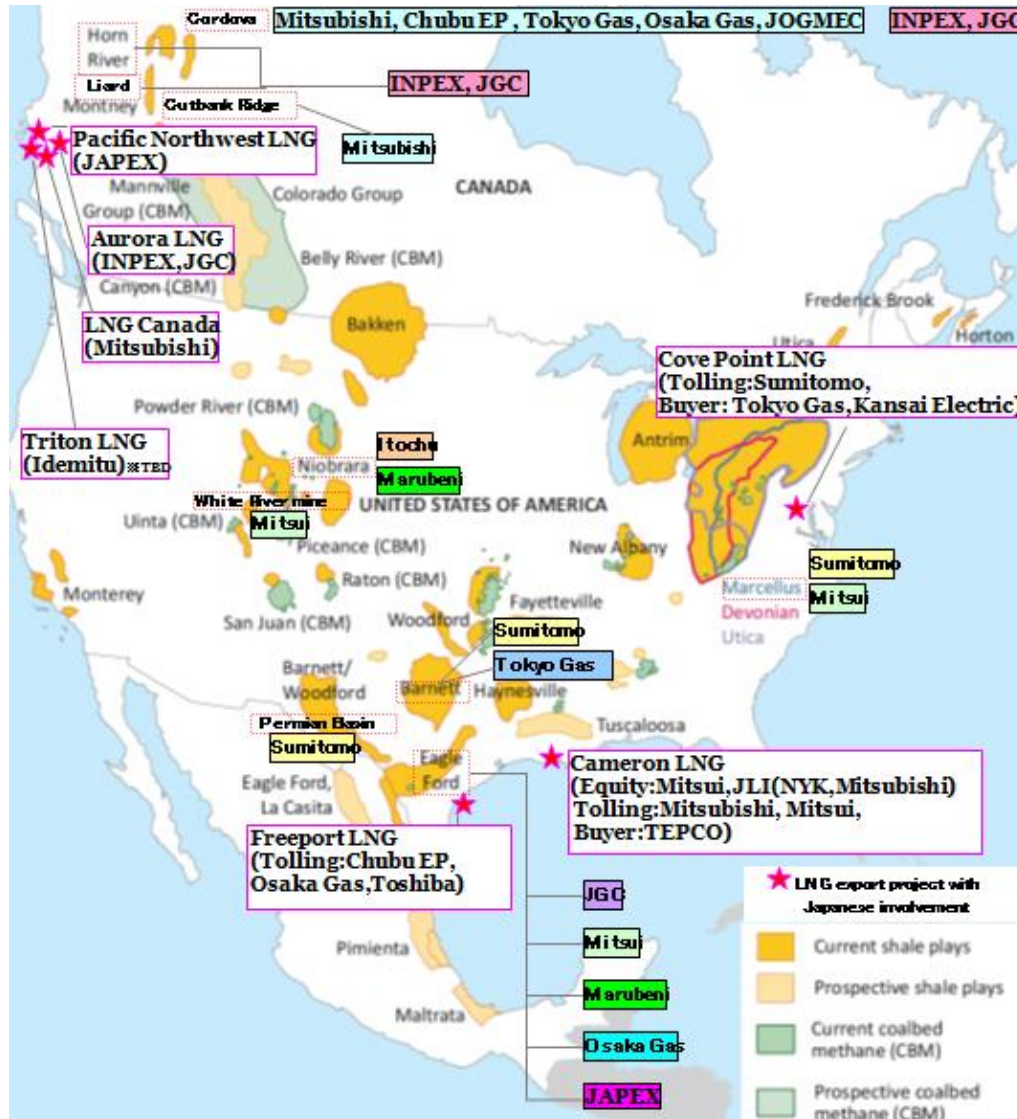
Monthly LNG Imports in Northeast Asia and Europe



(Sources) Customs statistics, IEA

- LNG imports in January-September of 2013: 116.2 Million Tonnes (MT) in Northeast Asia (up 4.3 MT, YoY), 25.8MT in Europe (down 10.1 MT).
- Continued demand decline in Europe; LNG competitiveness seriously undermined.

LNG Export Projects in North America



- Export potential more than 100MT/y
- Export authorization to non-FTA countries granted for five projects
- Japanese entities
 - Committing to 17MT of US LNG
 - Participating in 4 projects in Canada
- North American LNG important in terms of supply and pricing diversifications

(Sources) IEA and company websites

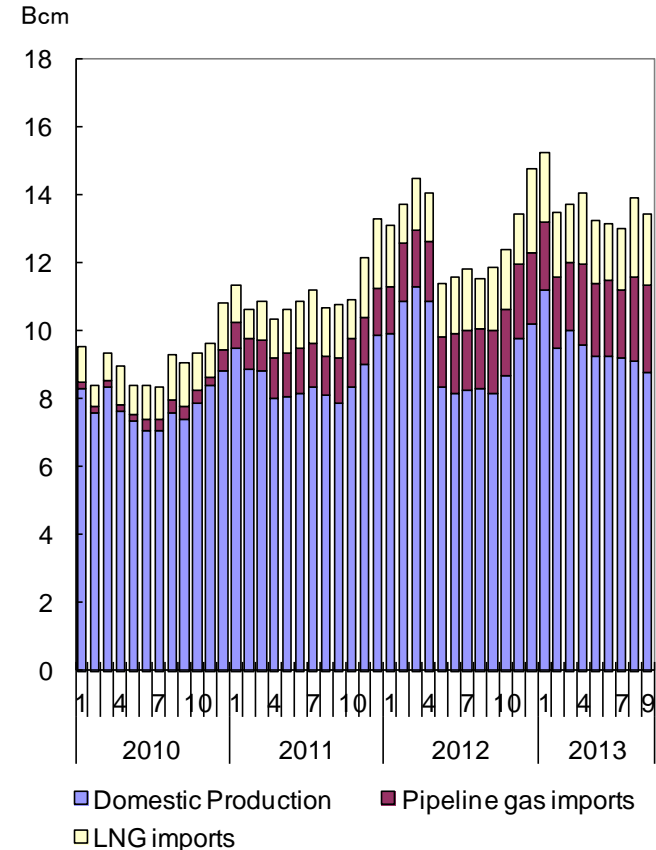
Natural Gas Supply and Demand in China

Gas Infrastructures



(Source) JOGMEC

Domestic Production and Imports

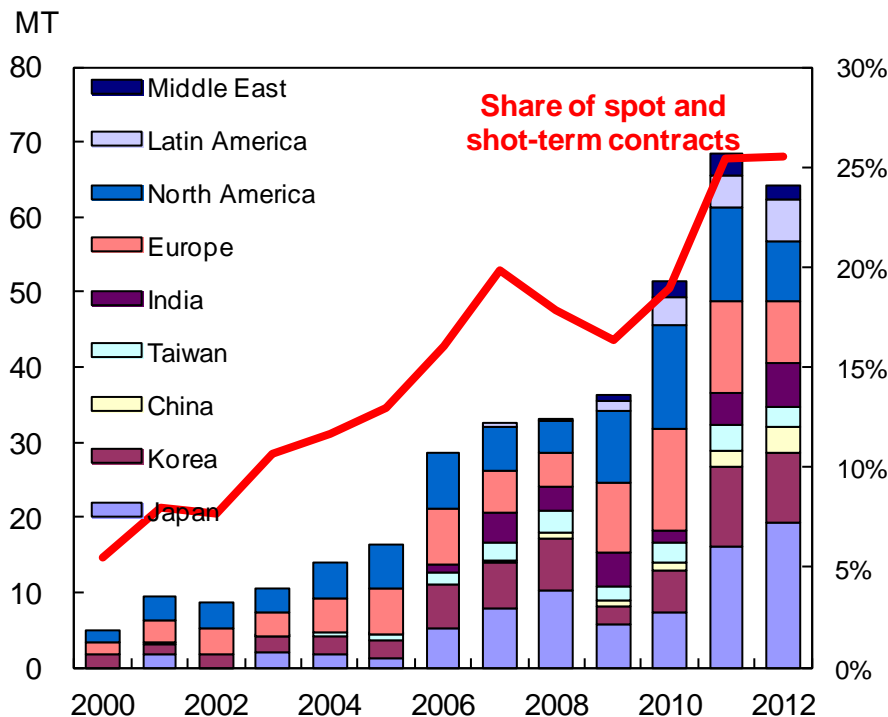


(Source) China OGP

- Many infrastructure facilities commissioned (Myanmar pipeline; LNG receiving terminals in Dongguan, Zhuhai, Tangshan, and Tianjin)
- Steady demand growth and rapid increase in pipeline gas imports.

Spot and Short-term LNG Trades

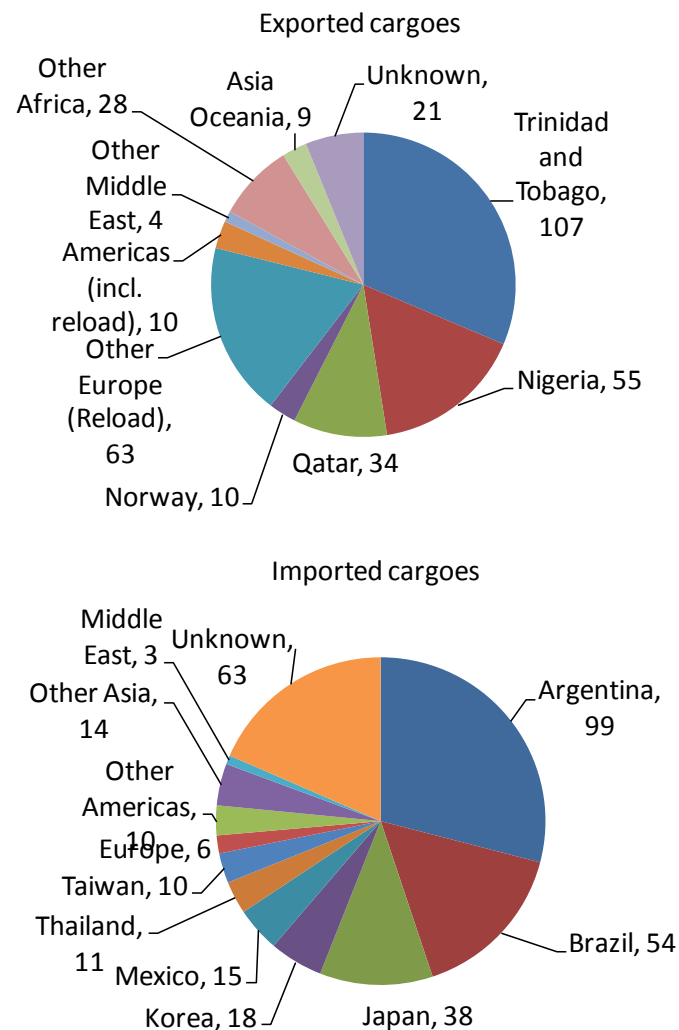
LNG Trades by spot and short-term contracts



(Source) GIIGNL

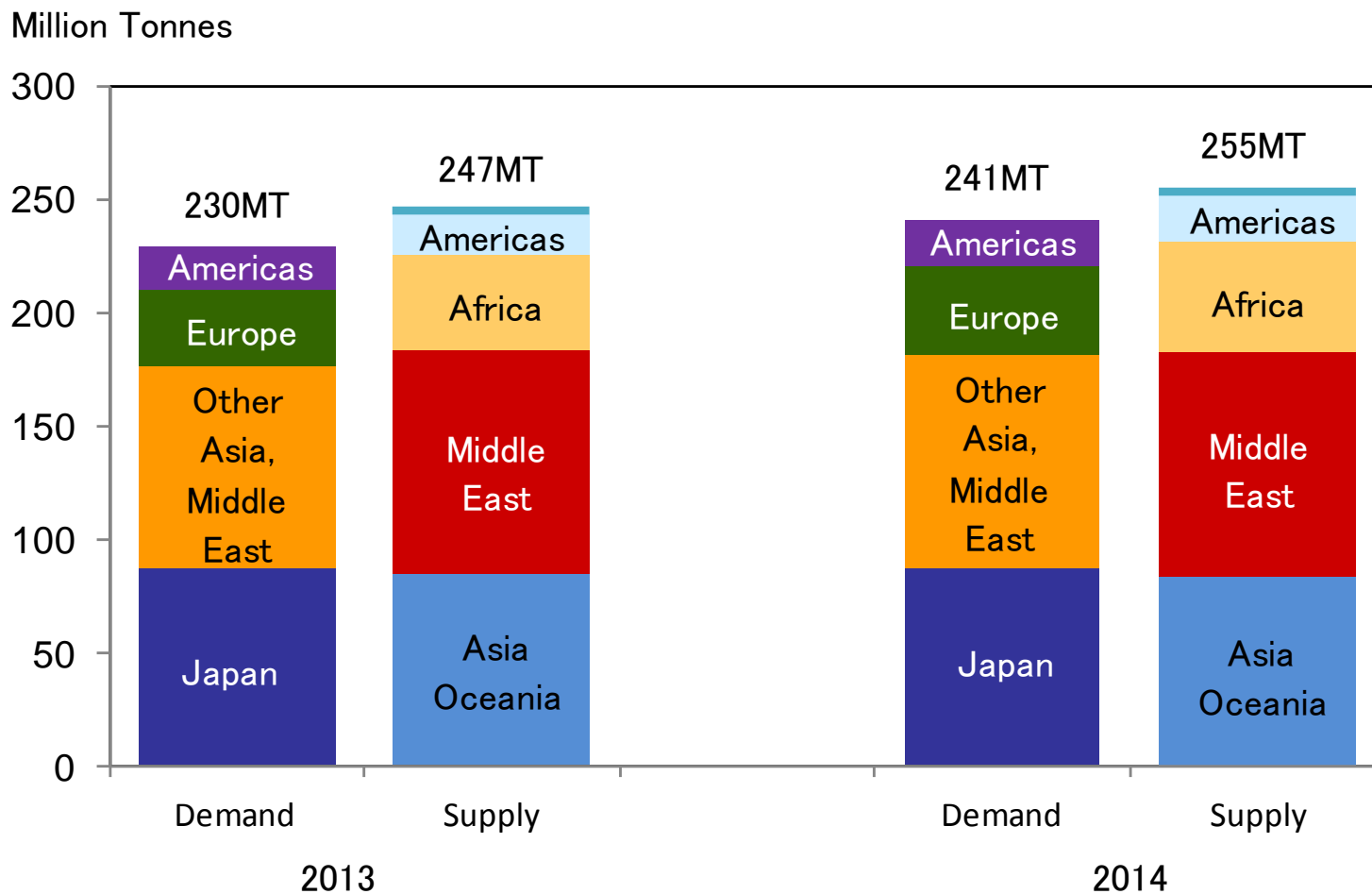
- 60.4MT (19MT for Japan) traded via spot and short-term contracts in 2012
- A large increase in spot trades (more than 20MT) expected for 2013

Spot LNG trades (Jan-Nov 2013)



(Source) ICIS Heren

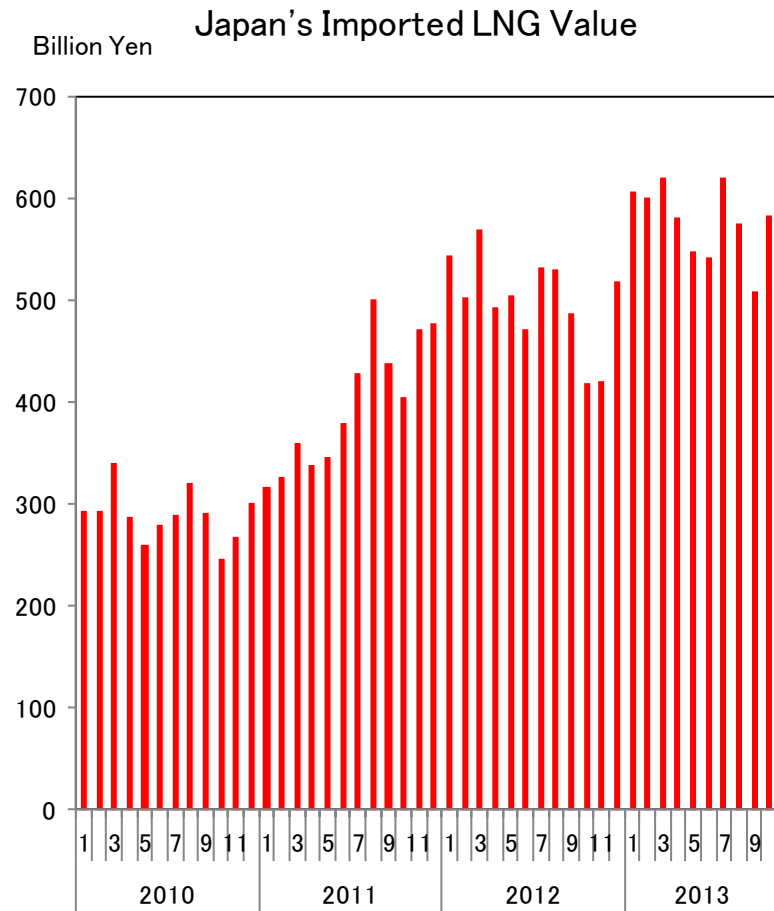
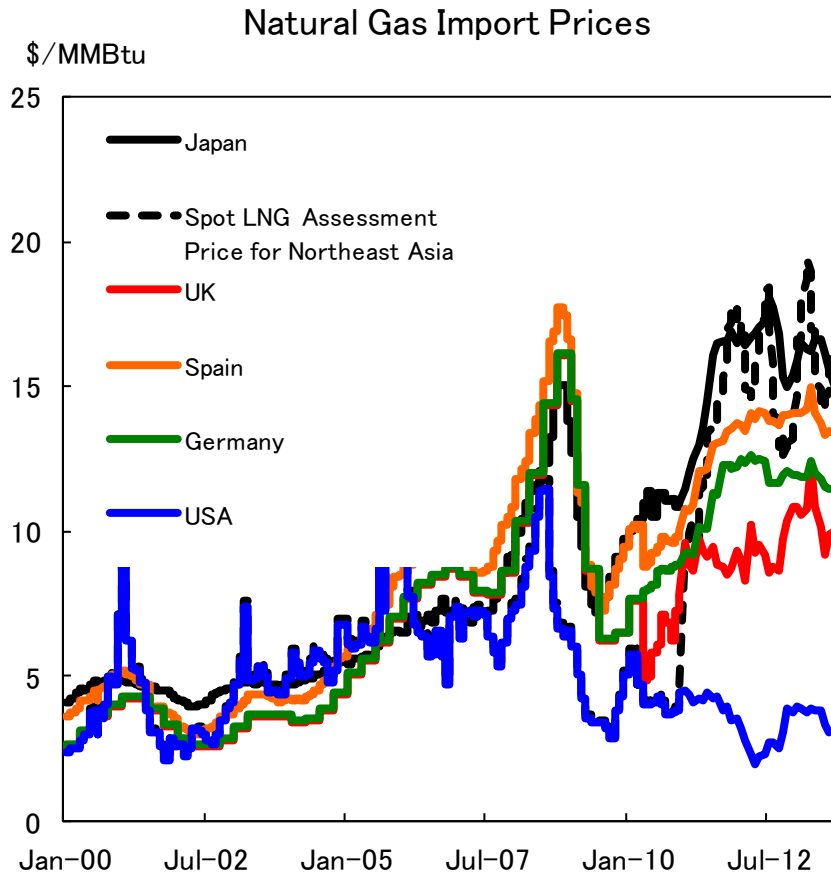
LNG Supply and Demand Outlook



(Source) IEEJ

- Adequate supply capabilities for 2013 and 2014

International Natural Gas Prices



(Source) Energy Intelligence, DOE/EIA

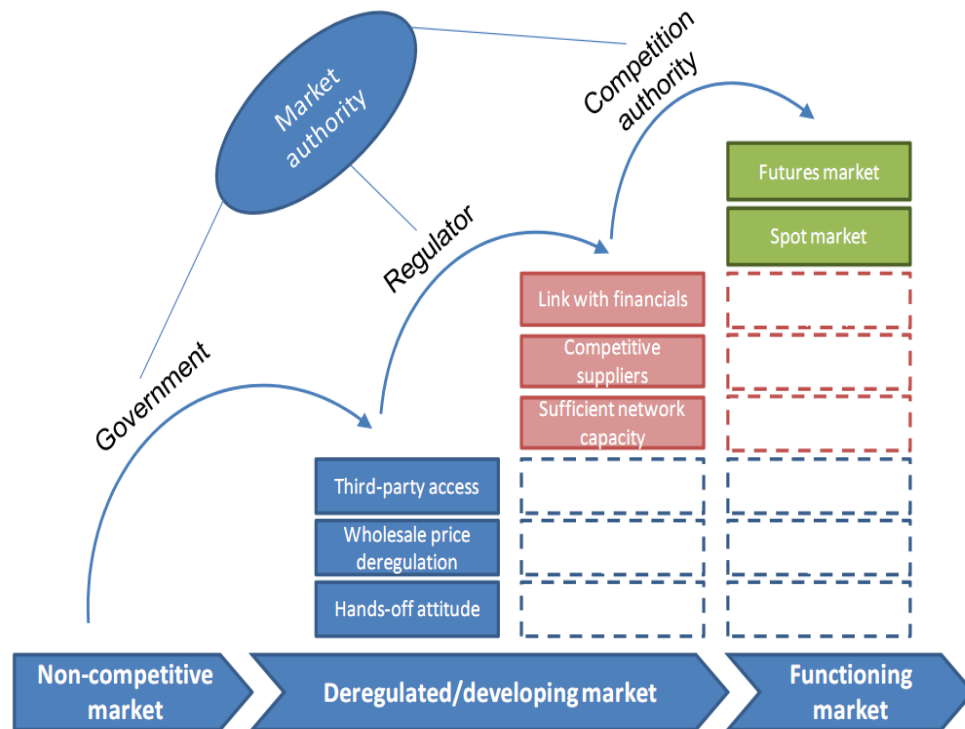
- Import prices to Japan hovering at high level, the price gap with Europe diminishing, and import prices to the USA staying at low level.
- Weaker yen pushing up the LNG import value for January-October 2013 by ¥730 billion, YoY, despite the decline in the imported quantity
- The LNG import price to Japan for FY2014 is assumed to be \$15/MMBtu.

Hub and LNG futures in Asia?

Hub/Price Typology

	Domestic	International
Physical	Henry Hub, NBP, TTF, NCG+ Gaspool, Victoria, etc	(Platts JKM, ICIS Heren East Asia Index, JLC, etc)
Financial	CME(Henry Hub etc), ICE(NBP etc), EEX(TTF etc), ASX(Victoria)	ICE (Platts JKM), CME (ICIS Heren East Asia Index) (TOCOM, Shanghai Futures Exchange)

Wholesale gas price development process



(Source) IEA

- Differentiation (domestic or international trading, and physical or financial trading) required discussing hub and futures prices.
- Domestic gas market reform as a prerequisite for domestic gas wholesale hub. More than 10 years needed to achieve adequate liquidity.

Hub and LNG futures in Asia?

LNG hub and futures plans in Asia



- Benchmark natural gas price is important to replace oil-linked pricing
- More liquidity in physical LNG market, through abolishing destination clause and lower Take or Pay obligations, required for LNG futures to be successful.

Summary

1. Natural gas/LNG supply and demand

- Constant growth in demand in Asia
- In Europe, the demand decline stopped, while the LNG import decline continued.
- Flexible supply increase under spot and short-term contracts; increase in liquidity of the LNG market expected.
- Adequate LNG supply capabilities in 2013 and 2014.

2. Natural gas prices

- LNG import prices hovering at a high level; serious increase in the import value due to the weaker yen.
- Benchmark price formation in Asia important to deal with Asia Premium of LNG
- Liquid physical LNG market as a prerequisite for LNG futures contracts