



WORLD LNG SERIES
ASIA PACIFIC SUMMIT

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Demand Recovery • Partnerships • Growth Opportunities

“The International Buyers and Sellers meet in Asia”

“Changing Market Dynamics – Challenges & Opportunities”

By:

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21st September 2010
Singapore



- 1. Introduction – Brief on IGU**
- 2. Global Energy Scenario until 2030**
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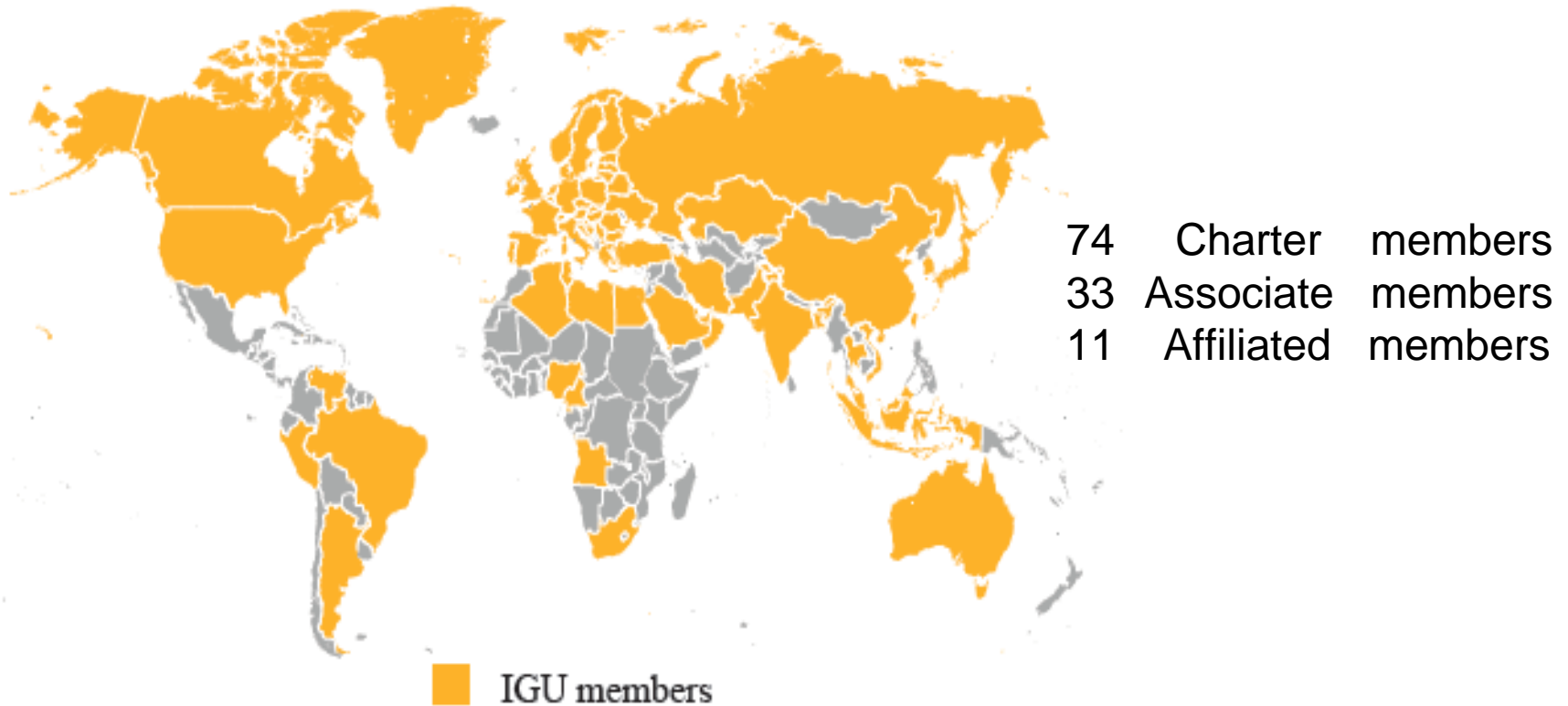


IGU as **THE** spokesman for the gas industry

- Worldwide and non–profit organisation established in 1931
- Promotes technical and economic progress of the gas industry
- Emphasising sound environmental performance worldwide
- Increased focus on strategic and policy issues
- Cooperation with IEA, United Nations, World Bank, IEF and others



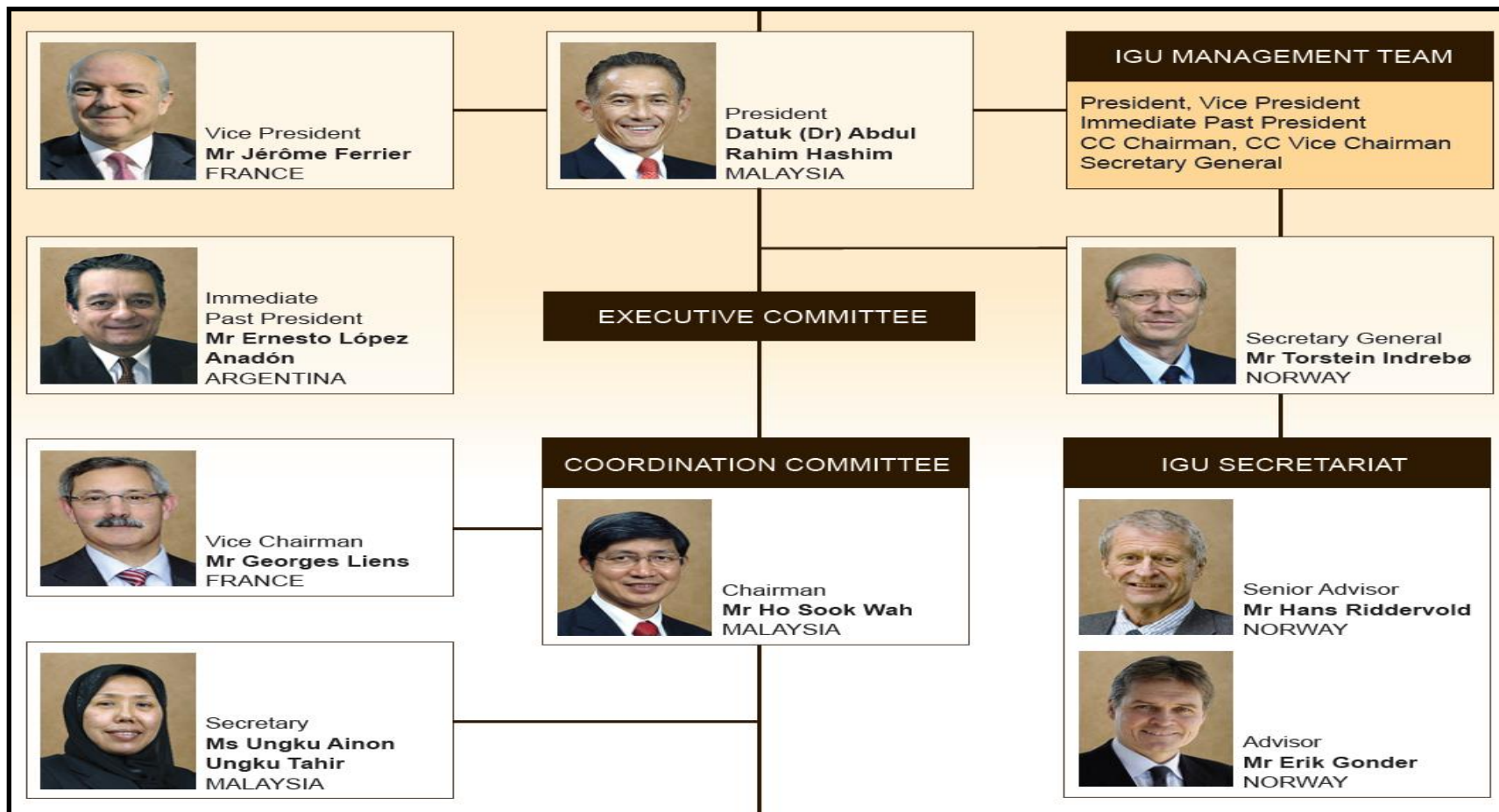
IGU Members responsible for 95% of Global Gas Sales



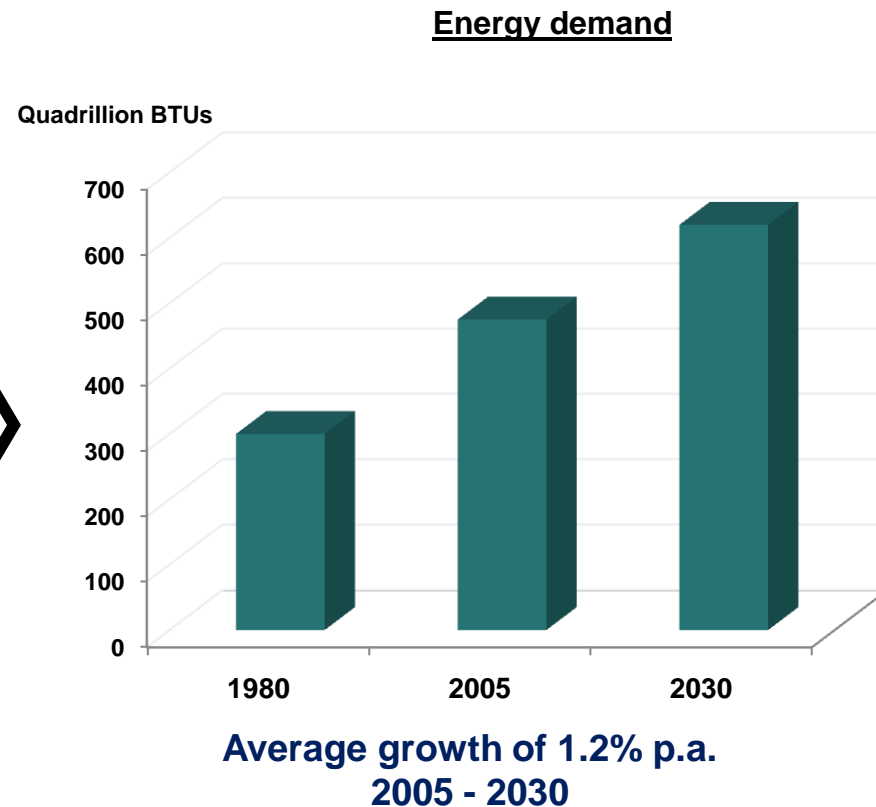
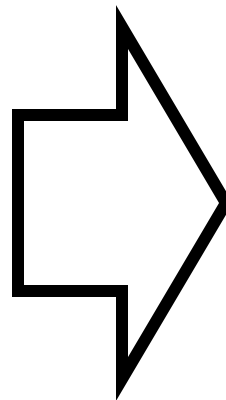
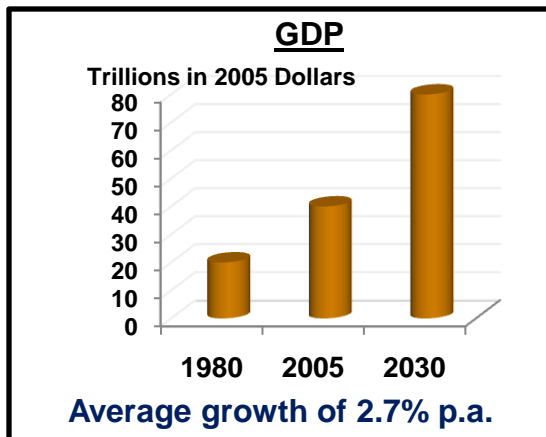
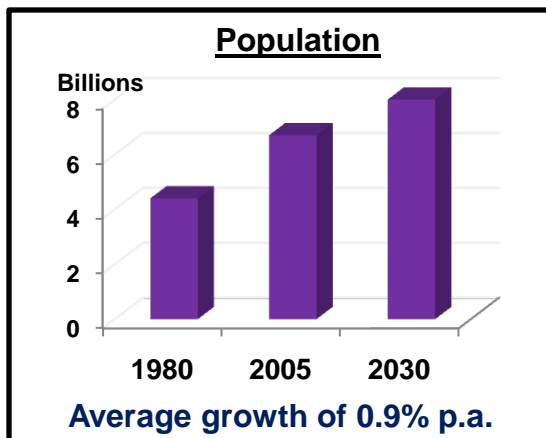
As of April 2010



IGU Organisation Chart for the 2009 – 2012 Malaysian Triennium



Energy demand is expected to grow in the foreseeable future

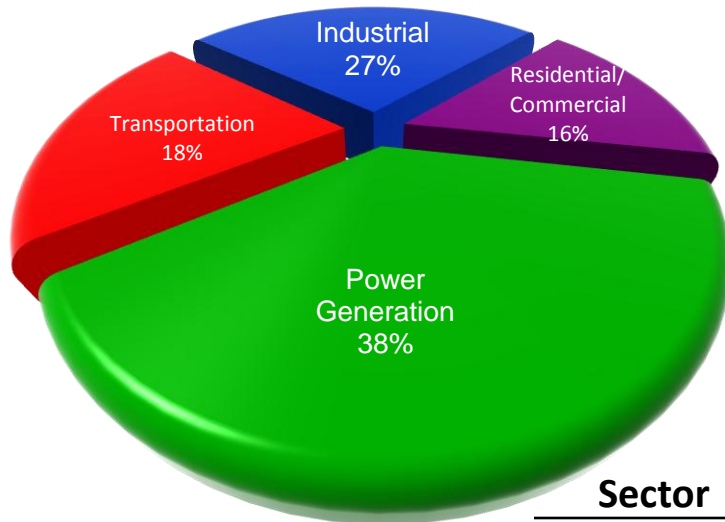


- World's population to increase from 6.7 billion today to 8.0 billion by 2030
- GDP to expand from USD 20 Trillion in 1980 to USD 80 Trillion by 2030
- The world will use 35% more energy by 2030 than in 2005 level!

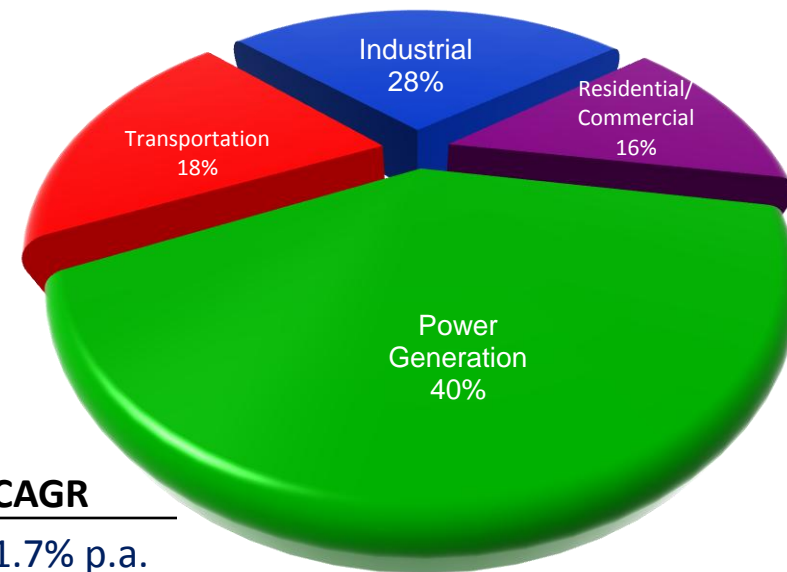


Power generation represents the largest and fast-growing sector

Gas End Use by Sector 2009



Gas End Use by Sector 2030

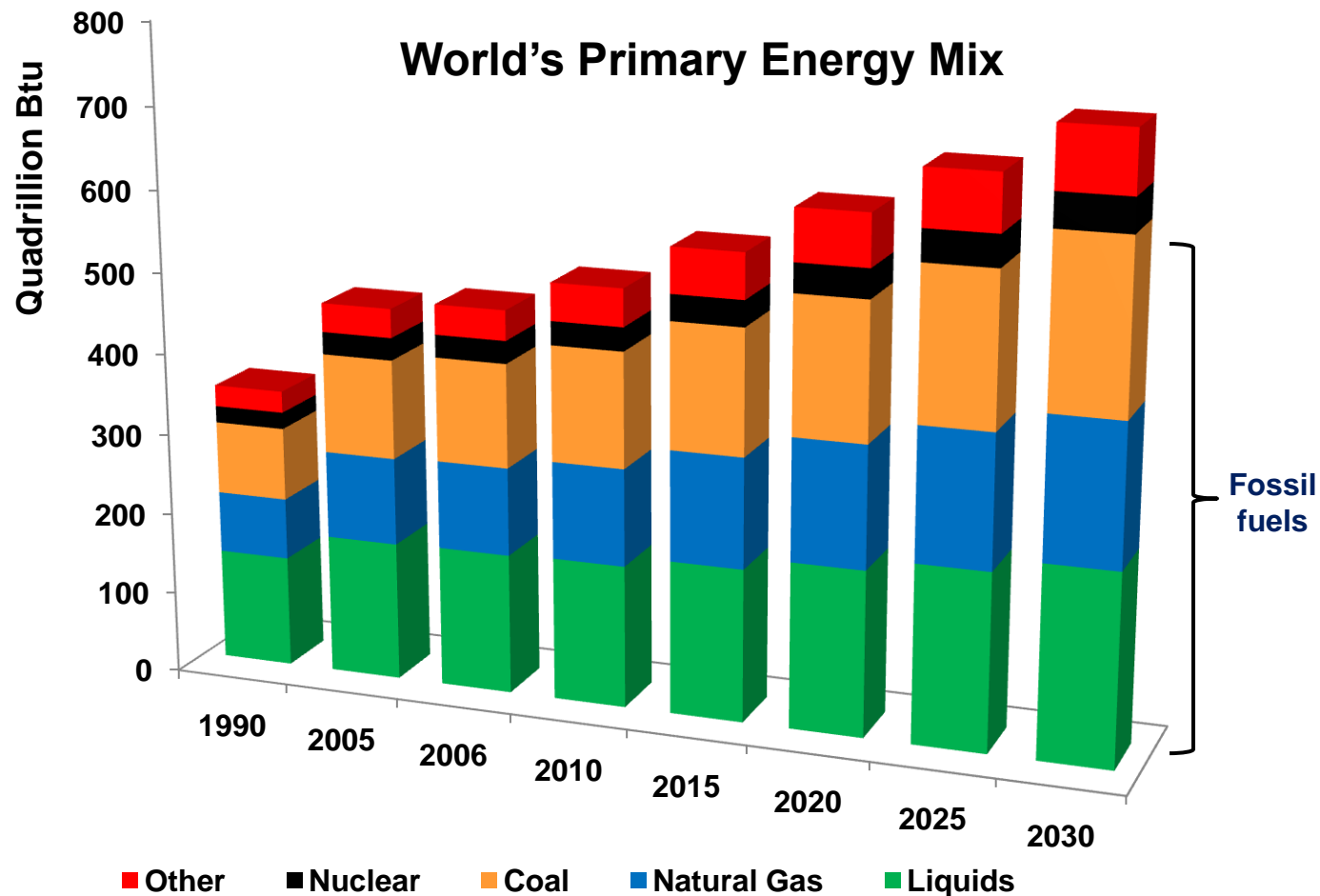


Sector	CAGR
1) Power Generation	1.7% p.a.
2) Industrial	1.5% p.a.
3) Transportation	1.2% p.a.
4) Residential / Commercial	0.8% p.a.

- This is due to a radical shift to use less-carbon-intensive fuels such as natural gas to generate electricity
- By 2030, it will account for 40% of all energy demand, representing 55% of the total growth in energy demand



Fossil fuels will still dominate the 2030 energy mix



CAGR Total World Fuel Consumption, 2010-2030

Liquids	1.3%
Natural Gas	2.0%
Coal	2.1%
Nuclear	1.7%
Other	3.0%

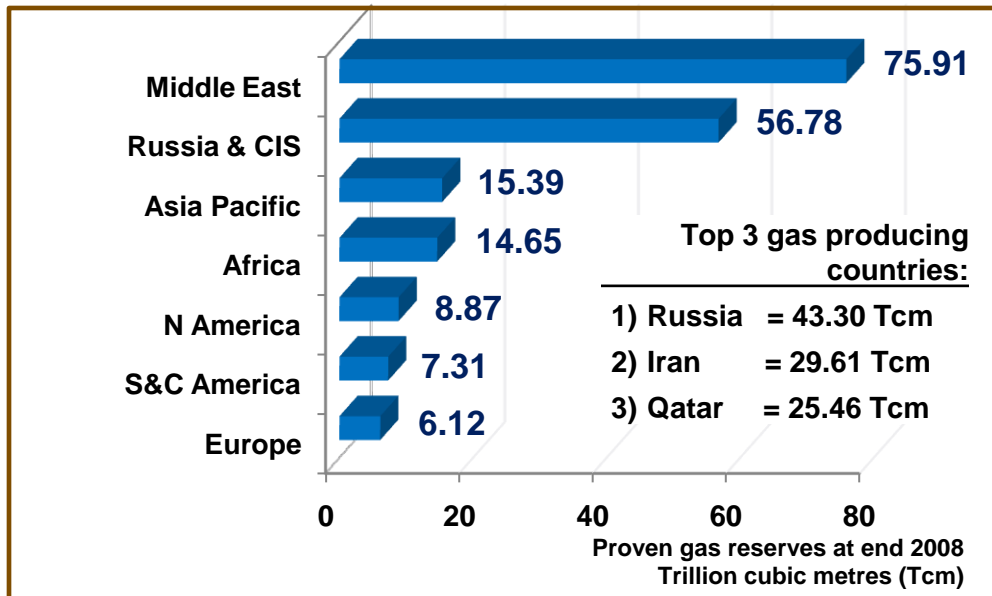
% of natural gas from total energy mix 1990-2030

1990	22%
2005	23%
2010	23%
2030	24%

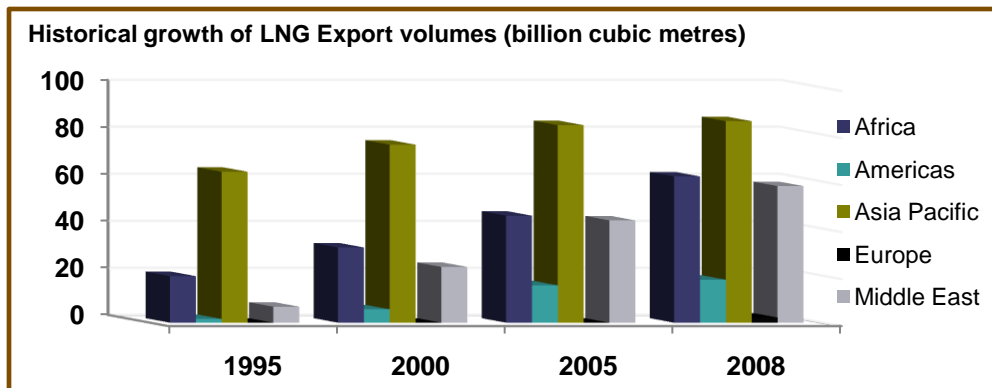
- Natural gas is the fastest growing energy source.
- By 2030, global natural gas demand will be 55% higher than it was in 2005!



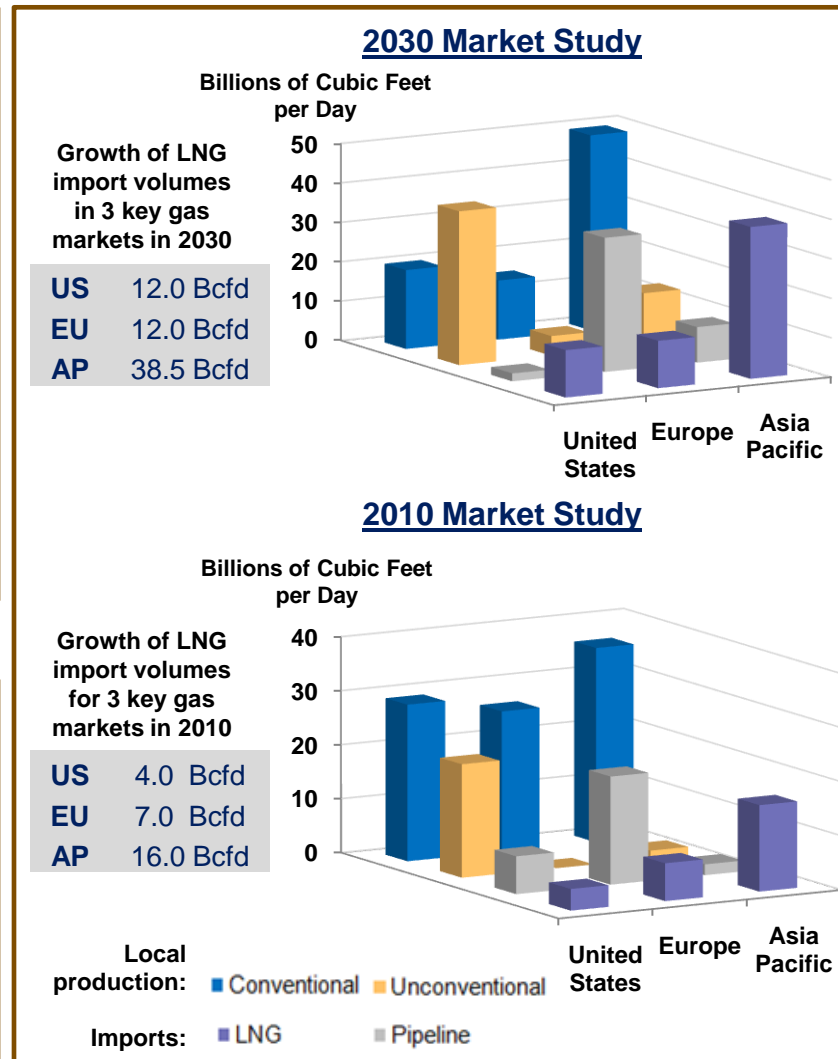
The world's outlook of natural gas supply - demand balance



Total 2008 world's proven natural gas = 185 Tcm (~6,533 Tcf)

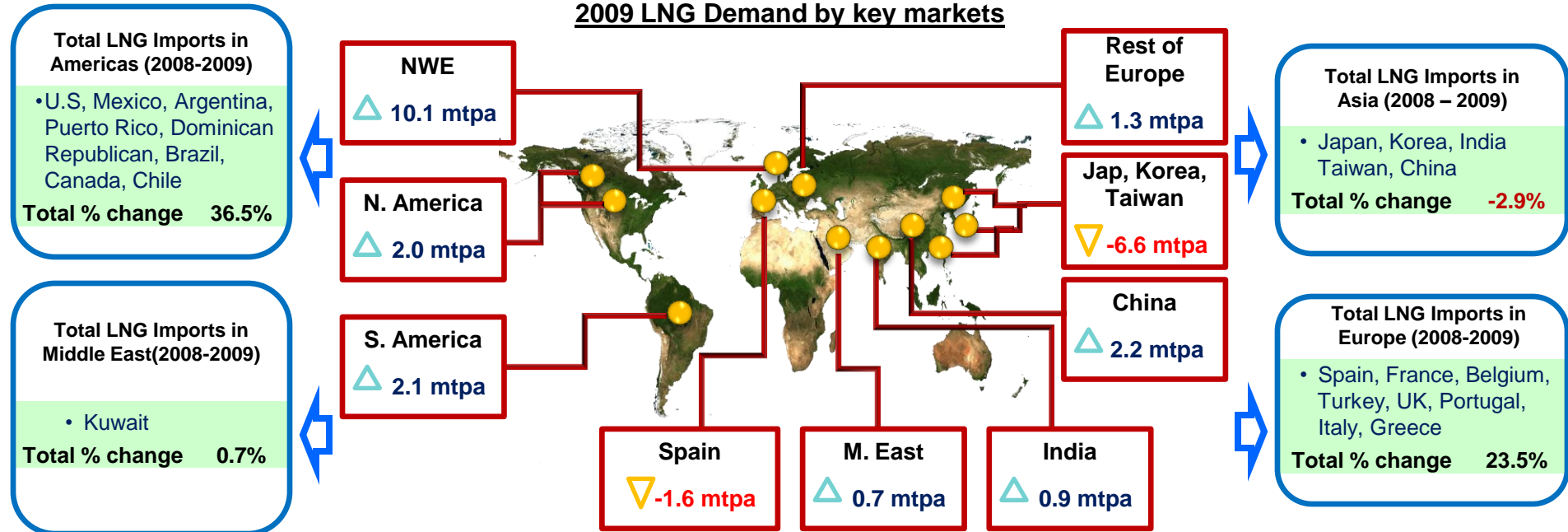


The global rise of LNG business is imperative to satisfy the world's rising energy demand!



The impact of financial crisis and US shale gas on LNG demand

2009 LNG Demand by key markets

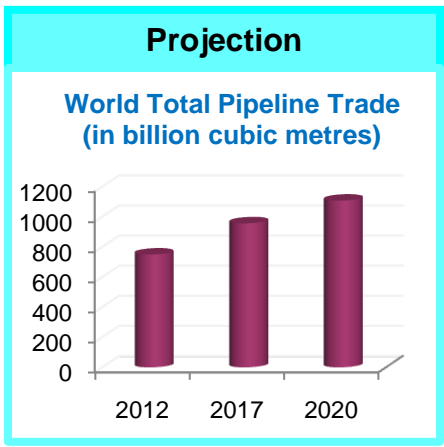
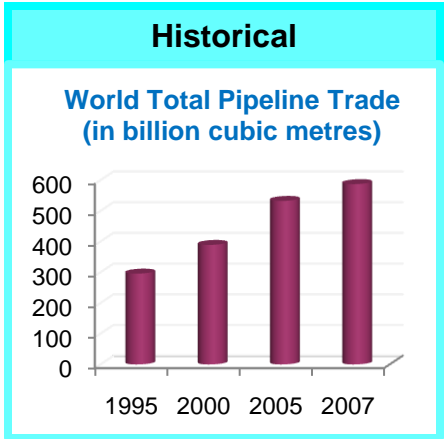
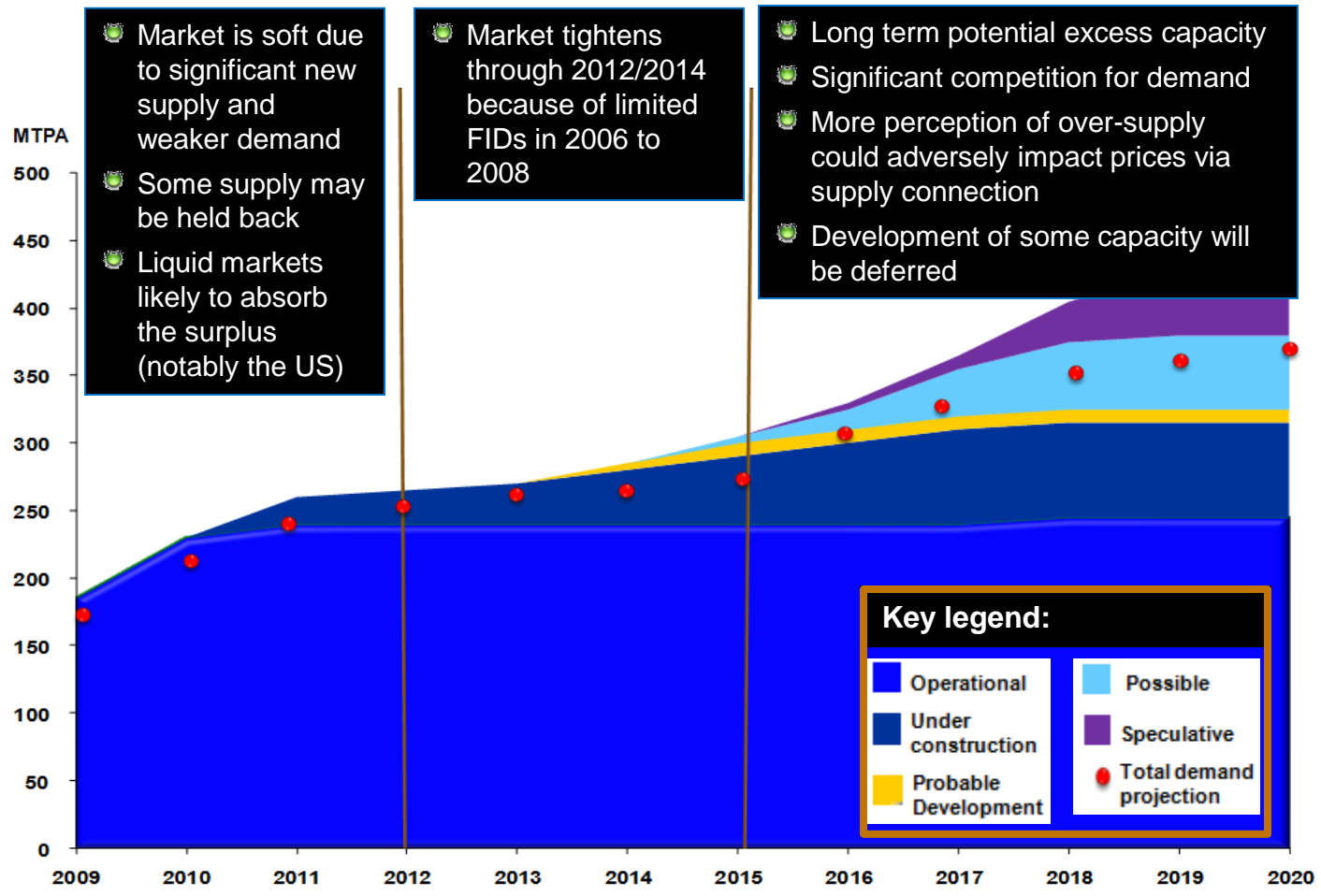


- Modest growth in total LNG imports of 5% was registered in 2009, notably in the Americas and Europe.
- The U.S market was seen as a safe anchor for LNG. Despite the robust U.S shale gas production, LNG cargoes still flowing notably in the north east enjoying a significant basis premium.
- Middle East has become an LNG demand centre.
- Spanish LNG demand has dropped significantly due to reduced consumption.
- The relatively strong LNG import growth in China and India (+3.1 MTPA combined) were insufficient to cushion the plunge in Japan, Korea & Taiwan (JKT) LNG imports.





The outlook of long term LNG supply – demand balance and its potential implications

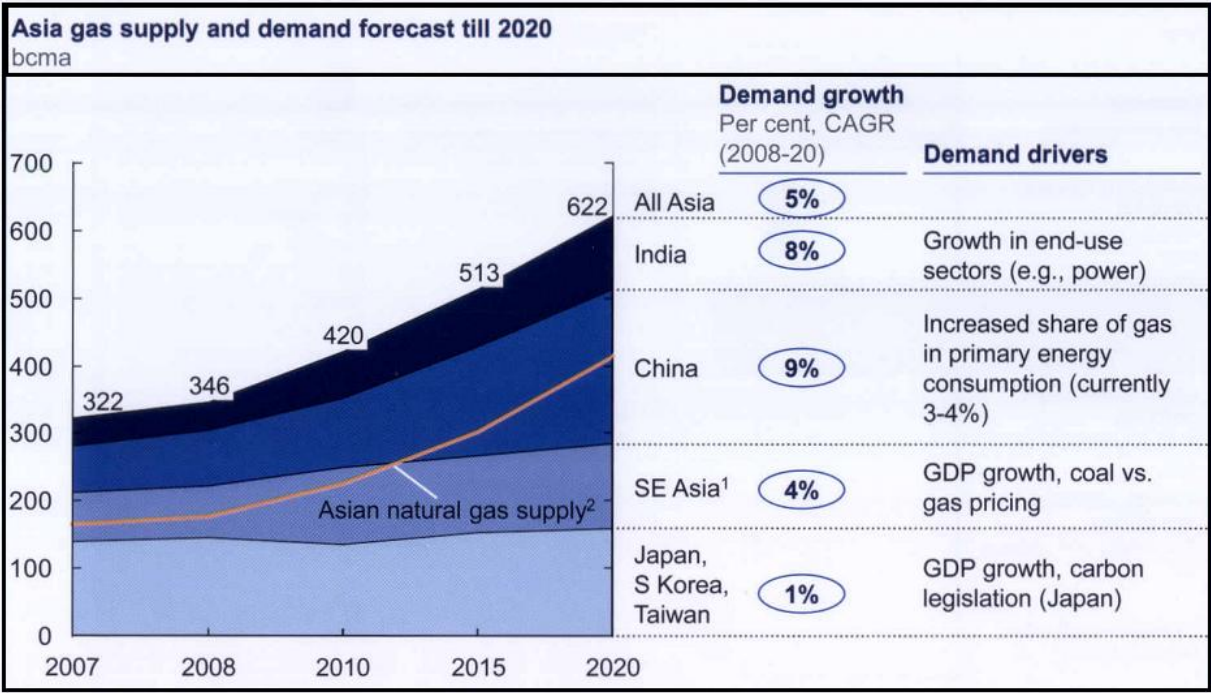


- The long-term view of the LNG industry especially in the LNG demand side looks more bearish than bullish!
- Could the LNG industry be classified as a cyclical business that has a habit of changing?





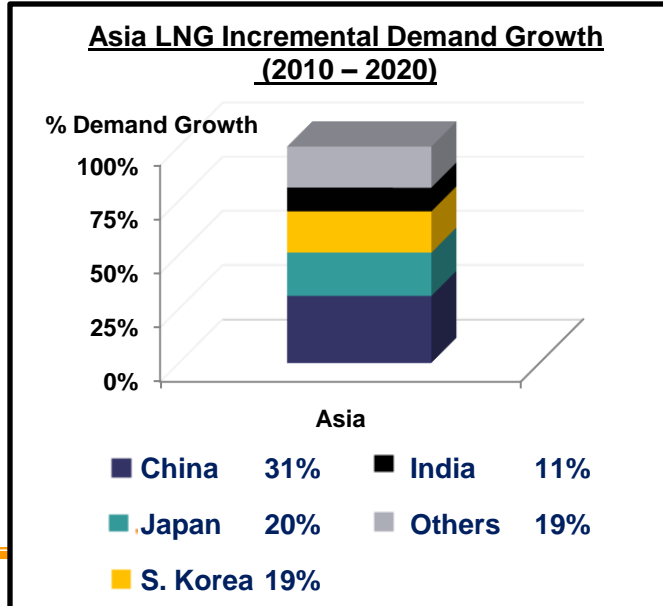
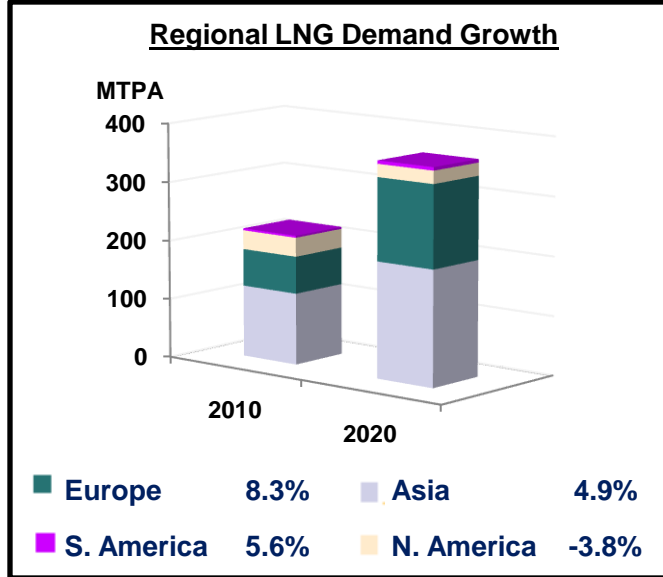
Asia will remain as key avenue to drive potential growth of gas demand and LNG



¹ Indonesia, Malaysia and Singapore

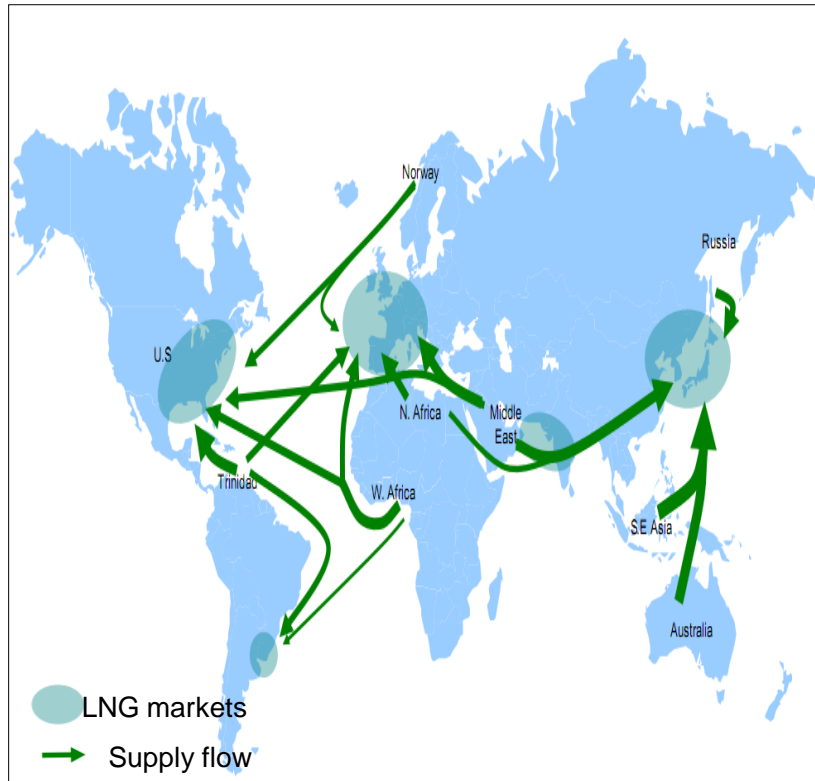
² Includes pipeline imports to China; excludes gas from Malaysia and Indonesia dedicated to intra-ASEAN LNG export

- Emerging Asia is likely to be the main growth market for gas globally, notably India and China with growth rate of 8% and 9% respectively.
- Asia is expected to remain the largest LNG consumer while Europe will experience the fastest pace of LNG growth.

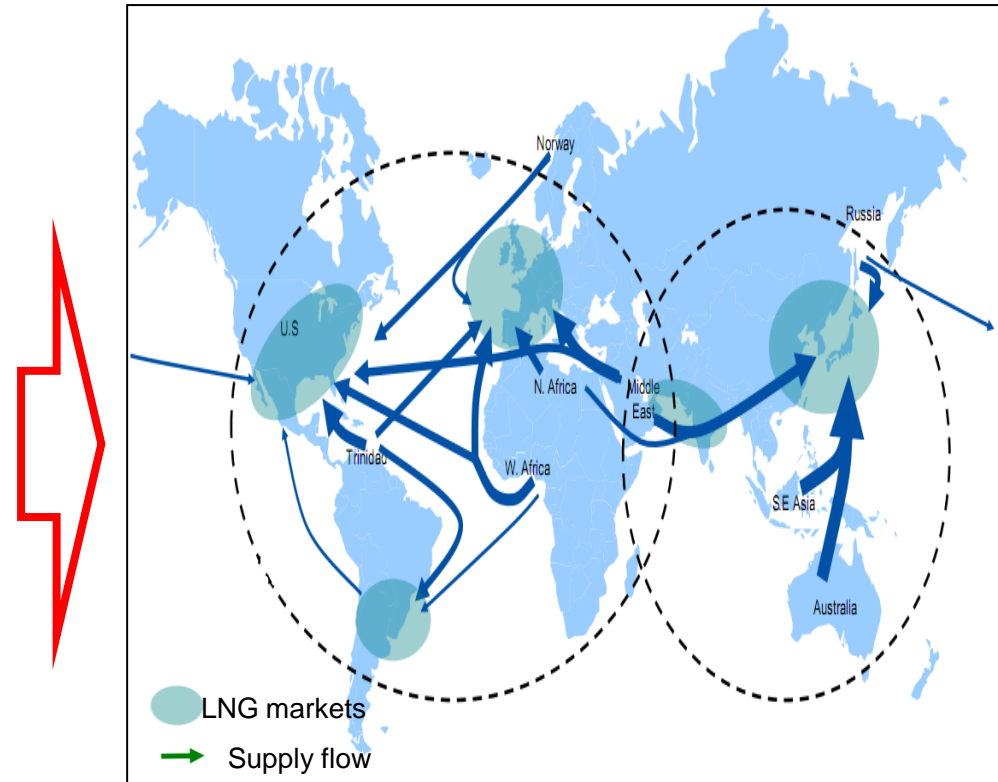


The global LNG market is undergoing the transitional state of change

2009



2010 & beyond



- Clear linkage between American, European, Middle East & Asian gas markets.
- Starting to open up access to LNG worldwide

- Greater overlap between global LNG markets with ample LNG supply
- Wider access to gas market through LNG established



The rising interest of developing regasification facilities worldwide

- Total planned = 47 projects
- Total capacity = 136.90 MTPA

- | | |
|--------------|-----------------|
| 1) Bahamas | 11) Japan |
| 2) Canada | 12) Netherlands |
| 3) China | 13) Pakistan |
| 4) Croatia | 14) Philippines |
| 5) France | 15) Poland |
| 6) Germany | 16) Singapore |
| 7) India | 17) South Korea |
| 8) Indonesia | 18) Spain |
| 9) Italy | 19) UK |
| 10) Jamaica | 20) US |



- Total under construction = 19 projects
- Total capacity = 118.90 MTPA

- | | |
|-----------|----------------|
| 1) Chile | 7) Japan |
| 2) China | 8) Netherlands |
| 3) France | 9) Spain |
| 4) India | 10) Thailand |
| 5) Italy | 11) UK |
| 6) Mexico | 12) US |

- Total speculative = 33 projects
- Total capacity = 58.85 MTPA

- | | |
|------------|-------------|
| 1) Canada | 7) Italy |
| 2) China | 8) Mexico |
| 3) Cyprus | 9) Spain |
| 4) France | 10) UK |
| 5) India | 11) Uruguay |
| 6) Ireland | 12) US |

Potential import total:

- Number of projects = 176
- Import capacity = ~780 MTPA

- Interest of importing LNG has increased significantly. Current regas capacity is about 470 MTPA. To date, a number of 75 projects which are located in 22 countries, exist and are in operation.
- If all project proposals come online, the figure could go as high as 780 MTPA by 2020 with an overall import terminals of 176 projects that are located in a total of 36 countries.



Key uncertainties that will affect demand – supply balance in the near and medium term

- Unprecedented demand growth and import needs are greater than expected.
- Potential impact from the unconventional gas development in key gas importing countries especially Asia and Europe.
- Unsure on the pace of LNG projects coming online.
- Uncertainty over the supplier's behaviour in channelling gas/LNG volume to end-customers



Strategic insights to ponder

- Opportunities to become LNG volume offtakers that may bolster supply position.
- Enhance capabilities towards unconventional gas sector through selective pursuit of regional opportunities.
- Continuously build and enhance technical know-how in stranded gas technologies (particularly FLNG) to broaden global gas portfolio



IGU Messages on Natural Gas

- It is abundant, affordable and acceptable
- Clean, efficient, versatile and environmental friendly fuel
- Continue to play a substantial role in global energy demand
- Basis for sustainable economic growth



Natural gas
– major part of the long term energy solution



The 25th World Gas Conference



KUALA LUMPUR
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**“GAS : SUSTAINING FUTURE
GLOBAL GROWTH”**

**Kuala Lumpur Convention Centre
4 to 8 June, 2012**



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THANK YOU FOR YOUR KIND ATTENTION !

