

Japan's contribution for clean energy in Asia

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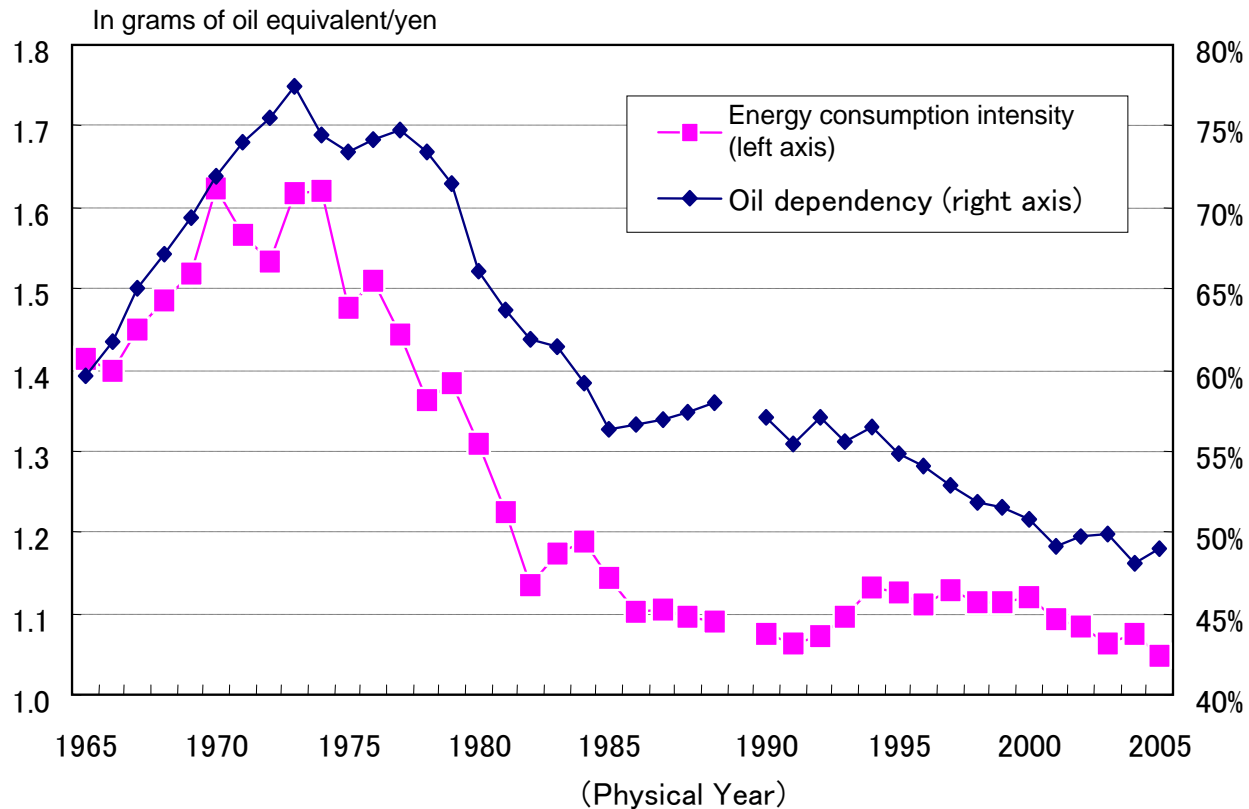
Progress of Energy Efficiency and Conservation and a Decline in Oil Dependency

- In Japan, the public-private joint efforts made since the oil shocks have resulted in a 37 percent improvement in energy efficiency (GDP intensity) and a nearly 30-point drop in oil dependency.

GDP intensity: FY1973 - 1.62 g/yen -> FY2005 - 1.05 g/yen (in grams of oil equivalent/yen of GDP)

Oil dependency: FY1973 - 77% -> FY2005 - 49%

<Changes in Oil Dependency and Energy Efficiency and Consumption Rate in Japan>



Source: Comprehensive Energy Statistics, Agency for Natural Resources and Energy; Directory of Statistics on Energy and Economy, Institute of Energy Economics, Japan

Note: Energy consumption intensity = Total energy supply/Real GDP; Oil dependency = Total oil supply/Total energy supply

Analyses of Factors Contributing to a Reduction in Impacts of Crude Oil Price Hikes

- A reduction in the impacts of the recent crude oil price hikes on the Japanese economy as compared with the first oil shock was attributable primarily to the contribution of (1) the progress of energy Efficiency and conservation, (2) reductions in oil dependency, and (3) the advance of the appreciation of the yen against the U.S. dollar.

<Analyses of Factors Contributing to a Reduction in the Impacts of Crude Oil Price Hikes>

Increase in the value of crude oil imports/GDP

1974年: 2.8%



Increase in the value of crude oil imports/GDP

2005年: 0.7%

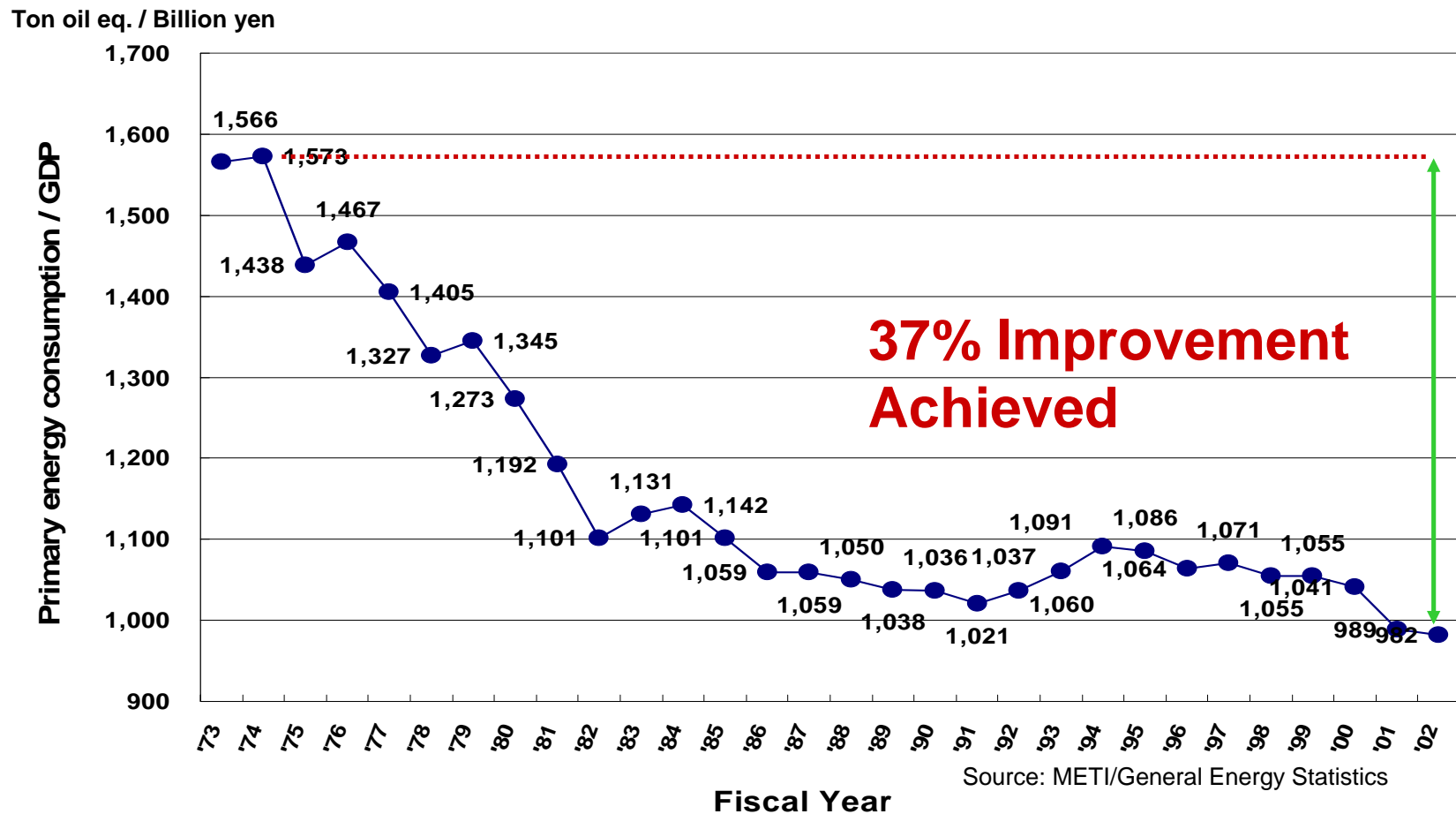
Main Factors Contributing to Impact Reductions	Percentage Contribution
① A decline in energy consumption intensity (energy conservation)	Approx. 40 percent
② Reductions in oil dependency	Approx. 20 percent
③ Advance of the appreciation of the yen	Approx. 40 percent

Source: Comprehensive Energy Statistics, Agency for Natural Resources and Energy; Directory of Statistics on Energy and Economy, Institute of Energy Economics, Japan

Note: Percentage contribution refers to the percentage of the average drop rate (-7.1% [after the range of crude oil price hikes was adjusted]) when an increase in the value of crude oil imports/GDP dropped from 2.8% in 1974 to 0.7% in 2005 to the yearly average drop rates of the respective factors similarly determined ((1)-2.9%, (2)-1.3%, and (3)-3.0%).

Changes in Energy Intensity in Japan

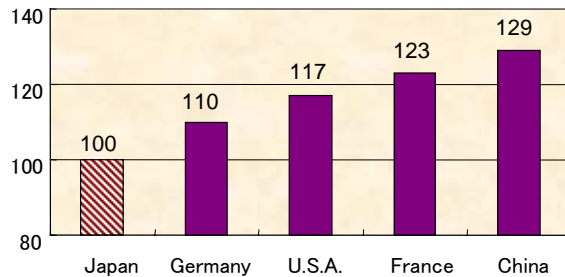
- In Japan, GDP energy intensity has shown an approximately 37% improvement over the past three decades.



Energy Consumption Efficiency by Sectors

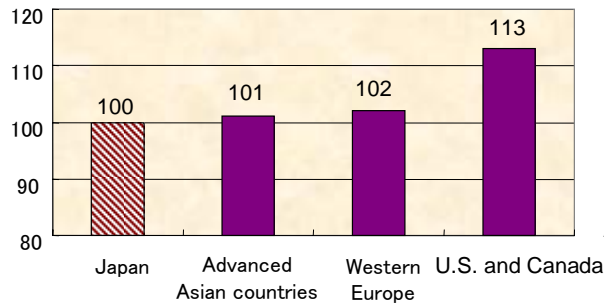
○ IEA is now in the process of developing an efficiency indicator by sectors and will report on the result in 2008.

Comparison of the index of energy needed to produce 1 kWh of electricity by thermal power plants (FY2003)



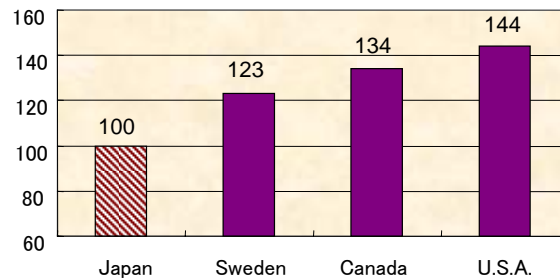
(Source: ECOFYS BV, the Netherlands)

Comparison of the index of energy needed to produce 1 kl of petroleum product (FY2002)



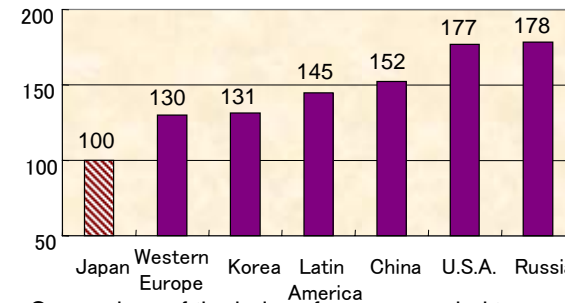
(Source: Solomon Associates, LLC)

Comparison of the index of energy needed to produce 1 ton of paper/paperboard (FY2003)



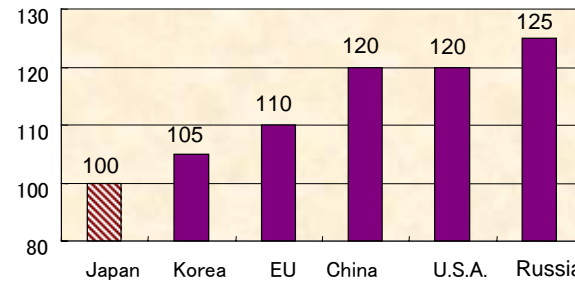
(Source: Agency for Natural Resources and Energy, Statistics Report (Great Britain), Environmental Report (Canada), etc.)

Comparison of the index of energy needed to produce 1 ton of intermediate cement product (clinker) (FY2003)



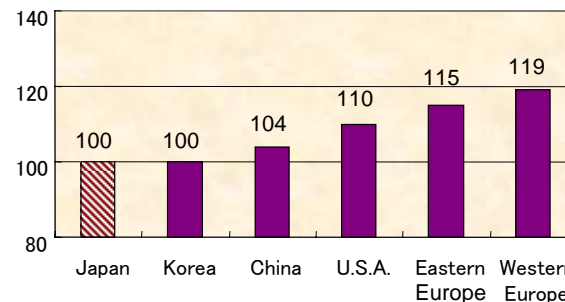
(Source: Battelle Memorial Institute)

Comparison of the index of energy needed to produce 1 ton of iron (FY2003)



(Source: Japan Iron and Steel Federation)

Comparison of the index of energy needed to produce 1 ton of electrolytic caustic soda (FY2003)



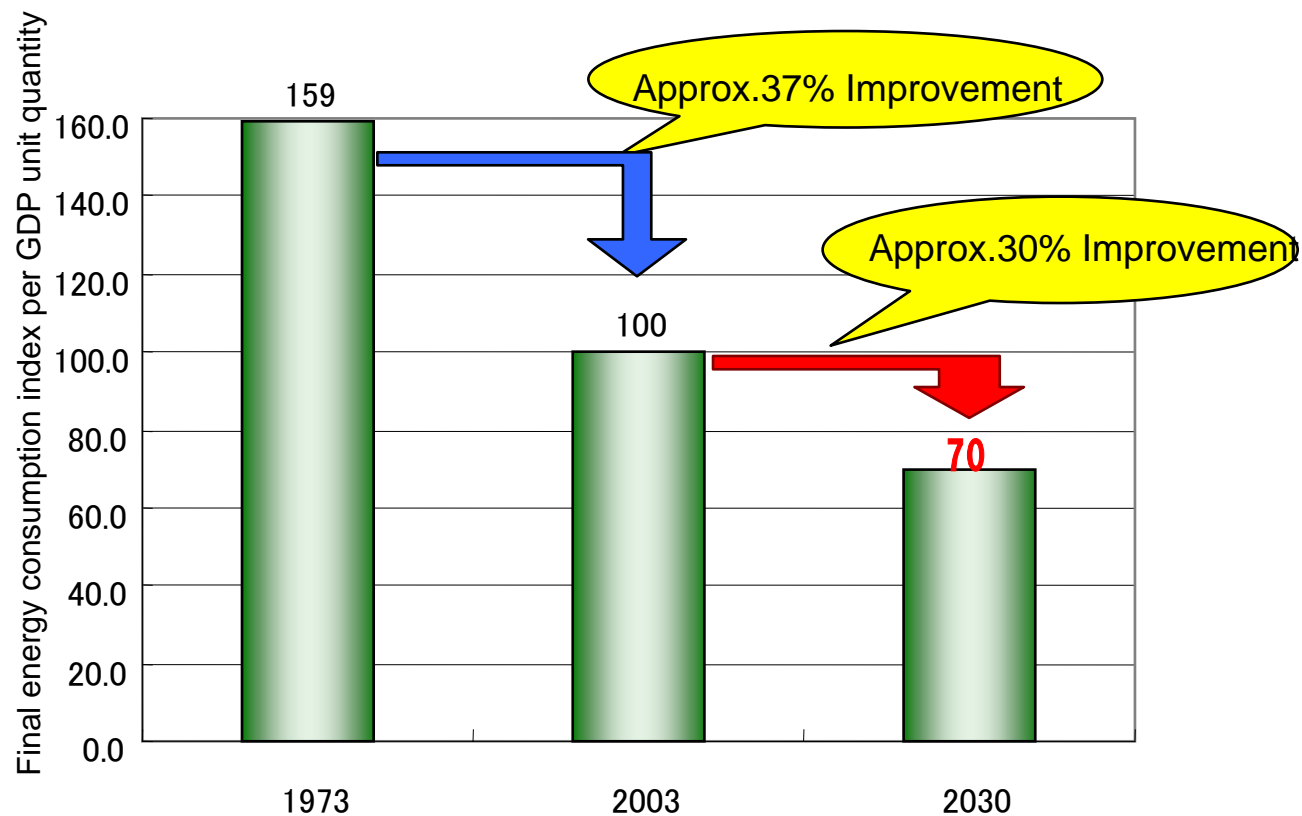
(Source: SRI Chemical Economic Handbook, etc.)

Source: Excerpt from the Summary of the Results of a Follow-up for FY2006, December 14, 2006, under the Keidanren Voluntary Action Plan on the Environment to Arrest Global Warming, Japan Business Federation (<http://www.meti.go.jp/committee/materials/downloadfiles/g70216a04j.pdf>)

Japan's Energy efficiency and Conservation Policy –New National Energy Strategy-

- Our country's economy has been achieving an energy consumption efficiency of over 30% since the Oil Shock of the 1970's. By establishing a positive cycle of technical innovation and social system reforms in the future, we aim to improve the energy consumption efficiency by at least another 30% by 2030.

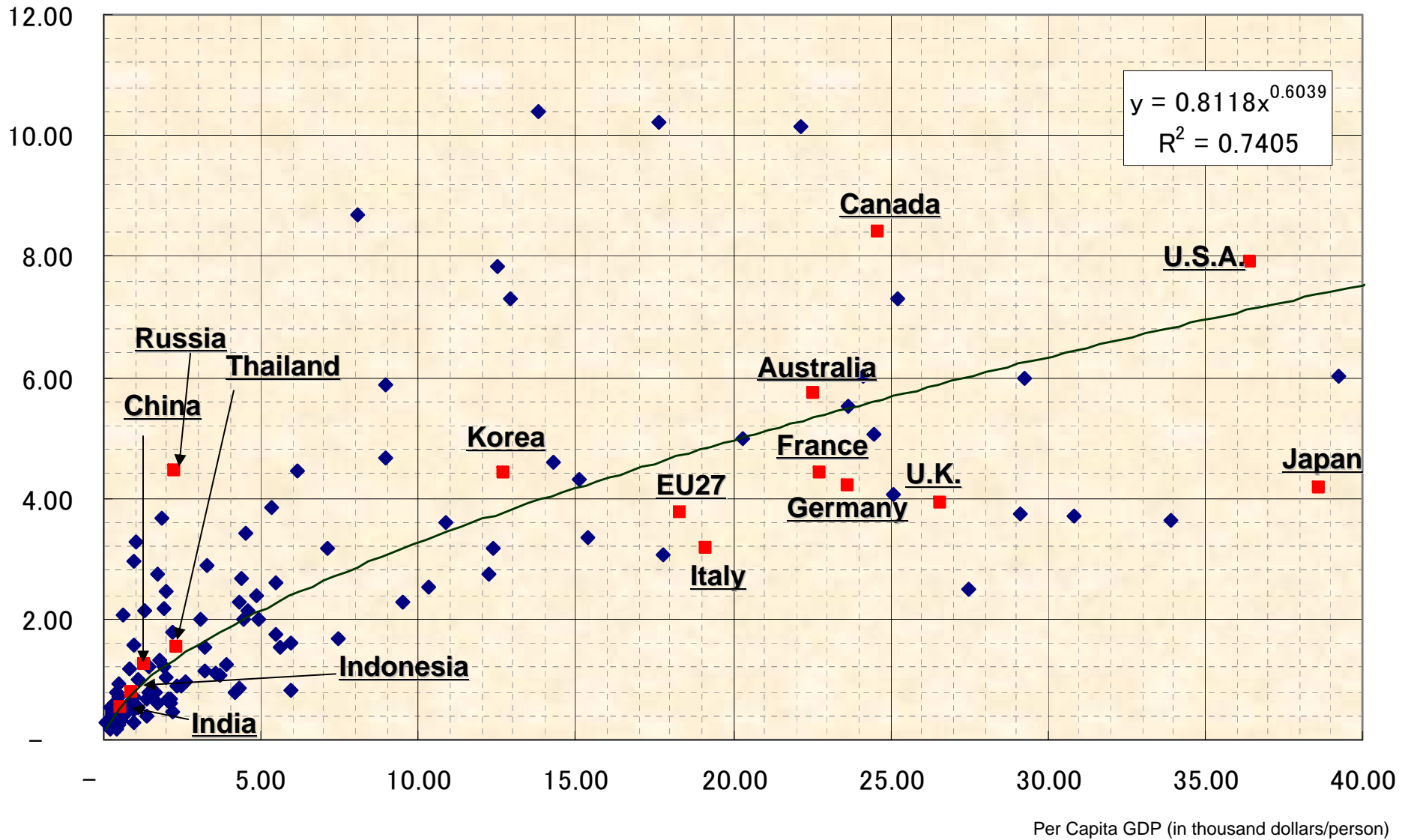
【 Basic Concept of the Energy Conservation Policy】



International Comparison of Per Capita GDP/Energy Supplies

Per Capita Primary Energy Supplies (in tons of crude oil equivalent/person)

[Per Capita GDP/Primary Energy Supplies (2004)]



Source: Calculated by quoting from Key World Energy Statistics 2006, IEA. Data are the numerical values for 2004; GDP is determined at the 2000 average dollar rate.

Second East Asia Summit: The Cebu Declaration

- In January this year, the Second East Asia Summit took place and the leaders of participating countries signed the Cebu Declaration on East Asian Energy Security.
- The Cebu Declaration spells out specific measures for promotion of energy efficiency and conservation, agreeing that each one of the participating countries should voluntarily formulate energy efficiency goals and action plans.
- The First East Asian Energy Ministers Conference will take place this summer and conduct a follow-up on the participating countries' activities and energy cooperation under the Cebu Declaration.

The Cebu Declaration on East Asian Energy Security (Outline)

- Take concrete action toward improving efficiency and conservation, while enhancing international cooperation through **intensified energy efficiency and conservation** programmes. **Set individual goals and formulate action plans voluntarily for improving energy efficiency**
- Promoting the use of biofuel. Start a work to encourage free trade in biofuel and formulate standards on fuel.
- The participating countries work together for research and development of new and renewable energy sources including biofuel.
- Promoting clean use of coal and international cooperation in clean coal technologies
- Exploring possible modes of strategic fuel stockpiling and others



The Second East Asia Summit: Japan's Energy Cooperation Initiative-

- Japanese Prime Minister Shinzo Abe stated that energy efficiency and conservation, biomass energy and clean use of coal are important to respect the purport of the Cebu Declaration and reinforce energy security in Asia, and proposed Japan's Energy Cooperation Initiative in these fields.
- The proposal was warmly received by delegates from the participating countries and it was mentioned in the Chairman's Statement.

Japan's Energy Cooperation Initiative

Promotion of Energy Conservation

(1) Receive 1,000 trainees from countries in the region and send 500 experts in the next five years. (2) Set up the Asian Energy Conservation Cooperation Center. (3) Positively use yen loans and the JBIC's investment financing.

Promotion of Biomass Energy

(1) Establish the Asian Biomass Energy Research Core to carry out joint research into biofuel. (2) Receive 500 trainees in the next five years. (3) Hold a seminar on the best practices in policy and technology. (4) Set up the Asian Biomass Energy Cooperation Promotion Office.

Clean Use of Coal

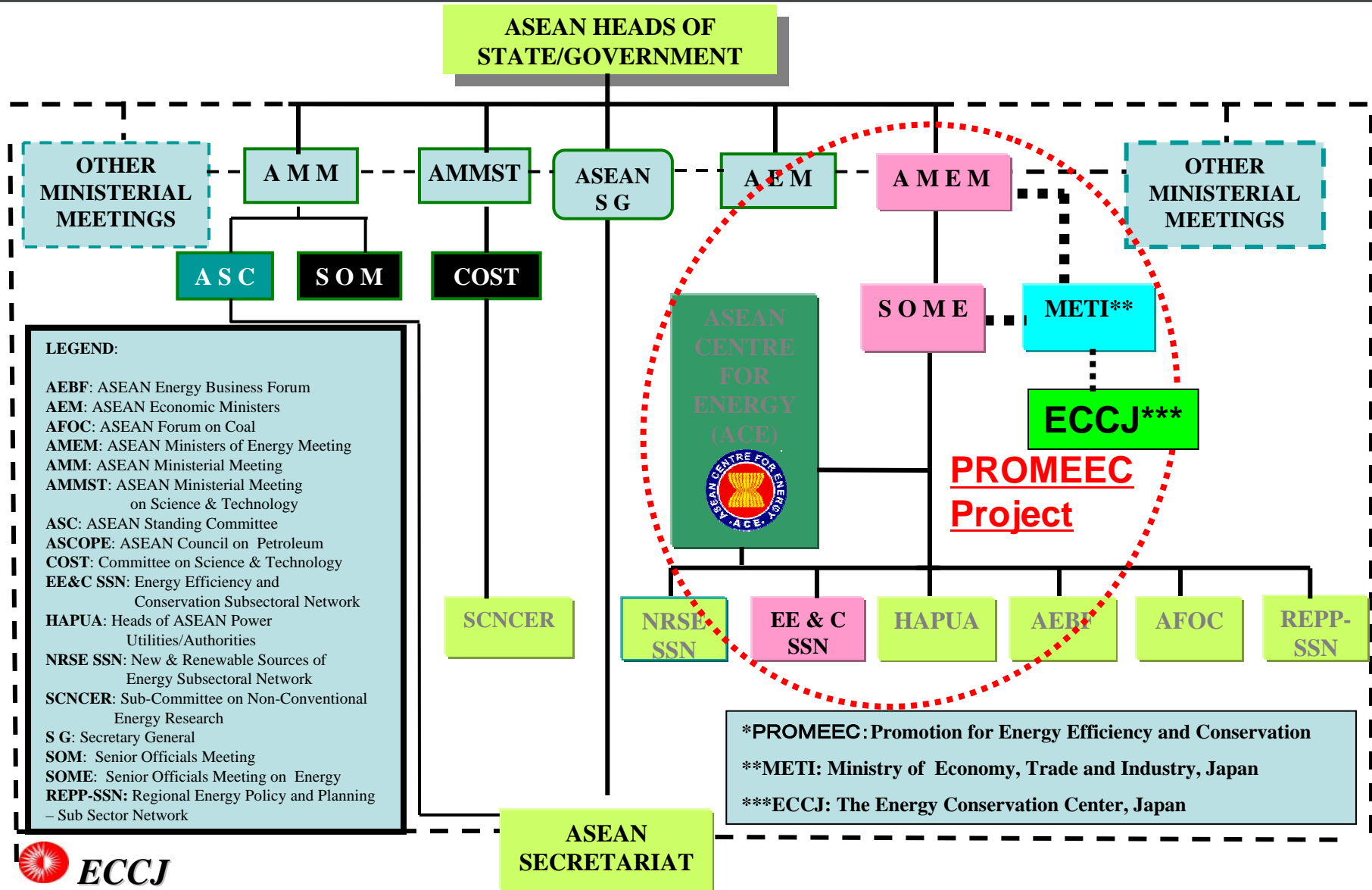
(1) Construct the Coal Liquefaction Support Center and implement projects for the spread of coal liquefaction and training of experts. (2) Implement cooperation in clean coal technology.

Energy for Poverty Eradication

Extend 2 billion dollar-scale energy-related ODA to improve energy access and carry out energy efficiency and measures in the next three years.

Overview of PROMEEC* Project (1)

- ASEAN Program for Capacity Building on EE&C -



Overview of PROMEEC Project (2) - Sub-projects and Main Activities -

- **PROMEEC** was started in 2000 with technical and funding support from **METI**
 - Jointly implemented by **ACE, EE&C-SSN and ECCJ**
 - Consists of 3 Major projects
 - **PROMEEC – BUILDINGS**
 - **PROMEEC – MAJOR INDUSTRIES**
 - **PROMEEC – ENERGY MANAGEMENT**
- Major Activities of PROMEEC Building & Industry are:**
- a. Energy audit & Local Workshops on OJT Basis
 - b. Development of in-house database, tech. directory
 - c. Award system for E.E. Best Practice Buildings
- Major Activities of Energy Management**
- d. Building “ASEAN Energy Management System”
 - e. Award System of Best Practices in E.M.
 - f. Preparation of E.M. tools such as E.M. Handbook

Japan's Contribution for Sustainable Development for Asia (ESDA : Enhanced Sustainable Development for Asia)

- Facilitation of Investment Climate
(such as construction of infrastructure)
- Promoting Energy Efficiency

Strengthening of collaboration between ADB and JBIC

• ADB • Collaboration • JBIC

- Establishing ACFA
(Accelerated Co-Financing scheme with ADB)
- Drawing up a common plan for investment promotion and energy efficiency

• JBIC will make 2 billion dollars of yen-loans in 5 years

Establishing Funds

• ADB

• Investment Climate Facilitation Fund
(ICFF)

• Asian Clean Energy Fund
(ACEF)

• Japanese government will contribute up to 100 million dollars in 5 years

Expectations to International Organizations

- Diffuse information about legislation, statistics, best practices, etc
- Support capacity building
- Encourage and support governments to set goals and action plans for energy efficiency
- Make guidelines for financial sector

<For these objectives>

- Cooperate with other supporting governments
(ex. ACEF, PROMEEC)

- Utilize for judgement sector-oriented energy efficiency indicators to be developed by IEA, APP, etc.

Thank you!

<http://www.meti.go.jp/english/index.html>