



# THE WOODS HOLE RESEARCH CENTER

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## **Energy Commission Proposes Plan to Cut Total U.S. Climate Emissions in First Year of Program**

**New recommendations include increased auto fuel economy standards, interim nuclear waste storage, deployment of carbon capture and storage technologies, and national renewable energy standard**

***Policies would reduce U.S. emissions to 15% below current levels by 2030***

### **Further Reading:**

Washington Post Guest Commentary - "**Sea Change in the Politics of Climate**" By Kelly Sims Gallagher and John P. Holdren.

The National Commission on Energy Policy, a bipartisan group of top energy experts from industry, government, labor, academia, and environmental and consumer groups, today released a series of new, sweeping recommendations to address the nation's leading energy challenges. In its new report, "Energy Policy Recommendations to the President and the 110th Congress," the Commission proposed revised policies regarding a cap and trade proposal for addressing global climate change, increases in fuel economy standards, approaches for the storage of nuclear waste, development and deployment of advanced coal technologies, adoption of a national renewable energy standard, and other major energy policy issues.

"We believe events of the last two years justify increasing the stringency of our initial recommendations on a number of major issues, especially climate change and automotive fuel economy," said William K. Reilly, former EPA Administrator and Commission co-chair. "At the same time, as in our original report, these revised recommendations continue to emphasize market-based, cost-effective approaches that we believe can gain the political support to become law."

Most dramatically, a Commission analysis finds that taken as a whole its new policy recommendations would reduce the absolute amount of U.S. greenhouse gases emissions starting in the very first year such a program would be implemented (2012), and would lead to emissions reductions of 15% below current levels by the year 2030.

"The science is clear on the importance and value of serious steps to reduce emissions of climate-altering gases sooner rather than later" said John Holdren, Teresa and John Heinz Professor of Environmental Policy at Harvard University, Director of The Woods Hole Research Center, and Commission co-chair. "The Commission's proposals for doing so can be implemented at low cost to the U.S. economy. There is no good reason for our government to continue to dither while the world warms."

While strengthening the overall stringency of its GHG mitigation proposal, the new Commission proposal continues to rely on the core program elements first articulated in its 2004 report, especially: emission targets within a cap and trade system; providing market-based incentives for deployment of low-carbon technologies; linkage to greenhouse gas mitigation action by major U.S. trading partners; and a cost-containment mechanism to prevent undue harm to the U.S. economy.

The reductions in greenhouse gas (GHG) emissions would result from a series of new policies proposed by the Commission, beginning with a revision of key elements of its initial cap and trade proposal for mitigating U.S. emissions.



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The proposal announced today increases the proposed “safety valve” or “cost cap” of the NCEP program from \$7 to \$10 per ton of carbon-dioxide equivalent emissions, and would increase the safety valve price by 5 percent above inflation per year. In addition, the Commission’s new carbon cap does not rely on an “emissions intensity” metric, but instead calls for specific numerical reductions in greenhouse gas emissions for a given year.

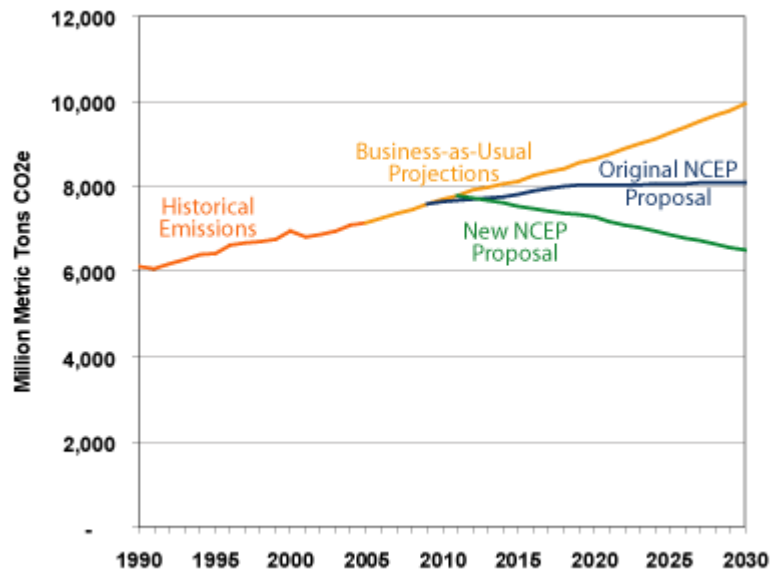
The Commission’s original proposal envisioned an initial ten-year implementation period during which program targets would first aim to slow the rate of growth in U.S. emissions before proceeding to “stop” and “reverse” phases in which emissions would stabilize and then begin to decline.

The Commission’s new proposal strengthens the program targets to begin emissions reductions immediately upon implementation and achieve a 15 percent reduction below current emissions levels by 2030.

Business-as-usual projections for greenhouse gas emissions are taken from the Energy Information Administration’s Annual Energy Outlook 2006.

A number of related policy proposals made by the Commission today would play a significant role in achieving the overall reductions in GHG emissions. These include a Commission proposal for new vehicle fuel economy improvement targets of 4 percent (or approximately one mile per gallon) per year, as well as the NCEP recommendation that the United States adopt a federal renewable energy portfolio standard of at least 15 percent of electricity generated by 2020.

The Commission’s current update also tackles critical design elements for a greenhouse-gas cap-and-trade program, including the highly controversial issue of allowance allocation. For reasons detailed in a recent NCEP staff paper on allowance allocation (available at [www.energycommission.org](http://www.energycommission.org)), the Commission now recommends that at least half of the total pool of allowances available on an economy-wide basis be directed toward aiding the transition to a low-carbon economy, including to provide funding for advanced energy technologies and to mitigate impacts on low-income consumers. This approach would leave more than adequate allowances to fairly compensate major energy industries for near-term economic dislocations while also avoiding the potential for substantial windfall gains. In this regard, the Commission recommends that carbon capture and storage projects should be eligible for incentives, including bonus



**Business-as-usual projections for greenhouse gas emissions are taken from the Energy Information Administration's Annual Energy Outlook 2006.**



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emissions allowances at least equal in value to incentives currently provided under the renewable energy production tax credit.

"The United States must implement specific policies to increase clean energy production if it is to achieve its broader energy policy and environmental goals," said John W. Rowe, Commission co-chair and Chairman and CEO of Exelon Corp. "While the Commission believes it is necessary to place a price on carbon emissions and to increase production of renewable energy, these measures alone are not sufficient to encourage new production. We also must implement policies that allow cleaner technologies to be deployed at affordable cost and without undue dislocation of existing energy infrastructure."

The Commission urged a series of other policy changes, including calling for five-year, rather than two-or-one-year, extensions of current federal production tax credits for renewable energy, aimed at promoting longer term investment. On energy efficiency, the Commission calls for enhancing and extending recently introduced federal tax incentives and updating standards for appliances and equipment. To help address the current impasse over the building of new nuclear power and specifically the disposal of nuclear waste, the Commission proposes that the Department of Energy (DOE) site and operate national or regional consolidated interim storage options, among other recommendations. NCEP called for a reevaluation of existing ethanol subsidies to ensure that public support is effectively targeted to meeting both energy security and climate change policy objectives.

The Commission's GHG emissions estimates are derived using the same economic models and technology assumptions as the "high technology case" used by DOE's Energy Information Administration. The Commission recognizes that uncertainty exists about the rate of future market penetration of low- and zero- carbon energy technologies, and therefore believes the safety valve or cost cap provision is especially important if the cost of new technologies turns out to be higher than anticipated.

"A limit or safety value on the price of carbon remains an important feature, especially in the first phase of the program, ensuring that there are not wild swings in the carbon price as happened in the early stage of the European plan," said former Congressman Philip Sharp, NCEP Congressional Chair and President of Resources for the Future. "It will also provide reassurance to those Americans who are very concerned that costs will dramatically escalate beyond the levels anticipated in economic modeling."

"While the Energy Policy Act of 2005 dealt with a number of major issues, the two mega-issues of climate change and oil security that were not effectively addressed, and have come to increasingly dominate national energy policy formulation," said Reilly. "The Commission believes today's recommendations, if adopted, would put the United States in an extremely strong position to address these critical long-term challenges."

Additional discussion of the Commission's recommendations and supporting analytic materials may be found at the Commission website, [www.energycommission.org](http://www.energycommission.org).

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## **SUMMARY OF RECOMMENDATIONS**

### **1. Oil Security**



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- Establish a national average new-vehicle fuel-economy improvement target of 4 percent per year, while retaining the full discretionary authority of the National Highway Traffic Safety Administration (NHTSA) to modify the presumptive target up or down if safety, technology, or economic considerations warrant.
- Encourage and empower NHTSA to implement reforms aimed at making the existing CAFE program more cost-effective, market-oriented, and responsive to the jobs and competitiveness concerns of the automobile industry.
- Provide targeted consumer and manufacturer incentives to promote the domestic development, production, and deployment of advanced automotive technologies such as hybrid, plug-in hybrid, and advanced diesel vehicles.
- Pursue cost-effective opportunities to further reduce transportation energy use by improving heavy-truck fuel economy and by adopting efficiency standards for light-duty vehicle replacement tires.

## 2. Climate Change

- Adopt legislation this Congress to implement a mandatory, market-based program to limit economy-wide U.S. greenhouse gas emissions.
- Strengthen key parameters of the original NCEP climate proposal, including:
  - defining program targets to aim for stabilizing emissions at current (2006) levels by 2020 and reducing emissions 15 percent below current levels by 2030;
  - raising the starting price of the safety valve to \$10 per ton of carbon-dioxide equivalent emissions; and
  - increasing the rate of escalation in the safety-valve price to 5 percent per year in real (rather than nominal) terms.
- Address other program design issues by (1) allocating emission allowances in a manner that effectively directs substantial resources to aid in the transition to a low-carbon economy and that fairly compensates major affected industries for short-term economic dislocations incurred as a result of the policy, while also avoiding the potential for significant windfall gains; (2) placing the compliance obligation (point of regulation) at or near primary energy suppliers; and (3) including a well-designed offsets provision.
- Create stronger incentives for comparable action on the part of key trading partners by providing technical and financial resources for the transfer of low-carbon technology, by signaling that the United States will work with other countries to forcefully address trade and competitiveness concerns in the event other major emitting nations fail to take action within a reasonable timeframe, and by linking future U.S. emission-reduction commitments to progress in the international arena.

## 3. Energy Efficiency

- Enhance and extend tax incentives for efficiency investments introduced under the Energy Policy Act of 2005 (EPAAct05).
- Ensure that the Department of Energy (DOE) follows through on its recent commitment to issue efficiency standards for 22 categories of appliances and equipment that capture all cost-effective and technically feasible energy savings.



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## 4. Natural Gas

- Continue to focus on assuring future supply adequacy by following through on EPAAct05 commitments with respect to the Alaska pipeline, LNG infrastructure, market transparency, and permitting and leasing. The Commission reiterates its call for a comprehensive inventory of on- and off-shore resources to inform future policy decisions and urges Congress to address concerns about the adequacy of related provisions in EPAAct05 (both in terms of the relatively short timeframe specified for completing the inventory and in terms of constraints on the use of federal resources to conduct inventory-related activities in certain areas).

## 5. Advanced Coal

- Direct greater resources toward accelerating the commercialization of carbon capture and storage (CCS) by providing substantial deployment incentives. Specifically, the Commission believes CCS projects should be eligible for bonus allowances under a greenhouse gas trading program that are at least equal in value to incentives provided under the renewable energy production tax credit.
- Condition eligibility for public funding or subsidies on the actual inclusion of CCS with any new IGCC and other advanced coal projects going forward. CCS must be included from the outset in any taxpayer supported efforts to develop coal-to-liquids technology.
- Explore carbon capture options for non-IGCC plants.
- Ensure that the U.S. Environmental Protection Agency (EPA) completes a rigorous, formal public process to formulate effective regulatory protocols governing long-term carbon storage as soon as possible (recognizing that midcourse corrections will likely be needed as experience is gained).
- Ensure that new coal plants built without CCS are not "grandfathered" (i.e., awarded free allowances) in any future regulatory program to limit greenhouse gas emissions.

## 6. Nuclear Energy

- Take action to address the current impasse on nuclear waste disposal, while reaffirming the ultimate objective of siting and developing one or more secure geologic disposal facilities, by amending the Nuclear Waste Policy Act (NWPA) to:
  - Align its requirements with human engineering and scientific capabilities, while adequately protecting public health and safety and the environment.
  - Require DOE to site and operate consolidated national or regional interim storage options.
  - Undertake R&D to explore technological alternatives to the direct geologic disposal of waste from a once-through cycle that meet commercial requirements and non-proliferation objectives, reduce the challenge of waste disposal, ensure adequate protection of public health and safety, and extend fuel supply.
  - Codify that interim storage and federal responsibility for disposal of nuclear waste is sufficient to satisfy the Nuclear Regulatory Commission's waste confidence requirement.



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- Require the Secretary of Energy to take possession of and/or remove fuel from reactor sites that have been, or are in the process of being fully decommissioned.

## 7. Renewable Energy

- Continue to provide investment certainty by extending the eligibility period for federal production tax credits in five-year, rather than two- or one-year, increments.
- Adopt a federal renewable portfolio standard that increases the share of electricity generated by renewable resources nationwide to at least 15 percent by 2020.

## 8. Biofuels

- Re-evaluate ethanol subsidies and tariffs in light of current fuel mandates and rationalize existing policies to direct a greater share of public resources to more promising options, such as cellulosic ethanol; biobutanol; and clean, high-quality diesel fuel from organic wastes.
- Address other hurdles to biofuels deployment, including hurdles related to the deployment of critical supporting infrastructures (including gathering systems, distribution systems, and refueling facilities) and compatible vehicle technologies.
- Take steps to ensure that policies aimed at reducing U.S. oil dependence do not promote environmentally unsustainable fuel alternatives. The Commission believes that California's recently introduced low-carbon fuel standard suggests a useful direction for future policy and deserves consideration at the national level.

## 9. Energy Technology Innovation

- Double annual direct federal expenditures on energy-technology research, development, and demonstration, corrected for inflation, with increases emphasizing public-private partnerships, international cooperation, and energy-technologies that offer high potential leverage against multiple challenges. Substantially increasing public investment in energy technology innovation is critical to the achievement of oil security and climate change objectives and can be funded using revenues generated by the proposed greenhouse-gas trading program.
- Triple federal funding specifically for cooperative international efforts in energy research, development, and deployment (where this proposed increase is within the overall expansion of federal expenditures recommended above).

*The National Commission on Energy Policy was founded in 2002 by the William and Flora Hewlett Foundation, and its partners-The Pew Charitable Trusts, the John D. and Catherine T. MacArthur Foundation, the David and Lucile Packard Foundation, and the Energy Foundation.*