

23rd WORLD GAS CONFERENCE
SESSION: GLOBAL MARKET DEVELOPMENT

FUTURE LNG PRICE IN ASIAN MARKET

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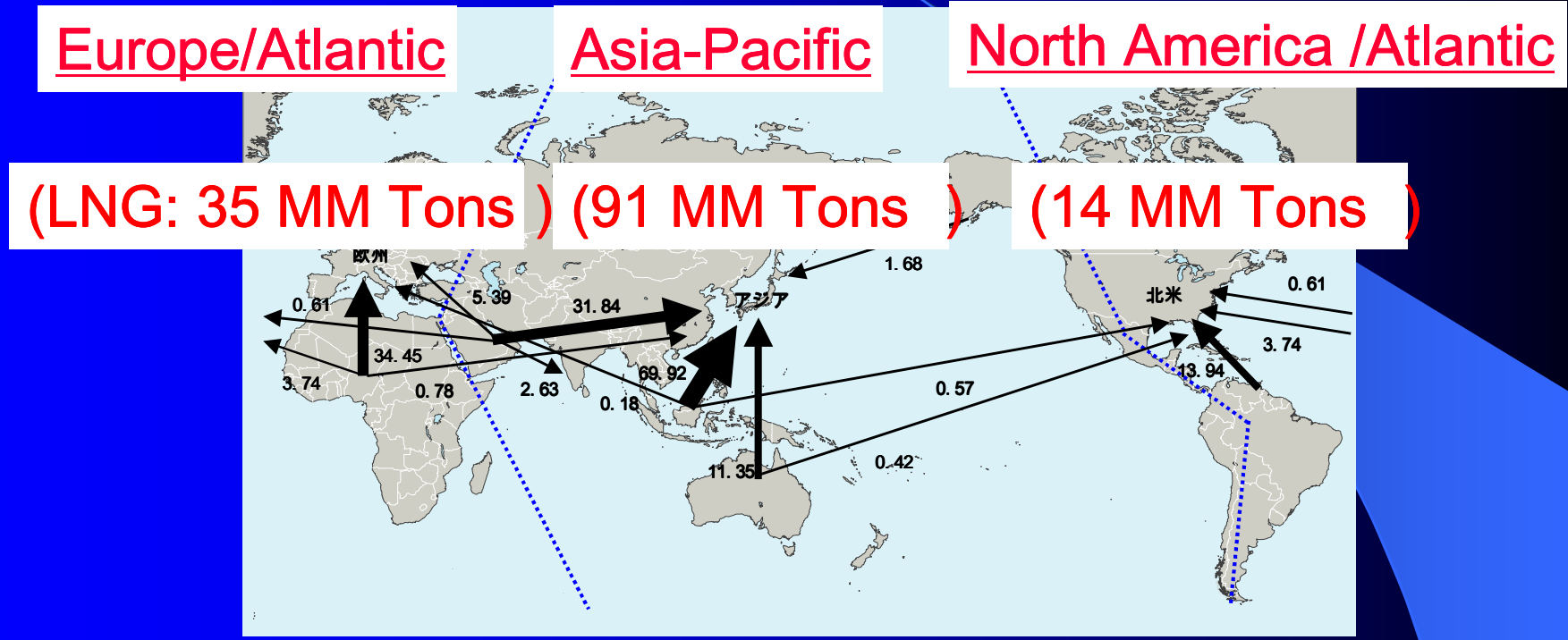
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1. CURRENT WORLD LNG MARKET

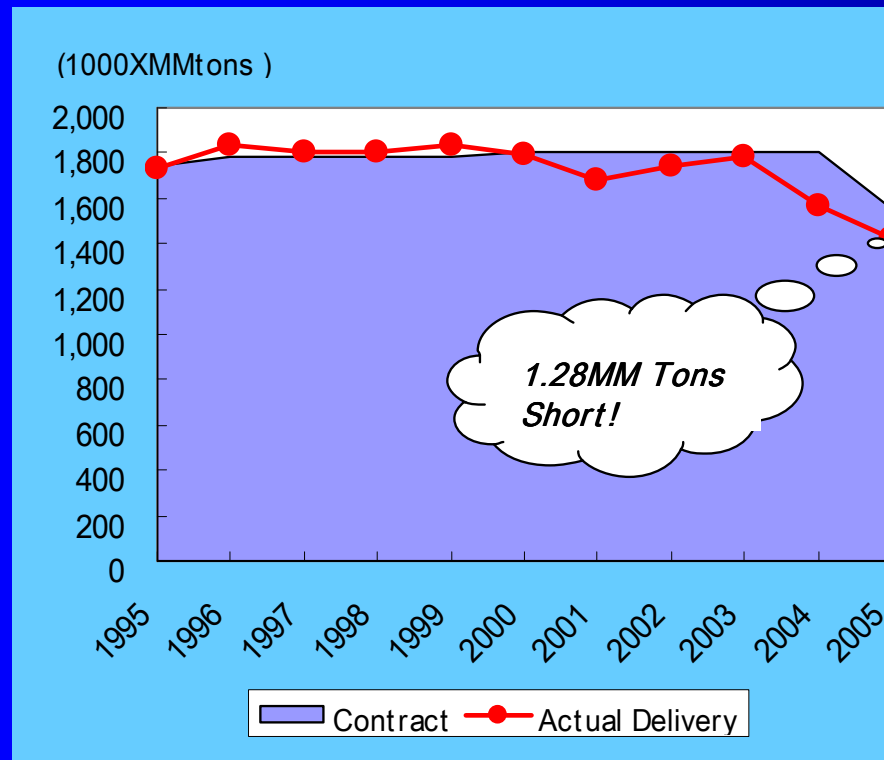
- 3 Major LNG Markets in the World
- Demand Growth:
 - As environmental friendly energy in general, for Power in Europe
 - Spot cargo absorption due to high price in the Atlantic
 - Recent power source substitution for nuclear in Japan
- Supply Tightness:
 - Mal-functions of Liquefaction plants
 - Delay of new projects

LNG Market in the World



Source: Cedigaz, Natural Gas in the World

Supply from Indonesia



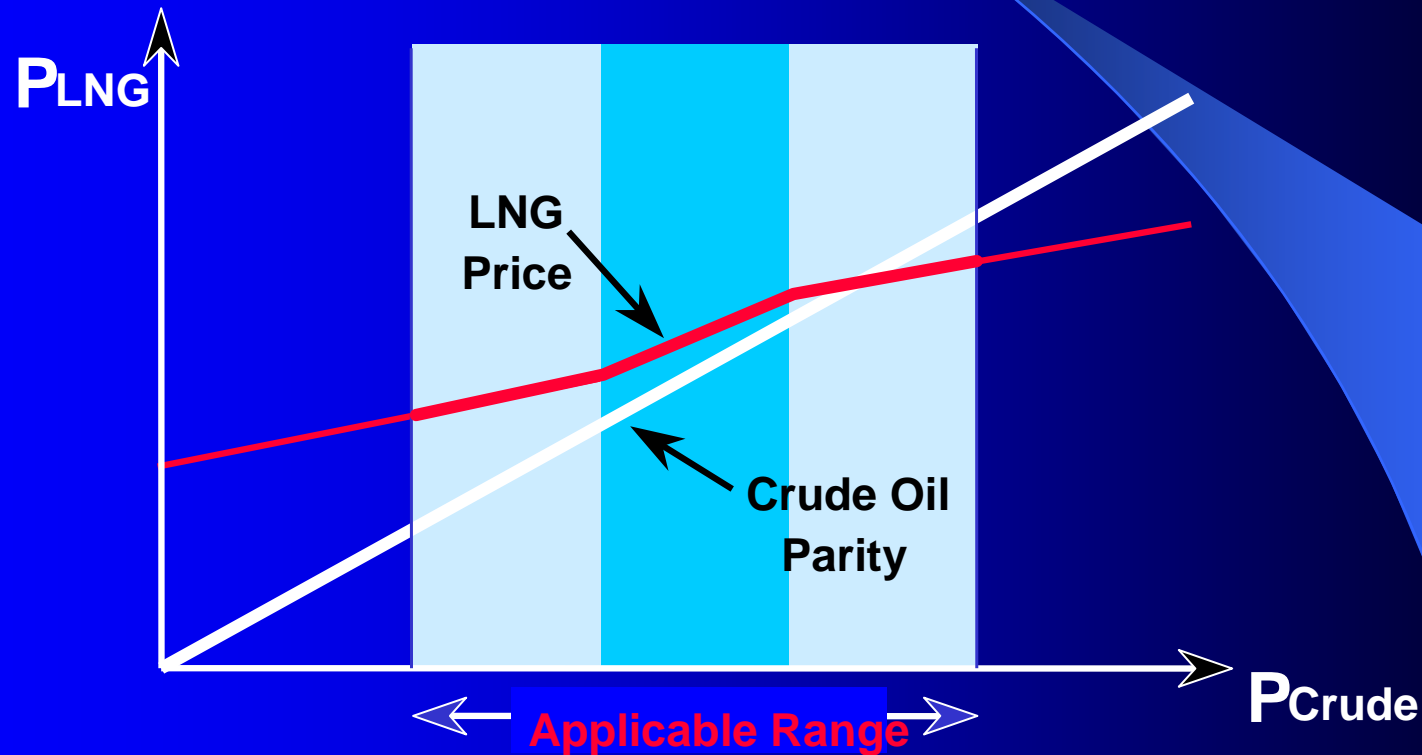
- Supply Short of 2.35/1.28MM tons in 2004/05
- Possible Causes :
 - Gas Feedstock shortage for Bontang LNG Plant
 - Gas Production Decline in Arun
 - Gas Supply Priority to Fertilizer Plant
 - Confusion Transient period of Organization Reform (From Pertamina BP Migas)

Source: Japan Exports & Imports, MOF-Japan, etc.

2. CURRENT PRICING MECHANISM/SYSTEM

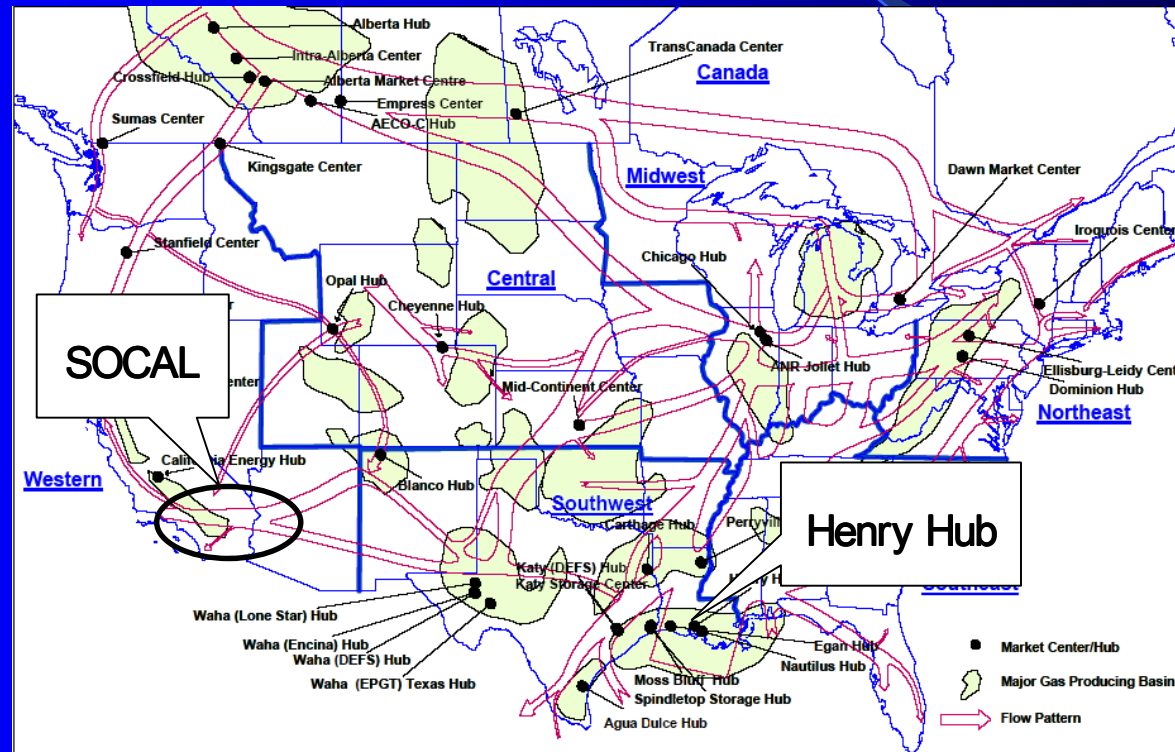
- Asia-Pacific market
 - JCC Link with S-Curve
- Continental Europe market
 - Brent/Oil Product(s) link
- U.S./U.K markets
 - Supply/Demand Balance at the trading reference points, such as Henry Hub, NBP

LNG Price Formula with S-curve (JCC Link with S-curve adopted in Asia)



Source: Gas Strategies

Price Determining point in North America



(Source) Natural Gas Market Centers and Hubs: A 2003 Update, EIA

3. FUTURE OF THE LNG PRICING SYSTEM IN THE ASIAN MARKET

- Approach between European continental and U.S./U.K markets in the Atlantic
- LNG's firm position of gas supply in Asian region
- LNG market in the Asia till 2010 (by Liao, CPC, Apr. 2006)
 - More volatile, i.e., introduction of liquidity
 - More homogeneous in the region,
 - Other markets for Sellers, less choice for Buyers
 - Competition among Buyers, rather than cooperation

Features of Asian LNG Market

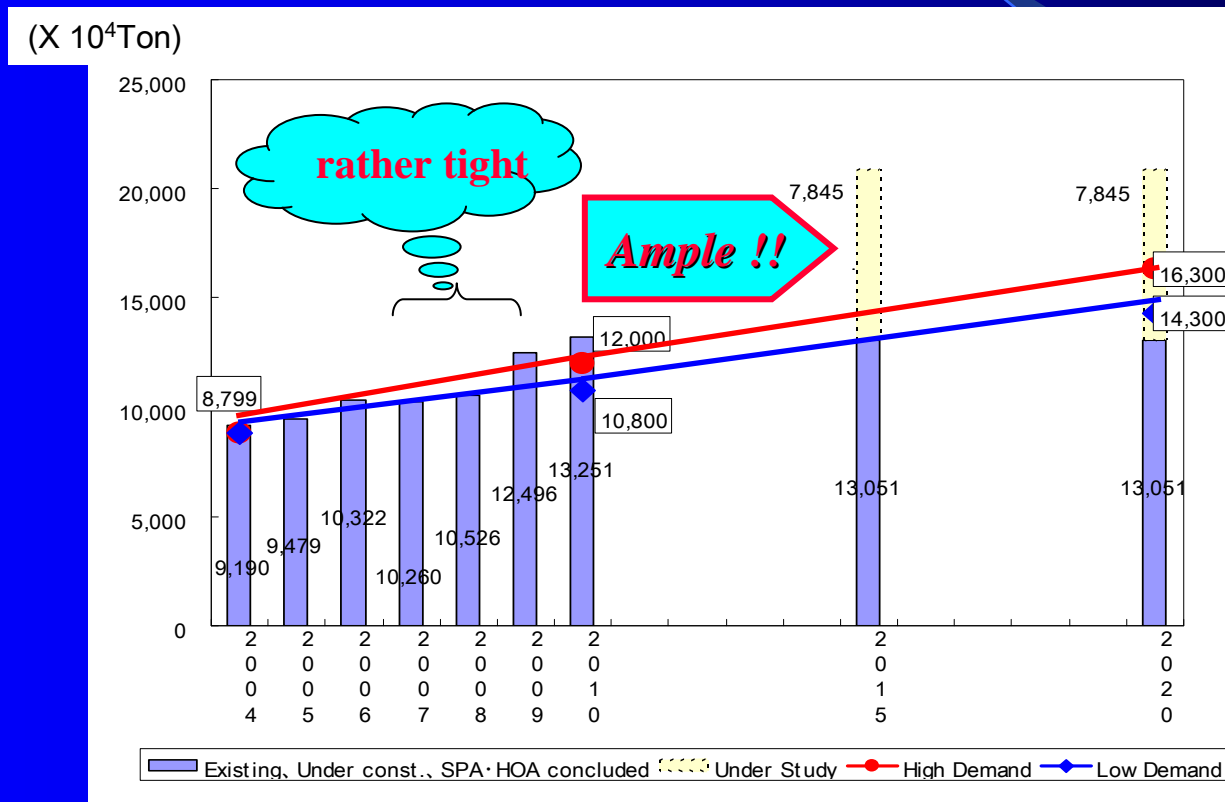
- Single dependency upon LNG in their natural gas supply
 - No effective underground storage in the supply system
- Potential request for appropriate linkage with oil in pricing formula
 - to quote as a reasonable reference (pro-)
 - to avoid too-much volatility (con-)
 - JCC: transparent, Brent: useful for hedge, WTI?
- Requirements of future LNG pricing mechanism/system
 - neutrality/transparency,
 - low volatility,
 - competitiveness,

4. CHALLENGE AND COOPERATION

FOR ENLARGING GAS MARKET (In order to growth/enlarge the Gas Market in sound manner:)

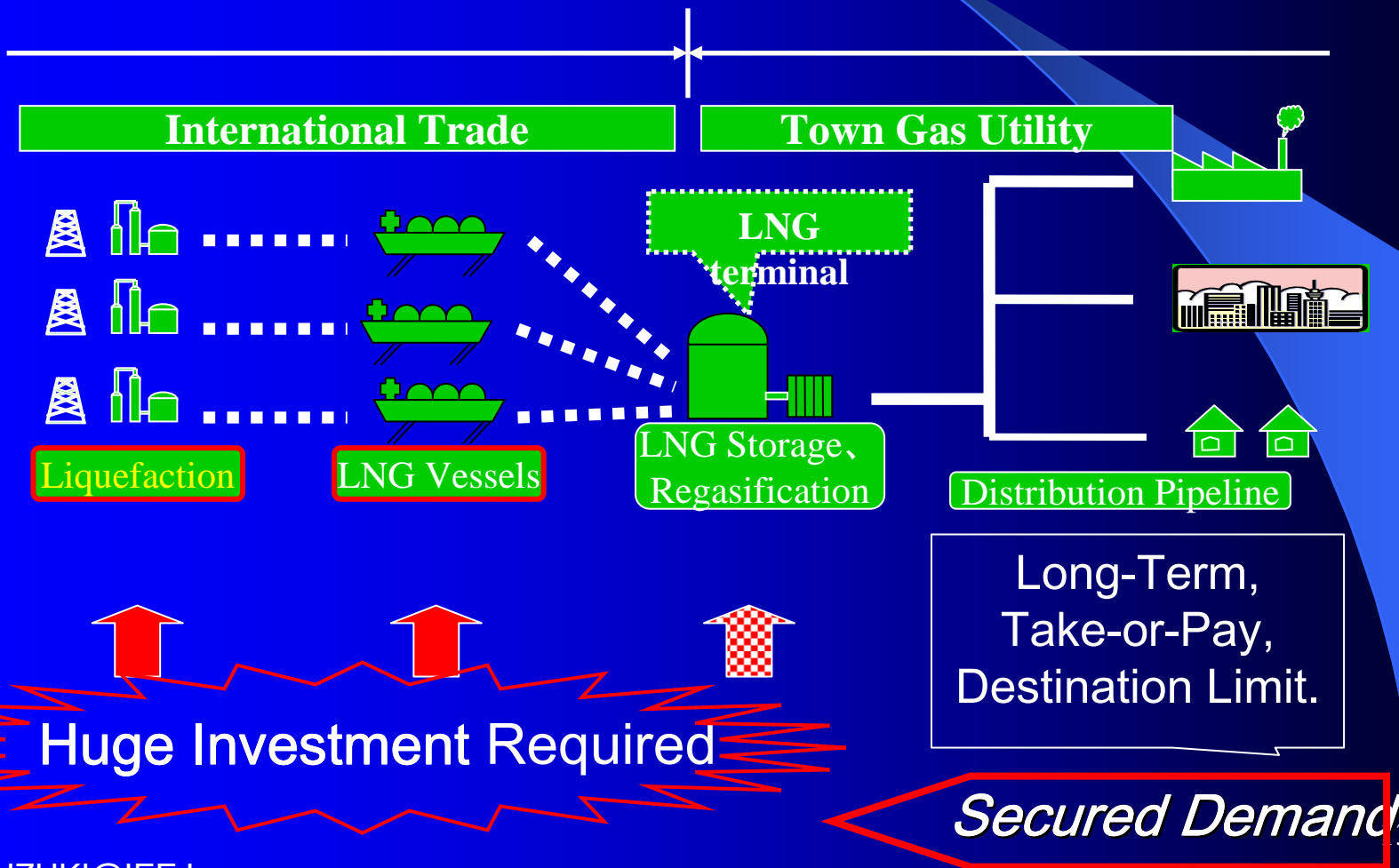
- Remove obstacle(s) to activate the vivid trade in maturing market
 - Foe example, release of destination bindings, etc.
- Influential factors/uncertainties for LNG price in future
 - Several uncertainties/risks there

Supply/Demand Balance of LNG in Asia-Pacific Region

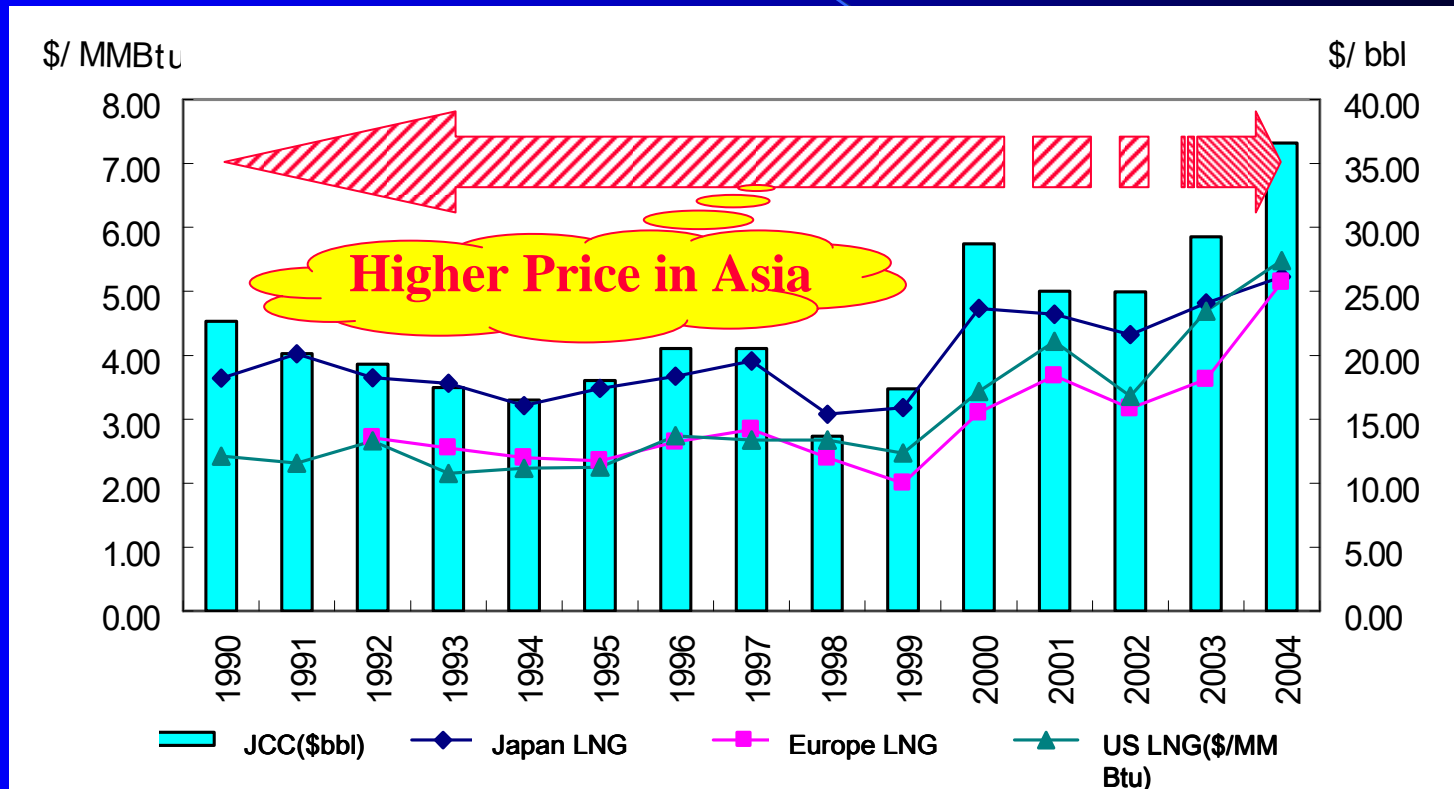


Source: LNG Supply and Demand in Asia-Pacific and Atlantic Markets (2005), IEEJ Home Page, (Forth-coming 2006)

Establishment of Traditional LNG Supply Chain



LNG Price Trend by Region



(Source) IEA/ENERGY PRICES & TAXES 2005,etc.

Important Reminders

- Based on Secured Demand, current LNG chain has been established!

- Traditional Terms and Conditions

- Long-Term
- Take-or-Pay
- Destination Limitation, etc.

Have been accepted and executed as per agreement

- Higher price has been charged and accepted

However, the market circumstance is changing.

What should we remind and consider for the growth/enlarge of the Gas Market in sound manner?

Necessary Condition for -

Burden for Supply

Security

Pay for Security

Challenges in General

- Nuclear & coal for power generation
- Future development of global warming policy
- New gas utilization technology
- Competition induced by Deregulation/Liberalization
- World Politics, especially M.E.
- Emerging markets (BRIC's, West Coast of US/Mexico, and growing European LNG requirement)
- New infra. Preparation (PL from Russia: Eastern Siberia/ Sakhalin, Trans-ASEAN PL, etc.)