

Climate Realities and Utility Policies What have we heard here?

Richard Cowart

Utility of the Future
NARUC -- December 4, 2009



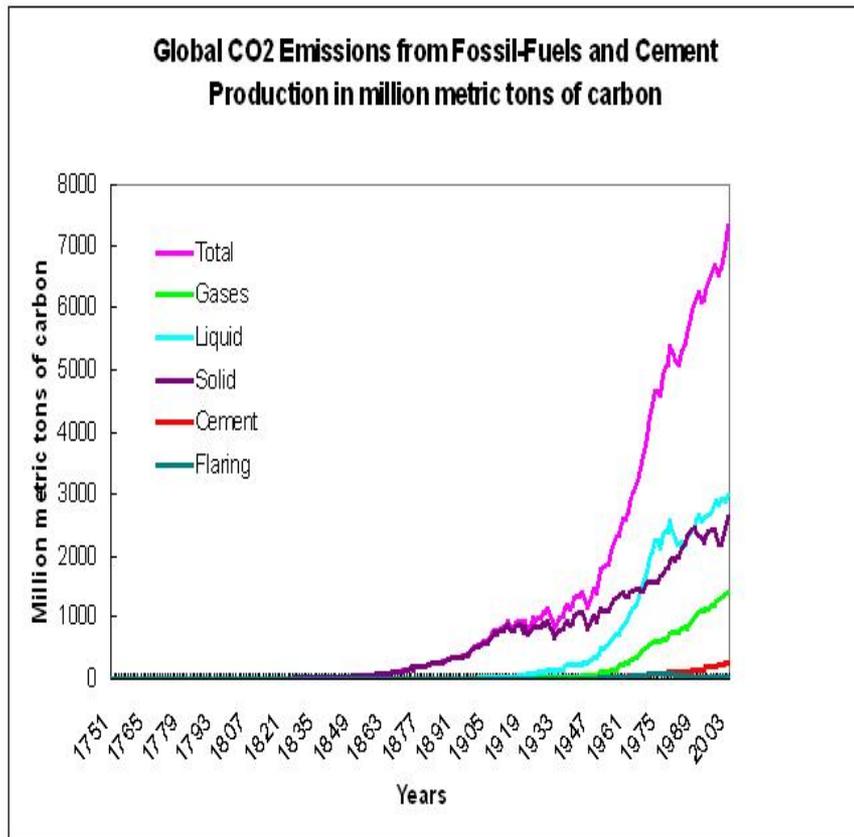
The Regulatory Assistance Project

China ♦ India ♦ European Union ♦ Latin America ♦ United States

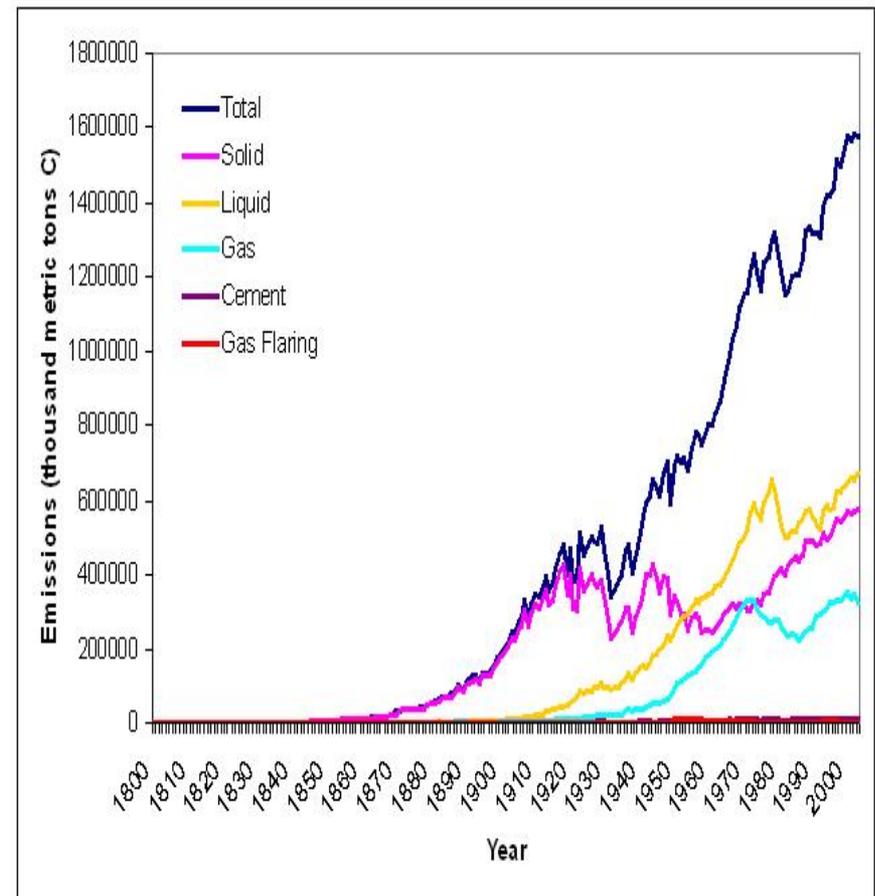
Website: <http://www.raonline.org>

Human population (both global and U.S.) has increased by more than 50% since 1970 (and so have GHG emissions)

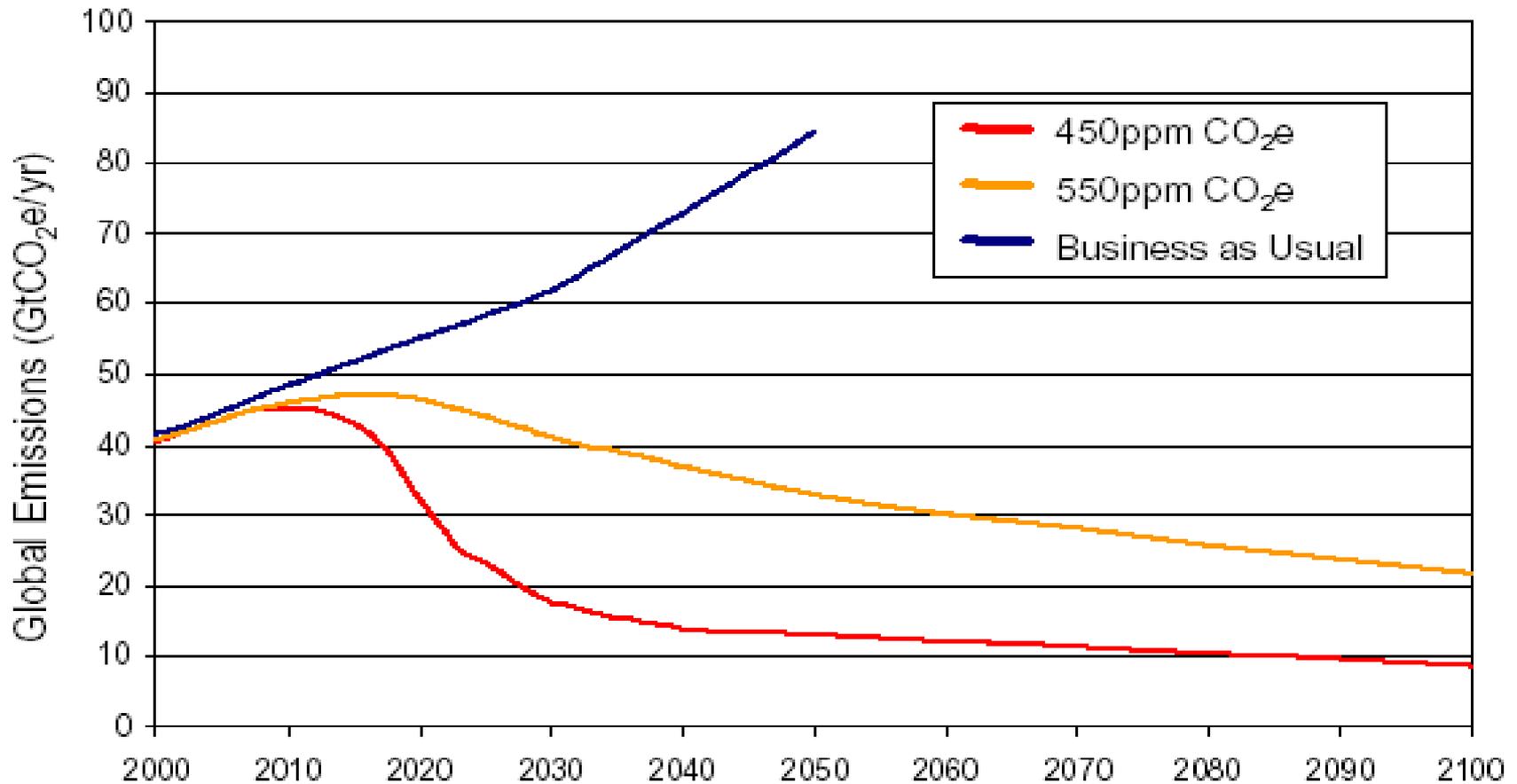
Global



United States



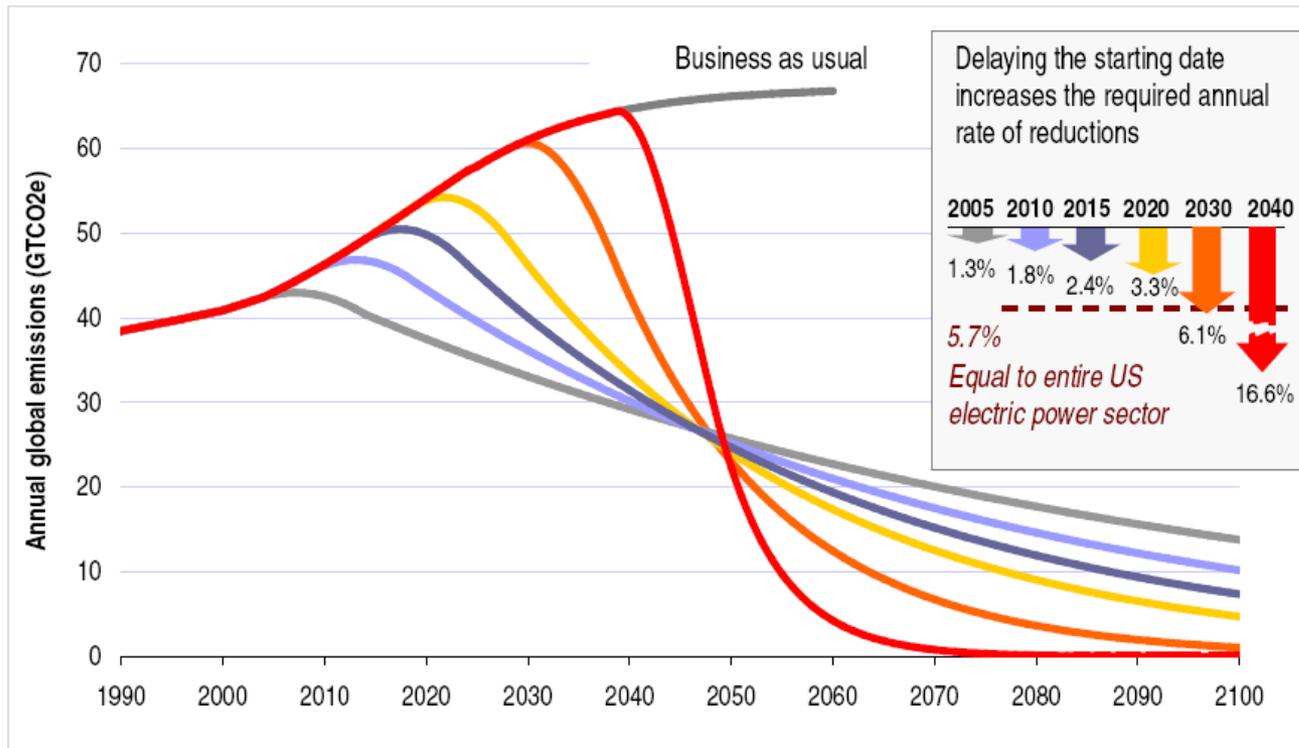
We can't stabilize climate without decarbonizing the power sector



Source: Stern Review (UK) October 2006

Different pathways to 450 ppm – Delay can be very costly

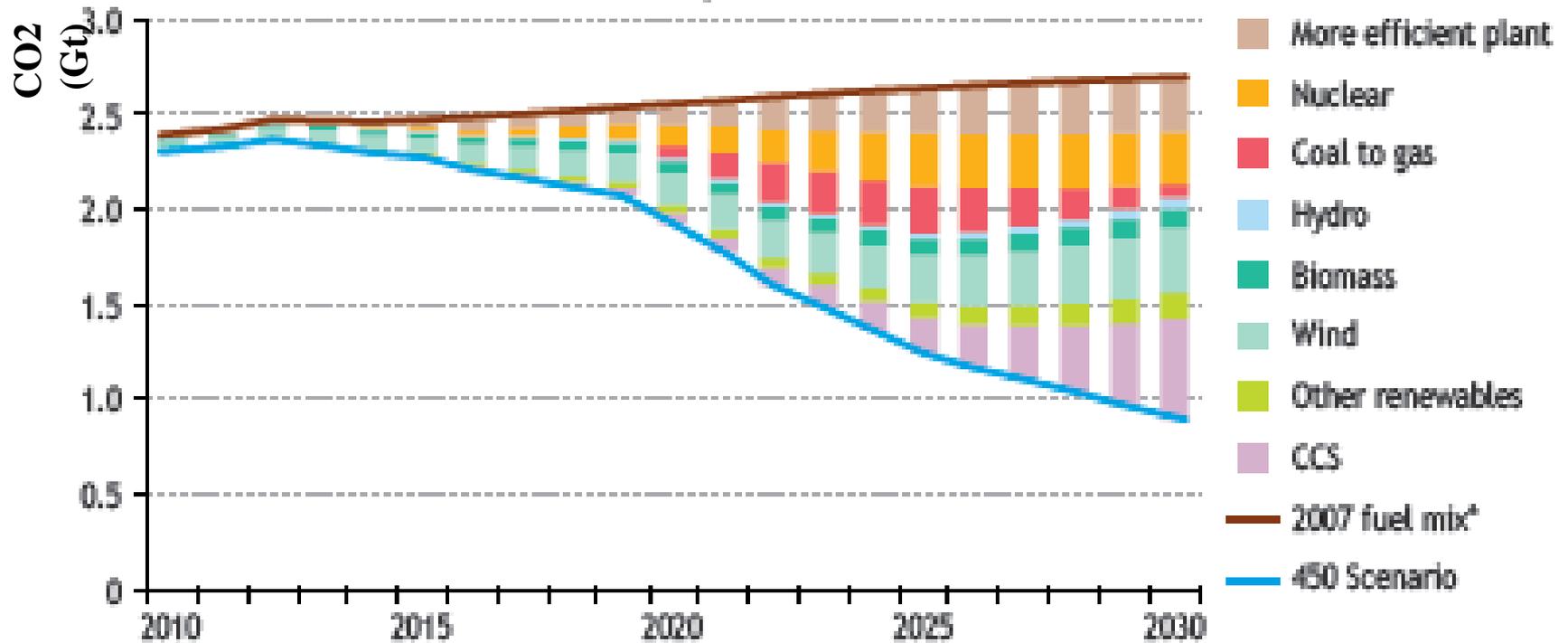
Delaying strong action will necessitate a much stronger response in the future



- Current estimates of the costs are of about 2% of GDP (per year) if immediate action is taken
- A ten-year delay could double the annual costs and costs rise to up to 20% GDP if no action is taken

Trajectories for the U.S. energy sector

CO2 emission savings in the U.S. power generation sector relative to the 2007 fuel mix to get to a 450 ppm scenario





No scenario works without an “Efficiency First” commitment

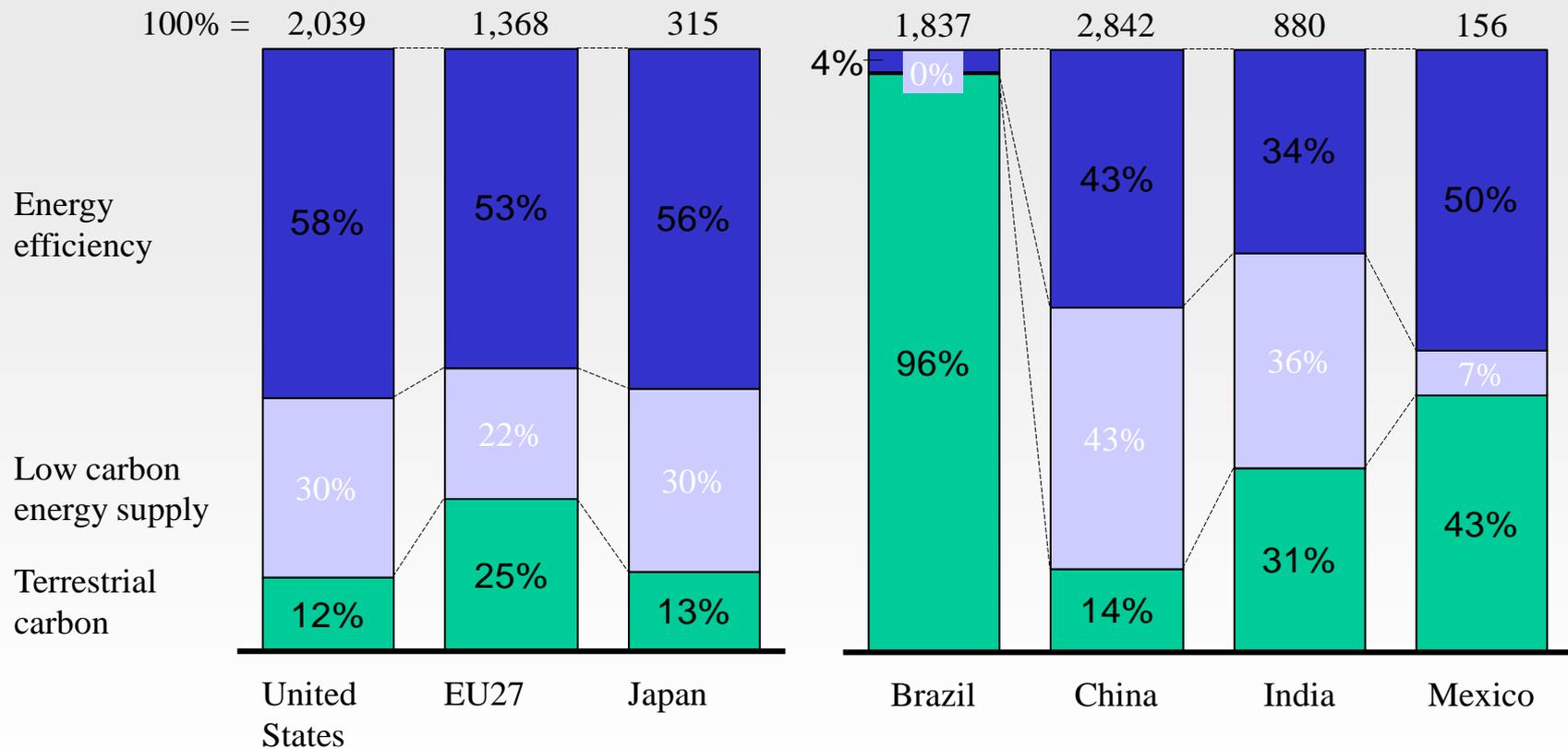
- ***“If I were emperor of the world, I would put the pedal to the floor on energy efficiency and conservation for the next decade.”***

— Dr. Stephen Chu, United States Secretary of Energy

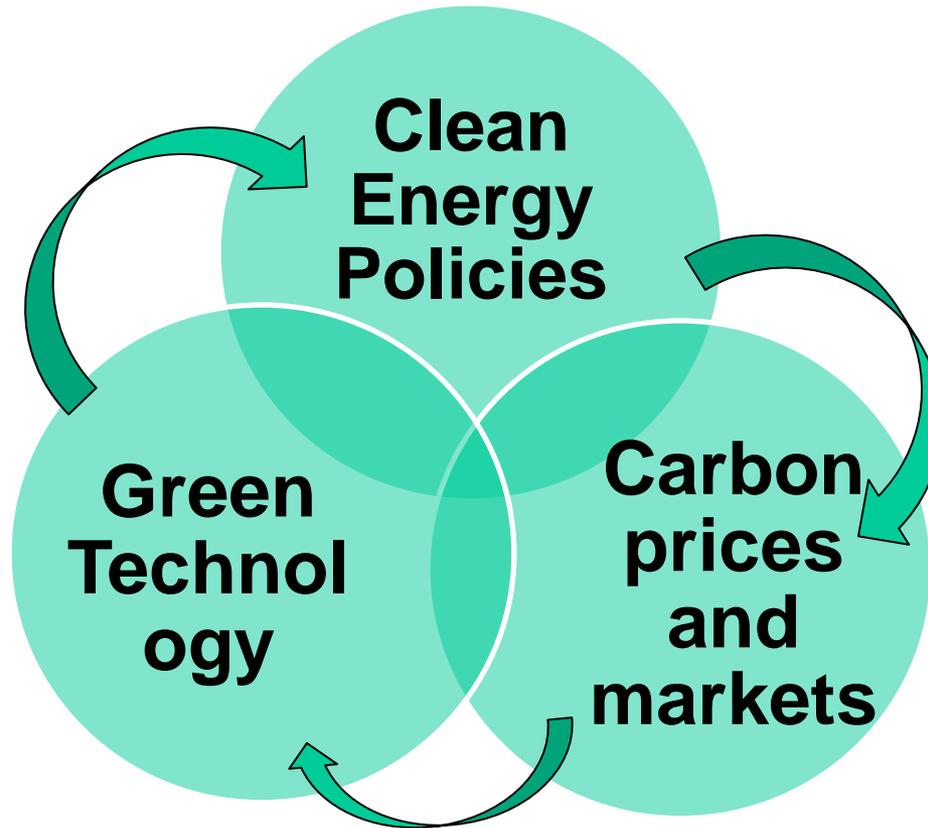
- ***Gina McCarthy yesterday -- “No matter what approach we take, if we don’t focus on efficiency, the costs are staggering...Energy efficiency is the foundation of every strategy we can develop”***

Deep Efficiency essential for GHG abatement

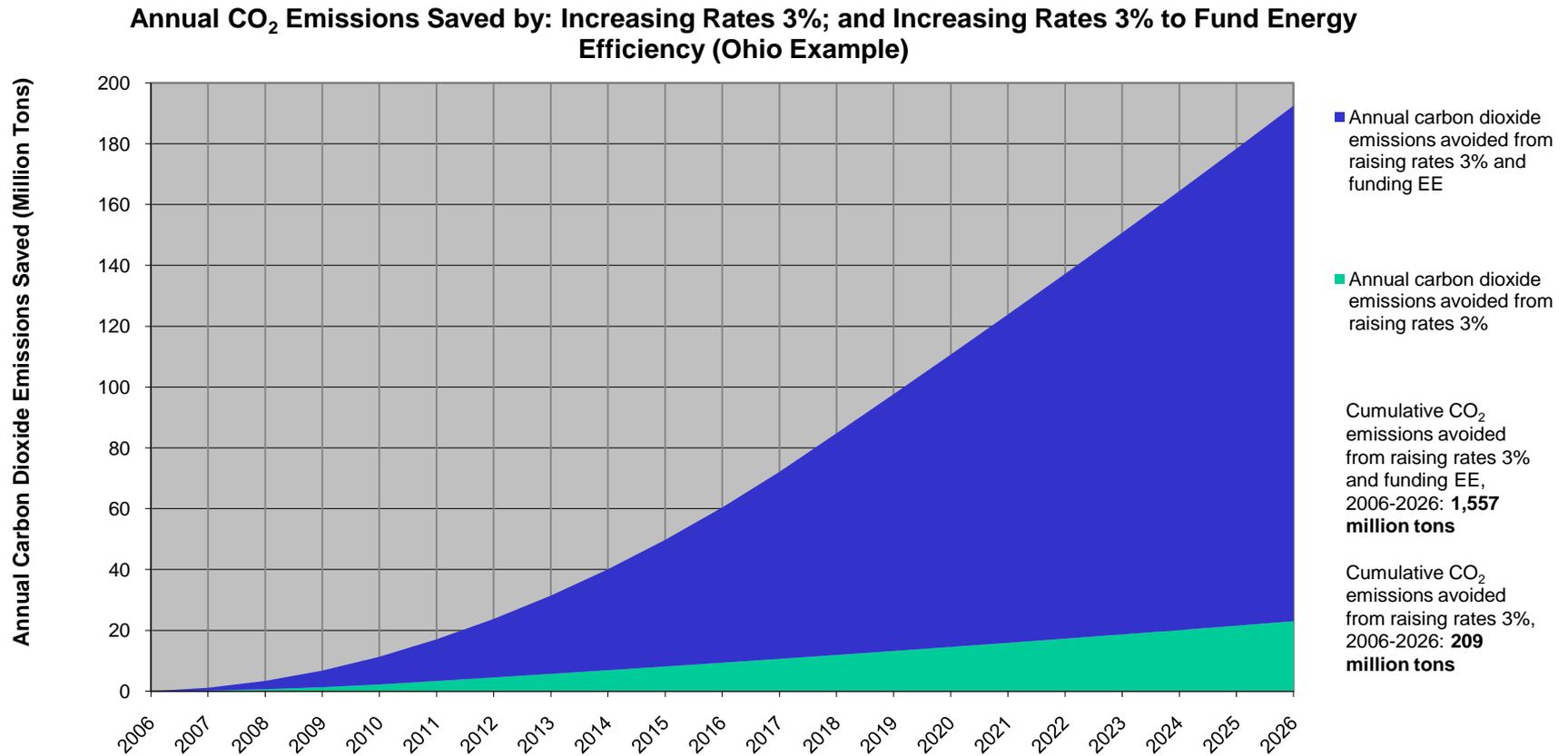
Abatement potential by country, by type of abatement, Mt 2020



Carbon Prices Alone Are Not Enough



Efficiency programs can save 7x more carbon per consumer \$ than carbon taxes or prices



Assumptions: Electricity use increases by 1.7% per year; Retail electric sales increase by 3%; Price elasticity is -0.25 (-0.75 for a 3% increase), distributed over 5 years; Carbon dioxide emissions are 0.915 tons per MWh in Ohio; Cost of EE is 3 cents per kWh; Average EE measure life is 12 years



Conclusion: You are more important than you think

- Utilities re ~40% of the problem but may be called on to be 75% of the solution
- This is true either with or without a federal climate bill
- Solution set: mostly policies & mostly state jurisdictional
- The smart grid is not smart unless it's green
- “It has to be you ...We don't have a clean air future without a clean energy future” -- *Gina McCarthy*



The Regulatory Assistance Project

RAP is a non-profit organization providing technical and educational assistance to government officials on energy and environmental issues. RAP is funded by several foundations, US DOE & EPA and international agencies. We have worked in over 16 nations and 40 US states, and now work closely with the European Climate Foundation.

Richard Cowart is the **Director of European Programs** for RAP.

He was Chair of the Vermont PSB, Chair of NARUC's Energy & Environment Committee, and of the US National Council on Competition and the Electric Industry. Recent assignments include technical assistance to The UK Department of Energy and Climate Change, the US Congress, the Regional Greenhouse Gas Initiative (RGGI), the New York ISO, the California PUC, US energy and air regulators, and China's national energy and environmental agencies.