

“Asian Energy Partnership”

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1. Energy Challenge in Asia

Energy Demand/Supply Situation

- Rapid Growth of Energy Demand in Asia Impact on Environment
- Increasing Dependence on Imported Energy (especially oil from the Middle East countries) Concern on Energy Security

Challenge: Energy Security

- “Energy Security” in the broader sense:
- Secure stable supply of energy at a reasonable cost in an environmentally friendly manner



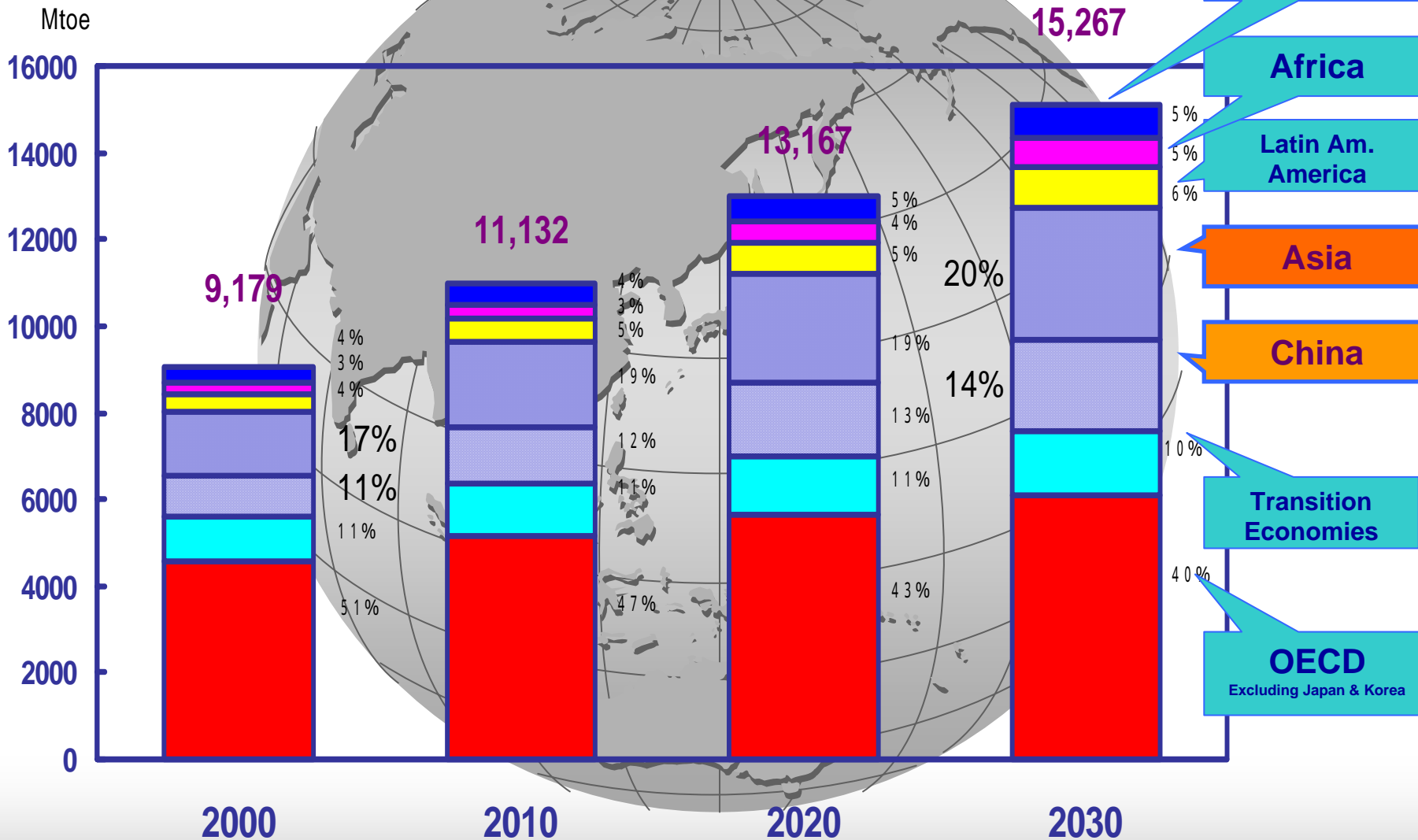
Enhancement of Asian Energy Security

2. Energy Situation in Asia

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- 1. Major Focal Point of Growing Demand in the International Energy Market**
 - 2. IEA Members (Japan and Korea) & Non-members (China, ASEAN and so on)**
 - 3. Indigenous Natural Gas & Oil Resources (China, Russia<East Siberia & Sakhalin>, and ASEAN producing countries)**

World Primary Energy Supply Outlook by Region

Growing Energy Demand in Asia Region



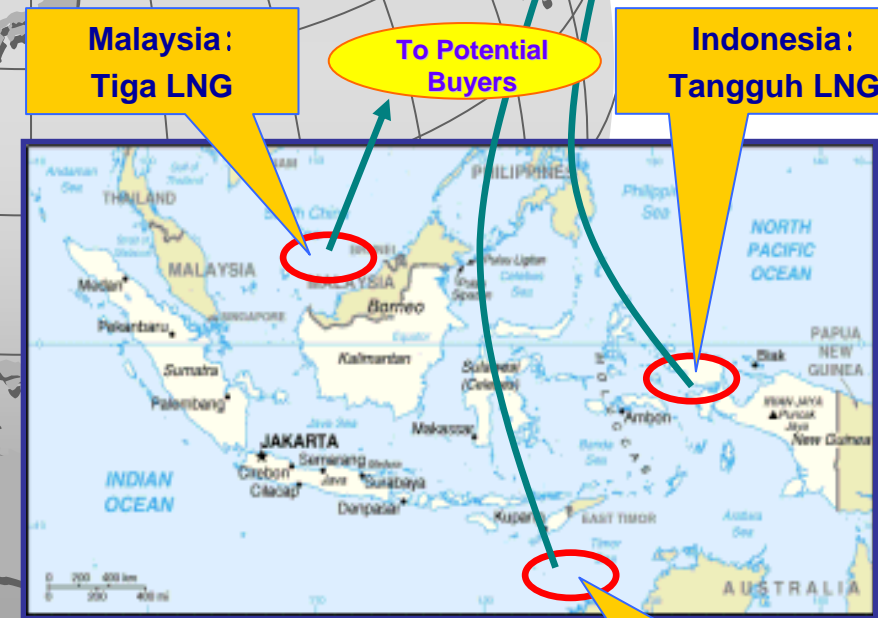
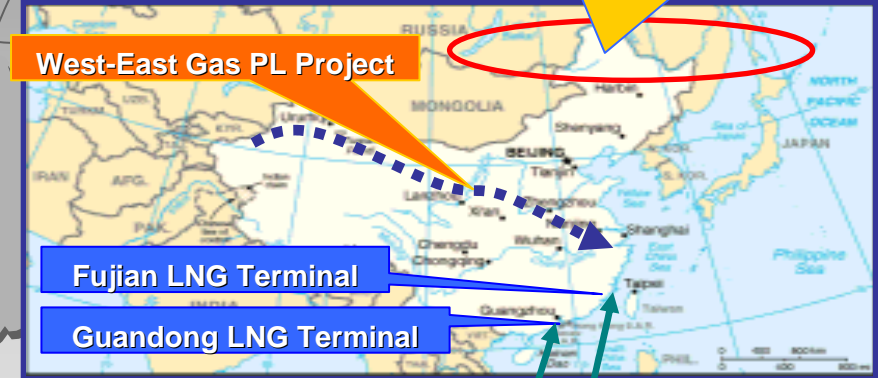
Natural Gas Reserves, Oil & Gas Projects in the Region

>Natural Gas Reserves

| Gas Producing Countries | Proved Reserves (TCF) | Share of total (%) |
|-----------------------------|-----------------------|--------------------|
| Brunei | 13.8 | 0.3 |
| China | 53.3 | 1.0 |
| Indonesia | 92.5 | 1.7 |
| Malaysia | 75.0 | 1.4 |
| Australia | 90.0 | 1.6 |
| Russia (including Sakhalin) | 1680.0 | 30.5 |

Source: BP Statistics 2003

>Recent Projects



Australia: NWS LNG

3. Issues to be addressed



3-1. Oil Market

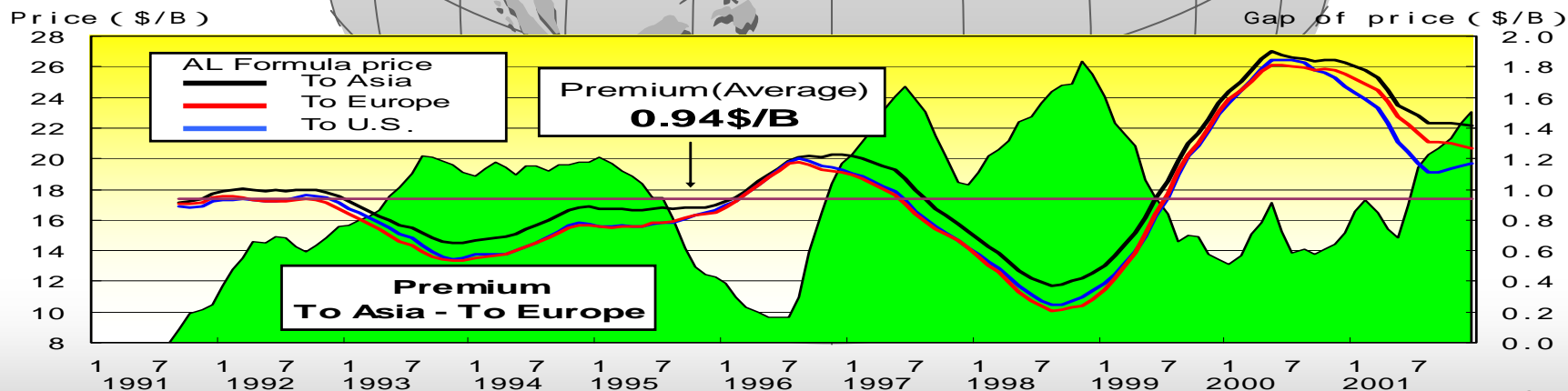
- Collective Asian demand should have market power vis-à-vis suppliers

➤ Establishing Oil Market in Asia

- Establishment of more open and transparent Asian Oil Market will create better price mechanism and supply-demand balance.

“Asian premium” is...

the situation that the price of oil which the Middle East exports to Asia is higher by \$1 ~ \$1.5 than that to Europe and U.S.A.



3-2. Oil Stockpile

Japan & Korea

Keeping national oil stockpiling = IEA members

China

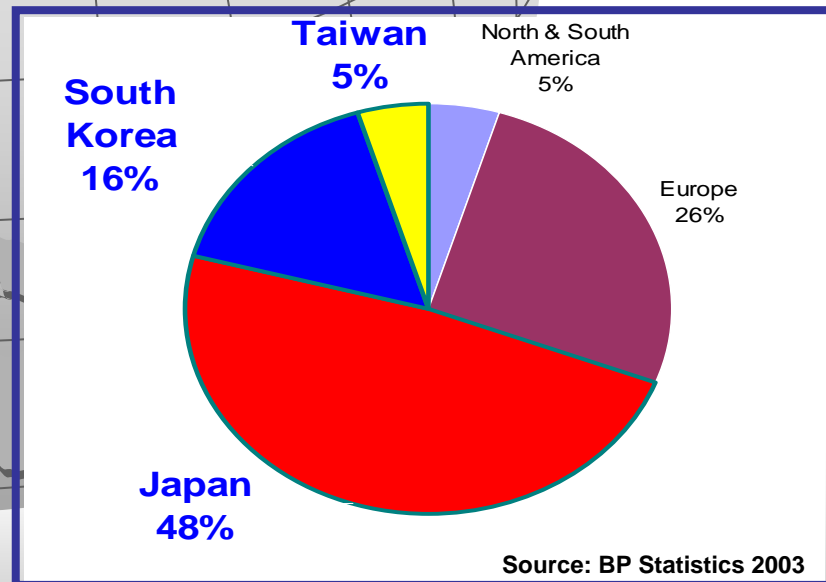
Decided to establish national oil stockpiling

ASEAN

Decided to revise "ASEAN Petroleum Security Agreement" (1986)

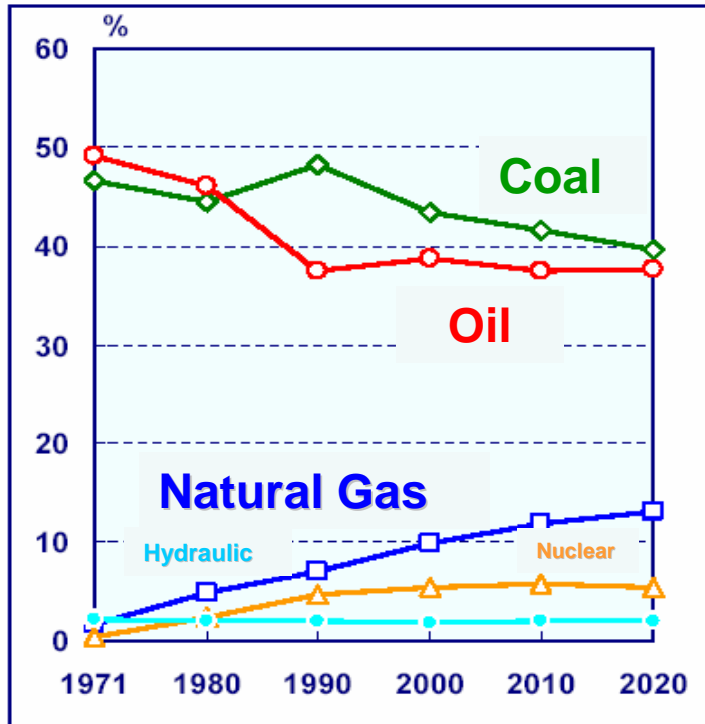
Planning to enhance regional emergency preparedness capability (2003).

Considering the continuous increase of Energy demand in Asia, as an Emergency Response Measure, Establishment of Oil Stockpiling and regional cooperation in Asia is important.



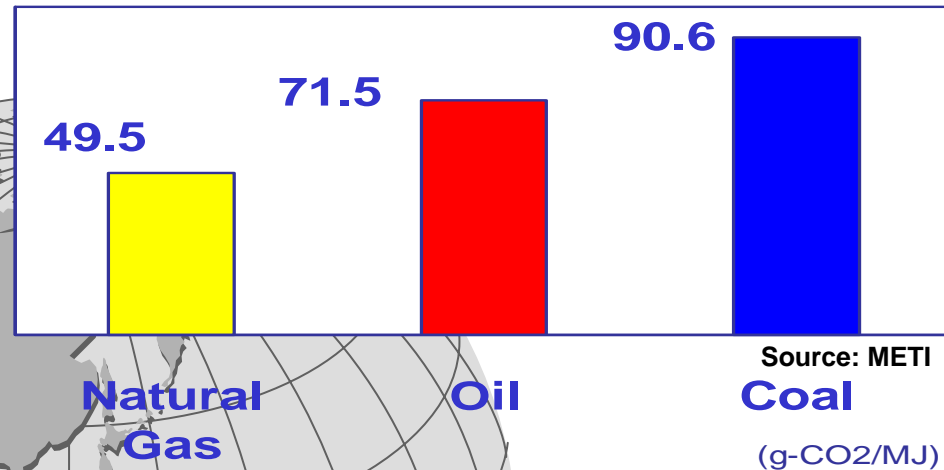
3-4. Coal

Primary Energy Consumption in Asia



Source: Institute of Energy Economics, Japan

Comparison of CO2 Emission per Calorie



>Coal will remain as major energy source in Asia till 2020.

>Emission of CO2 by consumption of Coal is almost double of Natural Gas

“Clean Coal Technology (CCT)” will contribute to...

- Reduction of Environmental Load.
- Effective Usage for other fossil fuels using coal as relatively rich resource.

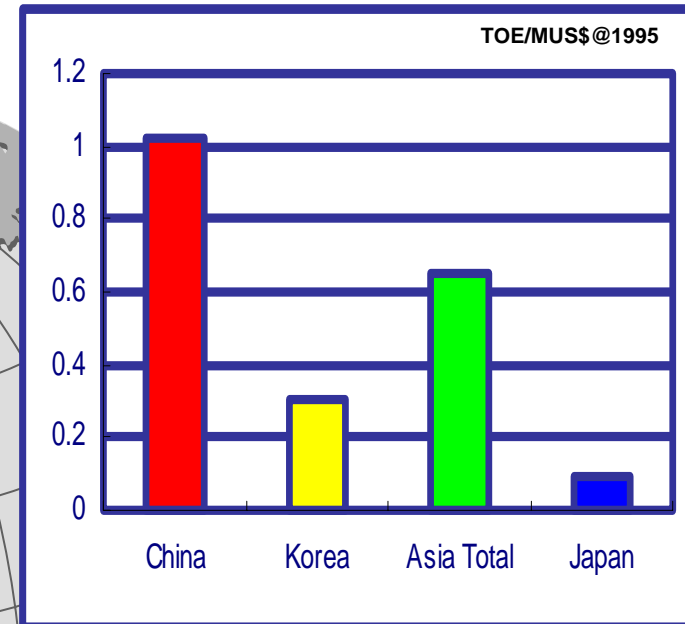
3-5. Energy Efficiency & Renewable

In Asia, each country shows different index on how much efficient in energy use.



- >Some countries have own technology and experience in efficient energy use.
- >Possibility on cooperation to share those technology and experience in Asian countries.

Total Primary Energy Supply per GDP 2001

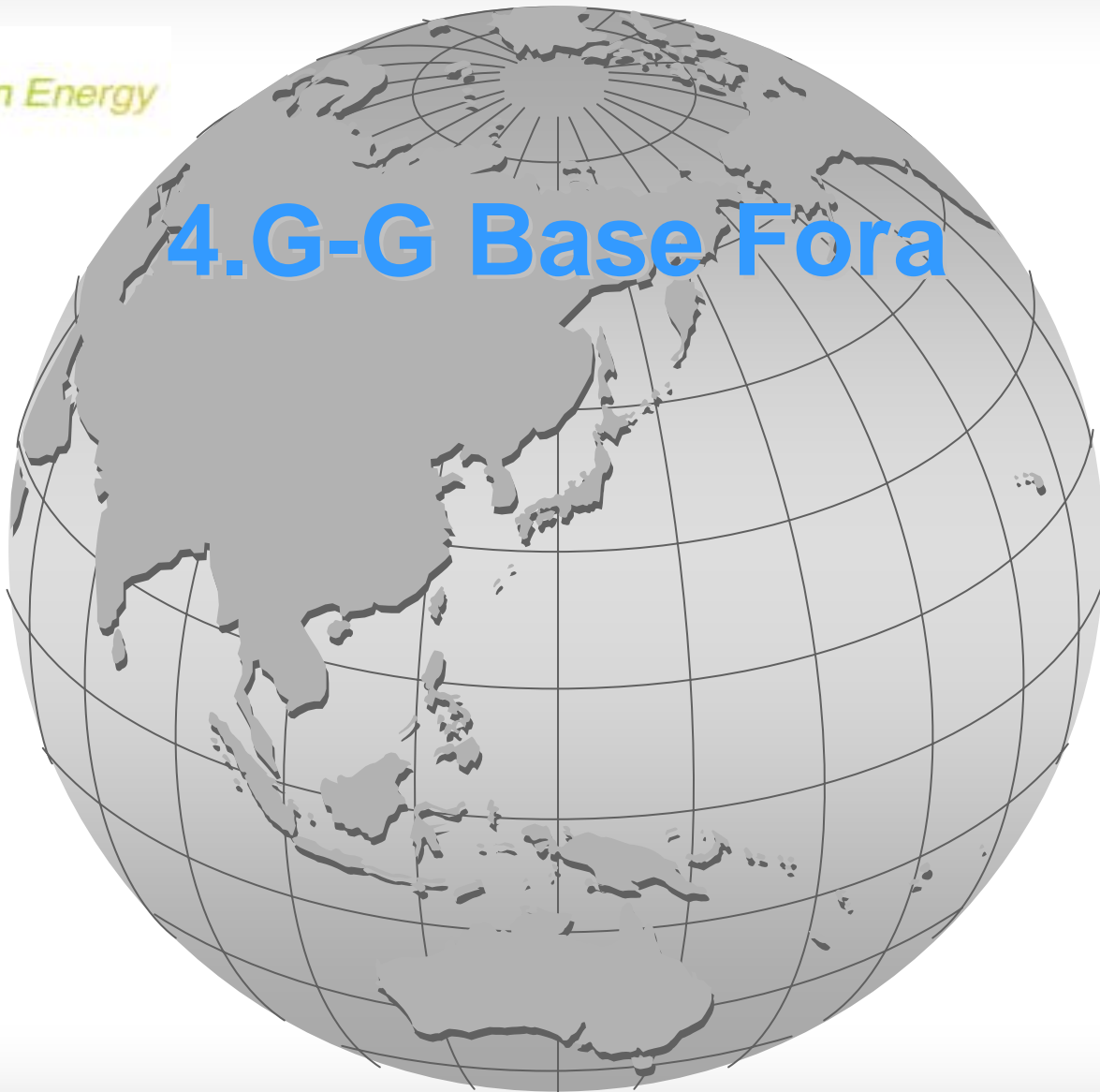


Source: Energy Balance of OECD/Non-OECD Countries, IEA 2003

And also,

- >Renewable energy (hydro, solar, wind, geothermal, combustion, biomass, etc) to successfully deal with environment problems and energy security,
- >Further cooperation of renewable energy policy in Asian countries .

4.G-G Base Fora



Bilateral Consultation



Japan - Republic of Korea

On 19 March 2004: The 12th Korea-Japan Energy Policy Dialogue.



Japan - People's Republic of China

On 23 October 2003: The 7th China-Japan Energy Policy Dialogue.



ASEAN + 3 (Japan, China, and Korea)

Energy Partnership

1st ASEAN+3 Energy Ministers Meeting and Japan/China/Korea
Energy Ministers Meeting (June, 2004 @ Manila)
“Forging Closer ASEAN Energy Partnership”

APEC Energy Cooperation

“Energy Security Initiative” (from 2000)

- *Monthly oil data collection
- *Energy information sharing, etc.

5. Japan's Energy Policy Review

Japan's Energy Policy including long-term outlook is under review.

Related Points:

1. Asian Regional Approach
2. Natural Gas Shift
3. Oil Market in Asia
4. Energy / Environment Integrated Policy

6. Business Solution

- Partnership on G-G, G-B, B-B
- B-B is Driving Force
- Key words
 - * Complementality
 - * Scale merit
 - * Win win
- Big Potential in Energy Efficiency / Environment

7. (Potential) Business Cases

- Nippon Oil / Petro China Refining on Commission
- Tohoku Electric / KOGAS Cooperation on LNG Procurement
- Nuclear Power Plants in China with Japanese Technology
- Coal Utilization in China with Japanese “Clean Coal Technology”
- Cogeneration in China with Japanese System
- Solar Energy in China with Japanese Technology
- CDM can be utilized
- Energy Efficient Manufacturing in China (Electronics, Textile, Steel, Auto etc.)
- ESCO