

# How Do Cap & Trade and Carbon Taxes Fit into a Global Emission Strategy?

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# Trends in Global Energy Use and Carbon Emissions: 2007-2030

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- Primary energy demand projected to increase by 1.8 % annually.
- Fossil fuels projected to be dominant energy source
- Renewable energy share projected to increase from 7% to 8% percent
- Carbon emissions projected to increase by 1.7% annually
- Developing countries account for over three quarters of the CO2 increase
- China's CO2 emissions exceeded the U.S. in 2006

# Carbon Cap and Trade: Pros and Cons

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## ■ Pros:

- ❖ Emissions limited to predetermined cap.
- ❖ Market causes price of emission credit to adjust to cost of abatement
- ❖ International trading of credits could reduce costs of abatement

## ■ Cons:

- ❖ Capping U.S. emissions causes substitution of higher cost resources for energy use and slows economic growth
- ❖ Emission caps would result in volatile prices for emission credits
- ❖ Rent-seeking, socially wasteful could result from caps on emissions

# Carbon Taxes: Pros and Cons

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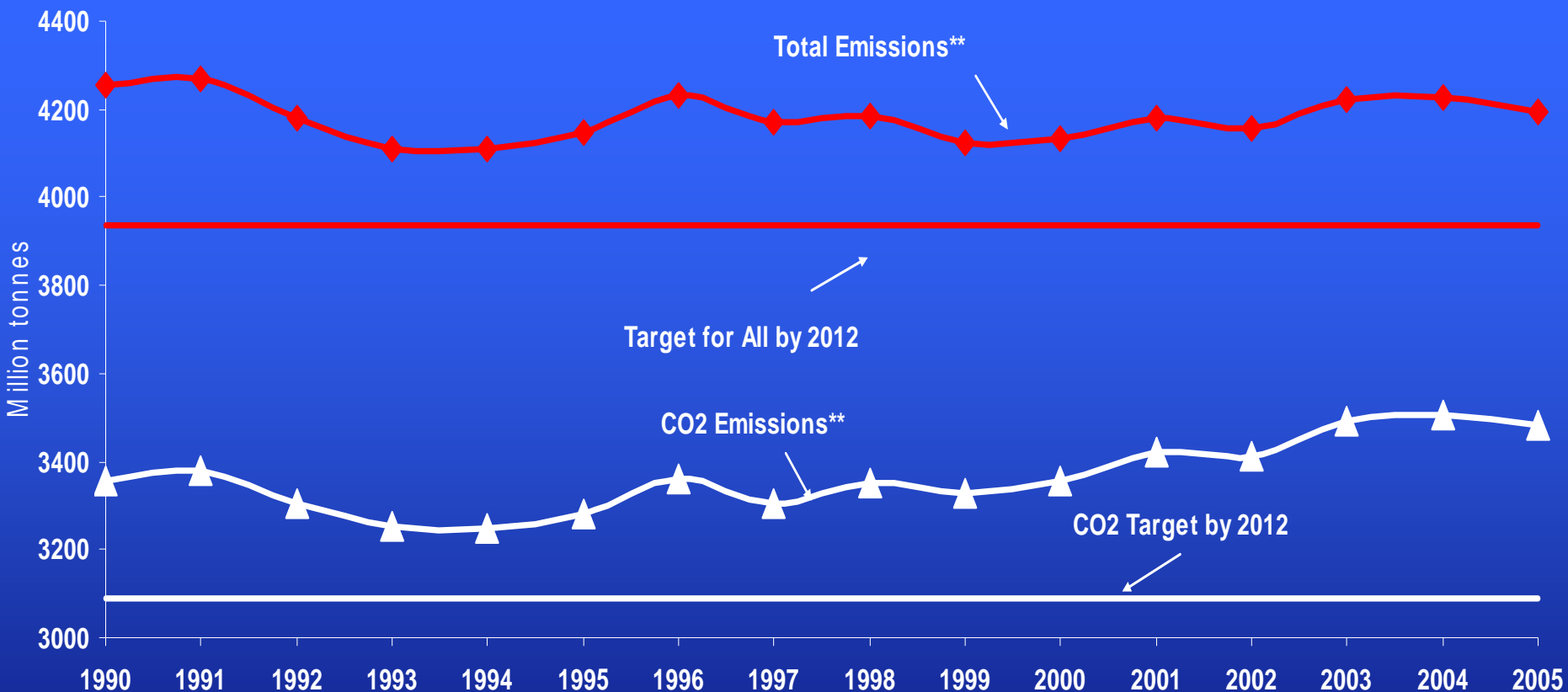
## ■ Pros:

- ❖ Provides certainty on environmental charges for energy use.
- ❖ Does not constrain economic growth as much as a cap and trade system
- ❖ Tax revenues can be used to reduce burdens on low income household, reduce other taxes or for other societal objectives
- ❖ Avoids rent-seeking behavior
- ❖ Avoids need to monitor validity of emission credits

## ■ Cons:

- ❖ Does not provide certainty on emission reductions
- ❖ Tax revenues could be wasted

# Greenhouse Gas Emissions in the EU-15\*

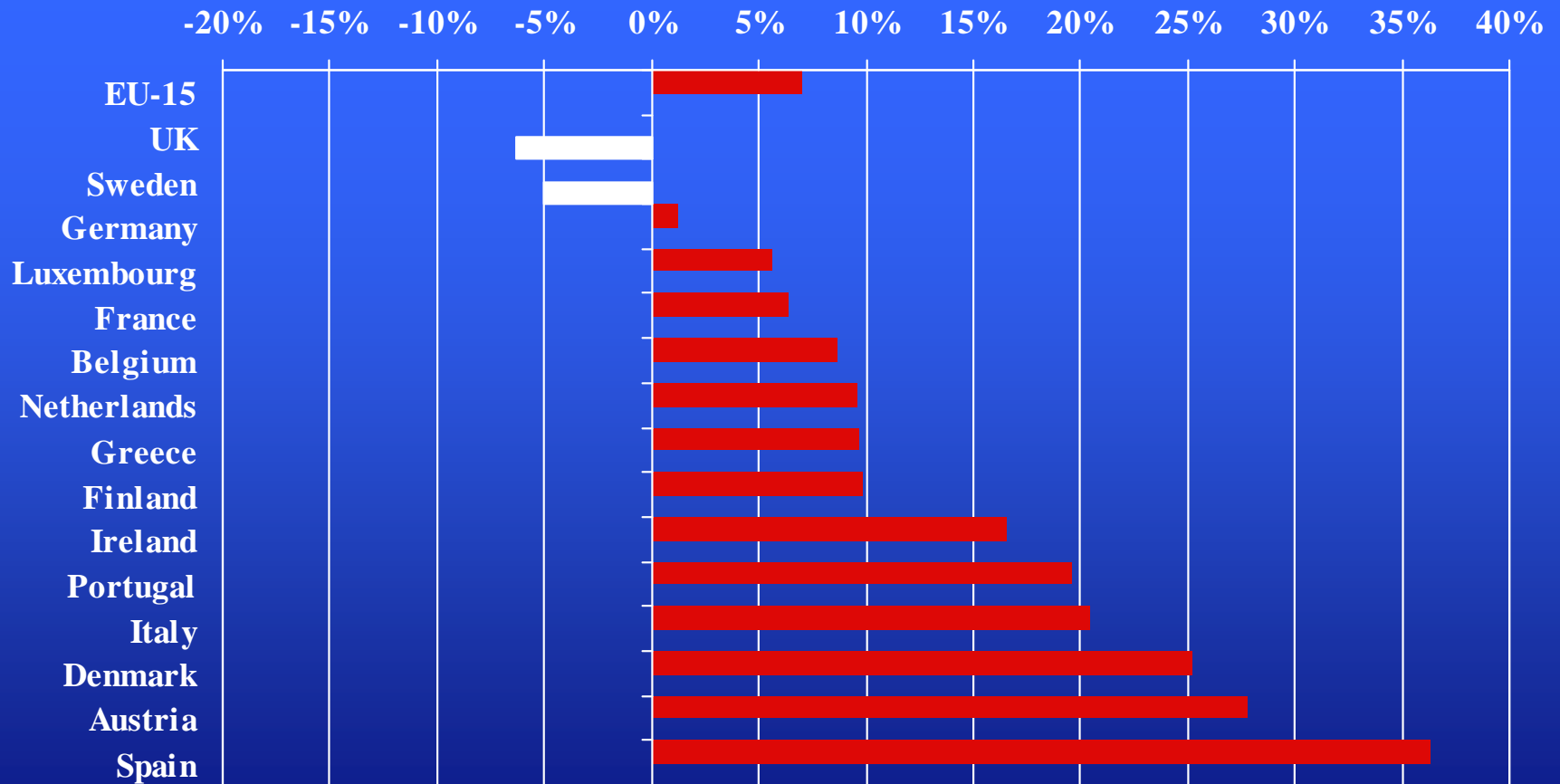


\* In CO2 Equivalents

\*\* Excludes land use, land use change and forestry.

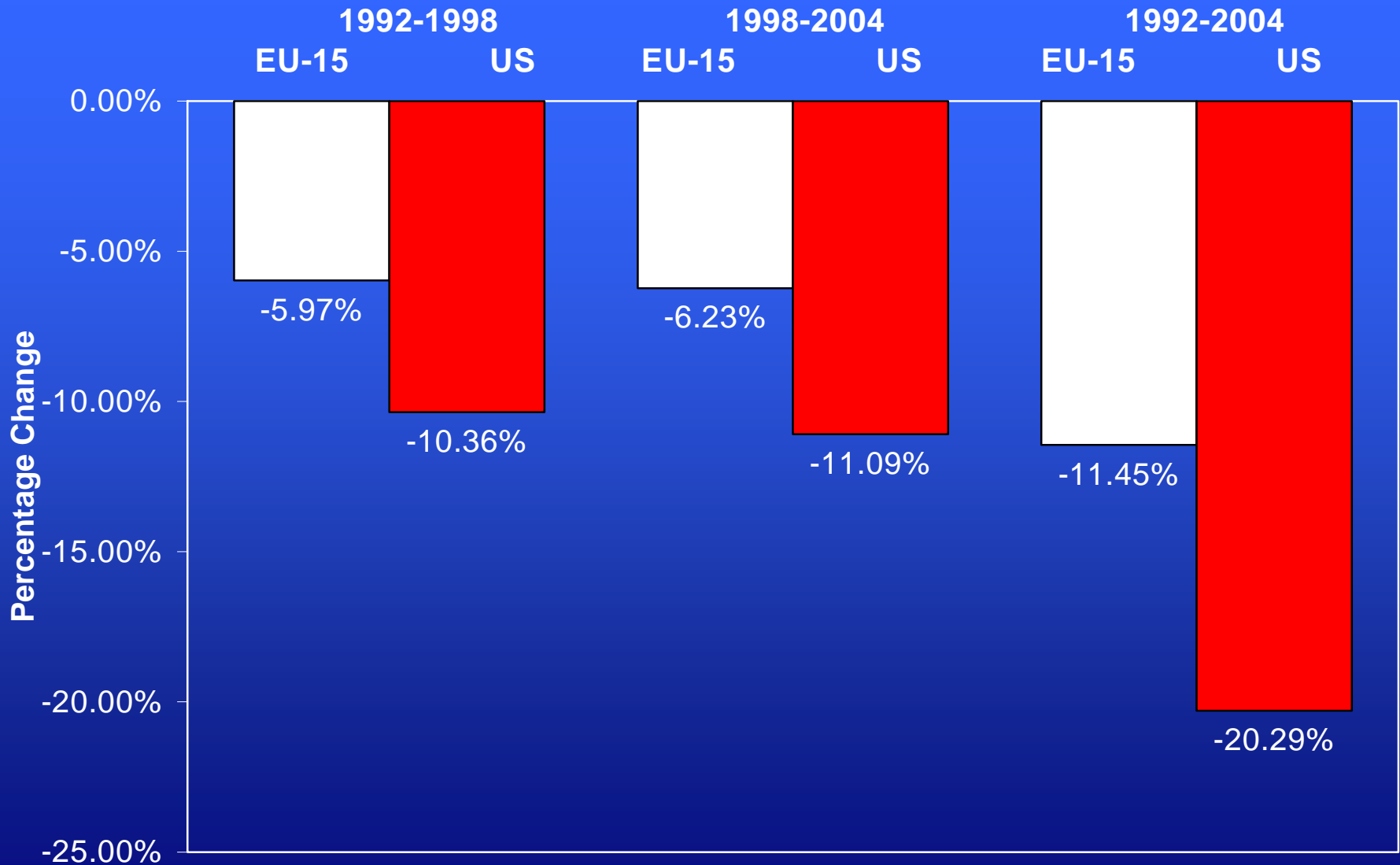
Source: "Annual European community Greenhouse Gas Inventory 1990-2005 and Inventory Report 2007", European Environment Agency, version 27 May 2007.

# Greenhouse Gas Emissions in the European Union Projected to Exceed Kyoto Targets in 2010



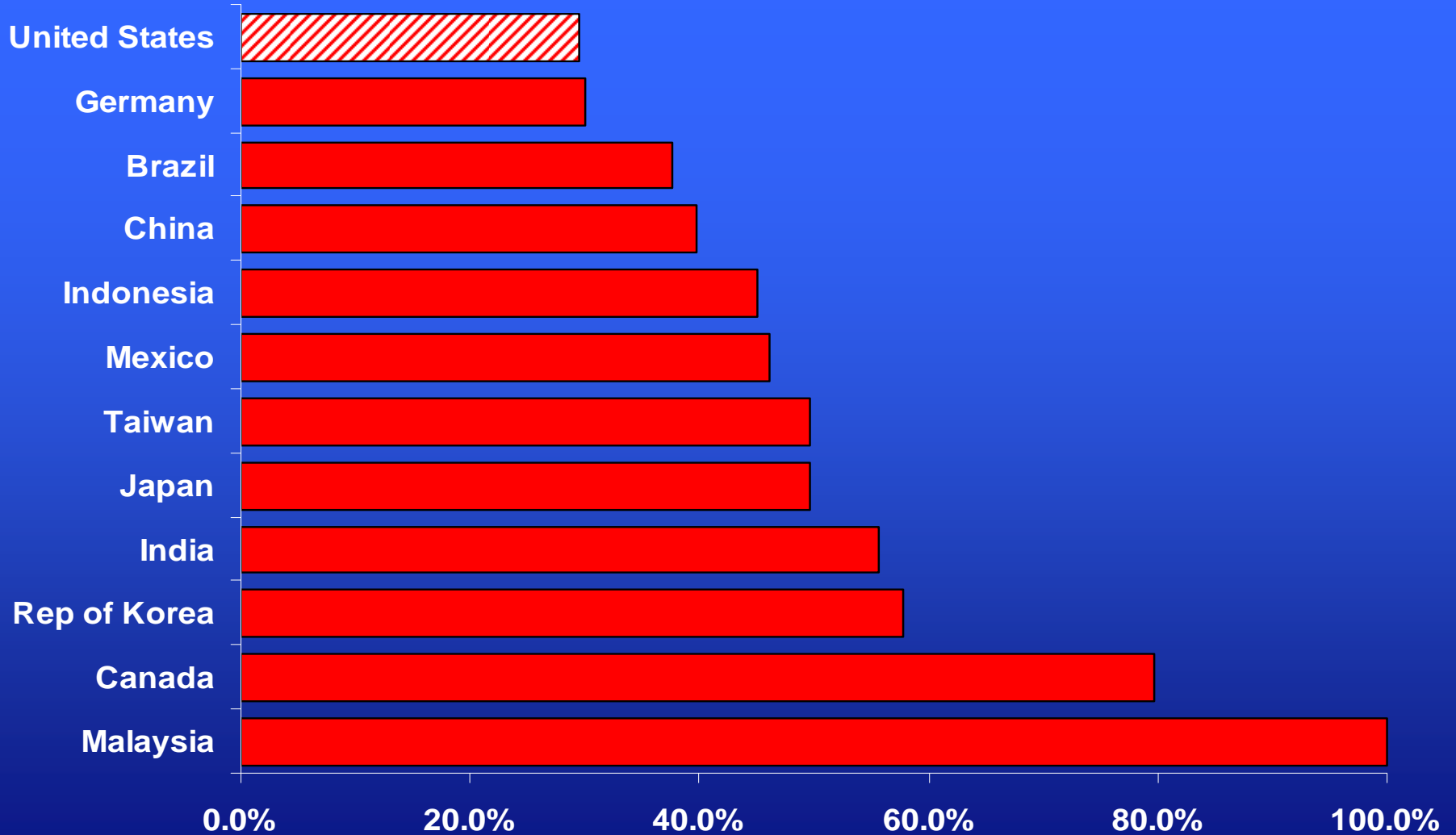
Source: European Environmental Agency, October 2006

# Comparison of EU and US Energy Intensity Reduction 1992-2004



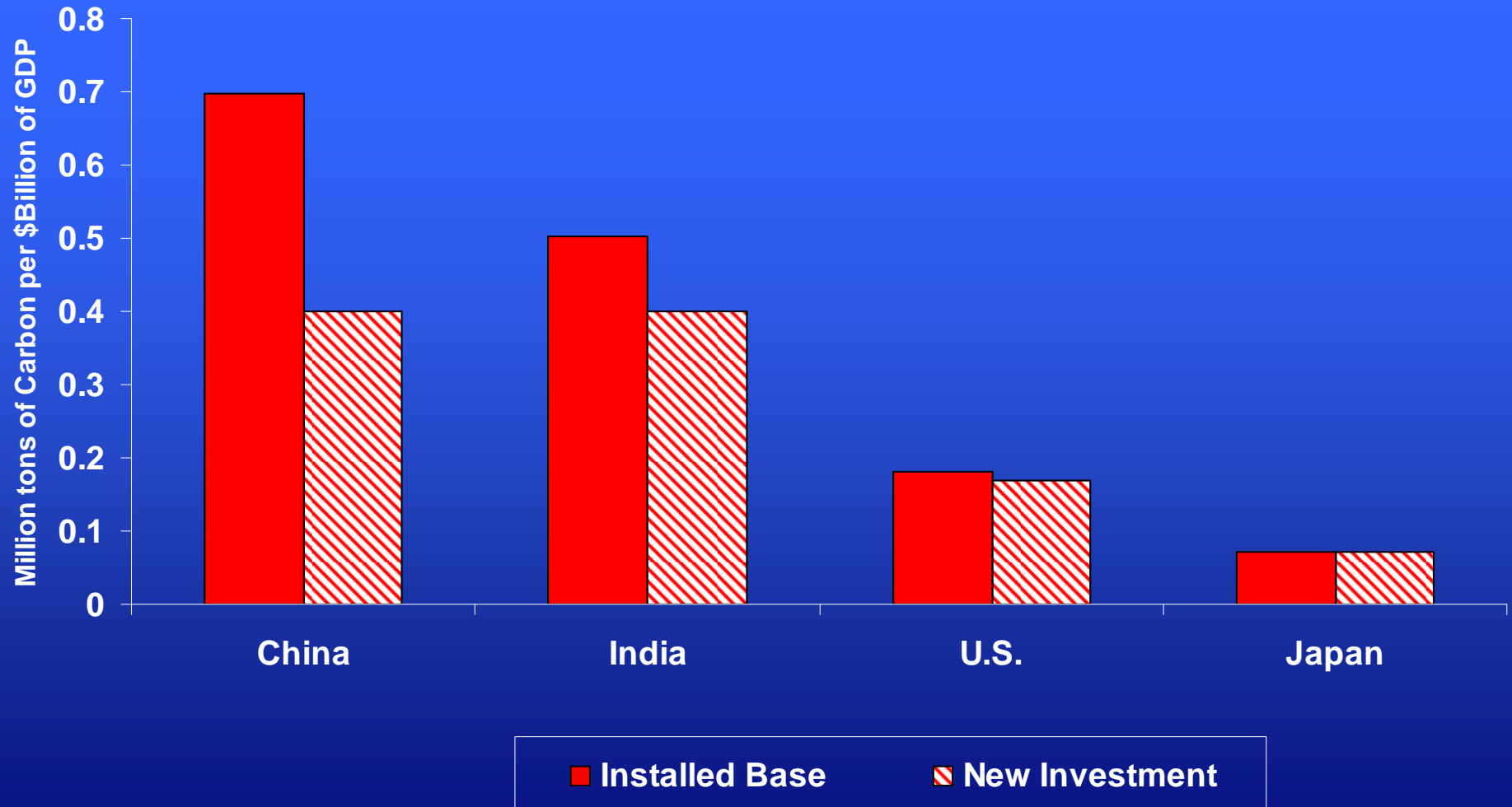
Source: U.S. Department of Energy, EIA, International Energy Annual 2004

# International Comparison of Nominal Capital Costs Recovered After Five Years for Combined Heat and Power Generation Investment



Source: Prepared by the Quantitative Economics and Statistics Group, Ernst & Young LLP for American Council for Capital Formation, May 2007.

# Greenhouse Gas Emissions Associated with Existing and New Investment in 2001 (Million tons of Carbon per \$Billion of GDP)



Source: *Promoting a Positive Climate for Investment, Economic Growth and Greenhouse Gas Reductions*, W. David Montgomery and Sugandha Tuladhar (see [www.iccglobal.org](http://www.iccglobal.org))

# Practical Strategies for Reducing Global Greenhouse Gas Growth

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- ❑ **Use cost / benefit analysis before adopting policies**
- ❑ **Reduce cost of U.S. energy investment through tax code improvement and incentives for non profits**
- ❑ **Remove barriers to developing world's access to more energy and cleaner technology by promoting economic freedom and market reforms**
- ❑ **Increase R&D for new technologies to reduce energy intensity, capture and store carbon, and develop new energy sources**
- ❑ **Promote nuclear power for electricity**
- ❑ **Promote truly global solutions and consider expanding the Asia Pacific Partnership on Development with its focus on economic growth and technology transfer to other major emitters**