

US EPA ARCHIVE DOCUMENT

**TESTIMONY OF
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BEFORE THE
COMMITTEE ON SCIENCE
UNITED STATES HOUSE OF REPRESENTATIVES**

February 12, 1998

Mr. Chairman, and Members of the Committee, thank you for this opportunity to testify on the Administration's plans to address global warming. Our goal is to develop, in consultation with the Congress and the American people, international and domestic strategies to address global warming that are environmentally sound and economically sensible.

I am pleased to report that we have made substantial progress towards that goal in the last several months. On October 22 of last year, President Clinton announced his climate change proposal. He described the Administration's international negotiating goals and our plans to move ahead to address climate change domestically. In December, U.S. negotiators reached agreement with other nations on the Kyoto Protocol. Although more work remains to complete the agreement, it bears the unmistakable imprint of U.S. demands for realistic targets and timetables, coverage of all greenhouse gases, national flexibility and market-based mechanisms for control. Finally, just last week in his budget announcement, the President unveiled the Climate Change Technology Initiative, a \$6.3 billion, five-year package of tax credits and investments in technology that make sense right now and will put the Nation on a smooth path to meeting our international obligations.

Decisions on what to do about any environmental problem *begin* with the science. The President's Science Advisor, Dr. Jack Gibbons, has given the Committee a comprehensive presentation of the scientific evidence for global warming and for the broad range of serious adverse impacts that lie in wait for us if we do not begin to reduce greenhouse gas emissions. Let me emphasize several points that are particularly important from the standpoint of the Environmental Protection Agency, which is charged with the responsibility to protect the health and the environment of the American people.

First, global warming endangers Americans' health, especially the health of our children, grandchildren, and future generations. Unless we begin to act:

- ▶ According to the Intergovernmental Panel on Climate Change, representing 2,000 leading scientific experts from around the world: "Climate change is likely to have wide ranging and mostly adverse impacts on human health, with significant loss of life."
- ▶ There will be more frequent and more intense heat waves. Deaths directly attributable to heat waves in the U.S. could more than double by the middle of the next century.
- ▶ Hotter weather may lead to more frequent and more intense smog episodes, causing more deaths and illnesses from air pollution.
- ▶ Pest-borne tropical diseases may spread across our borders as warmer temperatures expand the range of disease-carrying insects and rodents.
- ▶ There will be more frequent and severe droughts and floods, causing deaths and injuries, as well as huge property losses.
- ▶ Sea level will rise, exposing coastal areas to higher storm surges, with greater threats to health and safety, and more property damage. Salt water intrusion into coastal aquifers will endanger the drinking water supplies for millions of Americans.

Second, global warming endangers Americans' environment. If we do not act, our children and grandchildren will see our forests, rivers, and other natural resources stressed and threatened as never before.

- ▶ By the end of the next century, rising sea levels could drown 4000 square miles of our ecologically-critical coastal wetlands. Five thousand square miles of dry land in states like Louisiana and Florida could be lost under water.
- ▶ Trout and other fish species could be entirely wiped out in many states -- depriving millions of our children and grandchildren of the simple pleasures of fishing.
- ▶ Forests and habitats will be lost in many states as climatic ranges shift faster than plant or animal species can migrate. Maple trees could die out in the Northeast, wiping out the fall colors of New England forever. Glaciers may disappear from Glacier National Park. About one-third of the Florida Everglades, now being protected at significant cost, has an elevation of less than 12 inches and is highly vulnerable to sea level rise.

Third, health and environmental impacts such as these will have profound economic costs as well. Simply put, if we do not act, global warming will threaten the cleaner and healthier air, water and natural resources which the last six Presidents and 14 Congresses have worked so hard to restore and protect. We cannot allow this to happen.

In short, the immense threat posed by global warming is why the achievement in Kyoto is so important. Without repeating the detailed explanation of the Kyoto Protocol this Committee heard last week, I would note only that the Kyoto agreement embodies our key proposals for an achievable target on a realistic timetable, maximum national flexibility, and maximum use of market-based implementation tools. The agreement allows American businesses and consumers a decade of lead-time to adopt the technologies and practices needed to meet our emissions target. The agreement also includes the flexibility of a five-year budget period, covers all six important pollutants (allowing the flexibility of greenhouse-gas trade-offs), and includes three forms of international market-based emissions trading. The agreement rejected proposals by other countries for overly ambitious targets, unattainably short deadlines, and inflexible mandatory policies and measures.

To be sure, there is much more work to be done. In the coming year and beyond, we will work with other nations, both multilaterally and bilaterally, to fill in key implementation details and to obtain greater participation from key developing nations.

The question before us now is what should be done domestically while we pursue this agenda for further international work. Some may say that we should do nothing at all at home until all countries are fully on board and all the details are filled in. But such a course has two big drawbacks.

First, there are many voluntary steps to cut greenhouse gas emissions that make complete economic sense to undertake now, regardless of any international agreement. Improving the energy-efficiency of our businesses, homes, and vehicles and taking other steps to reduce greenhouse gas pollution can save large amounts of money and make our economy more productive.

Second, reasonable people who differ on the need for the Kyoto Protocol can still agree that it would be prudent to use the decade of lead-time provided by the Protocol to take reasonable steps to reduce greenhouse gas emissions that have numerous other benefits to the economy and the environment, and that will best position American businesses and the American economy for further action as the science evolves.

Third, as the most innovative economy in the world and the largest contributor to greenhouse gas pollution, the United States must take the lead in responding to this immense global environmental threat. By acting, and not just talking, we can assume moral leadership,

send an important market signal to the rest of the world, and make it easier to recruit other nations to do their share.

That is why last October President Clinton proposed the Climate Change Technology Initiative (CCTI). The President has proposed \$6.3 billion in targeted tax cuts and program investments over five years to speed the adoption of today's cost-effective energy-efficient and low-carbon technologies throughout the economy, and to hasten the development of even more advanced technologies for tomorrow.

Through our current programs implemented under the 1993 Climate Change Action Plan (CCAP), EPA and the Department of Energy (DOE) are already helping American businesses and consumers save money by employing energy efficient technology when replacing obsolete equipment or expanding. These technologies also can often enhance businesses' overall productivity.

The latest example, announced by Vice President Gore last month, is the new "Energy Star" partnership, under which the major TV and VCR manufacturers will make products that use less energy. Your current TV uses energy even when it is turned off as circuits respond instantly when you press the remote control. The new machines will sharply cut the amount of energy used when off, reducing pollution by up to a million tons of carbon per year, and saving consumers up to \$500 million per year on their electric bills. TVs and VCRs with the "Energy Star" label soon will be in stores across the country.

EPA's existing CCAP programs are expected to reduce U.S. greenhouse gas emissions by more than 40 million tons of carbon equivalent (MMTCE) in 1999. EPA's partnerships are expected to reduce annual U.S. energy expenditures by more than \$25 billion by 2010. The

President's Climate Change Technology Initiative includes funds for EPA to expand these technology deployment partnerships to reach more businesses and consumers, and to cover more products and technologies. The CCTI also includes funds to carry out the President's call for industry-by-industry consultations to develop voluntary but aggressive strategies to reduce emissions of greenhouse gases.

At EPA, we know from experience that voluntary and partnership programs work.

Several recent successes demonstrate the potential from these approaches:

- ▶ *Aluminum Industry Partnership.* EPA has forged agreements with 90% of the aluminum industry to reduce their emissions of perfluorinated compounds (PFCs), which are potent greenhouse gases, by 40-60% by 2000. With key technical support from EPA, the companies are well on their way to meeting their commitments.
- ▶ *Metal Finishers Agreement.* Through EPA's Common Sense Initiative, the metal finishing industry has committed to improving energy efficiency by 25% by the year 2002, while reducing other toxic chemicals.
- ▶ *Green Lights and Energy Star Buildings.* U.S. companies and organizations joined EPA's Green Lights and ENERGY STAR Buildings Programs, they could reduce the carbon dioxide emissions due to the energy used in commercial buildings by 35 percent and reduce commercial buildings' energy bills by \$25 billion per year.
- ▶ **Quad Graphics, Pewaukee, WI.** Through EPA's Green Lights program Quad Graphics has installed energy efficient lighting in its buildings, preventing more than four thousand tons of carbon dioxide emissions -- equivalent to eliminating the emissions of more than 1,000 cars. The company is saving more than \$250,000 every year on its energy bills -- and enjoying better lighting quality.
- ▶ **New York State.** These opportunities are available not only to private companies, but to all types of organizations. Through EPA's Energy Star Buildings and Green Lights programs, the State of New York is currently saving New York taxpayers more than \$2.5 million per year on state energy bills, while preventing more than 16 thousand tons of carbon dioxide emissions.
- ▶ *Climate Wise.* Since 1994, 392 companies, representing 8.5% of U.S. industrial energy use, have joined Climate Wise, including: British Petroleum, DuPont, 3M, Johnson & Johnson, General Motors, Boeing and more than 200 small and medium-sized companies.

Companies have submitted Action Plans detailing more than 700 emissions reductions actions that they estimate will reduce greenhouse gas emissions by more than 5 million metric tons of carbon equivalent by the year 2000. In the process they expect to save more than \$300 million. Here are some examples of what they're doing:

- ▶ **General Motors** reduced more than 54,500 metric tons of carbon per year by switching to natural gas at five steam-generating facilities. In addition, the first of 11 facility energy audits has identified procedural changes and projects saving 19% of total energy use.
- ▶ **DuPont** estimates that its actions will reduce emissions of greenhouse gases equivalent to 18 million metric tons of carbon dioxide by the year 2000. DuPont's energy efficiency improvements include switching boiler fuels, improving steam balance, decreasing waste heat and optimizing system performance in aeration blowers. Energy efficiency actions saved the company \$31 million in 1995 alone.
- ▶ **IBM** estimates that their energy efficiency projects will reduce greenhouse gas emissions by 60,000 metric tons and save the company \$5.5 million in the year 2000. Their actions include changes in process and facility design and improvements in energy metering and monitoring that will help them to better identify energy efficiency opportunities.
- ▶ **Motorola-Austin** reduced annual carbon emissions by more than 4,740 metric tons per year and saved more than \$1 million in 1996 alone by optimizing the performance of their boilers, insulating steam lines and repairing faulty insulation.
- ▶ **Lockheed Martin** estimates that it will achieve annual cost savings of \$175,000 and prevent the emission of 1,750 tons of carbon dioxide each year by committing to efficiency measures including boiler and process cooling efficiency, and the development of an energy automation program at facilities around country.

The Initiative also includes additional resources for research and development in key areas of energy-efficient technology. These R&D resources will allow EPA to accelerate its work under the Partnership for a New Generation of Vehicles (PNGV) to help develop cars and light trucks that get three times the fuel economy of current models, with comparable performance, safety, amenities, and cost. Working with industry and with DOE and other agencies, we will

also undertake a partnership to develop delivery and long-haul trucks that achieve significantly greater fuel economy while meeting stringent emissions targets.

The Initiative also includes \$3.6 billion over five years in targeted tax cuts to help businesses and consumers buy and adopt these technologies.

- ▶ Tax credits for highly fuel efficient vehicles: This credit would be \$4,000 for each vehicle that gets three times the base fuel economy for its class beginning in 2003. A credit of \$3,000 would be available beginning in 2000 for vehicles that get double the base fuel economy for its class. These credits would be available to jump start these markets and would be phased out over time.
- ▶ Tax credits for energy efficient equipment: These credits (all of which are subject to caps) would include a 20% credit for purchasing certain types of highly efficient building equipment, a 15% credit for the purchase of rooftop solar systems, and a 10% credit for the purchase of highly efficient combined heat and power systems.

Under the CCTI, EPA will expand its efforts in each sector of the economy in order to target the key opportunities for win-win emissions reductions that protect the environment while promoting economic growth. Key areas where EPA is expanding its efforts include the following:

1. Industry Initiatives -- the President has invited entire industries to work with the Federal government and develop greenhouse gas plans. In addition to its partnerships with individual companies, EPA will consult with key industries to develop voluntary but aggressive strategies for further greenhouse gas reductions that improve overall productivity and promote the deployment of clean technologies such as the use of industrial combined heat and power, and to build a program that appropriately rewards early action. EPA will seek dialogue with key stakeholders throughout industry and the NGO community.

2. Transportation Initiatives -- EPA will accelerate its efforts under the Partnership for a New Generation of Vehicles (PNGV), and will develop enabling technology for production

prototypes for delivery and long-haul trucks that would achieve significant increases in fuel economy while meeting stringent emissions targets. The National Academy of Sciences has determined that EPA's renewable fuels application for 4SDI engines is the lead PNGV candidate technology. When complete, EPA's design will provide the basis for a viable and proven concept vehicle for commercialization. It will also provide a strong technical base from which to initiate additional EPA research into similar technologies for light truck application. EPA will also expand its work with state and local decision-makers to develop and implement transportation improvements that encourage "livable communities" -- compact, walkable and mixed use development -- while reducing the growth in vehicle travel, emissions, and congestion.

3. Buildings Initiatives. The buildings sector, which includes both homes and commercial buildings, offers a large potential for carbon reductions using technologies that are on the shelf today. However, consumers and businesses continue to invest substantial resources in equipment that is relatively energy inefficient, resulting in higher energy bills and higher pollution levels. One of the key challenges over the next decade will be to overcome market barriers, such as the lack of reliable information, and improve the markets for energy-efficient products. EPA will expand its partnerships with equipment manufacturers and building owners in order to provide reliable, easily understood information to a greater segment of the residential and commercial markets. EPA will also expand its work to support other Federal agencies in improving the energy performance of their facilities.

4. Carbon Removal. EPA working with the U.S. Department of Agriculture will encourage the forest products sector to achieve greater reliance on biomass fuels as an energy source and be a supplier of carbon sequestration credits through afforestation and reforestation

activities. EPA will accelerate efforts to promote the use of livestock based fertilizer products and more efficient use of nutrients from all sources.

5. Crosscutting Analysis and Approaches. To build support for and the institutional capacity needed to implement a domestic and international carbon emissions trading program, EPA will work with developing nations and states and localities. Emissions from developing countries are growing rapidly and are projected to exceed those of developed countries within the next forty years. An effective, efficient global solution to climate change must be market-based and must involve both developed and developing countries. The Administration and EPA will work to secure additional international support for the American vision of global climate protection reflected in the Kyoto Protocol by assisting key developing countries in their efforts to reduce greenhouse gas emissions and address global climate change. EPA will also expand its work with states, which are key players, in efforts to reduce greenhouse gas emissions. EPA will provide support to states to help develop emission inventories and voluntary action plans, and implement and expand promising policy options identified by states in the greenhouse gas mitigation plans.

While these actions are justified on the economics and their contribution to climate change, they also help the environment in other ways. Fossil fuel combustion is not only the major source of US greenhouse gas emissions, but also of conventional air pollutants (e.g., particulate matter, oxides of nitrogen, volatile organic compounds, carbon monoxide, etc.). A vast, peer-reviewed scientific literature has conclusively linked U.S. air pollution with heightened risks of mortality, chronic bronchitis, congestive heart failure, ischemic heart disease, and other serious illnesses. Children and the elderly are the most vulnerable to the effects of poor air

quality. Thus, if we take these measures to combat global climate change, we will also reap immediate public health benefits in the form of cleaner air and cleaner water. Let me give you some examples:

- ▶ The Lancet, a highly respected British medical journal, recently published a peer-reviewed study of the particulate matter-related health impacts of fairly aggressive, worldwide greenhouse gas mitigation. The analysis found that an estimated 8 million deaths globally due to exposure to fine particles could be avoided between 2000 and 2020 if substantial steps were taken to limit greenhouse gas emissions from burning fossil fuels. In the United States alone, the study reports that thousands of deaths annually could be avoided during the 2000-2020 period. EPA's recently promulgated fine particulate standard begins to address this public health concern and should result in both some reductions in greenhouse gas emissions along with reducing the number of deaths associated with exposure to fine particles.
- ▶ In addition to health benefits, greenhouse gas mitigation would lead to improved visibility, more and better recreational opportunities, and reduced nitrogen deposition in vulnerable water bodies (such as the Chesapeake Bay). These benefits, however, have not yet been studied as thoroughly as the health impacts cited above.
- ▶ In 1999, EPA's CCTI programs alone are expected to also reduce NOx emissions by 90,000 tons per year, improving both air and water quality.

The President's CCTI makes sense right now: it hedges our risk of climate change and puts us on the right path should the science dictate more rapid reductions would be required in the future, it saves businesses and consumers money, and it reduces other dangerous forms of pollution.

In closing, I think it's clear that the Administration is delivering on its commitment to an environmentally sound and economically sensible approach. We are closely monitoring the science to make sure that our actions are proportionate to the risks we face. Internationally, we successfully negotiated a definitively American blueprint for the global response to climate change: targets and timetables, national flexibility, market-based approaches and developing

country participation. The tax credits and programs in the President's Climate Change Technology Initiative will provide economic and environmental benefits right now, while stimulating early action and positioning the United States to prosper in the global market for clean technologies that will provide the solution to global warming. We look forward to continuing to work with the Congress, the private sector and the American people as we move forward. I will be happy to answer any questions that you may have.

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