

Efforts to Establish LNG Futures Market

Tatsuya Terazawa
Director-General

For Commerce, Distribution and Industrial Safety Policy,
Ministry of Economy, Trade and Industry (METI)

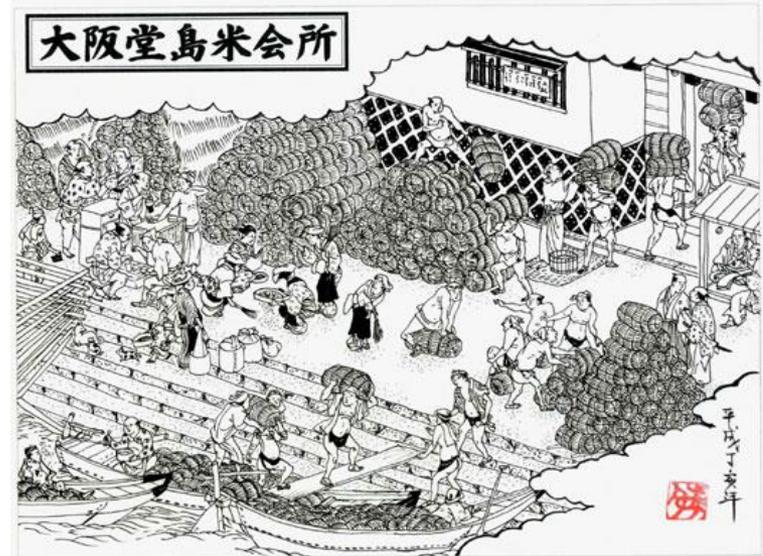
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Futures Trade – History and Functions

➤ The first Futures Exchange was established in Dojima, Japan for Rice about 300 years ago

- The Dojima Rice Exchange already had the function of (1) Price benchmark and (2) Risk hedge.
- In the Edo period, price information was distributed across the country at high speed.

Osaka→Kyoto (Approx. 40km)
----- 4 minutes by flag signaling
Osaka→Hiroshima (Approx. 350km)
-- 40 minutes by flag signaling
Osaka→Edo (Approx. 550km)
--8 hours by flag signaling and messengers
(in Hakone mountain area)



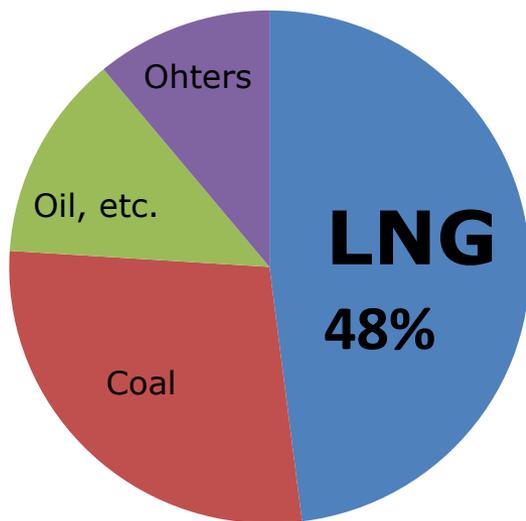
- Edo government well recognized those functions and authorized the Exchange for rice, which was the important element of the economy in the Edo period.
- ## ➤ Inheriting the long tradition, commodities are traded on the Tokyo Commodity Exchange (TOCOM) today

East Asia As The Center of LNG Demand

LNG of today is important as was rice of the Edo period

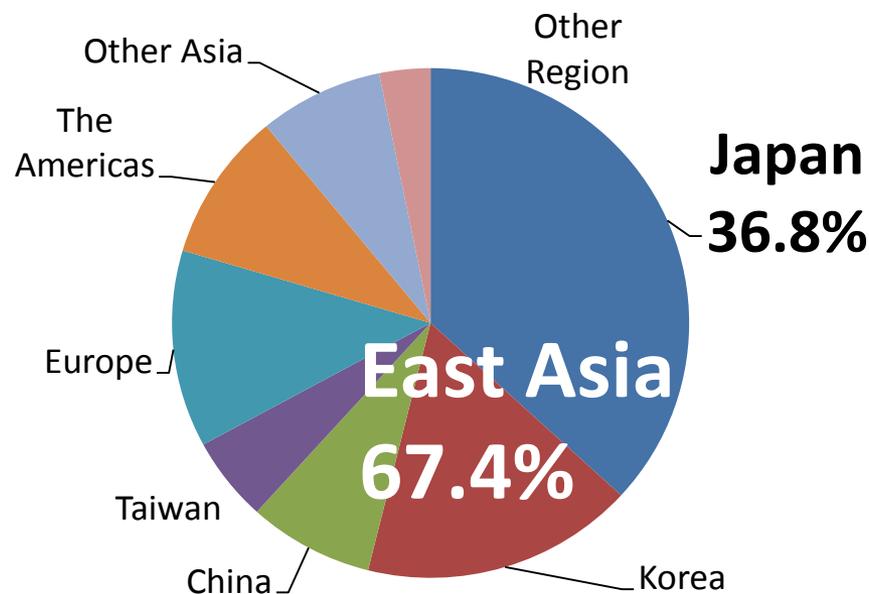
- LNG is a major source of power generation
- East Asia accounts for by far the largest demand of LNG
 - More demand is expected in Asia while new supply will be offered by the Shale gas revolution and new LNG projects in Asia Pacific
 - Landscape of LNG trade will be changed worldwide

Japan's Domestic Power Generation by Energy Resources in FY2013



Source: Compiled by METI through power company hearing etc.

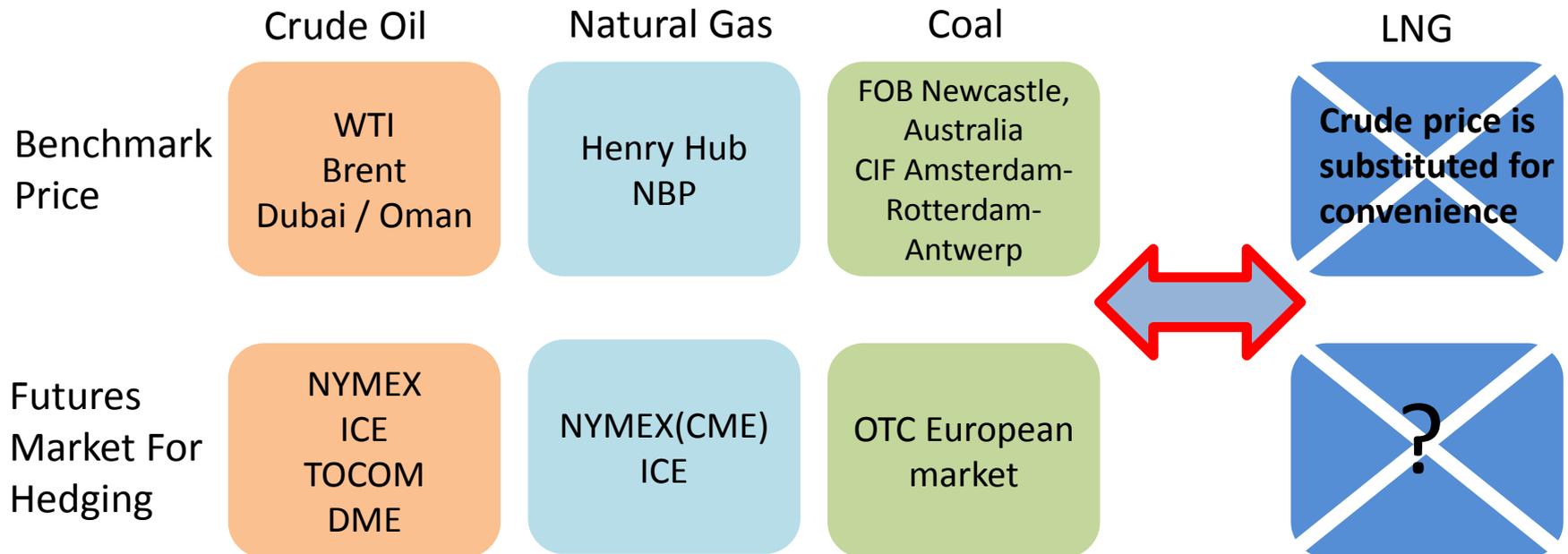
LNG Imports by Region in 2013



Source: GIIGNL "THE LNG INDUSTRY IN 2013"

Benchmark Price and Futures Market for Energy

- “Benchmark price” and “futures market to hedge the risk” remain essential in today’s trading
- Both benchmark price and futures market have been established for major energy resources, but not for LNG



METI's LNG Statistics

➤ METI's official statistics started in April 2014

- Transparent benchmark price for LNG is missing
- Japan is the largest importer of LNG
- The amount of spot trading has been increasing and will increase



METI started to publish spot LNG trading price data as a basis of LNG benchmark price

Statistical Information:

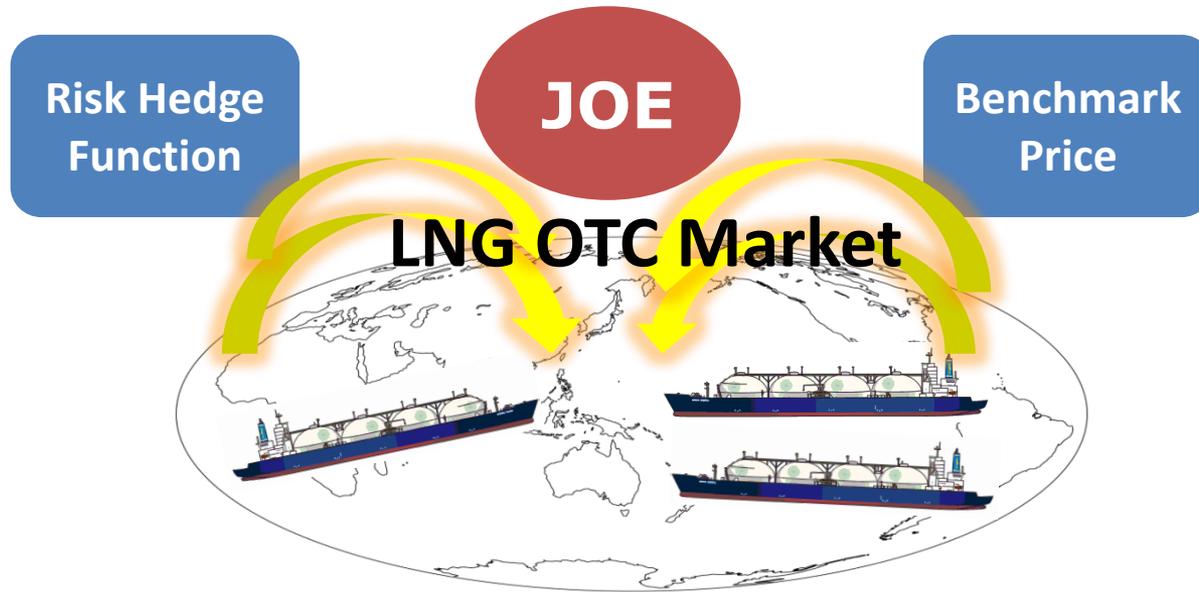
Averaged contracted price collected from all the major end-consumers of spot LNGs (approximately 15 companies in Japan)

METI's Statistics

Objective price information of contracted spot transaction collected from all the major Japanese electricity and gas firms, computed by a clear and open methodology, and publicized

New LNG OTC Market – Japan OTC Exchange

- Japan OTC Exchange (JOE) established a LNG OTC market in Sep 2014
 - JOE is a joint venture company of TOCOM
 - Participated by approx. 20 companies including all the major Japanese utility firms, trading firms (Japanese Shosha) and an international oil trading firm
 - **Actively invite variety of international buyers and sellers**



➔ **Exchange-based LNG futures are aimed to be launched in the near future**

- **Prime Minister Abe's Third Arrow (June 2014)**
"the Government will...actively endeavor to ensure that the listing of ... LNG futures proceeds smoothly. "