

Ending the Energy Stalemate

A Bipartisan Strategy to Meet America's Energy Challenges

Recommendations of the National Commission on Energy Policy

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The National Commission on Energy Policy

- Launched in 2002, Commission met a dozen times; sponsored over 35 independent research analyses
- \$10 million effort over 3 years
- Privately funded, principally by the William and Flora Hewlett Foundation along with its funding partners



The Commissioners

John Holdren (co-chair)

Teresa and John Heinz Professor of Environmental Policy, Harvard University

William K. Reilly (co-chair)

Founding Partner, Aqua International Partners; former Administrator of the U.S. Environmental Protection Agency

John W. Rowe (co-chair)

Chairman and CEO, Exelon Corporation

Philip R. Sharp (congressional chair)

Senior Policy Advisor, Van Ness Feldman PC;
Senior Advisor, Lexecon, Inc; former U.S. representative, IN



Marilyn Brown

Director, Energy Efficiency and Renewable Energy Program, Oak Ridge National Lab

Ralph Cavanagh

Senior Attorney & Co-Director, Energy Program, Natural Resource Defense Council

Archie Dunham

Chairman, ConocoPhillips (1999-2004)

Rodney Ellis

State Senator, Texas

Leo W. Gerard

International President, United Steelworkers of America

F. Henry Habicht

CEO, Global Environment & Technology Foundation; former Deputy Administrator of the U.S. EPA

Mario Molina

Institute Professor, Massachusetts Institute of Technology

Sharon L. Nelson

Chief, Consumer Protection Division, Washington Attorney's General Office; Chair, Board of Directors, Consumers Union

Linda Stuntz

Stuntz, Davis & Staffier; former Deputy Secretary of Energy

Susan Tierney

Managing Principal, The Analysis Group; former Assistant Secretary of Energy

R. James Woolsey

Vice President, Booz Allen Hamilton; former Director of Central Intelligence

Martin Zimmerman

Clinical Professor of Business, Ross School of Business, the University of Michigan; Group Vice President, Corporate Affairs, Ford Motor Company (2001-2004)



The Commission's Overarching Objective

Ensuring ample, clean, reliable, and affordable energy for the 21st Century while responding to growing concerns about the nation's energy security and the risks of global climate change.



Structure of the Commission's Report

- Improving Oil Security
- Reducing Risks from Climate Change
- Improving Energy Efficiency
- Expanding Energy Supplies
- Strengthening Energy Supply Infrastructure
- Developing Energy Technologies for the Future

Strengthening Energy-Supply Infrastructure

Need for new energy infrastructure affects nearly all regions.



Context for the Commission's Greenhouse Gas Recommendations

- Scientific consensus about climate change risks has grown over the last decade.
- Nevertheless, considerable uncertainty remains about likely costs and consequences of climate change itself, as well as about the costs of mitigation.
- In this context, Commission believes we must take a first step domestically, but in a way that does not harm the international competitiveness of U.S. businesses.
- Commission proposal aims to first slow emissions growth before stopping and eventually reversing future growth. We have not described a policy for achieving the levels of reduction required for atmospheric stabilization.

Reducing Risks from Climate Change

- Initiate in 2010 a mandatory, economy-wide, tradable-permits system to limit greenhouse gas emissions.
- Cap initial costs to the U.S. economy at \$7 per metric ton of CO₂-equivalent via a “safety valve” mechanism.
- Link subsequent U.S. action with comparable efforts by other developed and developing nations via a program review in 2015 and every five years thereafter.
- Allocate 95% of permits for free to emitting sources; remaining 5% would be auctioned.

Key Features of the Commission's Greenhouse Gas Proposal

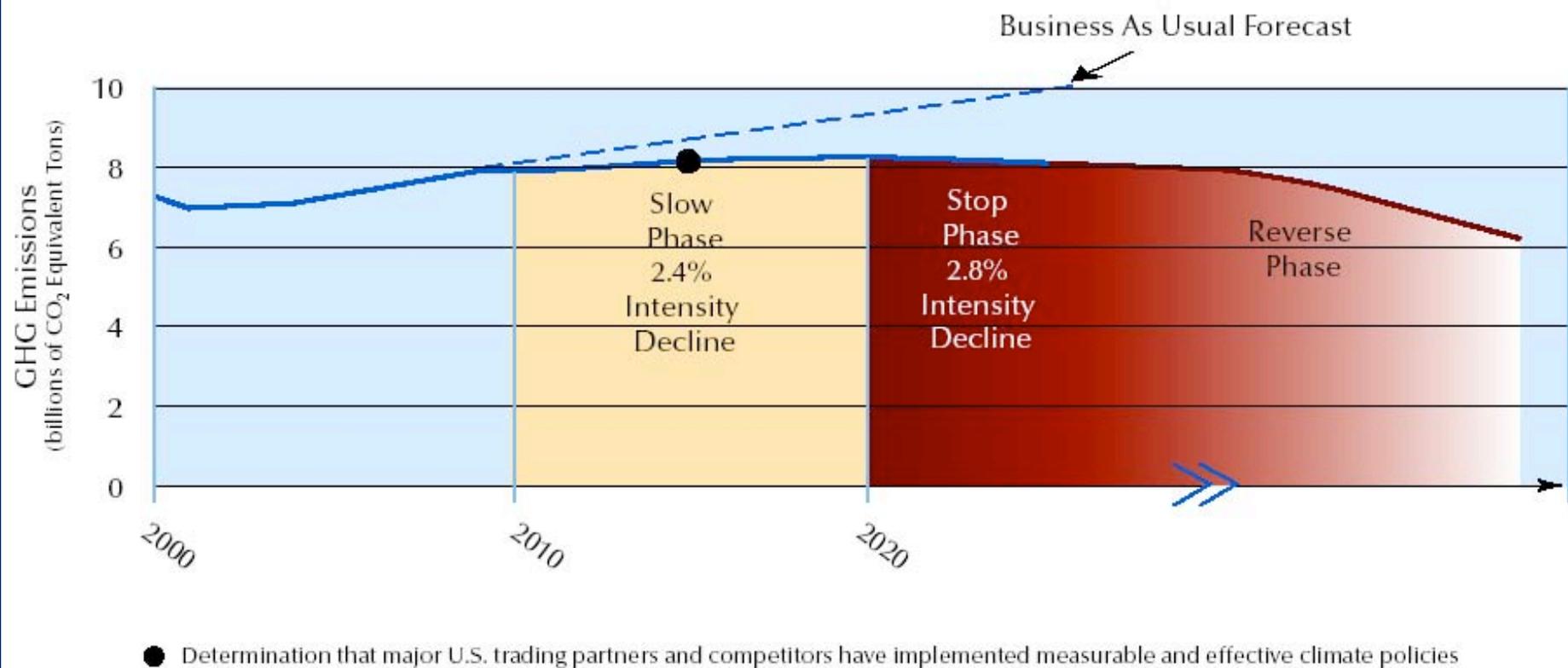
- Uses intensity-based metric to set emissions targets, similar to Bush Administration approach.
- Provides cost-certainty via the safety valve mechanism.
- Modeled on the successful, market-based approach used in the federal Acid Rain Program.
- Designed to provide gradually stronger market signal for avoided emissions over time, without prematurely displacing existing infrastructure.
- Flexible and responsive to changing conditions in terms of technology progress and international developments, while providing needed regulatory/investment certainty.

Reducing Risks from Climate Change

- Proposed emissions targets reflect a 2.4% annual decline in the emissions intensity of the U.S. economy for the period 2010-2019. In 2020, propose accelerating target intensity decline to 2.8% per year.
- Gradually strengthen market signal by increasing safety valve price 5% per year in nominal terms. Also gradually increase (starting in 2013) the quantity of permits auctioned each year up to a limit of 10% of the total permit pool.

Reducing Risks from Climate Change

The Commission's recommendation is to slow, stop, and eventually reverse U.S. greenhouse gas emissions.



Reaction So Far...

- Commission report has received substantial attention from media and political leaders.
- Equal criticism across political spectrum
- Support from unlikely quarters, such as the United Mineworkers and Autoworkers, suggests that there is indeed hope for ending the stalemate.

Legislative Efforts

- Bingaman Amendment
- Sense of Senate Resolution
- Senate hearings
- Allocation
- Technology & Adaptation

For More Information...

- Go to www.energycommission.org.
- In addition to final report, staff papers and independent research sponsored by Commission are collected in a 2,700 page technical appendix available on the website and CD-ROM.
- Economic analysis describing key assumptions and detailed modeling results for the Commission's greenhouse gas proposal is also available on the website and CD-ROM.
- Contact Commission staff directly at:
1616 H Street NW, 6th Floor
Washington, DC 20006
202-637-0400



Supplemental Slides

Expanding Energy Supplies

- Natural Gas
- Advanced Coal Technologies
- Nuclear Energy
- Renewable Electricity Technologies
- Non-Petroleum Transportation Fuels

Expanding Energy Supplies

Natural Gas

- Adopt effective public incentives for the construction of an Alaska natural gas pipeline.
- Address obstacles to the siting and construction of infrastructure to support increased imports of liquefied natural gas (LNG).
- Improve ability of key land management agencies like the Bureau of Land Management (BLM) to evaluate and manage access to natural gas resources on public land.
- Pursue R&D to develop technologies for tapping unconventional natural gas supplies, like methane hydrates.

Alaska Natural Gas Pipeline

- Alaskan North Slope holds 20% of proved U.S. gas reserves (approx. 35 tcf). Total resource may be 200-300 tcf.
- Currently, there's no way to deliver Alaskan gas to markets in the Lower-48.
- Barriers to pipeline include high cost (est. at \$20 billion) and lengthy construction period (10 years). Another factor for investors is uncertain impact of pipeline on future gas prices.
- Congress recently adopted tax provisions and loan guarantees to support pipeline. But further incentives may be needed, esp. to address issue of price certainty. Commission examined one option – establishing a floor price for Alaskan gas while also ensuring that any federal outlays are compensated if prices go higher – and concluded that likely benefits far outweighed likely costs.

Context for the Commission's Greenhouse Gas Recommendations

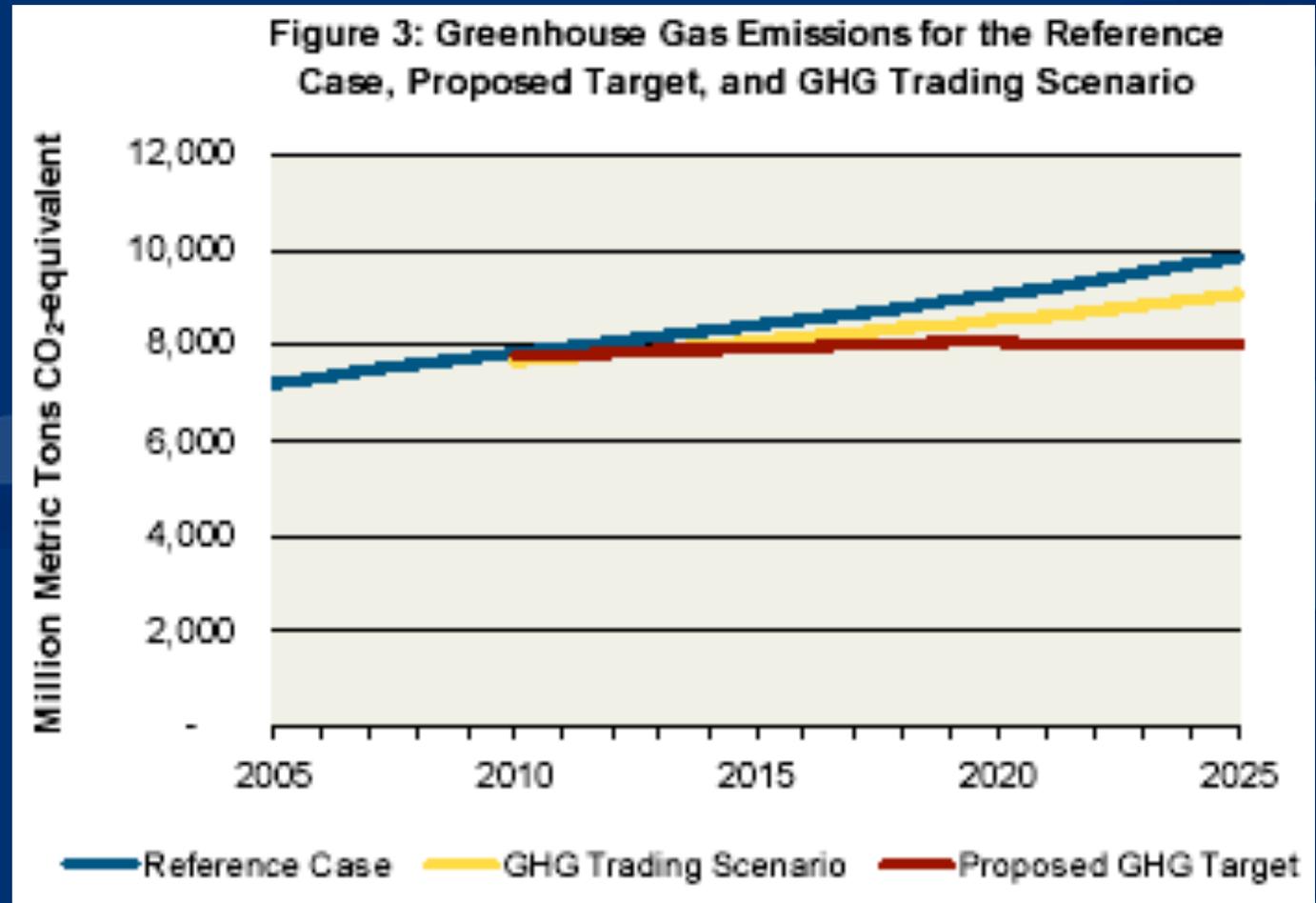
Comparison of Commission GHG Proposal to Other Domestic Climate Change Policies^a

		Commission Proposal	Bush Climate Initiative	McCain Lieberman Bill ^b	Kyoto Protocol ^c
Mandatory / Voluntary		mandatory	voluntary	mandatory	mandatory
Target type		emission intensity	emission intensity	absolute emissions	absolute emissions
Cost limit		yes	N/A	no	no
2010	Expected domestic emission reductions	200 million tons	300 million tons (goal)	550 million tons	1.2 billion tons
	Permit price (\$/ton CO ₂ equivalent)	\$5 ^d	N/A	\$9–\$16	\$51
	Estimated Cost in 2010	\$500 million	N/A	\$2.5–\$4.3 billion	\$31 billion
2020	Expected domestic emission reductions	0.5-1 billion tons ^e	850 million tons (extrapolated goal)	1.5 billion tons	1.7 billion tons
	Permit price (\$/ton CO ₂)	\$7	N/A	\$15–\$36	\$44
	Estimated Cost in 2020	\$2-4 billion	N/A	\$11–\$27 billion	\$37 billion

Impacts of Commission Proposal

- Modeled using DOE's NEMS tool. Additional economic modeling was performed by Charles River Associates.
- Commission proposal is conservatively estimated to reduce 2020 U.S. emissions by 540 million metric tons CO₂-equivalent.
- If our other proposals for efficiency and technology development lower abatement costs, fewer permits will be purchased under the safety valve and 2020 reductions could be as much as 1 billion metric tons.

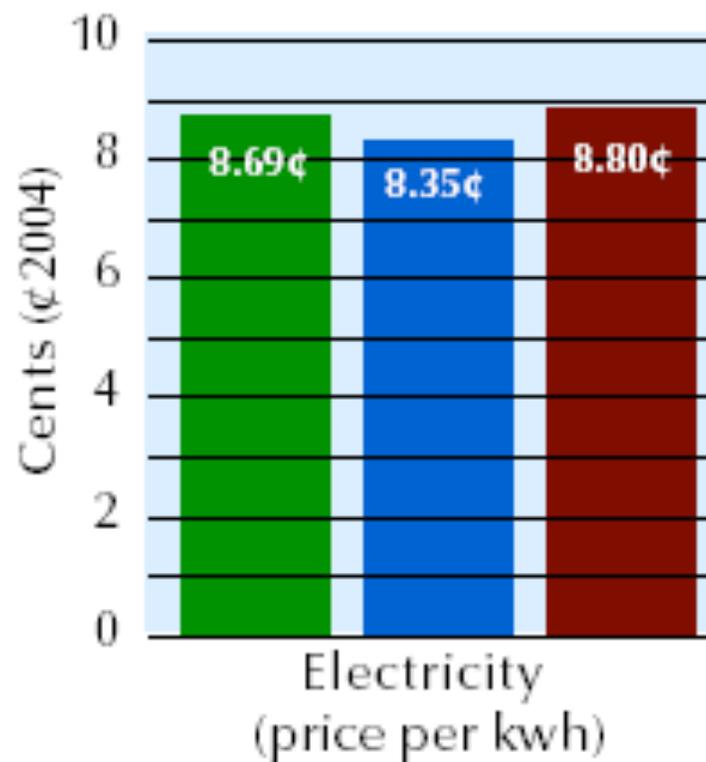
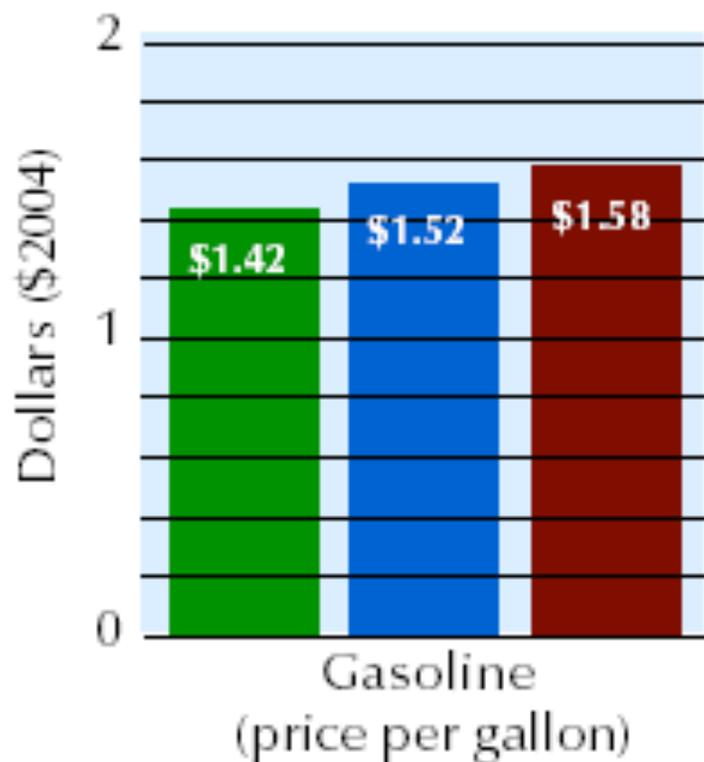
Emissions Impacts of Commission Proposal



Impacts of Commission Proposal

- Modeled impacts on most energy prices are fairly modest.
- Compared to BAU, natural gas and electricity prices would be expected to rise by 5%-7% in 2020.
- Gasoline prices would increase by approximately 6 cents per gallon.
- Most dramatic impacts on coal and renewables.
- Coal use would decline by 9% relative to BAU, but would still grow 16% over current levels in absolute terms.
- By 2025, contribution from non-hydro renewables would more than double compared to BAU (to 10% of total generation).

Energy Price Impacts of Commission Proposal



2002

U.S. BAU 2020

NCEP 2020

Data Source: NCEP NEMS Modeling