



IEA In-Depth Review of US Energy Policies 2007

Integrating Climate Change and Security Concerns

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Background

- IEA conducts regular review process – every 4-5 years
- Last US review in 2002
- Based on IEA shared goals = “3 E’s”:
 - Energy Security
 - Economic Growth
 - Environmental Sustainability
- Peer review by representatives from other members and the IEA (UK, France, Australia, Germany, Turkey, Sweden)
- US visit took place in June in Washington DC and CO
- Thematic review
 - Energy R&D
 - Energy Efficiency

Two major Challenges for the US

Energy Supply Security

Climate Change



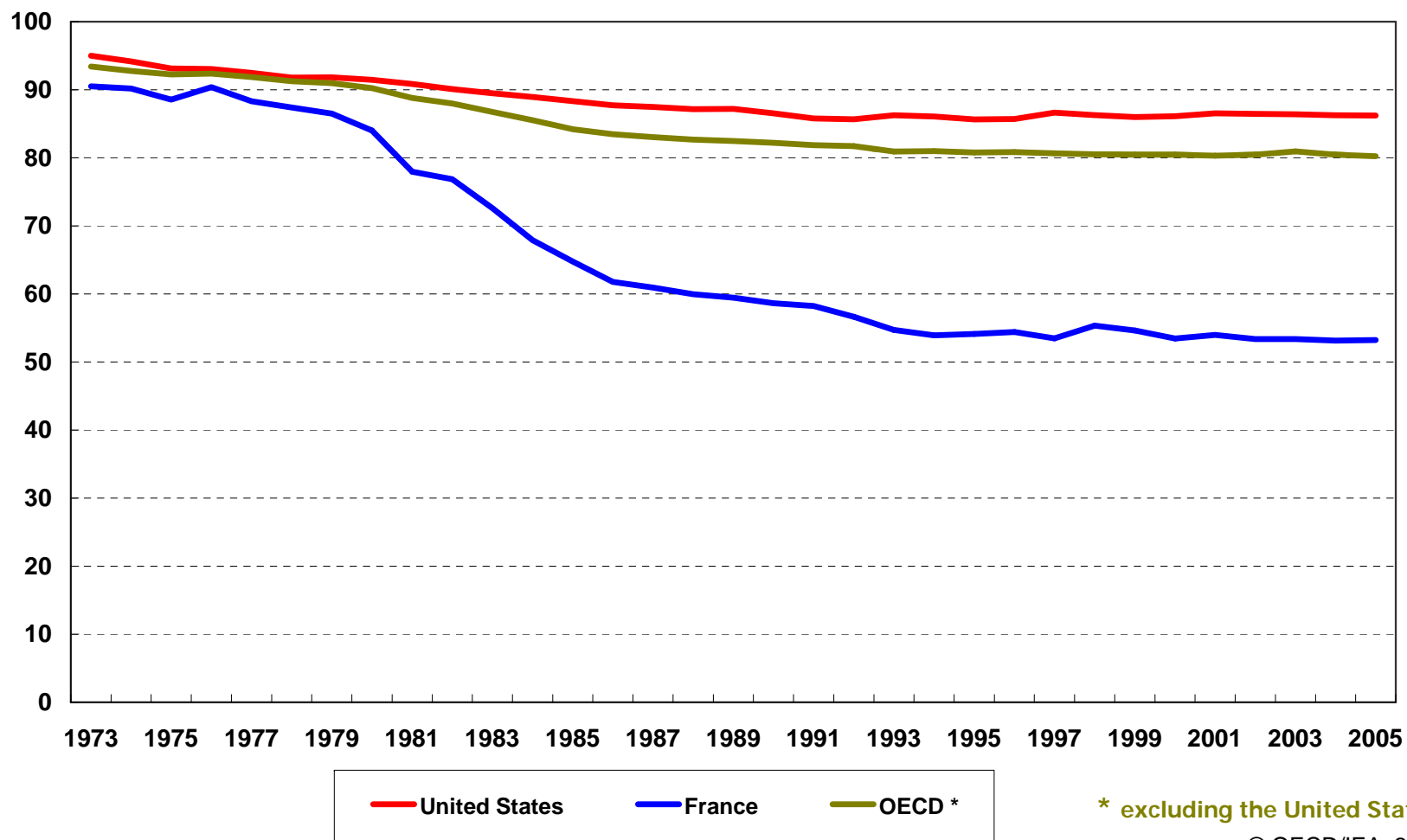


Is it going to get better?

- World energy markets are getting tighter
- Cost for developing delivery infrastructure is soaring
- Environmental constraints are precluding the pursuit of the 'easy' solutions
- Business as usual is unsustainable

Fossil Fuel Dependency

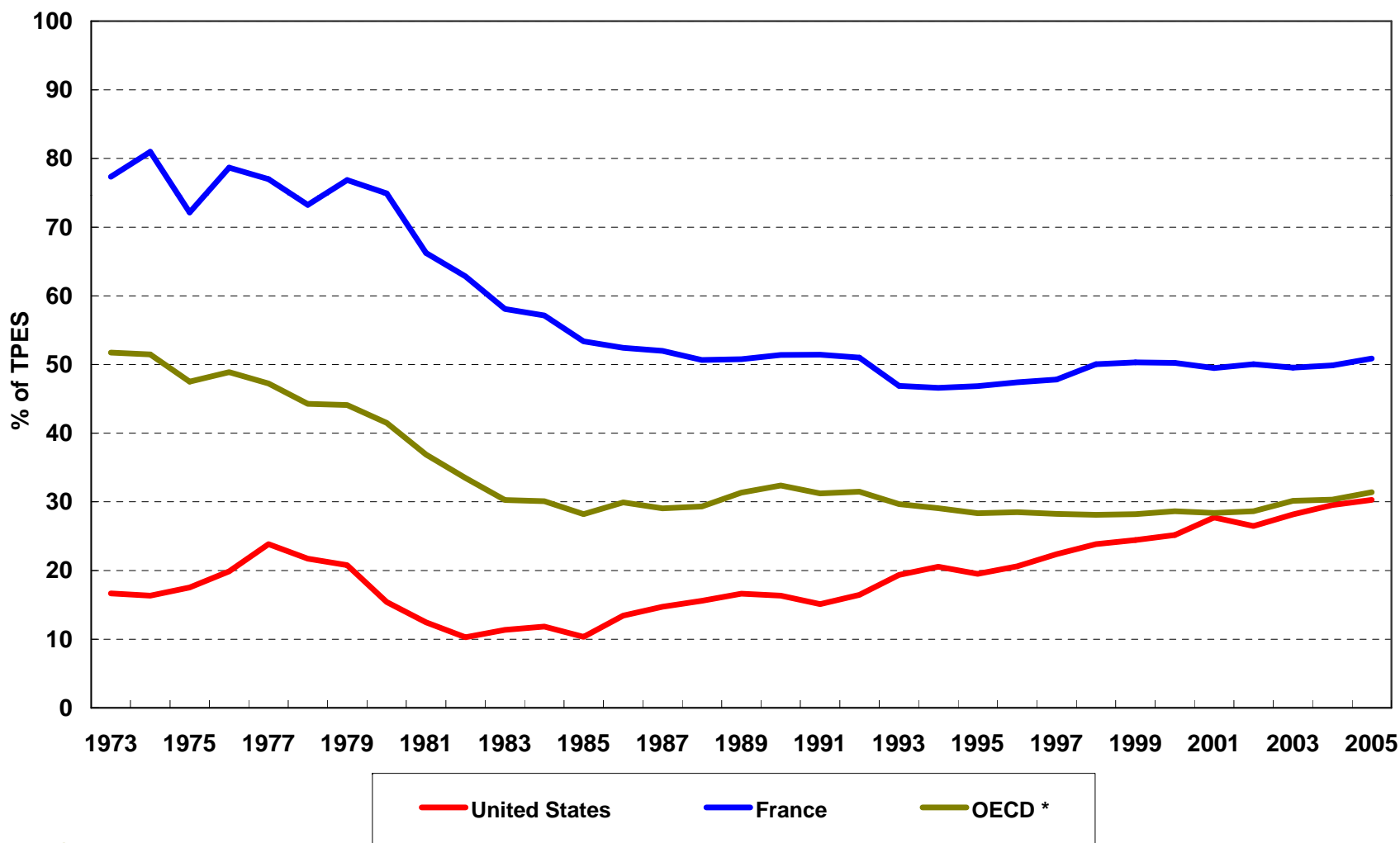
Fossil Fuels as a Percentage of Total Primary Energy Supply



* excluding the United States

Energy Supply Security

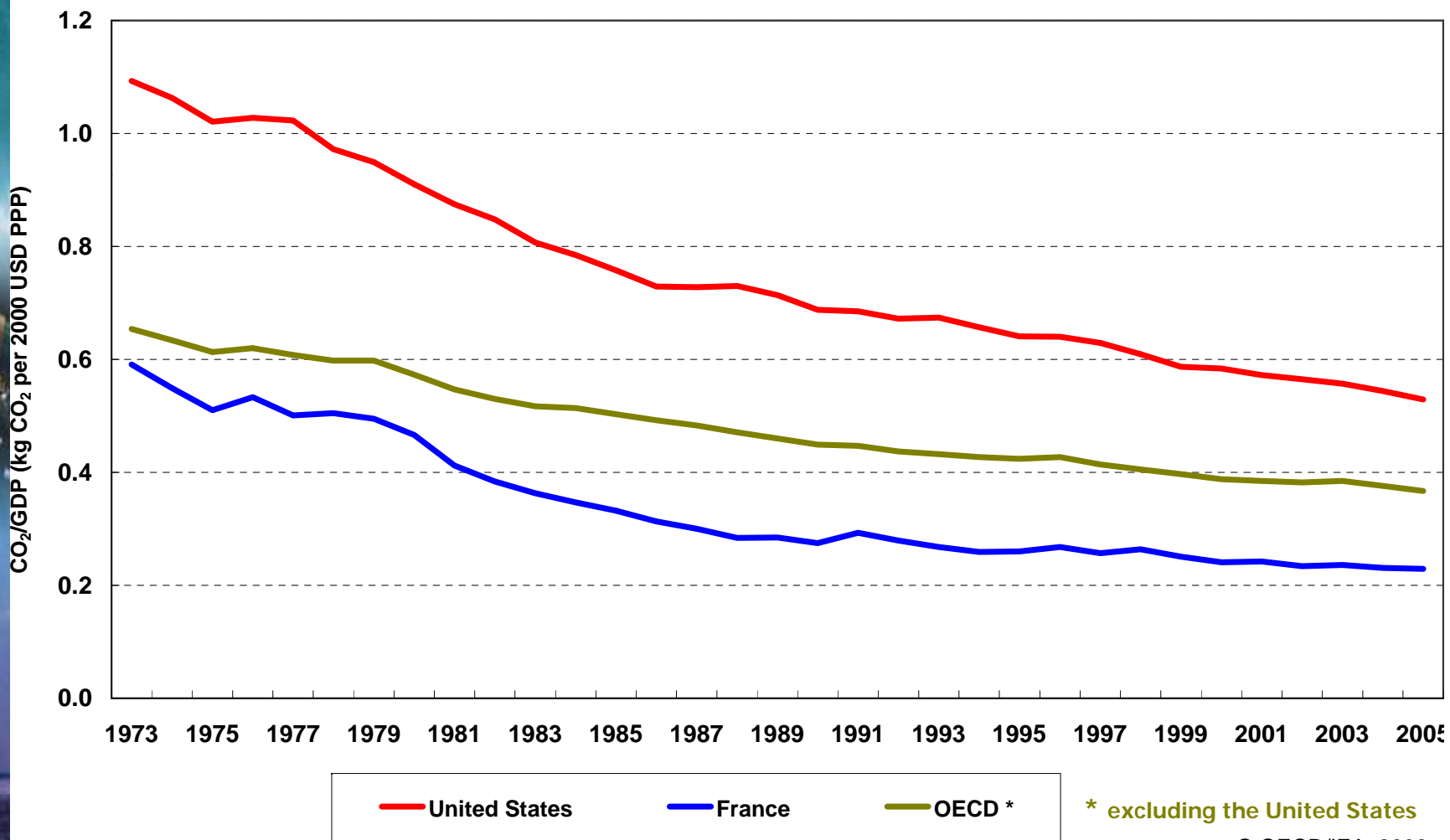
Net Imports as a Percentage of Total Primary Energy Supply



* excluding the United States

Climate Change

Energy-related CO₂ Emissions per GDP



Beyond Kyoto

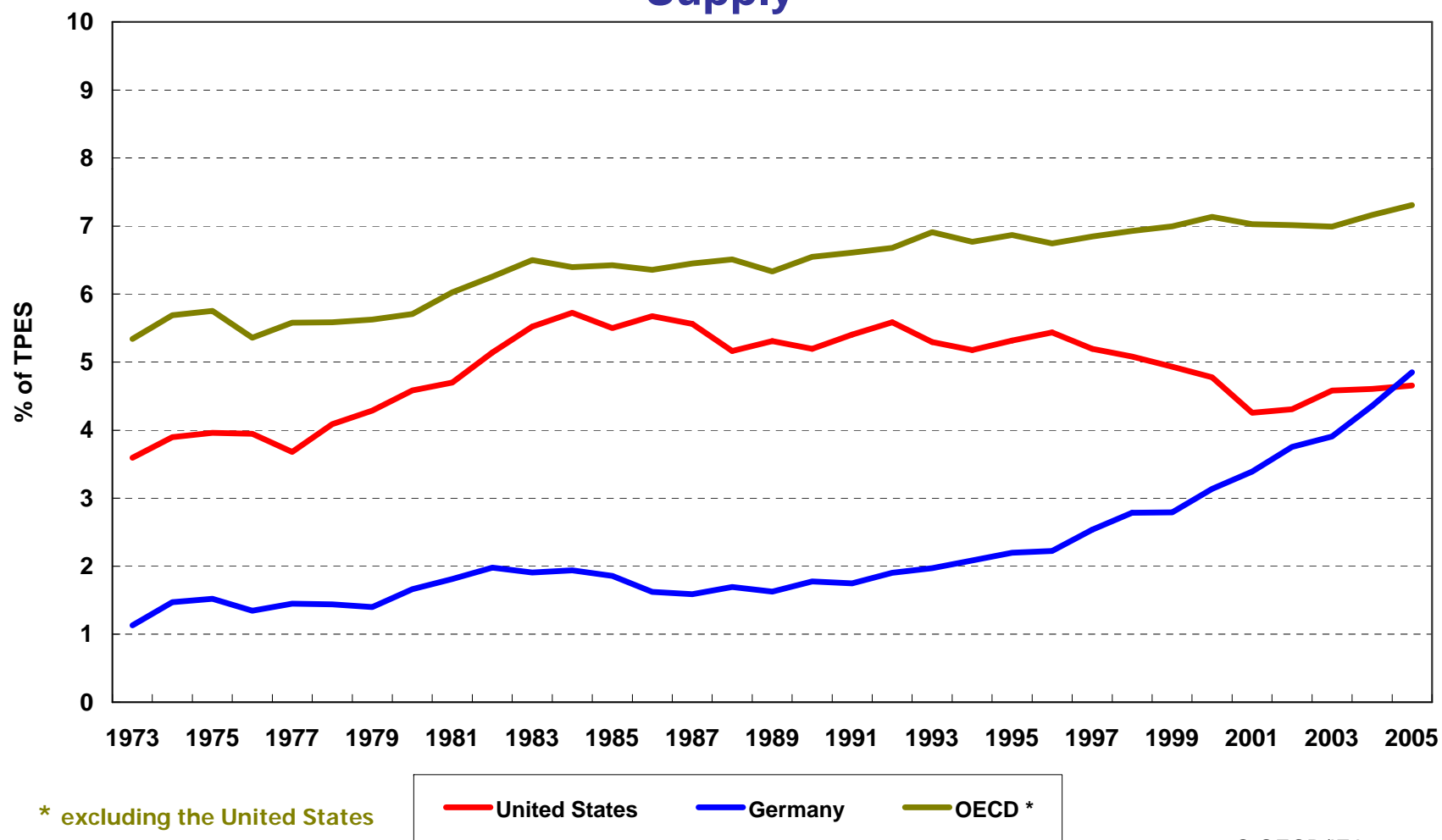
- A new framework after 2012 – the US must play a role!
- The US policy aim to reduce emissions intensity has been achieved – it is time to be more ambitious
- EPA Act 2005 and Energy Bill 2007 – good measures that need to be strengthened
- Time to put a value on CO₂ emissions.

Energy R&D

- Strong leadership in technology
- Strong infrastructure for energy R&D
- Continued commitment to international partnerships
- Particular importance
 - 2nd generation biofuels
 - Clean coal research and demonstration
- Bridging the ‘Valley of Death’ – possible without a CO₂ value?

Producing More Energy At Home

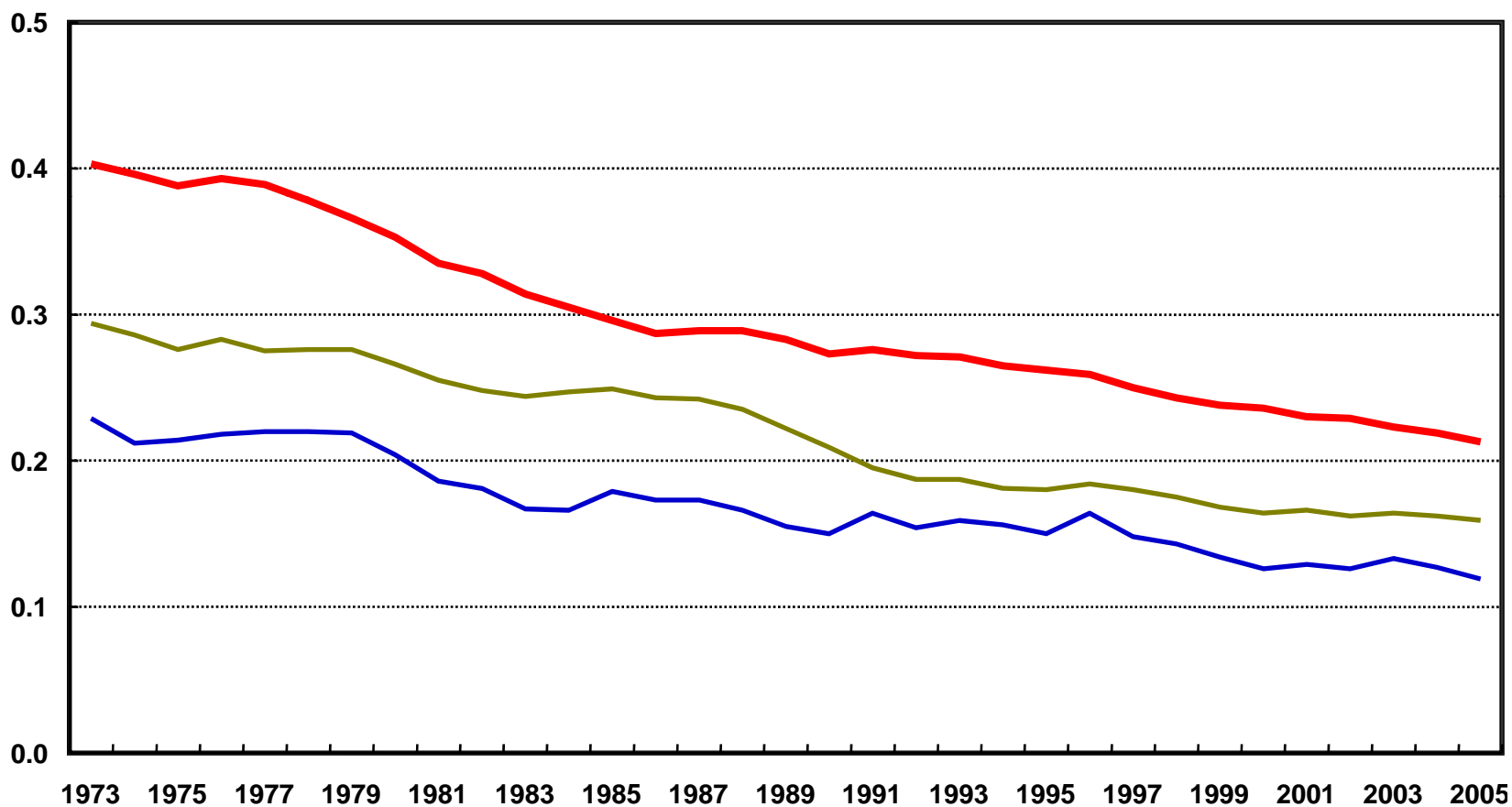
Renewable Energy as a Percentage of Total Primary Energy Supply



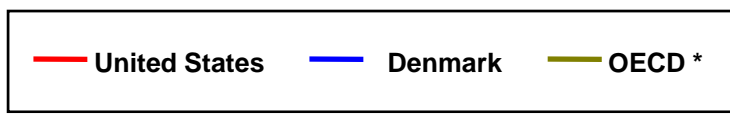
Increasing Energy Efficiency

Energy Intensity

toe per thousand USD at 2000 prices and purchasing power parities

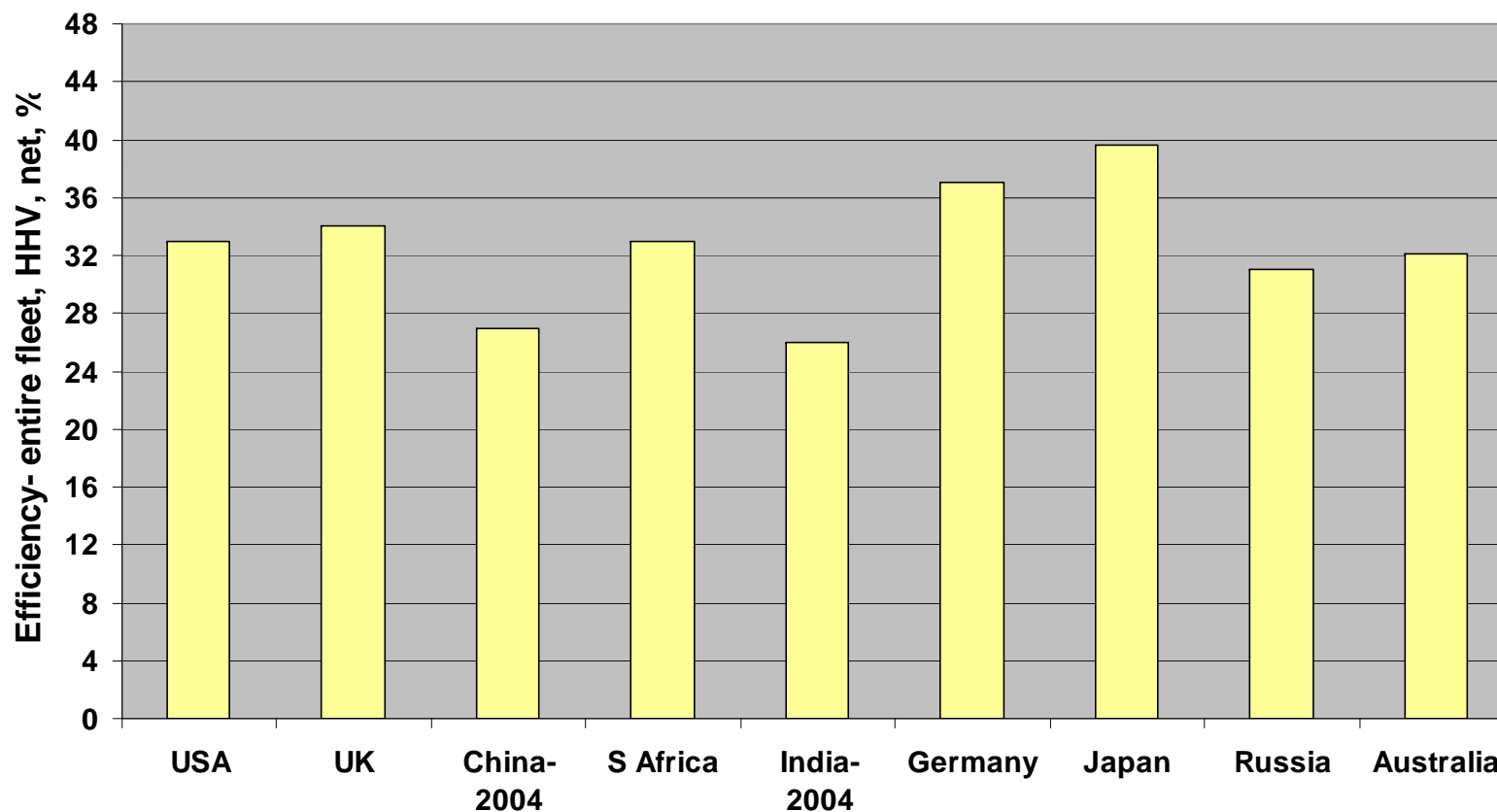


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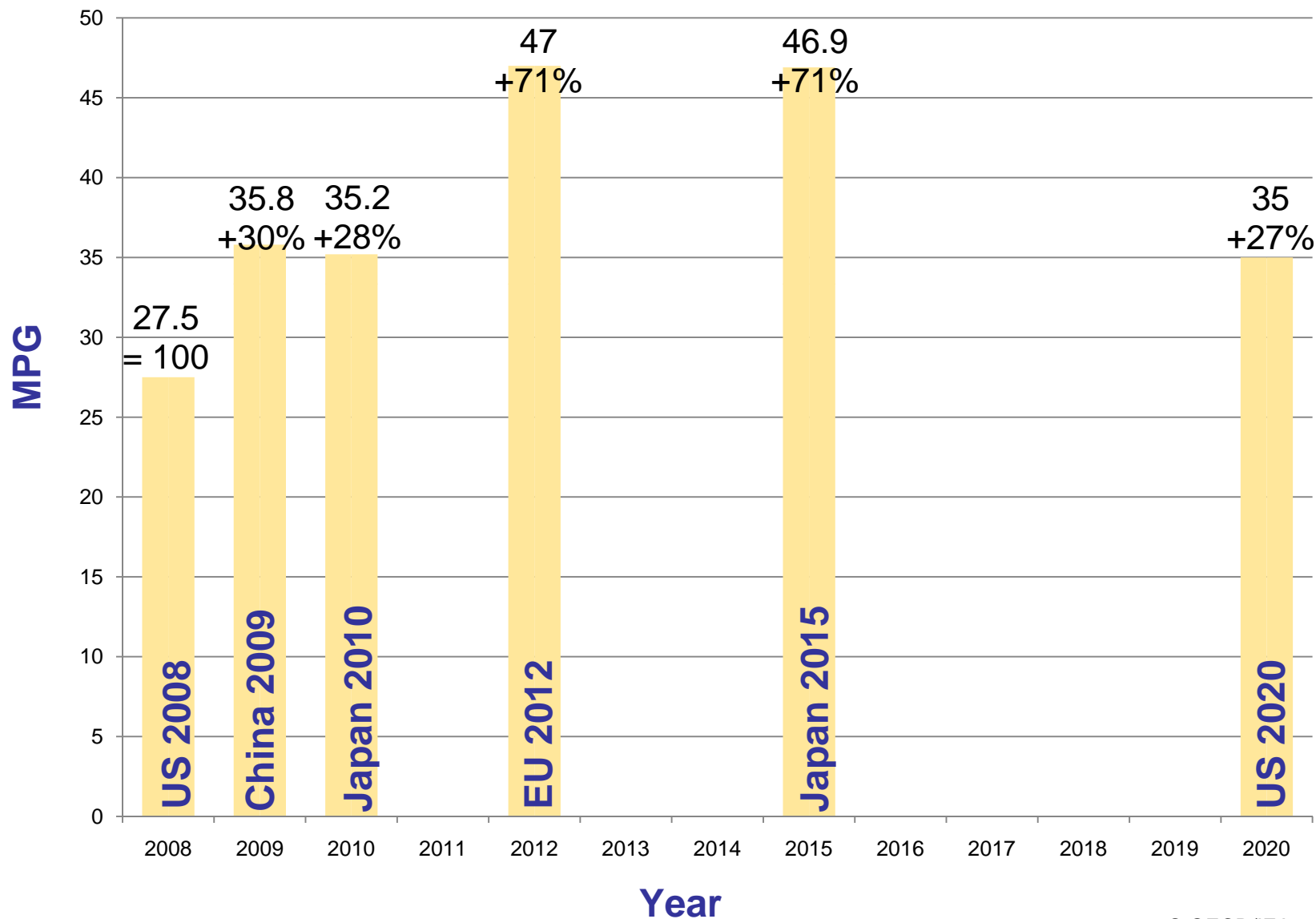
Coal-fired Power Generation

Average Station Efficiency of all Coal Stations by Country



Transport Energy Efficiency

International Vehicle Fuel Efficiency Standards 2008 - 2020

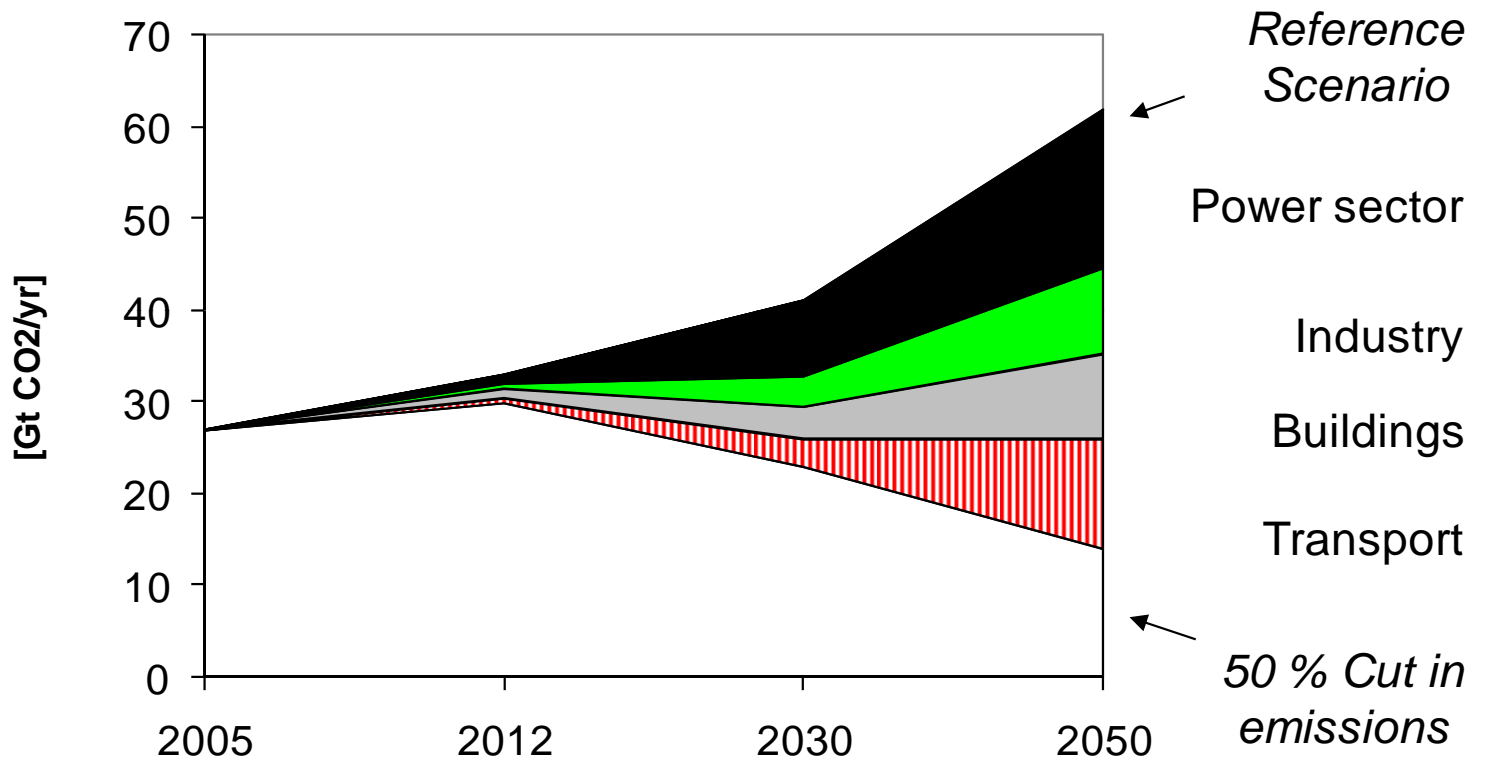




Bringing it together

- A value for CO₂
 - Ensuring consumers understand the consequences of consumption
 - The price mechanism is the best choice for a market economy
- Producing more energy domestically
 - Increase the use of clean nuclear power
 - More renewables to provide heat, power, and mobility
- Using energy more efficiently
 - Tough minimum standards are the cheapest way to ensure it at the point of use
 - Using the most modern technology for power generation will ensure the future of coal in US energy supply
- Clear long-term targets
 - Ensure investment security
 - Provide a framework for new technologies to develop

A New Energy Revolution: The Carbon Challenge



Improved efficiency and decarbonizing the power sector could bring emissions back to current levels by 2050. To achieve a 50% cut we would also have to revolutionize the transport sector.



Thank you

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