

# **Japanese Laws to Promote Renewable Energy**

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**International Workshop on Legal Issues  
for Clean Energy and Climate Change  
21-22 October 2006, Tsinghua University, Beijing, China**

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## Table of Contents

1. Introduction: Providing the Context
2. Present State of Renewable Energy Use in Japan
3. Overall Legal Framework
4. Japan's Kyoto Targets
5. Law Concerning Promotion of Development and Introduction of Oil-Alternative Energy

## Table of Contents (cont'd)

6. Special Measures Law for the Promotion of New Energy Use
7. Special Measures Law for the Use of New Energy by Electric Power Companies
8. Conclusion: The Need and Prospect for the Future

## 1. Introduction: Providing the Context

- Energy security issues for Japan:
  - Lack of domestic energy resources
    - Near-Total dependence on imports (oil, coal, natural gas)
    - Need to diversify, both sources of imports and the structure of energy supply and demand

## 1. Introduction: Providing the Context (cont'd)

- Air pollution control regulations
  - One of the world's strictest emission control standards, leading to the use of cleaner fuels such as LNG
- Climate change issues
  - Importance of non-CO<sub>2</sub> emitting forms of energy, i.e. renewables

## 1. Introduction: Providing the Context (cont'd)

All the above considerations leading to:



- Emphasis on "3 E"s:  
Energy, Economy, and the Environment

Additional Background:

On-going liberalization of the power industry/  
electricity market

## 2. Present State of Renewable Energy Use in Japan

- Renewable energy (in 2004):
  - 6.1 % of total primary energy supply (including hydro and geothermal)
  - 10.8 % of total electricity supply
- Ref. Nuclear:
  - 9 % of total primary energy supply
  - 29.1 % of total electricity supply

## 3. Overall Legal Framework

- Basic Law on Energy Policy (2002)
  - 1) Ensure stable supply
  - 2) Harmonize with environmental protection
- Basic National Energy Strategy
  - 1) energy conservation; 2) secure oil supply; 3) develop diverse forms/sources of energy; 4) make use of market mechanisms

## 3. Overall Legal Framework (cont'd)

- Energy Conservation Law (1979, amended in 1998, 2002, 2005)
- Law Concerning Promotion of Measures to Cope with Global Warming (1998, amended in 2002, 2005)
- Other substantive/sectoral laws covering heat and power generation (including nuclear energy)

## 4. Japan's Kyoto Targets

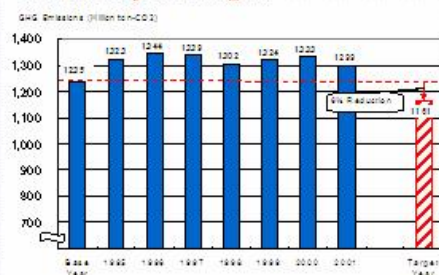
- Under the Kyoto Protocol, Japan is committed to 6 % reduction in GHG emissions (base year: 1990)
- Kyoto Target Achievement Plan
  - established by the Government of Japan under the "Law Concerning Promotion of Measures to Cope with Global Warming"

## Emission Reduction Targets

Classification	Targets
① CO <sub>2</sub> (energy related)	±0.0%
② non-energy CO <sub>2</sub> , methane, and N <sub>2</sub> O	-0.5%
③ revolutionary technologies, promotion of activities among people	-2.0%
④ HFC, PFC, SF <sub>6</sub>	+2.0%
⑤ Sinks	-3.9%
⑥ Further reduction through ① to ④, Kyoto Mechanisms	-1.6%
<b>Total</b>	<b>-6.0%</b>

(Targets are both total and percentage of base-year emissions)

## Challenges Ahead: Emission Trends and the Kyoto Target



### 5. Law Concerning Promotion of Development and Introduction of Oil-Alternative Energy (1980)

- "Oil-alternative energy" defined as:  
e.g. Nuclear, coal, natural gas, hydro, geothermal
- METI to set targets and guidelines for the supply of oil-alternative energies
- METI to provide guidance and advice, as well as fiscal and financial assistance to industries

### 6. Special Measures Law for the Promotion of New Energy Use (1997)

- Definition of "new" energy:  
Oil-alternative energy that is technically well on its way to practical use, but is not widely used for economic reasons
- e.g. solar (photovoltaic & heat), wind, waste, biomass, snow/ice heat utilization, natural gas co-generation, fuel cells
- N.B. Hydroelectric, geothermal, ocean-wave or thermal power generation are excluded.

### 6. Special Measures Law for the Promotion of New Energy (cont'd)

- METI to set a "Basic Guideline"
- Energy users shall strive to use new energy in accordance with the Guideline.
- Users of new energy may submit a plan, and have it approved by METI.
- Financial guarantees may be provided by NEDO.

### 7. Special Measures Law for the Use of New Energy by Electric Power Companies (2002)

- New energy defined as:  
e.g. wind, solar, geothermal, hydro, biomass, others designated by a Cabinet Order
- METI to set targets for the use of new energy by electric power companies over an 8-year period  
→ Japanese version of Renewable Portfolio Standard (RPS)
- The targets will be reviewed every 4 years, and increasingly strengthened.

### 7. Special Measures Law for the Use of New Energy by Electric Power Companies (cont'd)

- Electric power companies must achieve the target by producing a certain percentage share of their total electricity supply (sale) from new (or "green") energies.
- In order to meet the target, electric power companies may purchase "green electricity" certificates from other power companies which have a surplus of green electricity or from independent "green power" producers.

### 8. Conclusion: The Need and Prospect for the Future

- Legal (regulatory), fiscal and financial measures need to be strengthened to promote the use of renewable energy.
- Initial targets set under Japan's RPS Law are too low to create effective incentives for promoting renewable (or "green") energy.
- Overall impact of liberalization of electricity market in Japan appears to be negligibly small or neutral in terms of promoting renewable energy, except for small and independent ("citizen") power producers.

## 8. Conclusion: The Need and Prospect for the Future (cont'd)

- Further incentives must be provided for R&D as well as commercial application of new and renewable energy technologies.
- There may be a need to redesign and rebuild the physical/socio-economic infrastructure in order to better respond to the small-scale and diffused nature of renewable energy.