

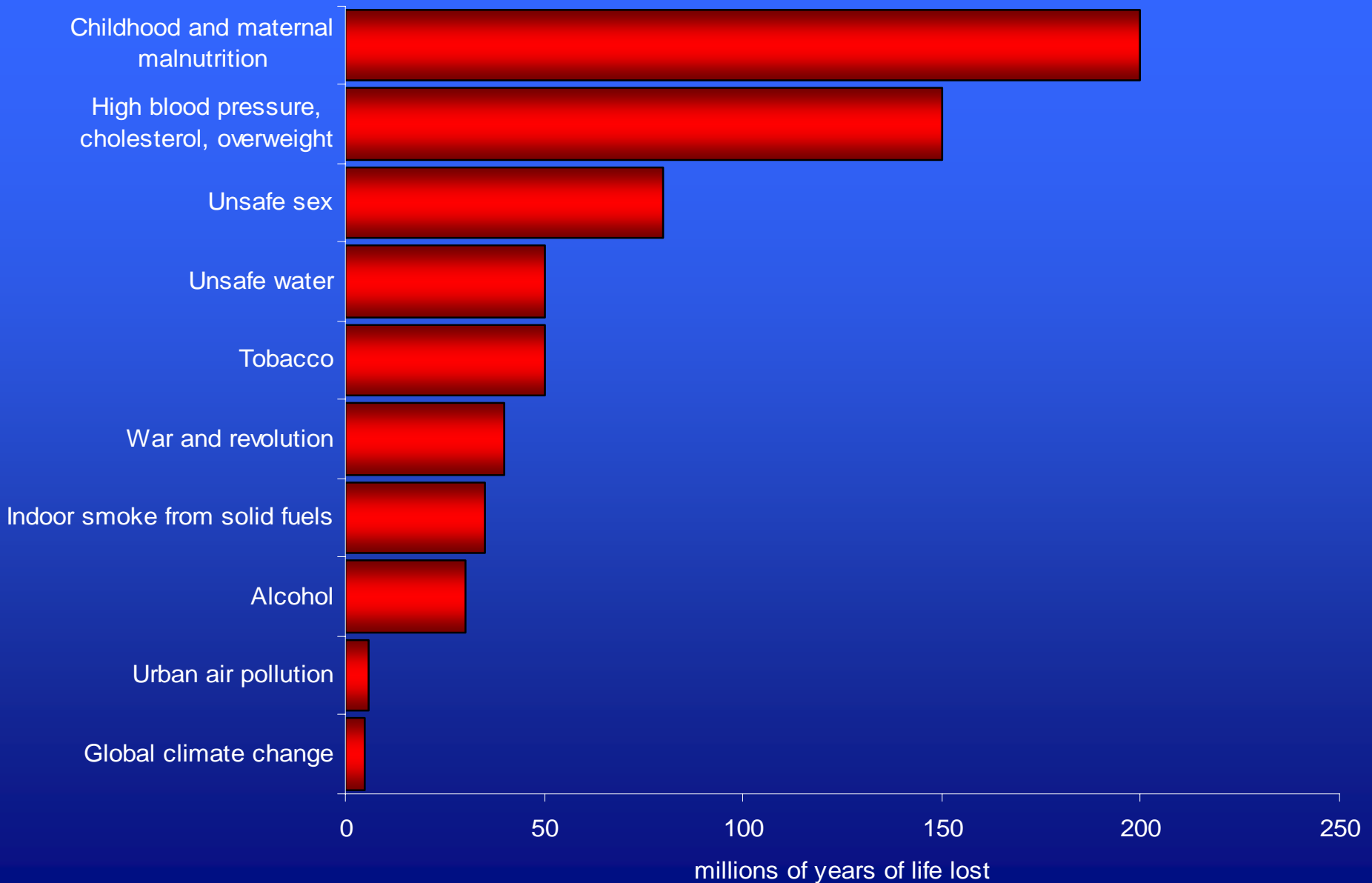
Economic Impact of Climate Change Policy

Prepared for:
Regional/Utility Roundtable Event
“Climate Change Legislation and
U.S. Job Growth: A Review of the Evidence”
Washington, D.C.
January 12, 2010

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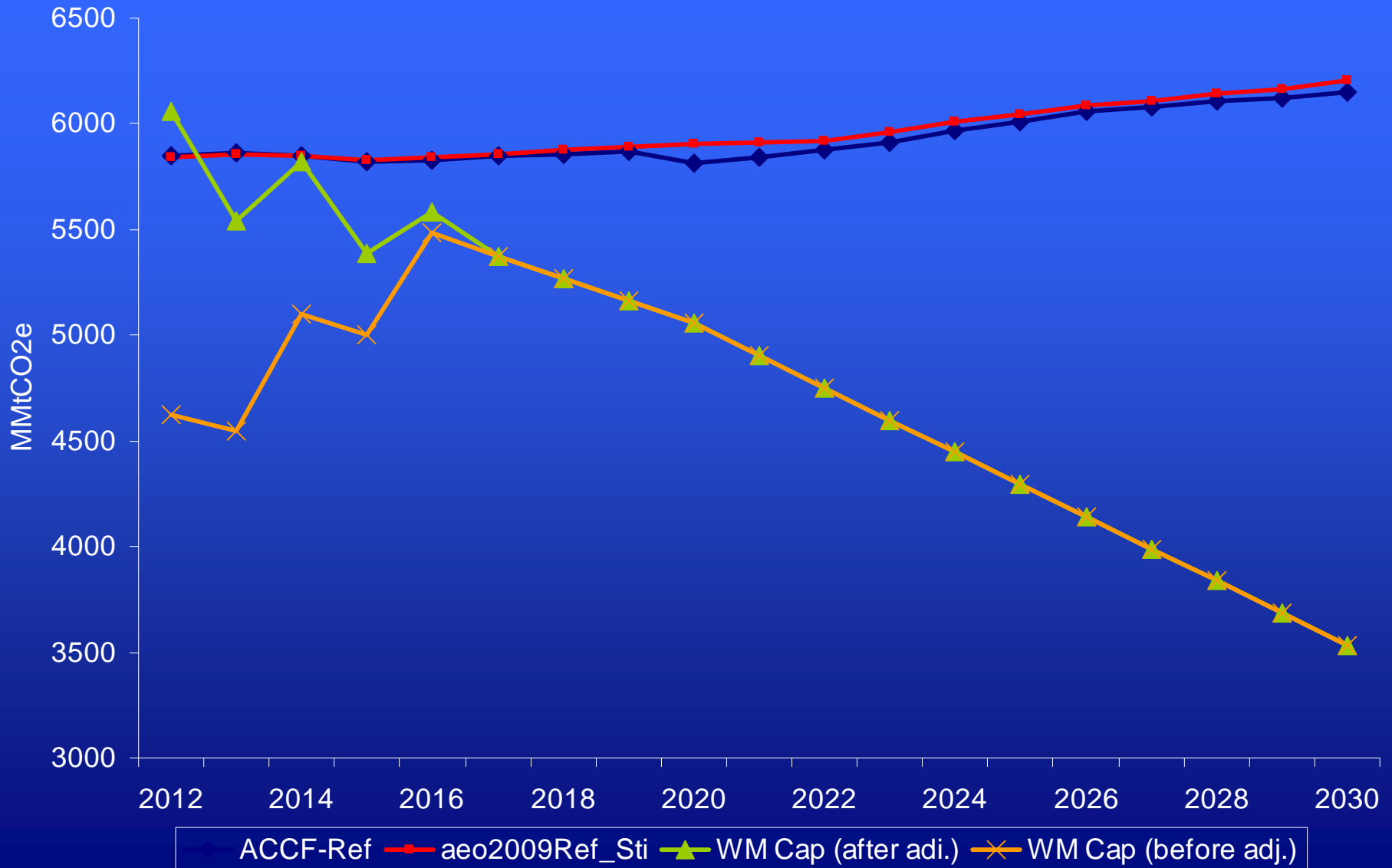
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Contributors to Global Mortality in 2000

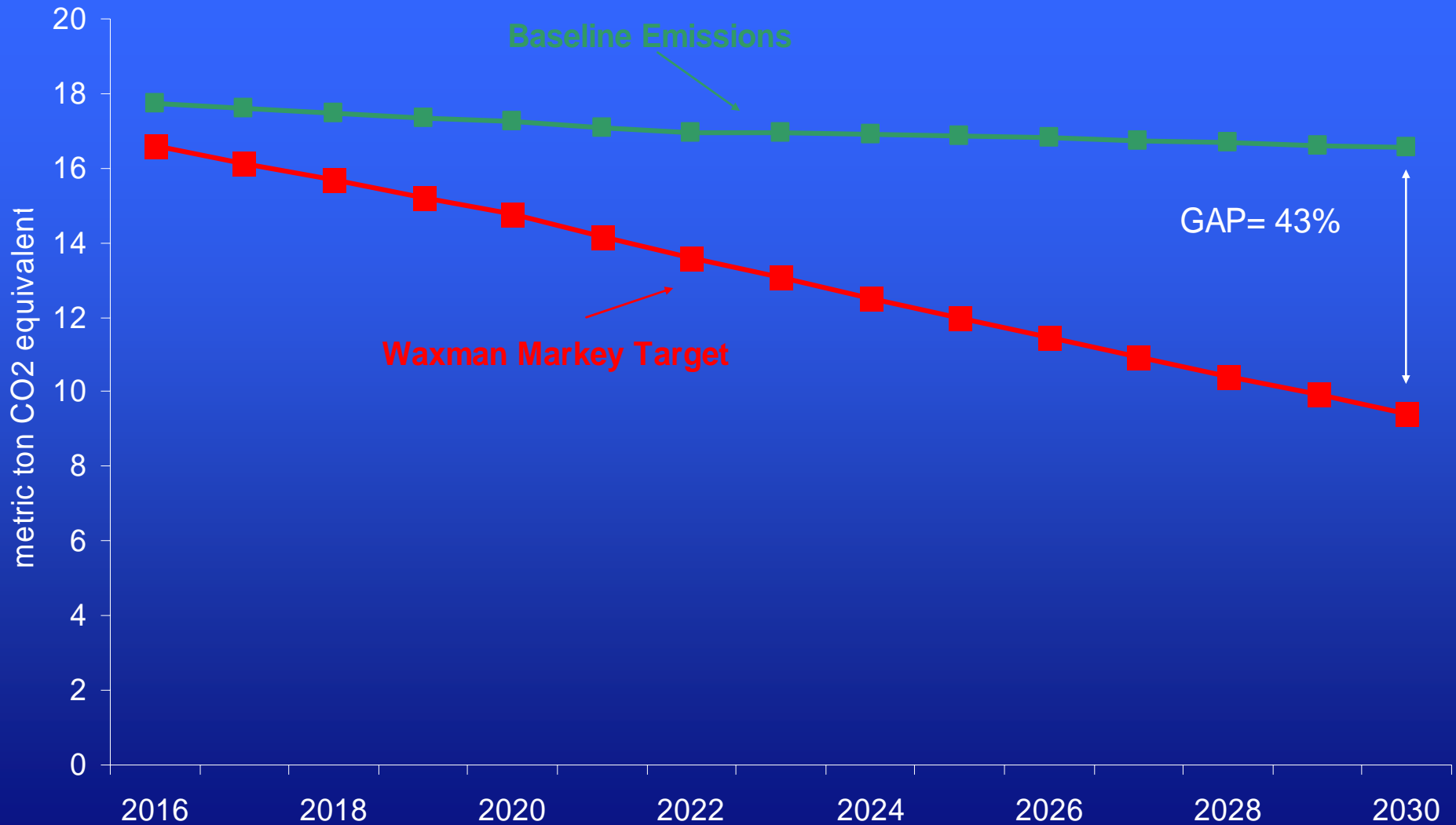


Source: John P. Holdren, "Science and Technology for Sustainable Well-Being," Science, May 2009.

Total Energy Sector CO2 Emissions under Baseline forecast and Waxman Markey Bill



Per Capita Energy Sector CO2 Emissions under the baseline and Waxman Markey bill



Assumptions Used in Modeling: Technology Build Constraints (2030 Build Limits)

	High Cost Scenario	Low Cost Scenario
Nuclear	10 GW	25 GW
IGCC w Sequestration	15 GW	30 GW
Biomass	Max 3 GW/Year	Max 5 GW/Year
Wind	Max 5 GW/Year	Max 10 GW/Year
NGCC w Sequestration	15 GW	30 GW

Assumptions Used in Modeling: Other Specifications

	High Cost Scenario	Low Cost Scenario
Offsets (annual)	1,000 MMT (split 95% Domestic, 5% International)	1,000 MMT (split 95% Domestic, 5% International)
Oil Price Profile	AEO2009	AEO2009
Natural Gas Prices	Not Constrained	Not Constrained
Cellulosic Ethanol	With HR.6 – Not Constrained	With HR.6 – Not Constrained
Banking	5,000 MMT	5,000 MMT
HR.6	Yes	Yes
Allowance Prices (annual growth)	Constrained to 10%	Constrained to 10%
Strategic Reserve	Not modeled	Not modeled

Impact of Waxman Markey Bill on the U.S. Compared to Baseline Forecast

	Low Cost Case			High Cost Case		
	2020	2025	2030	2020	2025	2030
Loss in GDP	-0.2%	-0.5%	-1.8%	-0.4%	-0.8%	-2.4%
Loss in Jobs (millions)	0.01	-0.33	-1.79	-0.08	-0.52	-2.44
Loss in Household Income (2007\$)	-\$118	-\$339	-\$730	-\$250	-\$564	-\$1,248

Impact of Waxman Markey Bill on the U.S. : Change in Energy Prices Compared to Baseline Forecast

	Low Cost Case			High Cost Case		
	2020	2025	2030	2020	2025	2030
Rise in Gasoline Prices	8%	12%	20%	11%	16%	26%
Rise in Residential Electricity Prices	5%	5%	31%	8%	12%	50%
Rise in Industrial Electricity Prices	13%	18%	49%	22%	32%	76%
Rise in Industrial Natural Gas Prices	33%	61%	87%	51%	86%	114%

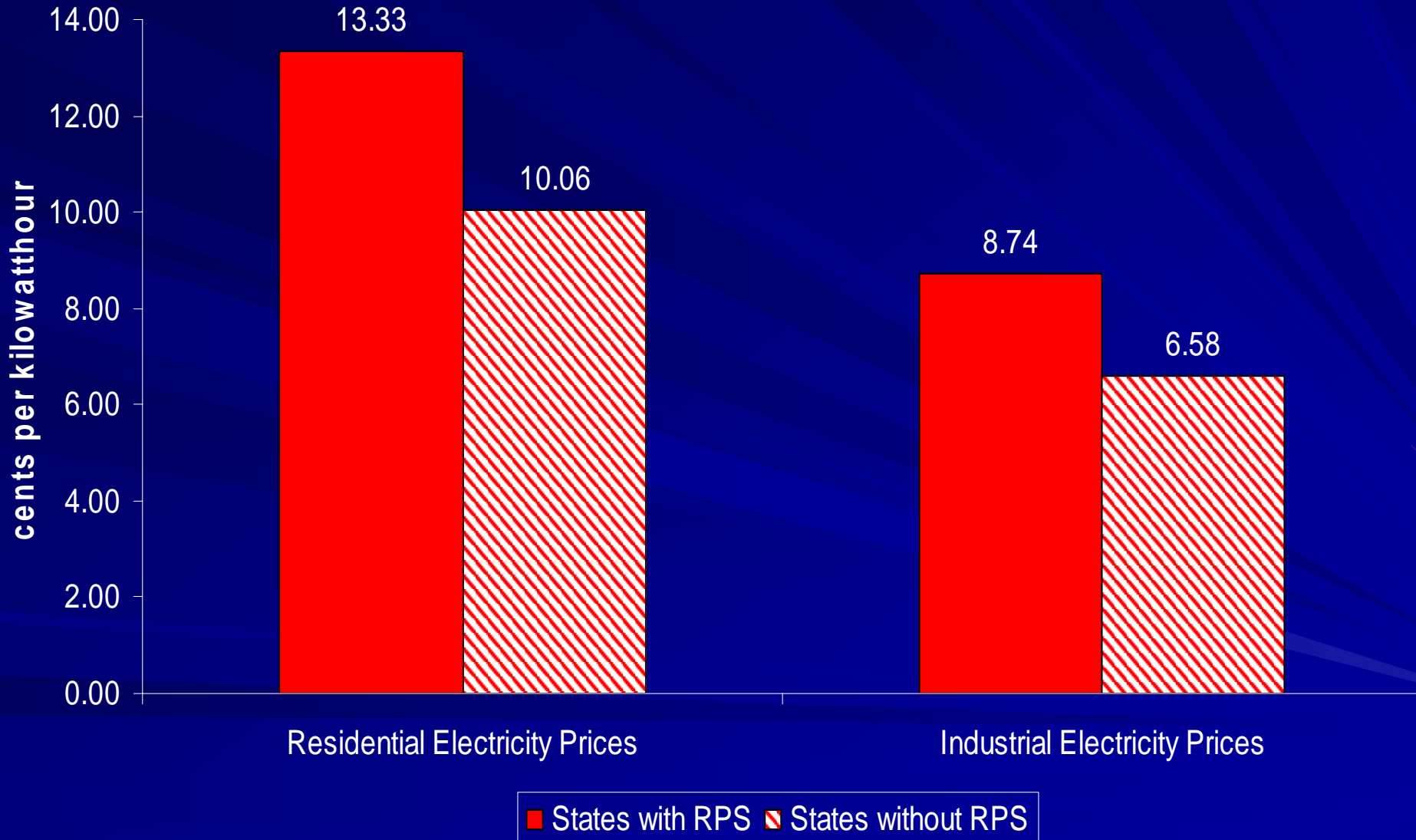
Summary of Key Macroeconomic Modeling Results for the Waxman Markey bill: 2020

	Allowance Prices (2007\$ per metric ton)	GDP Impact (% Change from BAU)	Impact on Jobs (Change from BAU)
ACCF/NAM Low Cost	\$48	-0.2%	10,000
ACCF/NAM High Cost	\$61	-0.4%	-80,000
CRA/NBCC	\$30	-0.8%	-1,800,000
EIA-NEMS Basic	\$32	-0.3%	-81,480
EIA-NEMS Limited	\$93	-0.7%	-355,210
CBO	\$23	-0.2 to -0.7%	N/A

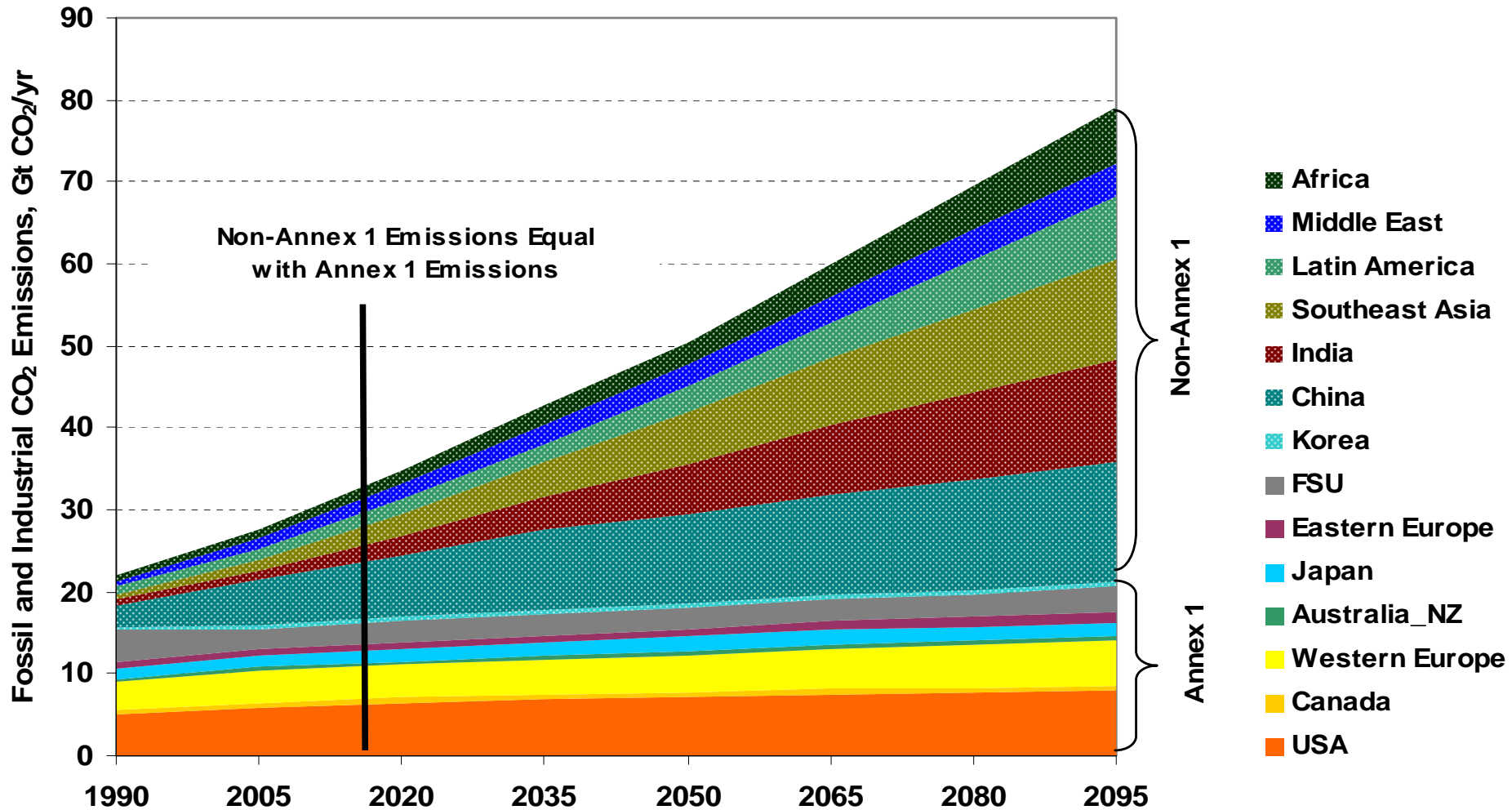
Summary of Key Macroeconomic Modeling Results for the Waxman Markey bill : 2030

	Allowance Prices (2007\$ per metric ton)	GDP Impact (% Change from BAU)	Impact on Jobs (Change from BAU)
ACCF/NAM Low Cost	\$123	-1.8%	-1,790,000
ACCF/NAM High Cost	\$159	-2.4%	-2,440,000
CRA/NBCC	\$49	-1.0%	-2,200,000
EIA-NEMS Basic	\$65	-0.8%	-597,000
EIA-NEMS Limited	\$191	-2.3%	-2,317,000
CBO	N/A	-0.4 to -1.1%	N/A

Electricity Prices: States with Renewable Portfolio Standards versus States without RPS



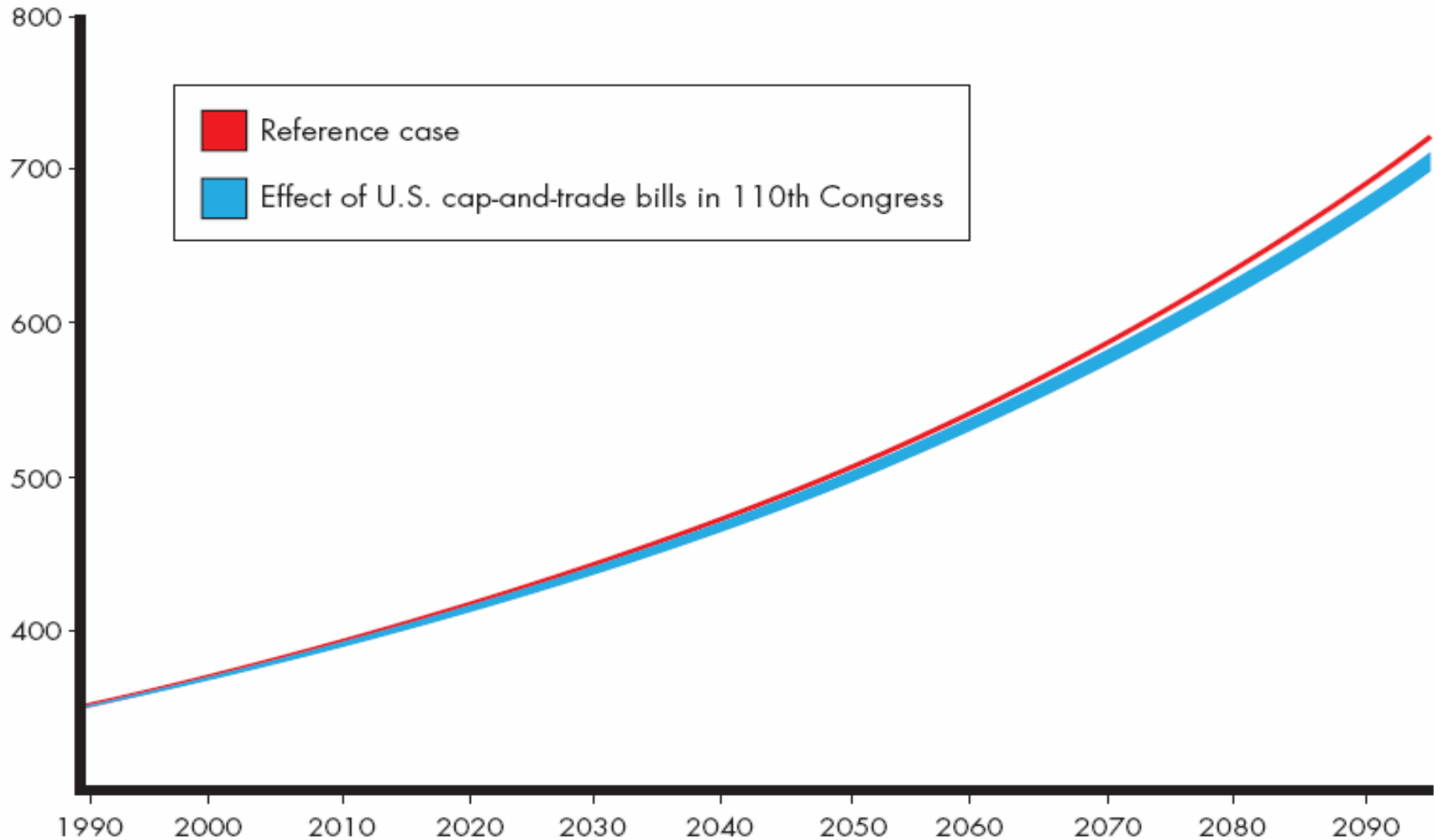
World Carbon Dioxide Emissions



Source: Data derived from *Global Energy Technology Strategy, Addressing Climate Change: Phase 2 Findings from an International Public-Private Sponsored Research Program*, Battelle Memorial Institute, 2007.

Global CO2 Concentrations: Carbon emissions are projected to rise over the next several decades

Parts per million



Practical Strategies for Reducing Global Greenhouse Gas Growth

- Use cost / benefit analysis before adopting policies
- If U.S. puts a price on carbon emissions, a carbon tax is preferable to cap and trade
- 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 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