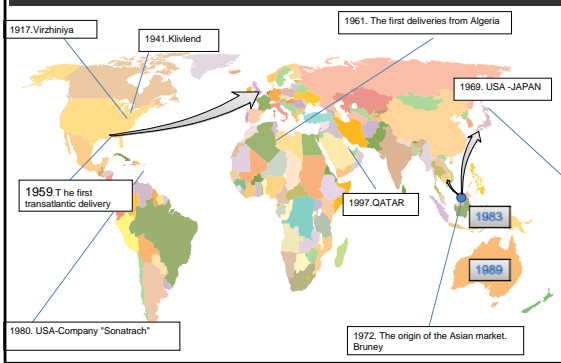


liquefied natural gas market

- 1.HISTORY OF DEVELOPMENT
- 2.TECHNOLOGY
- 3.KOMMERCIAL ACPECTS
- 4.major markets
- 5.volumes
- 6.exports
- 7.imports
- 8.trade flows
- 9.Price

1

THE HISTORY



2

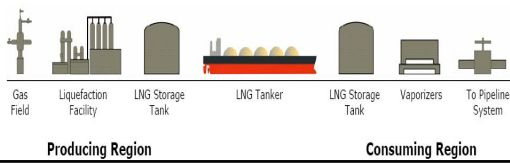
TECHNOLOGY



2

TECHNOLOGY

liquefaction at $T = -163^{\circ}$ **Security**
ignition temperature $+540^{\circ}$
inflammation at a concentration of fumes
 $5\% - 15\%$ $\rho = 0.41$ 0.5 kg/l
Energy value is equal to the energy value of diesel fuel



LNG costs of production

- Compared with conventional gas production chain (exploration and production, transportation and storage) in the cost of LNG has included costly process of liquefaction and regasification. Equipment liquefaction / regasification and transportation also requires high capital costs. Thus, the construction of each new LNG plant needs billions of dollars. The total capacity of existing LNG plants exceeds 5.6 trillion per year f cube. Plants that are under construction, will add another 1.5 trillion f cube. at different stages (from the talks - to plan) are projects to build LNG plants with a total capacity of 1.4 to 4.1 trillion f cube. Thus, that the world's refining capacity LNG almost tripled over the next ten years. Most facilities will be in Asia.

2

liquefaction



2

TERMINALS



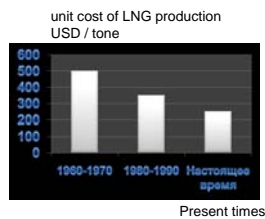
Cost of LNG

Transportation in 1000 m3 of liquefied state (US\$)	14,4 – 36
The process of liquefaction of 1000 m3 (U.S.\$)	28,8 - 43,2
The process of liquefaction of 1000 m3 (U.S.\$)	10,8 - 18
Production (U.S. \$)	3,9
In total, the cost of 1,000 m3 (0.73 tones of LNG) (U.S.\$)	57,9-101,1

Commercial aspects


the cost of a gas liquefaction plant not less \$1,5 bln.
 The cost of the receiving terminal of at least 1.5 billion U.S. dollars.
 the cost of a tanker to transport liquefied natural gas - \$300-200miln
 contracts are concluded at the twenty-twenty-five years
 we can observe the effect it replace

- oil
- DES → FOB



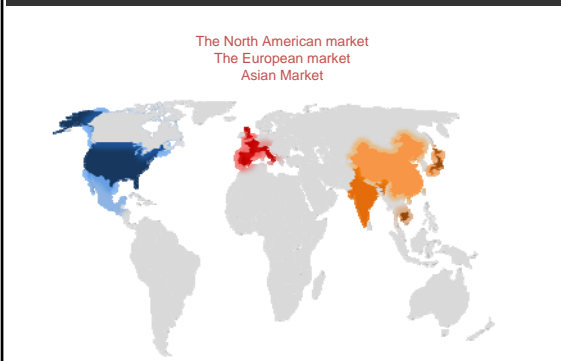
1990 - buyers' market, 2000 - market vendors (alternative supplies, arbitration)

Basic characteristics of markets



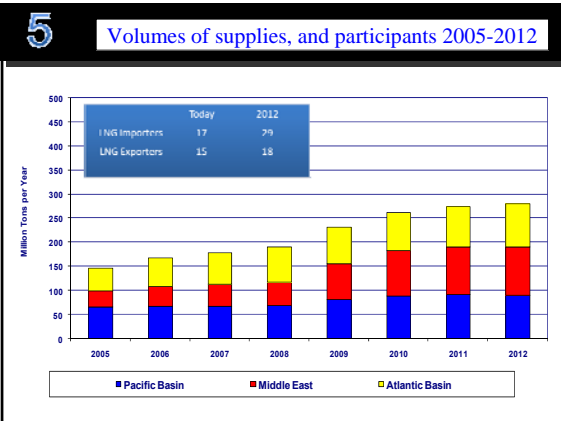
major markets
 volumes
 exports
 imports
 trade flows
 Price

4 THE MAJOR MARKETS OF LNG

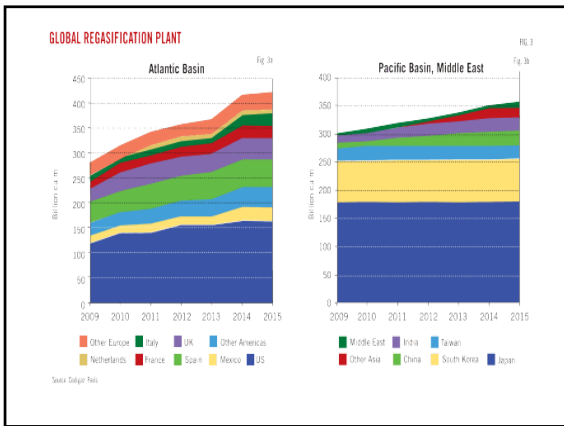


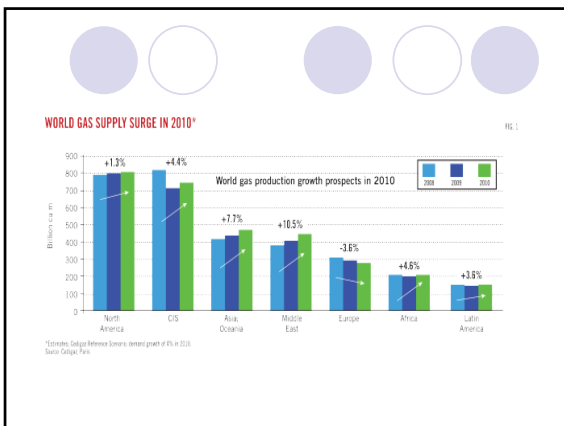
The North American market
 The European market
 Asian Market

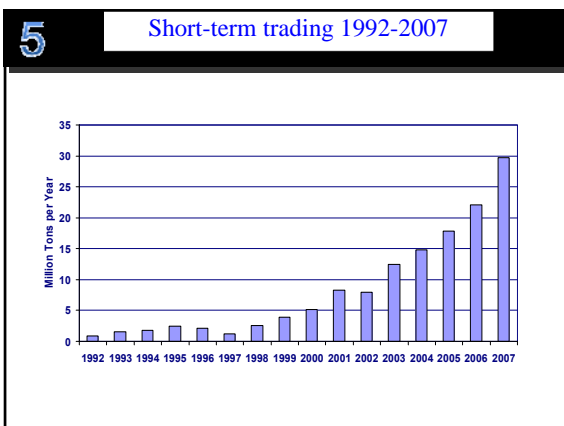
5 Volumes of supplies, and participants 2005-2012



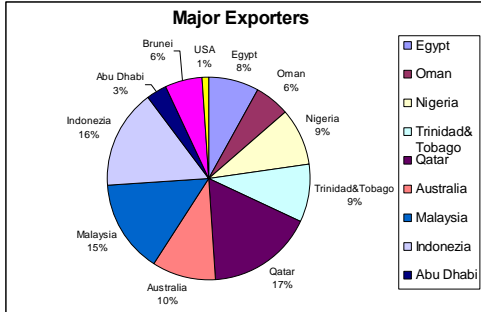
	Today	2012
LNG Importers	17	29
LNG Exporters	15	18



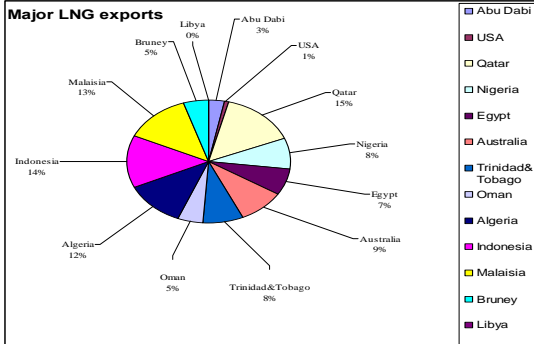




MAJOR EXPORTERS 2008

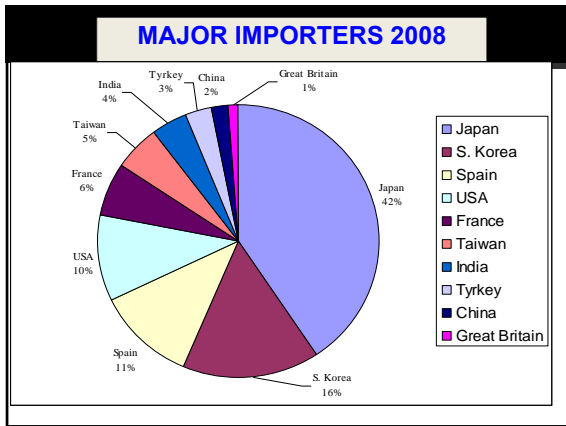


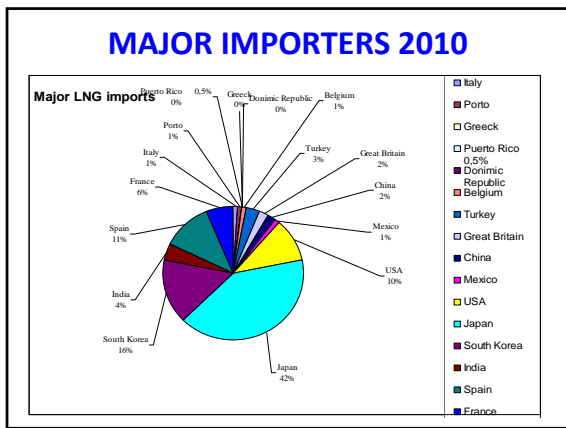
MAJOR EXPORTERS 2010

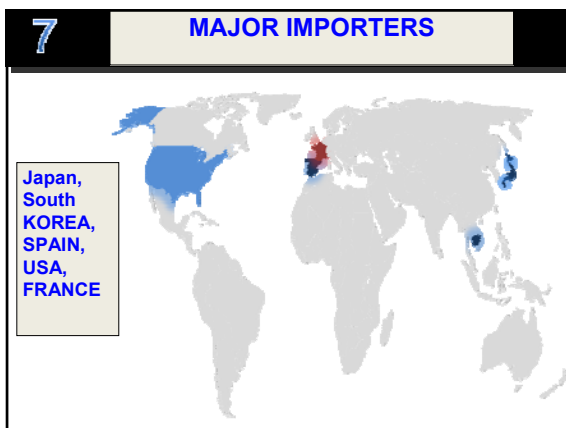


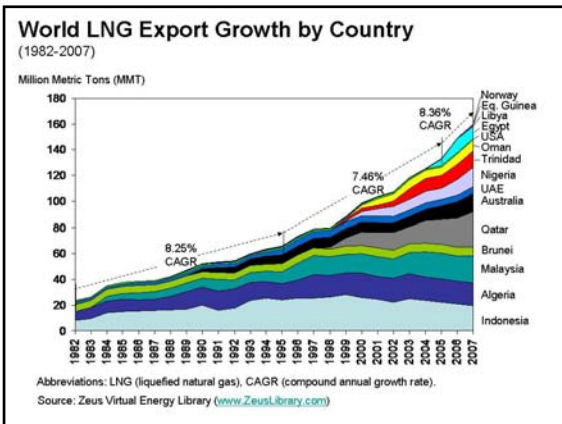
Major exporters

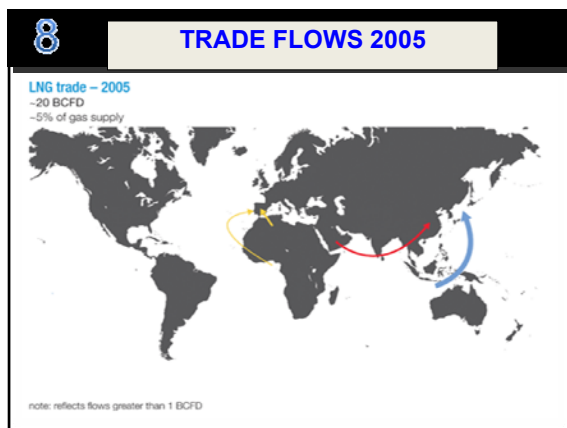


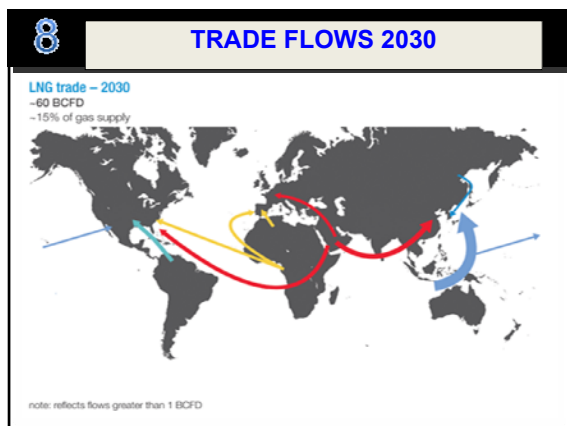












Enabling factors

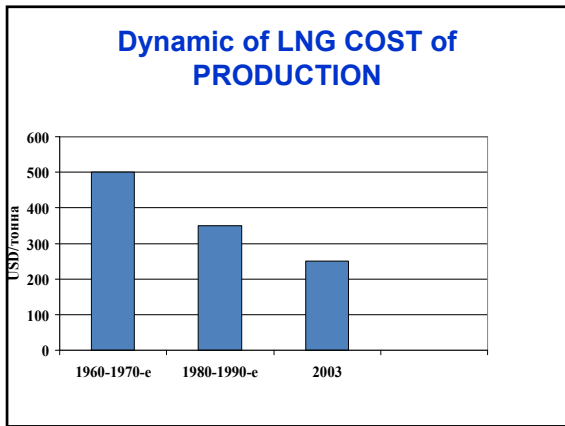
- The tendency to reduce the cost of production, because improved liquefaction technology
Rising consumption of GHG (up to 145 trillion by 2015). The share of LNG ~ 5% (2001), 19% (to 2011)
Market development of spot transactions (1997 - 3% of all contracts awarded in 2009 - 20%)

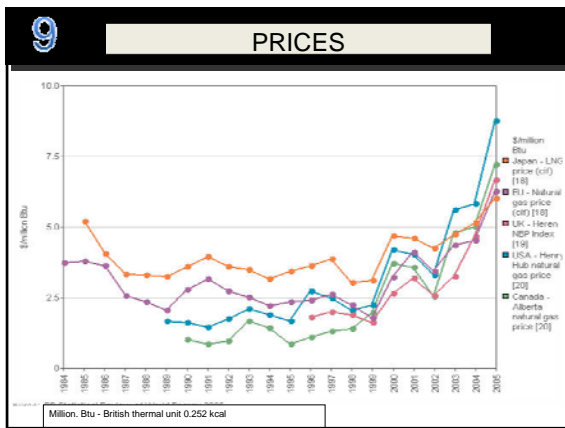
constraints

- The high cost of LNG compared to coal and oil
- Attractiveness of the traditional gas (cheaper), (under construction onshore and subsea pipelines)
- Alternative fuels (GTL)

JAPAN

- The share of LNG - 97%
The main supplier - Indonesia, as well: Australia, Brunei, Malaysia, UAE and USA.
1996 - contract with Qatargas for 25 years (6 million tons of LNG per year)
There are 23 LNG receiving terminals with total capacity of 188.3 million tons (260 billion m³)





PRICES

Dollars Btu

Год	LNG Japan CIF
2003	4,77
2004	5,18
2005	6,05
2006	7,14
2007	7,73

Btu - British thermal unit 0.252 kcal
 1kcal=3.97Btu
 49257899069014 Btu = 1Gt LNG
 1 Gm³ = 0.7244999997491Gt LNG
 1 tn LNG=51.6mMBtu

Thank you for your attention