

# Japan's View on Evaluating the Emission Potential



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# Long-term efforts for emission reduction

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- **Targets under the New National Energy Strategy -**
  - **Energy efficiency: improve at least further 30% by 2030**
  - **Oil dependency in transport sector: decrease to about 80% by 2030**
  - **Ratio of nuclear power generation: maintain more than 30% to 40% even after 2030**

# Bottom Up & Sectoral Approach

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## ■ The Kyoto Protocol Target Achievement Plan

Target for FY2010 (Mt-CO<sub>2</sub>)

Industry	435
Transport	250
Offices, others	165
Household	137
Energy Conversion	69

## ■ Pledge and Review by industrial sector

- Japan Business Federation's Voluntary Action Plan
- 35 industry sectors
- Annual review by other members and the government
- Some sectors have cleared the first commitments

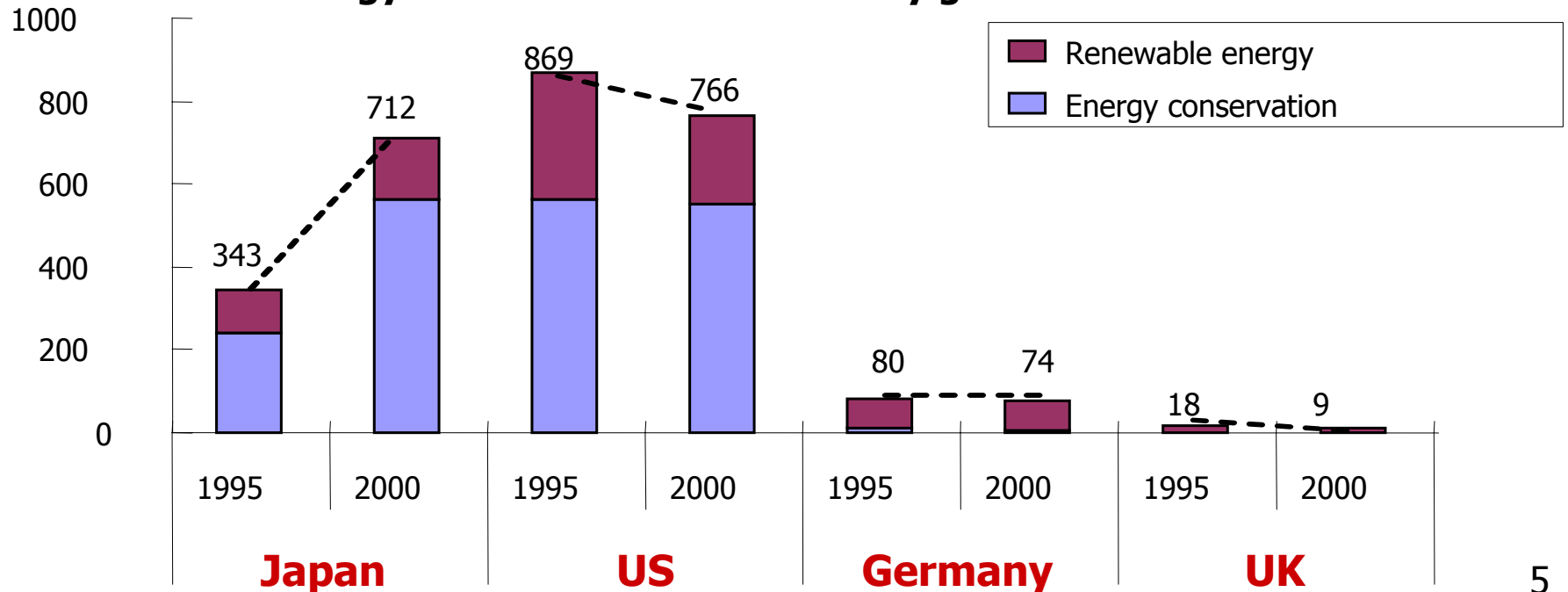
## ■ Asia-Pacific Partnership

- **Partners:** Australia, China, India, Japan, Korea, USA
- **Characteristics:** complement to Kyoto Protocol, technology-oriented, public-private partnership, project- and activity-based

# Necessity of long-term R&D investment

- **Innovation is necessary for stabilizing GHG concentration.**
- **Government role is very important in the long-term R&D investment.**
- **The “Strategic technology roadmap in energy field” has been drawn up in Japan.**

Energy-related R&D investment by government



Source: IEA (2002)

# Examples of expected technology

## Energy efficiency

- Heat pump
- Electric device



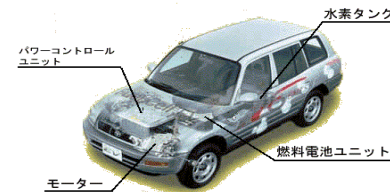
## Nuclear power with safety

- LWR for next generation
- Fast Breeder Reactor Cycle



## New energy

- Fuel cells
- Photovoltaic power
- Biomass



## Diverse energy source in transport

- Electric/Fuel Cell Car
- Biofuel



## Efficient and clean use of fossil fuels

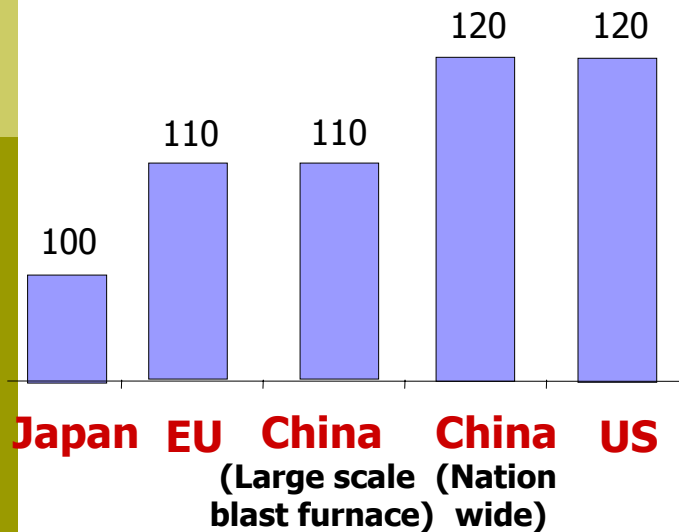
- Clean coal technology (IGCC/IGFC)
- CCS
- GTL, DME



# Evaluation of global reduction potential

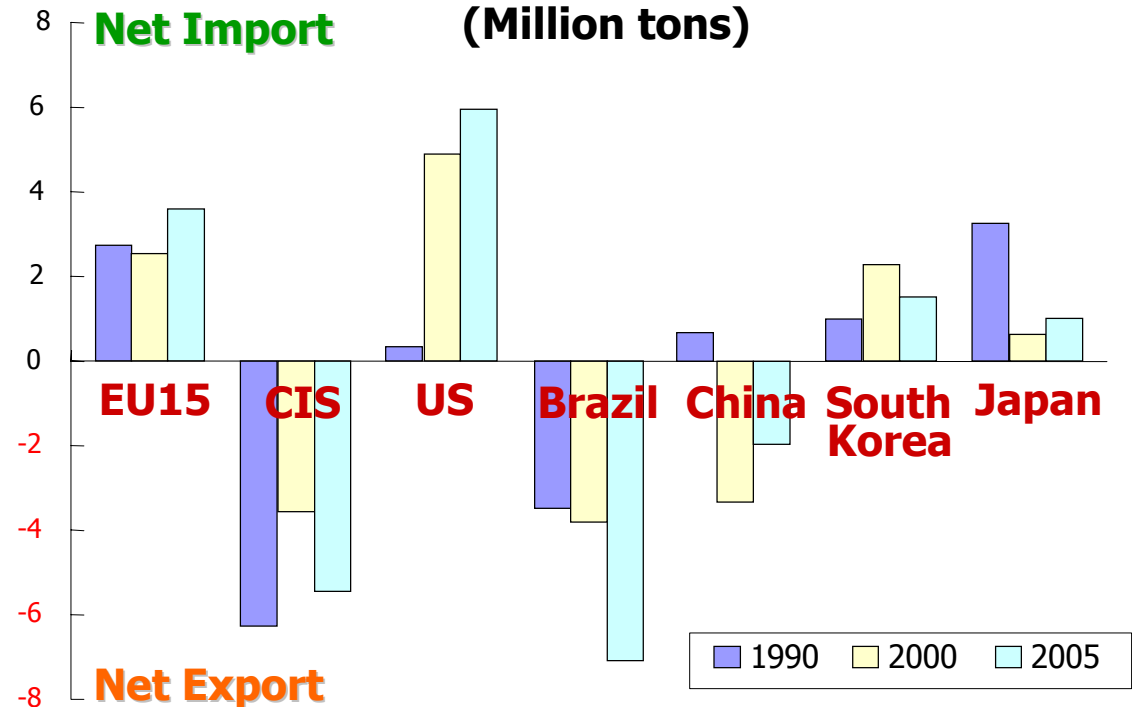
- Steel industry has large potential of CO<sub>2</sub> reduction.
- Trade of intermediate & CO<sub>2</sub> concentrated products is increasing.
- Global evaluation is necessary to prevent leakage.

Energy Consumption Rates in Steel Industry (Japan=100)



Source: JISF analysis

Trade of Pig Iron (Million tons)



Source: IISI Statistical Yearbook

# Conclusion

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For discussing and evaluating the reduction potential, the following points are important.

- **Evaluation of global emission reduction potential is important based on the trend of major sectors and technology.**
- **Specialists' view are important. Setting up a task force whose membership includes energy specialists is one option.**
- **Establishment of a transparent and commonly usable evaluation measures are essential.**