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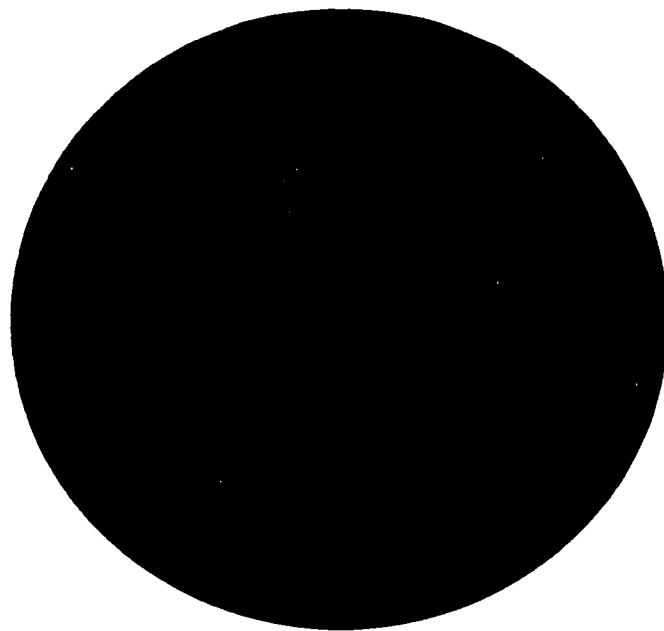
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Angie/Roger —

This maybe helpful
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It was updated
in Feb.

**PRESIDENT CLINTON ANNOUNCES THE UNITED STATES
CLIMATE CHANGE POLICY**



**NATIONAL GEOGRAPHIC SOCIETY
GILBERT H. GROSVENOR AUDITORIUM
Washington, D.C.**

October 22, 1997

PRESIDENT CLINTON'S CLIMATE CHANGE PROPOSAL

October 22, 1997

Global climate change is the premier environmental challenge and opportunity of the 21st century, and the risks it poses justify sensible preventive steps. Addressing this issue is one of the United States' greatest imperatives, for this and future generations. Recognizing the solid foundation of climate science, President Clinton is committed to strong and sensible action to reduce greenhouse gas emissions -- including realistic and binding emissions targets.

Key elements of President Clinton's climate change proposal include:

- **Binding Targets to Reach 1990 Emissions Levels by 2008-2012 and Reductions Below 1990 Levels in the 5-Year Period That Follows.** A critical component of the President's comprehensive framework is a realistic, achievable, and binding target of reducing greenhouse emissions to 1990 levels by 2008-2012 and reductions below 1990 levels in the 5-year period that follows.
- **\$5 Billion Program of Tax Cuts and R&D for New Technologies.** To spur energy efficiency and the development of new technologies, the President proposes a major new package of tax cuts and R&D spending amounting to \$5 billion over five years.
- **Industry-by-Industry Consultations and Early Credit.** The Administration challenges key industries to prepare plans over the next 9 months on how they can best reduce emissions. To provide an incentive for near-term actions to cut emissions, the President is committed to ensuring appropriate rewards for firms that act early.
- **Developing Countries Must Participate.** Climate change is a global problem, and requires a global solution. That's why the United States has spear-headed joint implementation projects, and the President has committed that the United States will not adopt binding obligations without developing country participation.
- **Broad-Based Domestic and International Emissions Trading System Begins After A Decade of Experience Has Accumulated.** The President is committed to a market-based emissions trading system, both domestically and internationally, that will harness the power of the market to reduce emissions to 1990 levels by 2008-2012. The trading system would begin after a decade's worth of experience with tax incentives, R&D, early credit, electricity restructuring, Federal efforts, and other measures.

BINDING TARGETS: The U.S. binding target is realistic: It seeks to return U.S. emissions to 1990 levels in the period 2008-2012 and reduce them further thereafter. We reject the European proposal for more stringent early reductions, as well as the "do-nothing" approach of some interests. The target is achievable: By providing incentives for early action to reduce emissions, attacking domestic energy inefficiencies, and putting in place a market-based emissions trading system, we can reach 1990 levels in the proposed time frame with minimal economic costs. And it is meaningful: Achieving 1990 levels in the period 2008-2012 would amount to almost a 30 percent reduction off a business-as-usual path, an important first step on the road toward stabilizing greenhouse gas concentrations in the atmosphere.

SOLID PRINCIPLES: The President's five climate change principles include: that the policies should be guided by science, rely on market-based, common-sense tools, that we should seek win-win solutions, that global participation is essential to addressing the global problem of climate change, and that we must have regular common-sense reviews of the economics and science of climate change.

SOUND AND SENSIBLE THREE-STAGE APPROACH: Reflecting his five key principles, the President's plan includes three stages: Stage 1 includes priming the pump through programs such as R&D, tax incentives, incentives for early action, and Federal leadership, and industry consultations. Stage 2 builds upon the first stage by including a review and evaluation in preparation for the permit trading system. Stage 3 -- which does not occur for a decade -- involves meeting binding targets through a domestic and international emissions trading program. The President is committed to working with labor and Congress to insure that we give proper assistance to any workers dislocated by the changes in energy usage inherent in any climate change plan.

INITIAL ACTION PLAN: The President's immediate action plan includes 9 elements:

1. *\$5 Billion in Tax Cuts and Federal R&D:* To spur energy efficiency and encourage the development and deployment of lower-carbon energy sources, the Administration supports a major new package of tax cuts and R&D spending amounting to \$5 billion over five years.

2. *Credit for Early Action:* To provide an immediate incentive for near-term actions, the President is committed to ensuring that firms acting early are rewarded appropriately.

3. *Industry-by-Industry Consultations:* The Administration challenges key industry sectors to prepare plans over the next 9 months on how they can best reduce emissions.

4. *Encouraging the Use of Energy-Efficient Products:* The President will complement his tax incentives, commitment to early action credit, and industry consultations by engaging in a broad-based effort to expand the use of *existing* energy-efficient technologies.

5. *Federal Procurement and Energy Use:* The Department of Energy will spearhead a comprehensive effort to reduce greenhouse gas emissions from Federal sources.

6. *Electricity Restructuring:* To deliver a significant downpayment on emission reductions, while saving consumers billions, we will pursue a bold plan for electricity restructuring.

7. *Setting a Concentration Goal:* The United States supports developing a specific, long-term concentration goal with the assistance of the National Academy of Sciences and other bodies.

8. *Bilateral Dialogues:* In addition to pursuing agreement in Kyoto, the Administration will pursue bilateral dialogues with key developing countries to promote clean energy.

9. *Economics and Science Reviews:* The President proposes regular scientific and economic reviews. These reviews will ensure that policy-makers have the best possible information on climate change.

WIN-WIN: There are numerous win-win solutions to reducing carbon emissions. For example, a breakthrough in fuel cell technology announced yesterday will clear the way toward developing cars that are three times as efficient as today's models -- cutting pollution while also cutting driving costs.

INITIAL CLIMATE CHANGE ACTIONS

October 22, 1997

President Clinton has proposed nine immediate actions to begin addressing climate change:

1. Tax Cuts and Federal R&D: To spur energy efficiency and the development of lower-carbon energy sources, the Administration supports a major new package of tax cuts and R&D spending amounting to \$5 billion over five years. Many of the ideas from the recent report of the President's Committee on Science and Technology (PCAST) will be considered in constructing this package.

2. Credit for Early Action: To provide an immediate incentive for near-term actions to cut emissions, the Administration is committed to ensuring that firms which act early are rewarded appropriately. We will work with companies to build a program that appropriately rewards those who take prompt and early actions before the beginning of the mandatory emissions budget period in Stage 3.

3. Industry-by-Industry Consultations: The Administration challenges key industry sectors to prepare plans over the next 9 months on how they can best reduce emissions, including how the Federal government can remove regulatory hurdles that discourage energy efficiency. The Administration will work in partnership with industry to develop sensible efficiency standards in a variety of areas.

4. Encouraging the Use of Energy-Efficient Products: As the Department of Energy's 5-Labs study illustrates, many existing technologies produce win-win solutions to reducing carbon emissions -- but nonetheless are still not widely used. The President is committed to expanding their reach. He will therefore complement his other programs by engaging in a broad-based effort to expand the use of existing energy-efficient technologies -- while also spurring the development of new technologies.

5. Federal Procurement and Energy Use: To reduce greenhouse gas emissions from Federal sources, DOE will spearhead a comprehensive effort that includes expanded performance contracting to make Federal buildings more energy-efficient, improved Federal procurement of energy-efficient technology, and partnerships to improve the energy efficiency of Federal aircraft, ships and vehicles. Federal agencies will also be called upon to assess emissions in major initiatives.

6. Electricity Restructuring: To spur further efforts to clean our air and deliver a downpayment on greenhouse gas emission reductions, while saving consumers billions, we will pursue a bold plan to restructure the energy sector. It is time to change the rules that are often more than 70 years old -- stifling innovations that can save money and impede newer, cleaner technologies.

7. Setting a Concentration Goal for Greenhouse Gases in the Atmosphere: The goal of the existing climate treaty is to stabilize concentrations of greenhouse gases, but the specific concentration has never been defined. The U.S. supports developing a specific, long-term goal, with the assistance of the National Academy of Science and other appropriate bodies.

8. Bilateral Dialogues: In addition to pursuing agreement in Kyoto, the Administration will pursue bilateral dialogues with key developing countries to promote clean energy.

9. Economics and Science Reviews: The President proposes regular scientific and economic reviews, to ensure that policy-makers have the best possible information on climate change.

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PRESIDENT CLINTON'S FIVE CLIMATE CHANGE PRINCIPLES

October 22, 1997

Global climate change is the premier environmental challenge and opportunity of the 21st century, and the risks it poses justify sensible preventive steps. Addressing this issue is one of the United States' greatest imperatives, for this and future generations. Recognizing the solid foundation of climate science, President Clinton is committed to strong and sensible action to reduce greenhouse gas emissions -- including realistic and binding emissions targets.

President Clinton's climate change plan is based on **five key principles**:

- **Guided by science.** The vast majority of the world's scientists have concluded that if the countries of world do not work together to cut greenhouse gas emissions, temperatures will rise and disrupt the global climate. Indeed, most scientists say this process has already begun. But there is much we still don't know about how the climate and human health will react to increased greenhouse gas concentrations. That's why the President's plan includes regular science reviews, to ensure that our policies are guided by the best science available.
- **Market-based, common-sense tools.** We have learned that the costs of protecting the environment is substantially lower if we harness the power of markets to do so. That's why the President's plan emphasizes flexible and market-based mechanisms. His plan includes a domestic and international permit trading system for greenhouse gas emissions, similar to the highly successful permit trading system that has dramatically cut acid rain at a fraction of the predicted cost.
- **Seek win-win solutions.** There are a multitude of win-win solutions to reducing carbon emissions, that can improve our energy efficiency and save consumers money. For example, a breakthrough in fuel cell technology announced yesterday will clear the way toward developing cars that are twice as efficient as today's models -- cutting pollution while also cutting driving costs. The President believes that we must seek such win-win solutions to addressing climate change.
- **Global participation.** Climate change is a global problem, and requires a global solution. A ton of carbon emitted in Argentina has just as much effect on the global climate as a ton of carbon emitted in the United States -- and within the next few decades, emissions from developing countries are expected to exceed those from developed countries. And many win-win opportunities exist to reduce greenhouse gas emissions in developing countries. That's why the United States has spear-headed joint implementation projects and the President has committed that the United States will not adopt binding obligations without developing country participation.
- **Common-sense economic reviews.** Our knowledge of the challenges and opportunities we face will grow over time. Therefore, the President is calling for regular 5-year economic reviews and updates, to ensure that policy-makers, both in the Administration and in Congress, have the best possible information on how the economy is responding to the effort to address climate change, how other countries are performing relative to their own commitments, and how the climate is changing in response to human activities.

THE PRESIDENT'S THREE-STAGE PLAN ON CLIMATE CHANGE

October 22, 1997

Reflecting his five key principles, the President's plan will proceed in three stages:

- **Stage 1: Priming the Pump Through R&D, Tax Incentives, Incentives for Early Action, Federal Leadership, and Industry Consultations.** The first stage of the President's package includes a 9-point action plan -- including \$5 billion in tax incentives and spending for R&D and energy efficiency, incentives for early action, a set of Federal government energy initiatives, and industry-by-industry consultations to explore their best ideas on how to reduce emissions in a cost-effective manner (including market-oriented standards for energy efficiency). The first economic review would occur near the end of Stage 1.
- **Stage 2: Review and Evaluation.** The second stage, which would begin around 2004, will build upon the programs adopted in Stage 1, by including a review of our progress and an evaluation of next steps as we move toward a market-based permit trading system for carbon emissions. During this second stage, the details of the permit system would be refined and perhaps tested. Such a permit system is similar in concept to the one that dramatically cut acid rain emissions -- although the scale would be significantly larger than the current acid rain program. The second economic review would occur near the end of Stage 2.
- **Stage 3: Meeting Binding Targets Through Domestic and International Emissions Trading Program.** In the third stage, we would reduce emissions to 1990 levels by 2008-2012, and below 1990 levels in the 5-year period after that, through a market-based domestic and international emissions trading system. Before beginning this third stage, the second economic update and review would allow Congress and the President to evaluate how the economy had responded to a decade's worth of experience in the first two stages of the President's plan. The President is committed to working with labor and Congress to insure that we give proper assistance to any workers dislocated by the changes in energy usage inherent in any climate change plan.

This three-stage program recognizes the long-term nature of the effort to address climate change in three ways:

- By adopting a graduated approach to emissions reductions, it allows us to exploit the tremendous opportunities for win-win reductions first.
- By adopting a system of regular scientific and economic updates and reviews, it allows us to monitor our progress and re-assess our success in reducing emissions, the state of scientific knowledge, and how the economy is responding to our efforts. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period.
- By insisting that the United States will not adopt binding obligations without developing country participation and by emphasizing the importance of an international trading system and joint implementation, we take advantage of low-cost reduction possibilities wherever they occur -- either here or abroad.

COMPREHENSIVE FRAMEWORK FOR EFFECTIVE, SENSIBLE ACTION

October 22, 1997

GREENHOUSE GAS EMISSION REDUCTION TARGET

Under the current international climate change agreement (signed in Rio de Janeiro in 1992), industrialized countries accepted a non-binding emissions reduction goal. Most nations, including the United States, will fall short of meeting it. This fact, coupled with better scientific evidence on the seriousness of the climate change threat, led the U.S. to propose last year that a new agreement set binding limits on emissions. The proposed U.S. emissions target is designed to provide important environmental gains while maintaining strong economic growth. It is:

- **Realistic.** Seeks to return U.S. emissions to 1990 levels in the period 2008-2012 and reduce them further thereafter. Rejects European proposal for more stringent early reductions, as well as the “do-nothing” approach of some interests.
- **Achievable.** By providing incentives for early action to reduce emissions, attacking domestic energy inefficiencies, securing flexible international implementation mechanisms, and putting in place a market-based domestic emissions trading system, the U.S. can reach 1990 levels in the proposed time frame with minimal economic costs.
- **Meaningful.** Achieving 1990 levels in the period 2008-2012 would amount to almost a 30 percent reduction off a business-as-usual path, an important first step on the road toward stabilizing concentrations of greenhouse gases in the atmosphere. Emissions accounting will include all greenhouse gas sources and sinks (including reforestation).

FLEXIBLE, MARKET-BASED IMPLEMENTATION

Just as the effects of climate change will be felt globally, so too are the causes of climate change global in nature. Greenhouse gas emissions do equal harm to the atmosphere whether they come from a coal plant in China or a bus in Boston. For this reason, any regime to reduce greenhouse gases must be global. It must also allow all nations the ability to seek out the most efficient way of reducing emissions so that the greatest gains are achieved at the least cost. For these reasons, the United States strongly supports the inclusion in a new climate change agreement of two innovative, flexible mechanisms for reducing emissions:

- **International Emissions Trading –Using Markets to Lower Costs.** The principle of emissions trading is to use the efficiency of the market place to achieve environmental objectives at the lowest possible cost. Under an international emissions trading regime, a country (or firm) would be able to meet its emissions reduction target by reducing pollution itself, purchasing reductions from another country (or firm) that was able to achieve excess gains, or some combination of both.
- **Joint Implementation –A Global Solution to Low-Cost Reductions.** Joint Implementation (JI) is an innovative, market-based approach for addressing global climate change that uses international partnerships to achieve low-cost reductions in greenhouse gas emissions. Under JI, a company in the United States invests in a project which reduces emissions in another country and uses those reductions as a less expensive means of meeting its own target.

PARTICIPATION OF DEVELOPING COUNTRIES

In addition to its non-binding emissions reduction aim for developed countries, the Rio climate change agreement required all countries to take policies and measures to reduce emissions. Many developing countries have made real strides, through, for example, reducing energy subsidies. Nevertheless, given that developing country emissions will eclipse those from the developed world within several decades, these countries need to do more. Accordingly, the U.S. calls on developing countries to strengthen their existing commitments and to agree that their obligations must increase over time to include binding emissions limits. Our principles include:

- **Global Participation.** All countries must participate. Every nation would be required to take meaningful actions to limit emissions. The U.S. will not assume binding obligations until developing countries agree to participate meaningfully in the challenge of addressing climate change.
- **Equity.** The obligations of poorer and less developed countries should take into account their state of economic development and their relative contribution to the climate change problem.
- **Assistance.** While insisting that developing countries take meaningful actions to address climate change, the U.S. recognizes that many of these countries face significant development challenges that hamper their ability to reduce emissions. President Clinton is reemphasizing his commitment to working with these nations to help build more sustainable energy futures. This includes a \$1 billion package of assistance from USAID and a renewed commitment to provide financial assistance through the Global Environment Facility, as well as our pathbreaking joint implementation proposals.

FACT SHEET ON INTERNATIONAL EMISSIONS TRADING

October 22, 1997

Description

The principle of emissions trading is to use the efficiency of the market place to achieve environmental objectives at the lowest possible cost. Under an international emissions trading regime, a country (or firm) would be able to meet its emissions reduction target by reducing pollution itself, purchasing reductions from another country (or firm) that was able to achieve excess gains, or some combination of both.

Given an effective international regime, emissions trading provides a powerful incentive for nations to reduce below the amount required and then sell excess reductions to others who in turn avoid more costly actions. The U.S. has proposed that emissions trading be permitted among all countries that agree to a binding emissions target.

How it would work

Consider a simplified example for how international emissions trading might work. Country A and Country B must reduce emissions by 100 tons each. It might cost each country \$1,000 to reduce 100 tons individually for a total cost of \$2,000. However, if Country A could reduce its emissions by 200 tons for a total cost of \$1,500 and sell half of these reductions to Country B, the overall target would be achieved for \$500 less, a savings of 25 percent.

U.S. experience

Emissions trading is being used successfully at the domestic level to reduce sulfur dioxide emissions (which cause acid rain) under the Clean Air Act. Achieving targeted reductions was originally estimated to cost \$5 billion annually if traditional controls had been required and \$4 billion with emissions trading. A GAO estimate after the initial stage of emissions trading now puts the cost at \$2 billion per year, or 60 percent below the original estimate with pollution reductions significantly ahead of schedule. Emissions trading has also been successful in cutting the costs of phasing out leaded gasoline and in curbing the production of chlorofluorocarbons which deplete the ozone layer.

Cost savings

According to the 1997 Economic Report of the President, international emissions trading for carbon dioxide could lower the cost of reductions by 50 percent below the minimum achievable using purely domestic programs.

FACT SHEET ON JOINT IMPLEMENTATION

October 22, 1997

Description

Joint Implementation (JI) is an innovative, market-based approach for addressing global climate change that uses international partnerships to achieve low-cost reductions in greenhouse gas emissions. Under JI, a company in the United States invests in a project which reduces emissions in another country and uses those reductions as a less expensive means of meeting its own target. The U.S. has proposed that a formal regime that gives credit for JI projects be part of a new climate change agreement.

How it would work

Consider the example of a project announced today as part of a pilot program on joint implementation instituted by the United States. Two U.S. companies (Solar Electric Power and Light of Washington, D.C. and Trexler and Associates, Inc of Oak Grove, Illinois) will work with Renewable Energy Services Company of Asia, Ltd. to market and install 812,000 solar home systems in Sri Lanka. These systems will replace the use of kerosene lamps for lighting and the use of diesel-electric charging of lead-acid batteries for powering small home appliances. The result will be a 1.5 million metric ton reduction in greenhouse gas emissions and cleaner energy for tens of thousands of people.

U.S. experience

Under the U.S. pilot program on JI (formed under the existing climate change convention), 28 projects have been approved in 12 countries, including Costa Rica, Bolivia, the Czech Republic, and Russia. These projects span a range of technologies, including solar, geothermal, and wind power; fuel switching for district heating; biomass energy; and reforestation. U.S. companies and organizations already participating include Commonwealth Edison, Wisconsin Electric Power, Kenetech Windpower, Sealweld Corp., American Electric Power, PacificCorp, Detroit Edison, Clean Air Coalition, and many others.

Benefits

Lower costs: JI provides a strong incentive for companies and countries to search the globe for the lowest cost ways of reducing greenhouse gas emissions.

Expanded exports of U.S. technology: The enormous potential for JI projects around the world creates major opportunities for the increased sale of U.S. energy efficiency and alternative energy technologies.

Technology transfer: Increased reliance on more energy efficient technologies and less carbon-intensive energy alternatives will help developing countries meet their growing energy needs with more environmentally sustainable solutions.

FACT SHEET ON ELECTRICITY RESTRUCTURING

October 22, 1997

As part of his climate change initiative, President Clinton announced his support for appropriately crafted electricity restructuring legislation that will save consumers billions of dollars while reducing carbon emissions.

Description

The electricity sector is our nation's most capital intensive industry -- and has sales of over \$200 billion. Under electricity restructuring, competition would be the primary mechanism to set electricity generation prices. Utilities would open up their distribution and transmission wires to all qualified sellers. The transmission and distribution of electricity would continue to be regulated because they will remain monopolies for the foreseeable future. The system would be restructured, not deregulated. Done correctly, this process can save consumers in their utility bills and reduce carbon emissions. A properly structured retail competition system can deliver electricity more efficiently, and just as reliably, as our present system of regulated monopolies.

Cost savings

Most experts are confident that restructuring will reduce the cost of electricity, although there is a diversity of views over the potential size of the savings. Because the industry is so large, even modest savings represent billions of dollars. DOE economists estimate potential savings of \$20 billion a year, which would mean average direct savings of about \$100 a year to a typical family of four and indirect savings to such a family through lower cost goods and services of about another \$100 a year. Other studies predict far larger savings.

Carbon reductions

With appropriate market-based provisions, electricity restructuring legislation could reduce carbon emissions by creating incentives to produce and use electricity more efficiently and with less pollution. As emphasized at the White House Conference on Climate Change, two-thirds of the energy used to produce electricity is currently wasted. Restructuring should introduce incentives for reducing this waste heat. Restructuring legislation could also include other provisions -- such as various incentives and mandates to promote energy efficiency and renewable energy -- that offer potential carbon savings.

Next steps

The Administration looks forward to working with interested parties on crafting comprehensive electricity restructuring legislation.

FACT SHEET ON FEDERAL ENERGY MANAGEMENT

October 22, 1997

Aggressive energy management can substantially reduce carbon emissions from the activities of the Federal government, which has the nation's largest energy bill at almost \$8 billion per year. Significant strides have already been made --energy consumption per square foot in Federal buildings is down 15 percent and energy use in civilian and military vehicles is down about 27 percent from 1985 levels. However, we can do much more.

The initiatives below will reduce Federal emissions of greenhouse gases through enhanced focus on energy efficiency and renewable energy. They address areas which can deliver the greatest energy savings, best leverage private sector funding and improve the Federal procurement system.

1. Expand Energy Savings Performance Contracting

- Expand use of Energy Savings Performance Contracts. ESPC uses private investment capital and expertise to accomplish energy and cost saving projects in Federal facilities. When a private sector firm which has invested in federal energy efficiency improvements is fully repaid from its share of the delivered savings, all additional savings accrue to the government. Streamlined ESPC contracts put in place by DOD and DOE are beginning to speed large investments in energy projects at Federal facilities. However, use of ESPC's is still limited in the Federal government. The Office of Management and Budget will lead an effort to increase their use. It will include new policy and budget guidance for agencies. ESPC authority can also be extended to other areas including:
 - *Leased Federal buildings.* These include buildings where the Government either pays for the energy use directly or in other building where ESPC can provide a better lease for the Government.
 - *Federal mobility.* There may be great potential for energy savings from more efficient energy use in aircraft, ships and vehicles.
 - *Water conservation.* Water conservation projects save energy because each gallon contains energy from pumping, heating, chilling or treatment.
 - *Non-federal facilities* where the Government makes indirect payment of energy expenses. These include, for example, National Guard facilities which the state owns but where the Federal Government covers utility expenses and public housing facilities which are Federally supported but owned by public housing authorities.
 - *State and local government facilities.* Federal energy experts can help transfer ESPC techniques to state and local governments so they can access this important approach to energy efficiency.

2. Improve Federal Procurement of Energy Efficient Technology

- *Accelerate the development of Product Energy Efficiency Recommendations.* These cover products that are in the top 25 percent of their class for energy efficiency or have Energy Star ratings, for example electric motors and air conditioning chillers. They provide a guide to Federal purchasers.

of the energy efficiency level to request in a specification or procurement.

- *Establish as standard practice, the purchase of energy efficient products for Government use.* Traditionally, federal purchases have been based on lowest price, ignoring the substantial savings many energy efficient products can achieve over their life. The Executive Office of the President will lead an interagency team to streamline and update Executive Orders and procurement practices to encourage the acquisition of these products. Use of alternative contracting vehicles to acquire energy-efficient products will be encouraged, and purchase of products in the top 25 percent of class for energy efficiency or conforming to Energy Star standards will become standard practice, subject to necessary exceptions. The initiative will be augmented by publication of a “best practices” buying guide and expanded training of purchasing decision-makers.
- *Use consolidated purchasing to stimulate markets and lower prices.* Consolidated Federal purchasing can stimulate commercial markets for new and emerging products which offer greater energy efficiency, lower operating costs, and sales opportunities for small businesses that produce these products.
- *Increase Federal procurement of renewable energy.* In states that have implemented retail competition in their electricity industry, Federal facilities will work with their suppliers to ensure that the facilities purchase competitively supplied non-hydro renewable energy at levels equivalent to the percentage specified in that state’s retail competition legislation.
- *Report Federal Agencies’ Contributions to Reduction of Carbon Emissions.* This initiative will develop an appropriate measurement methodology to convert currently available data on Federal energy use to carbon emissions to aid national carbon reduction efforts.

3. Building for the 21st Century

- *Establish a new level of excellence for Federal building construction and renovation that incorporates energy efficiency, quality, affordability, and sustainability.* By using the latest construction techniques and tapping the knowledge of the building community and local partners, agencies will work to ensure that new Federal buildings achieve energy efficiency increases of 30-50 percent by 2000 as compared to existing facilities. This will be accomplished through a “whole building” approach that treats buildings as integrated systems rather than a series of independent component selections.
- *Deploy solar technologies in Federal buildings.* Show Federal leadership by installing solar photovoltaic and solar thermal systems on 20,000 Federal roofs by 2010 in support of the President’s ‘Million Solar Roof Initiative’. Utilize alternative financing methods to provide the rapid infusion of investment necessary to support the cost-effective installation of these systems.
- *Expand the use of combined heat and power generation at Federal facilities.* Combined heat and power makes greater use of the waste heat produced in the generation of electricity.
- *Use biomass fuels in Federal boilers.* Biomass would come from agricultural and wood waste and methane from landfill and treatment plant operations.
- *Expand public awareness of energy efficient technologies.* By showcasing energy efficient and

renewable energy technologies at National Parks, Federal offices, embassies, military bases, and other facilities the public will be more aware of their potential to reduce pollution and lower costs.

- *Seek increased resources for civilian agency staffing to expand energy management activities and complete energy efficiency projects.* In recent years, budgets for energy management in several key agencies have been cut by more than 80 percent. These Federal appropriations often provide the most cost-effective funding for Federal energy efficiency projects.

4. Improve Aircraft, Ship, and Heavy Vehicle Fuel Efficiency

- *Public-Private partnerships to improve the energy efficiency of Federal aircraft, ships and vehicles.* Energy use in Federal aircraft, ships and vehicles, predominantly in the military services, is responsible for 43 percent of the \$8 billion Federal energy bill. This initiative would improve the energy efficiency of main propulsion systems, with particular emphasis on medium and heavy diesel engines and high performance turbine technology. The initiative -- designed along the lines of the Partnership for a New Generation of Vehicles -- would involve a partnership between Federal agencies and the private sector. Advances under this initiative will have significant application in commercial markets. In addition, the initiative will focus on near-term energy efficiency opportunities such as lighting retrofits on ships.
- *Increase the use of alternative fueled vehicles (AFVs) in the Federal fleet.* Federal agencies are increasing the use of alternative fuel vehicles which, among other things, helps reduce emissions of greenhouse gases. This initiative would enhance the focus of the current program on AFVs such as electrics, hybrid-electrics, natural gas and renewable-fueled vehicles.

5. Greenhouse Gas Assessments

- Federal agencies will be required to assess their greenhouse gas emissions in major actions they undertake.

FACT SHEET ON U.S. GLOBAL CHANGE RESEARCH PROGRAM

October 22, 1997

Background: The U.S. Global Change Research Program (USGCRP) is a National Research Program conducted under the auspices of the National Science and Technology Council (NSTC) Committee on Environment and Natural Resources. The NSTC is a cabinet-level council established by President Clinton in November 1993 to coordinate Federal science and technology efforts. The program's fundamental purpose is to increase understanding of the Earth system, and of human and naturally induced changes in the Earth's environment, and thus provide a sound scientific basis for decision making on global change issues. The USGCRP began as a Presidential Initiative, and was codified by the Global Change Research Act of 1990. The overall FY 1997 USGCRP budget was \$1.81 billion.

The core program of the USGCRP is focused on four key scientific areas:

- *Seasonal to Interannual Climate Variability:* The development and refinement of forecasts of seasonal and interannual climate variability, including study and prediction of the El Niño phenomena.
- *Climate Change Over Decades to Centuries:* Analysis and projection of the effects of long-term climate change on natural resources, public health, and socio-economic sectors.
- *Changes in Ozone, UV Radiation, and Atmospheric Chemistry:* Research on the causes, rate, magnitude, and human health and ecological consequences of changes in stratospheric ozone, UV radiation, and atmospheric chemistry.
- *Changes in Land Cover and Terrestrial and Aquatic Ecosystems:* Research on the causes and consequences of land-cover changes, and on basic processes governing the functions and structure of terrestrial, aquatic, and marine ecosystems.

New Research Directions: Global change research is providing the information about the changing Earth system, and in particular, about climate change, that is needed to achieve a sustainable future. New research efforts include:

- *A National Assessment of Climate Change Impacts* to aggregate information across regions and sectors, analyze national-scale consequences, and support development of mitigation and adaptation strategies.
- *Improved Regional-scale Analyses*, including regional estimates of the rate and magnitude of climate change, analyses of the environmental and socio-economic consequences of climate change in the context of other stresses, and integrated assessments of the implications for society and the environment of climate change.
- *Regional Workshops* to examine the vulnerabilities of various regions of the United States to climate change.

FACT SHEET ON PNGV

October 22, 1997

Announced at the White House on September 29, 1993 by President Clinton, Vice President Gore, and the CEOs of the domestic auto makers, the Partnership for a New Generation of Vehicles (PNGV) is a partnership between the U.S. Federal government (7 agencies and 20 federal laboratories) and Chrysler, Ford, and General Motors that aims to strengthen America's competitiveness by developing technologies for a new generation of vehicles. Its programs include research support for over 350 automotive suppliers, universities, and small businesses.

PNGV's long-term goal is to develop production prototypes of an attractive, affordable car that can meet all applicable environmental and safety times and achieve up to three times the fuel efficiency of a comparable automobile sold today. This would mean that a typical midsize car would be able to achieve 80 mpg. The partnership also aims to (i) improve automotive manufacturing, and (ii) introduce efficiency technologies into production vehicles as soon as they are economically justified.

There are numerous reasons for pursuing PNGV, including:

- **Environmental:** Automobiles are a major contributor to atmospheric carbon dioxide, a major greenhouse gas. Already, concentrations of carbon dioxide are 25 percent higher than pre-industrial levels and are expected to double within the next century. Since the number of registered vehicles in the United States is expected to climb from 194 million in 1993, to as many as 270 million in 2010, PNGV's success is critical to any program of controlling US and world greenhouse gas emissions. It will also result in low cost methods for controlling the emissions that contribute to urban air pollution.
- **Reducing U.S. Dependence on Foreign Oil:** The United States currently imports 50 percent of the oil we consume -- this share is expected to grow to more than 60 percent by 2010. Petroleum imports make up ten percent of our country's import inventory and account for a large chunk of the nation's trade deficit. This dependence on foreign oil makes the United States vulnerable.

PNGV Status Report: The industrial partners are now in the process of selecting technologies that will be included in concept vehicles that will be completed by the turn of the century. The federal agencies are working to revise their research priorities to support both technologies that can be incorporated in production prototypes for 2004 and that can be integrated into even more advanced vehicles that would be designed in later years.

The goal of the program, while extremely ambitious, still seems possible given the advances in key technology that have been achieved during the life of the program. These include advances in production of low-cost, light-weight materials for the vehicle body and frame; electrical control systems, batteries; and compact, inexpensive fuel cells -- including the new technology for using gasoline to power fuel cells announced yesterday; and, advanced internal combustion engines for use in hybrid vehicles.

FACT SHEET ON FUEL CELLS

October 22, 1997

THE BREAKTHROUGH: A gasoline-powered technology that would allow you to double the fuel efficiency of a car and emit half the greenhouse gases and virtually no other air pollution. For the first time, gasoline was used to produce electricity from a pollution-free fuel cell, allowing the use of the existing gasoline infrastructure. Previously, fuel cells have been powered by hydrogen or methanol, which are less convenient for use in cars.

The Department of Energy, together with Los Alamos National Laboratory, and A.D. Little, have developed a breakthrough fuel processor, which can extract hydrogen from gasoline and other fuels such as ethanol and natural gas. Last week, this fuel processor was combined with a fuel cell from Plug Power to demonstrate for the first time that a fuel cell electric car could be fueled by gasoline or ethanol. This eliminates the limited driving range and lengthy recharging times associated with electric cars that run on batteries.

WHAT IS A FUEL CELL: The fuel cell converts the chemical energy of a fuel directly into usable electricity and heat without combustion. Fuel cells are similar to batteries in that both produce a direct current by means of an electrochemical process, but fuel cells can operate indefinitely as long as fuel is supplied to them. Fuel cells can provide power for cars and other applications, such as electricity and hot water for buildings.

The Department of Energy working with its partners has brought down the cost of proton exchange membrane (PEM) fuel cells by a factor of twenty in the last ten years. Continued R&D, coupled with the economies of scale from mass production of fuel cells as they enter the marketplace, should allow us to maintain this pace of cost reduction for another decade.

PARTNERSHIP FOR A NEW GENERATION OF VEHICLES (PNGV): The fuel cell breakthrough was accomplished as part of President Clinton's PNGV initiative, an innovative partnership between the government, the national laboratories, the big three automakers, and their suppliers. PNGV's goal is to develop a family-sized vehicle with triple the fuel efficiency of today's cars, without compromising cost or convenience.

POTENTIAL GREENHOUSE GAS REDUCTIONS: One-third of the nation's carbon dioxide emissions comes from the transportation sector, primarily cars. Fuel cell technology alone can directly double fuel efficiency and cut carbon dioxide emissions in half. In combination with other PNGV advances, such as lightweight materials and regenerative braking, fuel cells will allow a tripling of fuel efficiency and a further reduction in greenhouse gas emissions. Powering the fuel cell with renewable fuels, such as ethanol, could eliminate automotive greenhouse gas emissions entirely in the long run. The buildings sector also generates one-third of the nation's emissions of carbon dioxide. A building that uses the electricity and hot water from a fuel cell fueled by natural gas would have about half of the greenhouse gas emissions of the average building today. Plug Power expects to introduce fuel cells for homes and other buildings in 2000 that will provide electricity for less than the current residential rate. By 2010, fuel cells in buildings could be providing emissions savings of five million metric tons of carbon.

FACT SHEET ON PATH

October 22, 1997

What is PATH? We are working to develop a partnership for 21st century housing bringing together government and industry to develop, demonstrate and deploy housing technologies, designs and practices that can significantly improve the quality of housing without raising the cost of construction. The **Partnership for Advancing Technologies in Housing** includes government (DOE, HUD, EPA, Labor, Commerce, FEMA, and DOD) and industry working together develop, demonstrate and deploy housing technologies and practices so that homes can be built cheaper, more environmentally sustainable, more disaster resistant, and provide a safer working environment.

PATH has a five-part approach:

- Industry-driven research on new technologies and practices
- Working with industry on pilot programs building thousands of marketable houses
- Streamlining of federal, state and local codes and regulations
- Judicious use of existing authority on standards
- Information campaign to influence consumer demand

R&D: Support more funds for accelerated research and demonstration of inexpensive, highly efficient, highly attractive housing. Link with million solar roofs program.

Standards: The success of PATH will in some part be based on utilizing existing authorities on standards for a select few products that have the potential for great savings. There are five appliance/products currently under review by DoE; Clothes Washers, Ranges/Ovens, Ballasts, Residential water heaters, transformers. Of these, the Clothes Washers and Water Heaters seem to have greatest potential.

Creating Markets: The key to making the Partnership successful will be the ability to create markets and consumer demands for homes that meet the PATH goals. The Partnership will work with states and communities to help them understand the benefits of building these homes, and the opportunities it affords the communities for economic growth. The Partnership will attempt to gain agreements between communities that PATH homes can go through an expedited permitting process.

Education and Outreach: Marketing the benefits of these homes to consumers and to encourage consumers to begin to ask for homes that are built to the quality level of >PATH= homes. This will need to be an intensive campaign of getting the message out to communities, builders and developers. This will provide incentives for more and more builders to want to build these homes.

Pilots: The pilots will play an important role in the success of PATH. The pilot sites will begin of developing the markets and demonstrate the feasibility of the homes. The pilot sites can also act as training sites for builders and community leaders to learn about the benefits of the technologies and as a classroom for training on how to use the technologies. Sites under consideration are Stapleton Airport, Denver (Redevelopment of old airport site near downtown) and Florida (Working with the State to link energy and environment to disaster resistance and affordability).

Regulatory Streamlining: Working with states and communities on making the code approval process more efficient and less time consuming.

FACT SHEET ON POTENTIAL INDUSTRY SECTOR SAVINGS

October 22, 1997

The industrial sector produces approximately one-third of total U.S. emissions. We can cut emissions substantially in this sector through the right mix of tax incentives, accelerated research and development, electricity restructuring, and environmental regulatory reinvention. According to a recently released report from five of the nation's energy laboratories, programs such as the ones below can reduce emissions in the industrial sector in 2010 by 28 million metric tons even with no increase in energy prices.

Increasing Energy Efficiency: Energy audits encourage systematic approaches to energy efficiency that typically have high yields. Southwire Corporation, a large manufacturer of wire, rod, and cable, cut their use of natural gas by 60 percent and cut electricity use by 40 percent per pound of product produced. Motors consume 70 percent of industrial electricity used, and there is room for improving their efficiency. The Greenville Tube Company, for example, increased productivity by 15 percent, increased energy efficiency by 30 percent, reduced scrap by 15 percent, and achieved \$77,000 per year savings -- a 6 month payback -- by improving the efficiency of their motors.

Cogeneration (Combined Heat and Power): New technologies available in the industrial sector will allow us to capture the waste heat the U.S. now throws away. With the right policies, industrial cogeneration of natural gas or biomass could cut annual carbon emission significantly by 2010. Advanced turbines developed by DOE with industry will be available in three years (orders are already being taken). They have an overall efficiency of 80 percent to 90 percent, produce steam together with low-cost electricity and significantly reduce NOx emissions. These turbines can run on natural gas or biomass. Some industries have their own low-cost biomass feedstocks (for example, black liquor gasification in the pulp and paper industry), which makes possible cogeneration with nearly zero carbon emissions.

Expanding Industries of the Future: The seven most energy-intensive industries—steel, aluminum, petroleum refining, chemicals, pulp and paper products, glass, and metal casting—account for about 80 percent of the carbon emissions in U.S. manufacturing and more than 90 percent of the hazardous waste. Industry, partnering with the Department of Energy, has developed long-term visions of energy-efficient, low-polluting, highly competitive "Industries of the Future" as well as technology roadmaps to identify an R&D and deployment pathway to achieving the vision. Visions typically foresee annual energy efficiency improvements of 1.0 percent to 1.5 percent for two decades.

FACT SHEET ON POTENTIAL BUILDINGS SECTOR SAVINGS

October 22, 1997

The buildings sector also produces approximately one-third of total U.S. emissions. There is substantial opportunity to improve the energy efficiency of our buildings and the appliances in them. Many of these technologies improve the quality of service delivered (i.e. higher quality lighting), and have also been documented in a number of cases to improve productivity. According to a recently released report from five of the nation's energy laboratories, programs such as the ones below can reduce emissions in the buildings sector in 2010 by 25 million metric tons even with no increase in energy prices.

Standards: Substantial carbon emissions reductions in 2010 can be achieved through existing authority of the Department of Energy to establish market-oriented efficiency standards for appliances, such as refrigerators and air conditioners. The Department of Energy uses a consensus-based approach in which manufacturers, environmentalists, consumer advocates, and the states work together to develop applicable standards.

Voluntary Programs: Significant carbon reductions in 2010 could also be achieved by expanding voluntary programs such as the joint EPA-DOE Energy Star program. Energy Star labeling has already transformed a number of markets. For example, it has cut the energy used by computers, monitors, and printers by 50 percent at virtually no incremental cost. It is now being extended to dozens of other products.

Adopting Best Electricity Engineering Practices: Electronic equipment consumes electricity in stand-by mode (even when not being used) generating 12 MMTs of carbon emission each year. Preliminary analysis suggests that 80 percent of that could be saved through adopting best engineering practices without reducing service.

Research and Development: Designing buildings with advanced technology can reduce energy consumption by 25 to 50 percent without increasing the building's initial cost. The extra cost of some of the energy-efficient equipment is offset by the smaller required heating and cooling system.

Combined Heat and Power: As in industry, we can reduce the carbon intensity of the buildings sector by accelerating the use of combined heat and power (CHP). Two CHP technologies—small turbines and proton-exchange membrane (PEM) fuel cells—can convert natural gas to useful energy with 80 to 90 percent efficiency, significantly cutting carbon emissions from a building.

FACT SHEET ON POTENTIAL TRANSPORTATION SECTOR SAVINGS

October 22, 1997

The transportation sector produces approximately one-third of total U.S. emissions. According to a recently released report from five of the nation's energy laboratories, programs such as the ones below can reduce emissions in the transportation sector in 2010 by 73 million metric tons even with no increase in energy prices.

High Efficiency Cars And Light Trucks: The goal of the President's Partnership for a New Generation of Vehicles is to produce cars that are three times more efficient than current vehicles with no compromise in size, safety, comfort or cost. The objective is a production prototype vehicle with a fuel efficiency of 80 mpg in 2004 and commercial availability soon after. A variety of efficient technologies such as hybrid vehicle design, advanced engines, regenerative braking and lightweight materials are under development. These technologies are also applicable to light trucks and sport utility vehicles, so that a PNGV for these heavier passenger vehicles is quite possible with an expanded research effort.

High efficiency heavy trucks: Ongoing federal R&D on advanced diesel engines and lightweight materials have the potential to substantially reduce carbon emissions from heavy trucks. These technologies are projected to be available by about 2003 and be quickly adopted by trucking manufacturers since energy is a major cost component of freight transportation (a truck typically gets 7 to 8 miles per gallon while traveling over 50,000 miles a year).

Advanced Efficient Aircraft and Rail: Ongoing federal R&D on advanced aircraft engines, improved airframes, and air traffic control have the potential to improve aircraft energy efficiency by 35 percent, with an additional increment of carbon emissions reductions achieved by increasing the efficiency of trains.

Low-Carbon Fuel: Government-industry R&D partnerships have brought the cost of ethanol from cellulosic waste (such as crop waste) and dedicated crops (such as switchgrass) from \$3.60 per gallon in 1980 to \$1.20 per gallon today. Such fuels are carbon neutral because the crops capture carbon dioxide when they grow and release it during combustion.

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National Geographic Speech

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White House Press Release

REMARKS BY THE PRESIDENT ON GLOBAL CLIMATE CHANGE

THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release

October 22, 1997

REMARKS BY THE PRESIDENT ON GLOBAL **CLIMATE CHANGE**

National Geographic Society
Washington, D.C.

2:57 P.M. EDT

THE PRESIDENT: Thank you very much. Mr. Murphy, Mr. Vice President, to all of you who are here. I thank especially the members of Congress who are here, the leaders of labor and business who are here, all the members of the administration, and especially the White House staff members that the Vice President mentioned and the Secretary of Energy, the Administrator of the EPA, and the others who have helped us to come to this moment.

On the way in here we were met by the leaders of the National Geographic, and I complimented them on their recent two-part series on the Roman Empire. It's a fascinating story of how the Empire rose, how it sustained itself for hundreds of years, why it fell, and speculations on what, if any, relevance it might have to the United States and, indeed, the West.

And one of the gentlemen said, well, you know, we got a lot of interesting comments on that, including a letter referencing a statue we had of the bust of Emperor Vespasian. And one of our readers said, why in the world did you put a statue of Gene Hackman in a piece on the Roman Empire? (Laughter.) And I say that basically to say, in some senses, the more things **change**, the more they remain the same. (Laughter.)

For what sustains any civilization, and now what will sustain all of our civilizations, is the constant effort at renewal, the ability to avoid denial and to proceed into the future in a way that is realistic and humane, but resolute. Six years ago tomorrow, not long after I started running for President, I went back to my alma mater at Georgetown and began a series of three speeches outlining my vision for America in the 21st century -- how we could keep the American Dream alive for all of our people, how we could maintain America's leadership

that if the countries of the world do not work together to cut the emission of greenhouse gases, then temperatures will rise and will disrupt the **climate**. In fact, most scientists say the process has already begun. Disruptive weather events are increasing. Disease-bearing insects are moving to areas that used to be too cold for them. Average temperatures are rising. Glacial formations are receding.

Scientists don't yet know what the precise consequences will be. But we do know enough now to know that the Industrial Age has dramatically increased greenhouse gases in the atmosphere, where they take a century or more to dissipate; and that the process must be slowed, then stopped, then reduced if we want to continue our economic progress and preserve the quality of life in the United States and throughout our planet. We know what we have to do.

Greenhouse gas emissions are caused mostly by the inefficient burning of coal or oil for energy. Roughly a third of these emissions come from industry, a third from transportation, a third from residential and commercial buildings. In each case, the conversion of fuel to energy use is extremely inefficient and could be made much cleaner with existing technologies or those already on the horizon, in ways that will not weaken the economy but in fact will add to our strength in new businesses and new jobs. If we do this properly, we will not jeopardize our prosperity -- we will increase it.

With that principle in mind, I'm announcing the instruction I'm giving to our negotiators as they pursue a realistic and effective international **climate change** treaty. And I'm announcing a far-reaching proposal that provides flexible market-based and cost-effective ways to achieve meaningful reductions here in America. I want to emphasize that we cannot wait until the treaty is negotiated and ratified to act. The United States has less than 5 percent of the world's people, enjoys 22 percent of the world's wealth, but emits more than 25 percent of the world's greenhouse gases. We must begin now to take out our insurance policy on the future.

In the international **climate** negotiations, the United States will pursue a comprehensive framework that includes three elements, which, taken together, will enable us to build a strong and robust global agreement. First, the United States proposes at Kyoto that we commit to the binding and realistic target of returning to emissions of 1990 levels between 2008 and 2012. And we should not stop there. We should commit to reduce emissions below 1990 levels in the five-year period thereafter, and we must work toward further reductions in the years ahead.

The industrialized nations tried to reduce emissions to 1990 levels once before with a voluntary approach, but regrettably, most of us -- including especially the United States -- fell short. We must find new resolve to achieve these reductions, and to do that we simply must commit to binding limits.

Second, we will embrace flexible mechanisms for meeting these limits. We propose an innovative, joint implementation system that allows a firm in one country to invest in a project that reduces emissions in another country and receive credit for those reductions at home. And we propose an international system of emissions trading. These innovations will cut worldwide pollution, keep costs low, and help developing countries protect their environment, too, without sacrificing their economic growth.

Third, both industrialized and developing countries must participate in meeting the challenge of **climate change**. The

want to get moving now. We will start with our package -- energy-related incentives, tax cuts, and cooperative efforts with industry. We want to stimulate early action and encourage leadership. And as we reduce our emissions over the next decade with these efforts, we will perform regular reviews to see what works best for the environment, the economy, and our national security.

After we have accumulated a decade of experience, a decade of data, a decade of technological innovation, we will launch a broad emissions trading initiative to ensure that we hit our binding targets. At that time, if there are dislocations caused by the **changing** patterns of energy use in America, we have a moral obligation to respond to those to help the workers and the enterprises affected -- no less than we do today by any **change** in our economy which affects people through no fault of their own.

This plan plays to our strengths -- innovation, creativity, entrepreneurship. Our companies already are showing the way by developing tremendous environmental technologies and implementing commonsense conservation solutions.

Just yesterday, Secretary Pena announced a dramatic breakthrough in fuel cell technology, funded by the Department of Energy research -- a breakthrough that will clear the way toward developing cars that are twice as efficient as today's models and reduce pollution by 90 percent. The breakthrough was made possible by our path-breaking partnership with the auto industry to create a new generation of vehicles. A different design, producing similar results, has been developed by a project funded by the Defense Advanced Research Products Agency and the Commerce Department's National Institute of Science and Technology.

The Energy Department discovery is amazing in what it does. Today, gasoline is used very inefficiently in internal combustion engines -- about 80 percent of its energy capacity is lost. The DOE project announced yesterday by A.D. Little and Company uses 84 percent of the gasoline directly going into the fuel cell. That's increased efficiency of more than four times traditional engine usage.

And I might add, from the point of view of all the people that are involved in the present system, continuing to use gasoline means that you don't have to **change** any of the distribution systems that are out there. It's a very important, but by no means the only, discovery that's been made that points the way toward the future we have to embrace.

I also want to emphasize, however, that most of the technologies available for meeting this goal through market mechanisms are already out there -- we simply have to take advantage of them. For example, in the town of West Branch, Iowa, a science teacher named Hector Ibarra challenged his 6th graders to apply their classroom experiments to making their school more energy efficient. The class got a \$14,000 loan from a local bank and put in place easily available solutions. The students cut the energy use in their school by 70 percent. Their savings were so impressive that the bank decided to upgrade its own energy efficiency. (Laughter.)

Following the lead of these 6th graders -- (laughter) -- other major companies in America have shown similar results. You have only to look at the proven results achieved by companies like Southwire, Dow Chemical, Dupont, Kraft, Interface Carpetmakers, and any number of others in every sector of our economy to see what can be done.

higher profit. We have to tear down barriers to successful markets and we have to create incentives to enter them. I call on American businesses to lead the way, but I call upon government at every level -- federal, state, and local -- to give business the tools they need to get the job done, and also to set an example in all our operations.

And let us remember that the challenge we face today is not simply about targets and timetables. It's about our most fundamental values and our deepest obligations.

Later today, I'm going to have the honor of meeting with Ecumenical Patriarch Bartholomew I, the spiritual leader of 300,000,000 Orthodox Christians -- a man who has always stressed the deep obligations inherent in God's gift to the natural world. He reminds us that the first part of the word "ecology" derives from the Greek word for house. In his words, in order to **change** the behavior toward the house we all share, we must rediscover spiritual linkages that may have been lost and reassert human values. Of course, he is right. It is our solemn obligation to move forward with courage and foresight to pass our home on to our children and future generations.

I hope you believe with me that this is just another challenge in America's long history, one that we can meet in the way we have met all past challenges. I hope that you believe with me that the evidence is clear that we can do it in a way that grows the economy, not with denial, but with a firm and glad embrace of yet another challenge of renewal. We should be glad that we are alive today to embrace this challenge, and we should do it secure in the knowledge that our children and grandchildren will thank us for the endeavor.

Thank you very much. (Applause.)

END

3:24 P.M. EDT

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Climate Change Talking Pts.

Divider Title: _____

Global Climate Change: Basic Talking Points

February 1998

Core Message

Global climate change is a key environmental challenge for the 21st century. The world's best scientists tell us that this problem is real and that the threats it poses -- like increasingly frequent and severe storms and droughts and rising sea levels -- are too serious to ignore. It is our responsibility to take vigorous, sensible steps to solve this problem. If we fail to do so, our children and grandchildren will pay the price.

Over the course of the next year, the Clinton Administration will be working hard at home and with our partners abroad to address climate change. Domestically, we will begin implementing the President's plan for reducing greenhouse gas emissions. Internationally, we will build on the historic agreement reached in Kyoto, Japan last December.

President Clinton's Domestic Plan for Reducing Emissions

In October 1997, President Clinton outlined a comprehensive and economically sound plan for reducing U.S. greenhouse gas emissions. This plan emphasizes win-win initiatives designed to cut emissions by increasing energy efficiency; developing new, cleaner energy technologies; working with industry and others to promote sensible solutions; and relying on market-based mechanisms to ensure cost-effective reductions. The plan includes:

- **Tax cuts & research R&D.** The President's plan includes a vigorous program of tax cuts and R&D aimed at cutting greenhouse gas emissions. The package amounts to \$6.3 billion over 5 years -- \$3.6 billion in tax cuts and \$2.7 billion in new investment.
 - The **tax cut package** includes tax credits for fuel efficient cars of up to \$4,000 to consumers who purchase highly efficient vehicles. Also included are credits for rooftop solar electricity and hot water systems, for energy efficient homes and appliances, and for several forms of advanced power generation.
 - The **investment package** includes research and development spending in the three major carbon-emitting sectors of the economy -- buildings, transportation, and industry. Among projects to be expanded is the Partnership for a New Generation of Vehicles, a government-industry effort to develop super-efficient cars that are attractive, affordable, and meet all applicable safety and environmental standards. Substantial funds will also be invested in research partnerships for key renewable energy technologies.
- **Industry-by-industry partnerships.** A second component of the President's plan includes building partnerships with key energy producing and emitting industries to develop sector-by-sector initiatives to cut emissions. These partnerships will identify opportunities for working together to remove barriers to the development and widespread use of energy efficient technologies and practices.

- **Federal energy use and procurement.** A third element of the President's plan is to substantially reduce the Federal share of U.S. greenhouse gas emissions by improving the energy efficiency of Federal facilities and activities and by overhauling procurement practices. While achieving important reductions and cost savings in their own right, these actions can also set a powerful example for the private sector.
- **Electricity restructuring.** Another core element of the President's plan involves restructuring the electricity industry in such a way as to reduce greenhouse gas emissions while saving consumers millions on their energy bills.
- **Domestic emissions trading.** After a decade of experience in reducing emissions, the President has proposed a domestic emissions trading system beginning in 2008. The goal of such a regime is to ensure that further cuts are achieved as cost-effectively as possible. The U.S. has used emissions trading successfully to reduce the pollution that causes acid rain -- exceeding environmental objectives at costs far lower than anticipated.

The Kyoto Protocol on Climate Change

The Kyoto Protocol is an historic step toward building an effective international response to the problem of climate change. In key respects, the Protocol embraces U.S. proposals -- most notably bringing the power of the free market to bear in protecting the global environment. The essential elements of the Kyoto Protocol include binding emissions targets for industrialized nations and flexible market mechanisms for achieving those targets. Our work over the coming year will focus on achieving meaningful participation from developing countries and on establishing rules and guidelines for putting agreed market mechanisms into practice.

- **Emissions Targets.** The U.S. proposal entering Kyoto was for realistic and achievable emissions targets that were credible in reducing the dangerous buildup of greenhouse gases yet measured enough to safeguard U.S. prosperity at home and competitiveness abroad. We succeeded in achieving this goal by reaching agreement on:
 - The President's concept of a **multi-year time frame** for emissions reductions rather than a fixed, single-year target. The multi-year time frame will allow nations greater flexibility in meeting their targets.
 - The President's **specific time frame of 2008-2012**, rather than earlier periods favored by the European Union and others, giving us time to gradually phase in change and deploy new technologies cost-effectively.
 - **Differentiated targets** for the key industrial powers ranging from 6% to 8% below baseline levels of greenhouse gas emissions, with the U.S. agreeing to a 7% reduction. When changes in accounting rules for certain gases and offsets for activities that absorb carbon dioxide are factored in, the level of effort required by the U.S. is actually quite close to the President's original proposal to return emissions to 1990 levels by 2008-2012. The Kyoto target is at most a 3% real reduction below that proposal.

-- **Coverage of all six greenhouse gases** (the EU and Japan favored counting only three) **and of activities that absorb carbon dioxide**. Including the additional three gases and so called carbon "sinks" provides for more comprehensive environmental protection while also allowing for cost-effective measures to combat climate change.

- **Flexible Market Mechanisms.** Central to making the Kyoto Protocol a comprehensive, global, and cost-effective agreement are several market mechanisms that will provide U.S. companies with real flexibility in how they achieve emissions reductions. These include:

-- **The U.S. proposal on international emissions trading.** Through our domestic program to reduce acid rain, we have proven that emissions trading is an effective way of achieving environmental objectives at low cost.

-- **A Clean Development Mechanism (CDM)** establishing the right for U.S. companies to participate with developing countries in specific projects to cut emissions. The CDM encompasses the U.S. proposal on joint implementation and will provide companies with relatively low-cost emissions reduction opportunities overseas while offering developing countries the double benefit of foreign investment and clean technology.

- **Meaningful Participation from Developing Countries.** President Clinton and Vice President Gore have called for the meaningful participation of key developing countries in reducing emissions and will not submit the Kyoto Protocol to the Senate until such participation is achieved. The Kyoto Protocol makes a down payment on meaningful participation (principally through the CDM), and the Administration plans to focus extensive diplomatic efforts over the coming year on securing additional commitments.
- **Economic Implications.** Through our success in achieving realistic and achievable emissions targets (rather than the more extreme proposals of other nations) and in establishing cost-effective market mechanisms (rather than the mandatory, standardized policies and measures favored by others), the U.S. helped craft an agreement that is both environmentally strong and economically sound. Those who claim that addressing global warming will send energy prices soaring and damage the economy ignore key provisions that will dramatically reduce costs, such as international emissions trading, and also ignore the important effects of the President's plan for reducing emissions at home.

Remember: the naysayers have told us for the past 25 years that taking action to protect our environment would hurt the economy and they have been wrong over and over again. Today we have the cleanest environment in a generation and the strongest economy in a generation. Environmental protection and economic growth *have* gone hand in hand and they will in the case of global climate change as well.

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Climate Change Q & A
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THE PROBLEM

Is climate changing?

Yes. The global climate is changing most likely because of the increasing atmospheric concentrations of greenhouse gases. The climate in the U.S. is also changing. Observations show that temperatures and total rainfall are increasing; and patterns of rainfall are changing. Over the last century:

- Global average surface temperature increased by about 0.5 - 1.0 degree F.
- U.S. total precipitation has increased by about 6%.
- US intense precipitation events (over 2 inches in a day) have increased by about 20%.
- 1997 was the warmest year on record since measurements began, and 9 of the last 11 years are among the warmest on record.

The average rate of warming in the next century will probably be greater than any seen in the last 10,000 years.

Even if climate is changing, how do we know that humans are responsible?

The 1995 Second Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), the most rigorously and thoroughly reviewed compilation of climate change science ever produced, concluded that “the balance of evidence suggests a discernible human influence on climate.” Many pieces of evidence point to a human role:

- Observations show that fossil fuel combustion and other industrial and agricultural processes have increased atmospheric concentrations of greenhouse gases. CO₂ has increased 30% since 1860.
- Observations also show that the world is warming at an unusually rapid rate, has been warming over a long period, and is warmer this century than it has been since at least 1400 AD.
- The magnitude, timing, and geographic pattern of observed temperature changes closely matches the changes that models project from human activities, and does not match well with model simulations of natural change or changes seen in the natural record.

Isn't it true that we don't really know if observed climate changes are caused by increases in greenhouse gases?

Even though observed change in climate is not yet outside the bounds of natural variability, we can be confident that increases in greenhouse gases are contributing to observed climate changes. The basic physics of the greenhouse effect are well established. We know that Earth would be about 66 degrees F colder if there were no greenhouse gases in the atmosphere at all, and that life as we know it would not exist. We know that increasing the atmospheric concentration of greenhouse gases will warm our planet. We know that we have already added significant amounts of greenhouse gases to the atmosphere: the level of carbon dioxide in the atmosphere has increased from 280 parts per million by volume (ppmv) prior to industrialization to over 360 ppmv at the present time. And we know that the Earth has warmed during this same period of time.

Why should we act now? Before we undertake costly mitigation measures, why not put a whole bunch of money into resolving the science? If we find out that we really have a problem, then I am sure that we would all agree to act.

We currently spend around \$1.8 billion per year on global change research. The scientists are telling us that the climate is changing. We need to continue to learn about exactly how fast, how much and where climate will change, but we know enough *now* to know we are headed into uncharted territory very quickly. The potential impacts we face include increased droughts and floods and changing patterns of disease. Some think we are already seeing signs of these.

We must start to change the emissions paths we are on now for 3 reasons:

- The longer we continue on "business as usual" before deciding to reduce emissions, the sharper--and potentially more expensive--the later decreases will have to be.
- Starting the process will spur innovation and cost-effective technologies that can rapidly diffuse around the world to make the sustained reductions we will need to address this problem.
- Slowing the rate of climate change will make it more likely human and ecological systems can adapt to that change;

Why should we care if it gets a little bit warmer, especially if the changes are mainly nighttime and winter temperatures?

Societies around the world are dependent on the climates that they have experienced for centuries. For example, US agriculture relies on the timely occurrence, extent, and amount of winter snows and summer rains. Communities are dependent on recurring rains to fill their reservoirs and rivers, and recharge the groundwater. Changes in the patterns and frequency of extreme weather events could cause societal disruption, threatening human lives and infrastructure. Changes in seasonal and nighttime minimum temperatures can increase the range of pests and disease-bearing pests that affect crops and human health. Although technology can provide some buffer against climate fluctuations and change, many societal activities are dependent on the long-term climate that currently exists in each region.

SCIENCE OF THE GREENHOUSE EFFECT

How can humans have such a big effect when natural sources account for 97% of the carbon emissions in a year?

Natural sinks for carbon (i.e., forests, terrestrial vegetation and oceans) in general balance natural sources of carbon (e.g., dead and decomposing vegetation, forest fires, etc.). There is some buffering capacity within these natural sinks for carbon, however human activities have been increasing emissions of CO₂ and other greenhouse gases far faster than oceans and plants can absorb them, leading to a steady rise in the atmospheric concentrations of such gases. We add about 7 billion tons of carbon to the atmosphere each year. Even though this amount is small relative to the natural carbon cycle, human caused emissions of greenhouse gases is tipping **the Earth's carbon budget out of balance**. This imbalance is getting worse each year as we continue to add CO₂ to the atmosphere. The concentration of CO₂ has grown by about 30% since 1860 and will continue to grow significantly unless actions are taken.

Why is there a difference between satellite and surface-based measurements of temperature?

There is a discrepancy between surface measurements of temperature and satellite observations because these data records are derived from two distinct techniques that measure different aspects of the global temperature. In the first place, the satellite record is a calculation of atmospheric temperature in two layers of the atmosphere (the lower troposphere, from 1-7 km above ground (or ~5,000 to 30,000 feet), and the lower stratosphere, which is between 17 and 21 km above the ground), while the surface measurements are of temperature at the land and ocean surface. It is also important to remember that the satellite record is quite short compared to the surface-based instrumental record, which makes it very difficult to establish a meaningful trend with the satellite data and also makes comparison of the two records difficult. There are also additional factors that complicate comparison of the two records. Both techniques of measuring temperature are influenced by a variety of sources such as localized pollution or aerosols, volcanic eruptions, and the inherent differences in temperature variability depending on the nature of the substance being measured (e.g., ocean water, land, or air), but in different ways. When these and other factors are taken into account, however, both records indicate a warming trend over land.

Can't climate change be explained by variation in the amount of Solar radiation that reaches the Earth?

Recently, the question of whether solar cycles explain the temperature patterns seen over the last 100 years has been resurrected. This is not a new issue, but one that has been debunked many times before and is explicitly refuted in the 1995 IPCC report.

Clearly variation in solar radiation can affect the climate. But the signal and climate forcing from changes in the sun are very weak compared to the radiative forcing of greenhouse gases. So, if you argue that the earth's temperature responds to these very small forcings from the sun, and it clearly does, it will certainly respond to the bigger forcing we're giving it from greenhouse gases.

Isn't it true that most of the scientists who signed the "scientists letter" aren't climate specialists? What makes them qualified to speak out on this subject?

A wide variety of researchers signed the Scientists Statement on Global Climate Disruption (dated June 18, 1997). Many of them are climate researchers; all of them are individuals trained in the evaluation of evidence and theory, and their opinion should not be taken lightly. Because of their reliance on evidence, scientists are typically very cautious in their judgements. The fact that over 2600 of them have chosen to speak out on climate change is a powerful argument for the seriousness of this issue. Finally, the term "climate specialist" is a broad description: the highly inter-disciplinary nature of climate change science means that "climate specialists" should include people trained in biology, ecology, physics, sociology, chemistry, geology, economics, geography, oceanography, meteorology, medicine, political science, and other disciplines, as well as climatology.

How can we predict the future climate, when we can't even predict the weather for next week?

While we can only accurately predict the weather (the specific state of the atmosphere at a given time), several days into the future, improvements in modeling and observations now enable prediction of more general climate conditions, such as a wet or dry spring, up to a year in advance.

We are able to predict climate conditions further into the future by using General Circulation Models (GCMs) which simulate the working of the global climate. These models are certainly not perfect simulations, but they do a pretty good job of representing the observed long-term changes in past climate. Tests show that the latest models slightly underestimate past climate changes, suggesting that their predictions of future warming may also be a bit low -- not that the models are overestimating future changes as some critics suggest.

If we don't even know how much the climate will change, how can we project what the effects will be?

We can use General Circulation Models (GCMs) to simulate the future climate changes that could occur from various concentrations of greenhouse gas in the atmosphere. This permits us to project many of the large-scale effects that would occur from different levels of warming, even though we don't know what the exact level will be at any given time in the future. Climate change is already contributing to more rainfall in intense downpours and warmer temperatures, and these factors are already affecting water resources, agriculture, low-lying coastal regions, natural ecosystems, the potential range of disease-carrying insects, and many other sectors of the environment and society.

How can any projections of impacts be accurate when climate models don't give an accurate picture of regional changes in climate?

Although detailed predictions of what might happen in specific regions of the world are not yet possible, plausible estimates of possible impacts are starting to emerge. We can extrapolate these effects into the future, even though we cannot yet accurately simulate future climates on a regional-scale. Precise projection of regional-scale effects will require further improvements in modeling and computational capability.

How can anyone isolate the role of climate change from all the other illnesses and conditions that can affect people's health?

Although climate change is a part of a complex system of factors that can affect people's health through the outbreak and spread of disease, scientists using forecasts of short-term climate variability, such as those associated with El Niño, have been able to indicate the climatic potential of a disease outbreak. Climatic events, such as changes in temperature, precipitation, humidity, and storm patterns, have been shown to contribute to increased incidences of water-borne diseases such as hepatitis, shigella dysentery, typhoid, and cholera as well as vector-borne diseases such as malaria, dengue, yellow fever, hantavirus, and the plague.

Won't warmer weather increase agricultural productivity? And aren't warm weather and CO₂ good for plants?

Warming will increase agricultural productivity in some regions and decrease it in others. Warmer weather can cause changes in growing seasons, water availability, soil moisture, and precipitation, which will affect different agriculturally productive regions to varying degrees. And while it is true that CO₂ is good for plants, the ability of plants to take advantage of additional CO₂ can be offset by other stresses caused by climate change, such as severe droughts, floods, and extreme heat waves. Although it appears that agricultural production can be maintained at the global level in a warmer world, there will be significant regional shifts in productivity, and it appears that many of the poorest regions of world are likely to experience decreases in agricultural production.

How do we have any idea what emissions might be in 50 to 100 years?

We have a highly developed understanding current and historical emissions of most greenhouse gases, and especially good data for carbon dioxide, which makes up about 85% of US greenhouse gas emissions. We also have a good understanding of how economic activity and technological innovation have affected emissions. It is thus possible to create plausible scenarios for future levels of emissions that would occur from different combinations of technological development, economic growth, and population growth.

Climate Change
December 15, 1997

Q: DO YOU EXPECT CONGRESS TO RATIFY THIS AGREEMENT WITHOUT PARTICIPATION BY DEVELOPING COUNTRIES?

A: First, this is an historic and unprecedented step -- the Kyoto agreement involves 160 nations, and it recognizes the crucial importance of specific steps to address climate change. We are proud of the leadership provided by the President and the Vice President in forging this agreement. But as the President has always emphasized, this is a global problem requiring a global solution, and we must have meaningful participation by the developing countries before we ratify the agreement. As the President and Vice President have emphasized, the agreement does not yet represent meaningful participation by the developing countries.

So we have further work to do before we can send the agreement to the Senate. But let me emphasize again, that this is an historic first step in protecting the earth from the dangers that scientists have identified with global warming. **This agreement is a resounding success for the US: we have locked in the progress that we made with developing countries on joint implementation, and the progress we made with the EU and Japan on our overall approach.**

FOLLOW: WHEN WILL YOU SUBMIT THIS TREATY TO THE SENATE?

A: The President has emphasized that before we submit the treaty for ratification, we must have meaningful participation by key developing countries. While we made some progress in Kyoto with developing countries, there is clearly more to be done. We will be actively pursuing such meaningful participation over the coming months.

[If pressed: I don't want to create any artificial deadlines. This is clearly a high priority, and we will be working on it aggressively as we head toward Buenos Aires next year.]

Q: DID YOU CAVE, WITH A 7 PERCENT REDUCTION BY 2008-2012?

A: This is an historic and unprecedented step, and involved a very complicated set of international negotiations -- including 160 nations -- on a difficult and complex issue. To reach agreement, we had to show some flexibility. But other countries did also. First, the timetable 2008-2012 was the President's position and was opposed by many, including the European Union, who wanted to start the binding period in 2005. Second, the agreement includes six greenhouse gases, which had been pushed only by the U.S. And third, the treaty reflects our emphasis on market-based systems. For example, the market-based Clean Development Mechanism is basically our Joint Implementation proposal, and should allow U.S. firms to take advantage of low-cost reductions in developing countries. Finally, the target and timetable itself is actually fairly close to our initial position. Some of the apparent movement actually reflects different accounting for

carbon sinks and three of the six gases. When you account for these accounting changes, the 7 percent decline is fairly close to our initial position -- no more than 3 percent below it.

Q: WHAT ARE YOUR NEXT STEPS, GIVEN THAT SOME SENATORS HAVE SAID THIS AGREEMENT IS DEAD ON ARRIVAL?

A: We view the agreement in Kyoto not as the end of the process, but as a historic beginning. It is a truly significant first step in dealing with a long-term problem that ultimately must be solved not only by developed -- but also by developing countries.

We have adopted a two-step process to this problem. This agreement locks in hard commitments by the developed countries, as well as some commitments by the developing countries (such as on the Clean Development Mechanism).

The President has made very clear that the United States would not take on legally binding targets until there is meaningful participation by developing countries. Despite some important progress, that meaningful participation is not yet present. We will be working hard over the coming months and years to secure that participation.

We will also be moving ahead with our domestic initiatives, including the \$5 billion package of R&D and tax incentives that will be part of the President's budget.

Q: DON'T ECONOMIC MODELS SUGGEST THAT THE KYOTO AGREEMENT WILL TANK THE ECONOMY AND COST MILLIONS OF JOBS?

A: There is a long history of corporate-sponsored studies concluding that environmental protection must come at the expense of economic growth, so it's hardly surprising that we see the same phenomenon with climate change. But let's look at the record: Today, the unemployment rate stands at 4.6 percent, the lowest in more than two decades, and the economy has generated 14 million new jobs since 1993. Inflation is low, investment is booming, and real wages are rising. All this good news despite the doomsday predictions of self-interested economic studies that warned of the disastrous consequences of the Clean Air Act, the Clean Water Act, and other efforts to protect the environment.

FOLLOW: BUT AREN'T THERE SPECIFIC MODELS SHOWING THAT THE KYOTO AGREEMENT WILL COST MILLIONS OF JOBS?

A: Those models ignore several key elements of the President's approach to climate change:

1. They ignore the President's \$5 billion package of tax cuts and Federal R&D: To spur energy efficiency and the development of lower-carbon energy sources, the Administration supports a major new package of tax cuts and R&D spending amounting to \$5 billion over five years.

2. They ignore the potential for increased use of existing energy-efficient products: As the Department of Energy's 5-Labs study illustrates, many existing technologies produce win-win solutions to reducing carbon emissions -- but nonetheless are still not widely used. The President is committed to expanding their reach. The models referenced assume little change in the penetration rate of existing energy-efficient equipment. Engineering studies suggest that we could reduce emissions by 20 percent at no (or negative cost) by improving the penetration of energy-efficient equipment.

3. They ignore the President's Federal energy initiative: To reduce greenhouse gas emissions from Federal sources, the Department of Energy will spearhead a comprehensive effort that includes expanded performance contracting to make Federal buildings more energy-efficient, improved Federal procurement practices, establishment of a new level of excellence for Federal building construction and renovation, and partnerships to improve the energy efficiency of Federal aircraft, ships and vehicles.

4. They ignore electricity restructuring: To spur further efforts to clean our air and deliver a downpayment on greenhouse gas emission reductions, while saving consumers billions, we will pursue a bold plan to restructure the energy sector. It is time to change the rules that are often more than 70 years old -- stifling innovations that can save money and impede newer, cleaner technologies.

5. They ignore international emissions trading. Two key components of the Kyoto agreement are an international system of emissions permit trading, and the Clean Development Mechanism -- which allows U.S. firms to benefit at home from improving energy efficiency abroad. Studies suggest that international trading and the Clean Development Mechanism can substantially reduce the costs of emissions reductions.

6. They ignore the economic costs associated with climate change itself. Climate change will lead to increased flooding, sea-level rise, and other dislocation. So looking just at the impact of reducing emissions on GDP is misleading.

Q: DOESN'T THE PRESIDENT'S PLAN AMOUNT TO THE LARGEST ENERGY TAX INCREASE IN HISTORY -- \$200 BILLION A YEAR OR MORE?

A: Not at all. The President's plan includes tax *cuts*, not tax increases. Those tax cuts will be part of our \$5 billion package to spur energy efficiency and reduce greenhouse gas emissions. Our plan does not involve tax increases at all.

FOLLOW: BUT ISN'T A PERMIT SYSTEM JUST LIKE A TAX?

A: No. First of all, the permit system would not begin until we have a decade's worth of experience with tax cuts, R&D, early credit, and other incentives to reduce greenhouse gas emissions. We have also built in regular 5-year reviews, to monitor how the economy is responding in this effort to address a critical environmental problem. Finally, economists will tell you that there are several critical differences between a permit system

and a tax. [For example, a permit system provides insurance that a given quantitative target will be met, whereas a tax does not. And unlike a tax, permits could be granted to firms based on historical emissions levels.]

Q: WON'T ENERGY PRICES INCREASE, JUST AS IF YOU IMPOSED A TAX?

A: First, we have a decade in which we will use tax cuts and R&D to spur energy efficiency. After that decade, when we enter the internationally binding period, there may be some shift in the relative price of carbon-intensive energy compared to less carbon-intensive energy. But that doesn't necessarily mean an increase in overall energy prices. Let's look at what happened over the past 15 years: In 1983, the real price of gasoline was \$1.84 per gallon. Fifteen years later, in 1997, it's now \$1.24 per gallon. Energy prices are very difficult to predict, and a variety of factors -- from electricity restructuring to international oil discoveries -- will play a role.

Q &A on Climate Change
December 12, 1997

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THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release

October 6, 1997

REMARKS BY THE PRESIDENT
DURING PRESENTATIONS AT
WHITE HOUSE CONFERENCE ON CLIMATE CHANGE

Georgetown University
Washington, D.C.

THE PRESIDENT: Isn't there some evidence already that malaria in nations and areas where it presently exists is becoming more prevalent and moving to higher climate?

DR. LIVERMAN: Yes, there is some evidence that, for example, there is more malaria at higher elevations in some developing countries, and certainly there is some more anecdotal evidence of malaria moving into the United States. That's partly climate, but it's also because we have a much more mobile population today than we had in the past.

THE PRESIDENT: Let me ask you one other question, because -- let me go back to what I said in the beginning. This is one of the most difficult problems of democracy because we get 100 percent of the people to agree that it exists, and only 10 percent of the people have experienced it and another 10 percent of the people can imagine it and, therefore, are willing to deal with it. You still have to have to have 51 percent in order to develop any kind of political consensus for doing anything, I think, commensurate with the need.

So would you say -- I have -- and I know this happens to a lot of people -- but I had a number of people -- I had a young congressman in to see me the other day who was a member of the Republican Party and he said, you know, in my state we've had 300 year floods in 10 years. I met a man over my vacation who said that he was moving away from the place he had lived for a decade because it was a completely different place than it had been just 10 years ago; it was hotter, there were more mosquitoes, it was a very different and difficult place.

Do you believe that these anecdotal experiences are likely related to climate change, or are they just basically people's imagination?

DR. LIVERMAN: No, I actually think there is a scientific basis for these perceptions of climate change; there's such an area I did research in. And we've done very carefully structured scientific surveys of farmers and of city dwellers that show that many people do believe that the climate is changing -- whether it's a farmer in Mexico or a resident of Los Angeles. We have a lot of studies where people do believe it's changing, and in many cases it correlates with the type of observed temperature changes that Tom Karl talks about.

So my feeling from my own work interviewing people is that many people in this country do think that the climate is changing and are concerned about it.

THE PRESIDENT: Dr. Karl, do you want to say anything?

MORE

DR. KARL: Yes, actually I think the anecdotal evidence is consistent with the notion that although no single event is the basis for saying global warming is taking place, if you look at mar of -- in fact, I have a number of statistics you might find of some interest here. Just during 1996, we had six states that set their all-time annual precipitation amount -- not to belabor it, but totals like 16 feet of rainfall in Oregon during the year 1996; over eight feet of precipitation and Mt. Mansfield in Vermont, and there are a number of other records like this.

These are the types of things that certainly have an impact and I think people remember.

THE VICE PRESIDENT: If I could add a word to this, I noted earlier James Lee Witt, who is head of FEMA here, he and I have gone out, as he and the President have gone out frequently to the sites of these disasters, and the budget for the consequences for the flooding event and the other disaster events as well now reaches an average of \$1 billion a week in the United States.

You mentioned, Doctor, about malaria. One scientist was telling us recently about a case of malaria that showed up in Detroit during a month when the average temperature was a full six degrees warmer than the 30-year average, and while of course you can't again say that's the cause and that's the effect, the odds of diseases of that kind, as Secretary Donna Shalala who is here, has told us, increase quite dramatically.

The other thing I wanted to ask just briefly is, in terms of the effects on human beings. The weather forecasters who were at the White House last week talk about the heat index, the combination of temperatures and humidity. And your presentation followed right on Dr. Tom Karl's, and somebody was saying that the heat index here in Washington, D.C., by the middle of the next century is predicted to go from -- do you know the numbers, Dr. Ka

DR. KARL: I think it's up to 105 or 110. I don't know the exact numbers, but --

DR. LIVERMAN: It's under 100 now, and it's going to go to about 105 on average, they think, during the summer months.

THE VICE PRESIDENT: Well, we'll get some more on that. (Laughter.)

THE PRESIDENT: We certainly will. (Laughter.) One reason I believe this is occurring is that James Lee Witt is the only member of my Cabinet who is actually disappointed when his budget goes up. (Laughter.) And he's had a lot of disappointments these last five years.

I'd like to now call on Donald Wilhite to talk about the relationship -- we've heard about increased precipitation and I'd like to ask him to talk about drought and the apparent paradox in drought patterns and increased precipitation patterns and what implications this might have for American agriculture, which is a terribly important part of our economy and we have all been counting on it being a very important part of our export economy for the indefinite future.

DR. WILHITE: Thank you, Mr. President, Mr. Vice President. I was asked to talk a little bit about -- give the dry talk, I guess, of the presentation. (Laughter.) Each drought event I think is a vivid reminder of our nation's continuing vulnerability to climactic variations. If one can remember the severe drought of the late 1980s and the early 1990s, those resulted in severe economic and environmental consequences in many parts of the country.

In 1988, for example, nearly 50 percent of this nation was affected by severe drought and resulted in excesses of \$15 billion in agricultural losses in this country; a very dramatic number. In 1996 we had a reoccurrence of drought in the Southwestern United States, and this also resulted in severe economic and environmental losses, a higher incidence of forest fires and so forth. This also is of concern. In the state of Texas alone, impacts were in excess of \$5 billion.

Now, American agriculture, while technologically advanced, is still subject to the sensitivity of weather conditions or the vagaries of weather, the slide that's up on the screen now shows a dramatic upward trend in corn yields since 1950 in the United States. But note the deviations on that trend. Those deviations are largely the result of variations in climate or extreme weather conditions. Most of those are the result of drought events, some of those are the result of excessively wet events which delayed or hampered spring planting.

Drought also is of high incidence in a normal part of the climate in virtually all portions of the country. This next diagram shows the incidence of drought in the United States over the last 10 years. So while it's true we've had maybe an increase in precipitation, I think it's interesting to note from this slide which shows the number of years experiencing moderate, severe or extreme drought in the last 10, that while you have a rather surprisingly large area in the Western United States that shows a high incidence of drought, we are also demonstrating the high incidence of drought in the Great Plains states, in the Southwest, in the Midwest and also along the Eastern Coastal states.

So drought is clearly a phenomena that affects all portions of the nation, not just the Western United States. So that projected increases in temperature and a possible accelerated water cycle that we've been hearing about this morning may lead to changes in both the amount and the seasonal distribution of precipitation which may alter then the incidence of drought events and also flood events in this country.

So while we don't know precisely what the regional impacts of climate change may be, as Dr. Liverman was speaking about a few moments ago, we do know the impacts associated with these extreme weather events, and we also know where our vulnerabilities are as a result of this. And I think it's prudent that we sort of assess what our vulnerabilities are and use these as a way to reduce the impacts of drought events and flood events today that will help us in the future.

THE PRESIDENT: I want to ask a question and try to make sure that are all as clear as we can be based on what is known about two apparently contradictory things. That is that the total volume of precipitation has increased virtually everywhere and the number and severity of droughts has increased across the country.

Now, Dr. Karl said earlier that part of the explanation is that the precipitation we're getting is coming in bigger bursts. But what I would like to do is have somebody offer basically a line of explanation that everyone in the audience and hopefully those who will be following these proceedings can understand, why did it happen at the same time that we had more drought and more floods? How could we have more droughts when the aggregate amount of precipitation on an annual basis was increased? And I think it's important that people kind of "get" why that happens.

DR. WILHITE: Well, I'll take a first shot at that. First of all, the increased precipitation amount that Tom Karl was referencing earlier, a lot of this increased precipitation is coming in the form of short-term, intense precipitation events which leads

to very high runoff. So there's not a lot of moisture that goes into the soil.

Secondly, increasing temperatures tends to increase evaporation and, therefore, the resulting impact of that is soil drying. So you have a combination of these things going on that help to explain this paradox.

THE PRESIDENT: So I think that's important. When the temperatures warm, they dry the soil and create the conditions for the floods simultaneously.

DR. WILHITE: That's correct.

THE PRESIDENT: And because these floods don't wash away the soil, rather than sink down into the soil, you get very little benefit out of them, and farmers lose a lot of topsoil.

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THE PRESIDENT: Let me ask you a follow-up question, and perhaps someone else would like to answer. But I think it's important again -- and forgive -- for those of you in the audience who know a lot more about this than I do, you will have to forgive me, but I'm also trying to imagine how this is going to be absorbed by our nation and by people who will be following this.

It appears that we are headed into a powerful El Nino, and I wonder if one of you would just simply very briefly explain what that is and whether you believe there is a link between the power of the El Nino and climate change.

DR. WATSON: Yes. Every two to seven years we have a phenomena called "the El Nino phenomena." The ocean temperatures off South America in the Pacific warm up and they effectively have a large-scale effect on temperature patterns and precipitation patterns throughout the world. You get heavy rainfall in Peru, a drought in Northeast Brazil, a drought in Zimbabwe, and major effects in countries such as Australia.

One of the questions we have to ask ourselves is, are these El Nino events changing? What we've observed in the last 20 years is we've now had the largest, most intense El Nino in 1982 and it's looking like the one we have now may well be the most intense of the last 200 years. The question is, are we changing the frequency and the magnitude of these so-called El Nino events because of global warming? We don't know. But just like there are more floods at the moment and more droughts throughout the world, it is interesting to note that as the greenhouse gas concentrations are increasing, it does appear that the frequency and magnitude of these El Nino events also seems to be changing, and they have profound effects, as I said earlier, both on temperature and precipitation truly around the globe.

THE VICE PRESIDENT: I would just like to comment on your remarks concerning the skeptic. I personally believe we've had experience with a form of skepticism that I think is similar to this before. In 1964, the scientific community through the Surgeon General's report said that smoking cigarettes causes lung cancer. And for the last 33 years, up until this summer, the CEOs of the tobacco companies said with a straight face and seemingly no embarrassment, there is no link between smoking cigarettes and lung cancer. Some scientists say even today the exact causal relationship is very difficult to pin down because science can't answer all of the questions. But it's abundantly obvious that it does, and the President's been leading our country's fight on that issue. And,

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thank goodness, eventually, the weight of the pinion got to be such that most everybody except this very, very tiny band became embarrassed to parrot that line anymore. I think that the weight of evidence here is in the same category.

THE PRESIDENT: We've got to wrap up the first panel and get on to the next one, but I'd like to ask -- I think I'd like to ask, John, you to respond to this. If anyone else wishes to, you're welcome to. I think there is a more sophisticated question to be asked, although the Vice President is right, there still are some people who claim that this scientific case that I have been completely persuaded by has not been made. I think the more difficult argument, John, goes something like this: Look, you put all this stuff in the atmosphere and it stays there for 100 years at least, and maybe longer, and so what's the hurry?

In a democracy, it's very hard to artificially impose things on people they can't tangibly feel, and so why shouldn't we just keep on rocking along with the kind of technological progress we're making now until there really is both better scientific information and completely painless technological fixes that are apparent to all? Why shouldn't we just wait until all doubt has been resolved and hopefully we have even better technology? Because, after all, the full impact of whatever we do if we start tomorrow won't be felt for a decade and maybe even for a century.

Number one, if that's true, how quickly could we lower the temperature of the planet below what it otherwise would be; and, number two, what about the argument on the merits?

DR. HOLDREN: Mr. President, let me take a try at addressing that. It's clear that the task that you and other policymakers face in this situation is a tough one. Business as usual is what most people are comfortable with. The difficulty is that our health and our economic well-being are more dependent on climate than most people think.

Human disruption of climate by greenhouse gas emissions is almost certainly further along than most people think, and directly addressing the point you were just making, reducing greenhouse gas emissions enough to avert much larger disruption than experienced so far is going to be more difficult than most people think. And the longer we wait, the more we coast up that business-as-usual trajectory, the more old-style technologies are going to be in place in this country and around the world and the harder it is going to be to get off of that track.

The goal of the framework convention on climate change to which the United States is a party was ratified by the United States Senate in 1992 is to stabilize greenhouse gas concentrations at a level that prevents dangerous human interference in the climate system.

Now, there is no formal agreement yet about what constitutes dangerous interference, but I know of very few analysts who have looked seriously at the impact side of this question who think that going beyond twice the preindustrial carbon dioxide concentration is anything other than very dangerous. That would be about 550 parts per million, compared to 365 parts per million today, 280 parts per million preindustrial, and you saw earlier a simulation of the considerable temperature changes that that would entail.

Now, the problem is that stopping even at that 550 part per million level, twice preindustrial, is not going to be easy. The curves that are on the screen now show future world emissions of carbon dioxide under business as usual, which is the reddish line at the top, and then under three trajectories that would stabilize the concentration at levels ranging from 350 parts per million on the

bottom -- a little less than today's -- to 750 parts per million on the highest of the lines that bend over; another orange one.

The green one in the middle is the 550 parts per million trajectory, the trajectory that stabilizes at twice preindustrial CO₂. Now, that lowest trajectory might be the most desirable from the standpoint of giving us the greatest assurance of avoiding climatic changes that we really won't like, but it's virtually not practical to get to that, and we're already past the point where we can get to that trajectory. In fact, if you could see the scale more clearly, you would see that that one requires the emissions to go negative early in the next century, which is particularly difficult to manage.

Now, the green trajectory that stabilizes at a doubling of preindustrial carbon dioxide concentrations requires that global emissions -- global emissions, not U.S., but worldwide including the developing countries, start to decline already in about the year 2030, and they do that from a peak in which average per capita emissions worldwide would be only one-fifth of U.S. per capita emissions today. That's going to be very hard to do and if we're going to do it we need to start working on it today.

The problem basically is that the world energy economic system is a lot like a supertanker under full power; it's got huge momentum in the direction it's heading, it's very hard to steer, it's got very bad brakes.

The science that has been summarized here this morning is telling us that the supertanker is headed for a reef. We can tell the water is getting shallower under the hull; even if we can't say exactly how far we can go before the reef rips the bottom out of that tanker. Now, in that situation, full speed ahead is clearly the wrong course. We need to start slowing and steering away from the reef of unmanageable degrees of climate change now. And since we're all in the same supertanker, industrialized and less developed countries together, we had better find ways to slow and to steer cooperatively rather than bickering over who is holding the wheel.

We've got a lot of tools available to help us with that steering effort. There are advanced technologies already on the shelf that can help us dramatically increase the efficiency of energy and use and can reduce sharply the emissions of carbon dioxide from energy supply. We need only some sensible attention to reducing the barriers to the more rapid and widespread diffusion of those advanced technologies already on the shelf and there are new technologies that can be brought to the point of applicability with expanded research and development that would make increased energy efficiency and reduced carbon emissions even more cost-effective.

But now I'm basically getting into parts of the story that other panels are going to deal with later today and I'll leave that to them.

THE PRESIDENT: But I do want to make the following points. Number one, we can't get to the green line unless there is a global agreement that involves both the developing and the developed countries. Number two, however, that's not an excuse for us to do nothing because if we do something it will be better than it would have been otherwise because we're still the biggest contributor and will be until sometime well into the next century.

And, number three, based on everything we know, it will be easier in some ways, particularly if they get the financial help they need, for developing countries to choose a different energy future in the first place than it will be for the developed countries to make the adjustments, which is not to say we don't have to make the adjustments, but to say that I have read a lot of the press

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coverage and people saying, oh, well, we're just using this for an excuse or we're not being fair to them or we don't want them to have a chance to grow. That is not true.

The United States cannot maintain and enhance its own standard of living unless the developing nations grow and grow rapidly. We support that. But they can choose a different energy future, and that has to be a part of this, but it's not an excuse for us to do nothing, because whatever we do we're going to make it better for ourselves and for the rest of the world than it otherwise would have been.

But I think it's important to point out what John showed us there on the green line. The green line -- it requires -- to reach the green line, we have to have a worldwide action plan.

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THE PRESIDENT: Let me just say before we go on to the transportation sector, these presentations have been quite important. I remember 20 years ago, more or less -- maybe a little less now, I can't remember exactly when -- the Congress voted, or the federal government at least required -- it might have been a regulatory action -- that the new power plants not use natural gas anymore and that we phase out of them because we grossly underestimated how much natural gas we had and we thought we could go to clean coal because we didn't want to build nuclear plants for all the reasons that were clear.

And one of the biggest problems we face now in trying to make a reasoned judgment about how quickly we can reduce greenhouse gas emissions, and by how much, is the need not to be unfair to electric utilities that have billions of dollars invested in government-approved power plants that they have not yet fully amortized.

Therefore, insofar -- and this applies both to buildings and to the utilities themselves about which these two speakers have spoken. You can either conserve more in the production of electricity or you can have the people who consume it conserve more or you can change the basis on which the plants work, which is the most expensive way to do it. Therefore, insofar as we can do more in terms of how much electricity people use or how much waste heat you recover, either one of those things is a far preferable -- far preferable alternative than to change the basis on which plants that have already been built are being amortized, and will generate huge amounts of saving at lower costs if we can do it.

At the end of this session, we'll get around to sort of the skeptical economist's take on the technological fix. We'll get around to that later. But I just think it's important that we focus on this specific issue, because if our goal is to minimize economic dislocation, then having conservation by the end users, the people who have the buildings, for example, whether their manufacturers or residential buildings or otherwise business buildings, and having recovery of waste heat are clear, I think, the preferable alternatives and clearly the less expensive alternatives.

I'd like to call on Mary Good now, who was the Under Secretary of Commerce for Technology in our administration for four years and now is the managing member of Venture Capital Investors. I want her to talk a little bit about the potential for technological advances to reduce emissions in the transportation sector and to focus particularly on the partnership for new generation vehicles that we've been working on with the auto companies and the UAW since this administration took office, and Mary had a lot to do with it.

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There is also a huge debate here about how much we can do how quickly, and we have to make the best judgment about this in determining what to say about where we are in Kyoto, because transportation, as Secretary Pena said, occupies such a large part of this whole equation.

So, Mary, have at it. Tell me what I should say in Japan on my visit.

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THE PRESIDENT: I just wanted to make two brief points. The leaders of the Big Three auto companies and the UAW came in to see us last week, and they said they're going to meet their Partnership for the Next Generation Vehicle goal. The real problem is, once they develop a prototype, how quickly can it be mass-produced and how will people buy it, and will they buy it at present fuel prices. We'll come back to that at the end.

But one related question to that is, given Americans buying habits and consumer preferences, don't we have to include these light trucks and even heavy trucks in this Partnership for the Next Generation Vehicle; don't we have to achieve significant fuel efficiencies there as well if we have any hope of succeeding here.

The only point I want to make, Mary, is, you know, I'm big on all kinds of fast rail research, but I hope tomorrow's headline isn't "Clinton Advocates More Research on Levitation." (Laughter.) I don't need that.

MS. GOOD: We'll have to explain it to them better.

THE PRESIDENT: I'd like to call on Michael Bonsignore now to talk about the energy savings available through the use of more high-efficiency products and systems, and also the potential for environmental technology exports. What he has to say and how applicable and expandable you believe it is has a lot to do with whether this transition we're going through will be an economic plus, a drag, or a wash. I personally have always believed it would be a plus if we did it right. But I'd like to ask Michael to talk about that.

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THE PRESIDENT: We need to wrap up; we're running a little bit late. But I wanted to just give everyone an opportunity to comment on this. Mason was the only person, I think, who explicitly said that in order to make this transition we need to raise the price of carbon-based products. One of the difficulties we're having within the administration in reaching a proper judgment about what position to stake out in Kyoto relates to how various people are responding, frankly, to the recommendations and the findings of the people coming out of the energy labs, because they say, hey, look, what we know already shows you that we have readily available technologies and courses of action which would take a huge hunk out of -- right now, with no great increased cost -- a huge hunk out of any attempt to, let's say, flatten our greenhouse gas emissions at 1990 levels.

We just heard about it today. Look what you could do with power plants. You can recapture the waste heat, two-thirds of that. You can make buildings and manufacturing facilities and residences much more energy efficient. You can make transportation

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much more energy efficient. Besides that, we've got all these alternative sources of fuel for electricity and transportation. I mean, it's all out there; this is what we know now.

And then sooner or later, we're going to have the Partnership for the Next Generation Vehicle. So the question is always, though, who will buy this stuff. Right now, you can buy light bulbs -- every one of us could have every light bulb in our home, right now, every single one of them -- we'd have to pay 60 percent more for the light bulb, but it would have three times the useful life. Therefore, you just work it out, we'd pay more up front, we'd save more money in the long run, and we'd use a whole lot less carbon. And why don't we do it? Why do we have any other kind of light bulbs in our homes?

And that is the simplest example of the nature of the debate we are now having. That is, in terms of get from here to where we want to go, do we have to either raise the price of the product -- there are only three or four things you can do -- you can raise the price of the product to the consumers; you can lower the price of the alternative thing you wish to be bought by the consumers; you can create some new business opportunity through some market permit trading, other market option or otherwise change the business environment the way we do electric deregulation, for example; or you can somehow increase the awareness of consumers of what their options are and the consequences of that, and hope that they will behave in a different way. I think those are the four categories of possibilities.

And if you choose an ambitious target, then, if the requirement is more -- to reach the target is almost exclusively on the front end -- that is, you have to raise the price to the consumer or the business involved -- the businesses may be a consumer -- if it happens too quickly, you're going to do economic damage on the one hand, on the other hand there is no way in the world this Senate will ratify our participation in Kyoto. So we'll be out there -- it will be a grand gesture, but it won't happen.

Therefore, we have got to know how much we can do through a combination of price -- you might be able to get some price changes, particularly going back to what Mike says on the real price of energy -- particularly if it was not a net tax increase, you wouldn't have to have a net -- there are a lot of other ways to do this. But we have to be able to get something out of either lowering the cost of the alternative, creating new business markets, or increasing consumer awareness of what is right there for them now and what the consequences are. We can't do it all on the front end and expect realistically -- if all we do on the Consumer Price Index, raising the price of coal, raising the price of oil to the real consumer, and that's all we do, we are not going to get what we want to do in the time allotted to get it because it either won't pass the Senate or it won't pass muster with the American people.

So we have to be able to access what the Energy Department tells us is there for all to see in other ways. And I don't know if any of you want to comment on that, but this is not a question of whether you're brave or not or all that, it's really a question of what we can get done and what realistically is going to happen in America.

But I'm plagued by the example of the light bulb I have in my living room of the White House that I read under at night, and I ask myself, why isn't every light bulb in the White House like this. I use this when -- I get so tickled -- I go in and turn it on and I measure how much longer it takes to really light up, but I know it's going to be there long -- you know? (Laughter.) And I say, why am I so irresponsible that I have not put this in every light bulb? Why are we not all doing this?

So when you get right down to it, now, this is where the rubber meets the road. We have to make a decision, a commitment; it has to be meaningful. I'm convinced that the Energy Department lab people are absolutely right, but the skeptics on my economic team said, there will not be perfect substitution, they're not going to do it.

So if you want to say anything about that, you can, but when you get right down to it, that's where -- all the decisions are going to be made based on our best judgment about what kind of markets we can create for the private sector, what kind of substitution there is, and whether we can -- how quickly we can move to alternative energy sources that people will actually access.

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THE PRESIDENT: I strongly agree with that, pushing that. And, again, I say that does not let us off the hook to do things here at home, it just makes good sense. It's easier for -- we should give these other countries a chance to choose an alternative path.

I never will forget a couple of years ago -- I know we've got to wrap up -- but I had a fascinating conversation with the President of China a couple of years ago, and we were discussing what our future would be and whether we wished to contain China. And I said, I don't wish to contain China, I said, the biggest security threat China presents the United States is that you will insist on getting rich the same way we did. And he looked at me, and I could tell he had never thought of that. And I said, you have to choose a different future, and we have to help. We have to support you. And that does not in any way let us off the hook. But it just means that we have to do this together.

Well, this has been fascinating. You guys have been great, and I thank you a lot. (Applause.)

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THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release

October 6, 1997

REMARKS BY THE PRESIDENT
AT WHITE HOUSE CONFERENCE ON CLIMATE CHANGE

Georgetown University
Washington, D.C.

10:30 A.M. EDT

THE PRESIDENT: Thank you very much. Thank you, Mr Vice President, for your remarks, and your remarkable leadership to help us keep our Earth in the balance. Thank you, Father O'Donovan, for letting me come home to Georgetown one more time to discuss a matter of immense importance to America and its future. I thank the members of Congress and the members of the Cabinet and the administration who are here, all those who have agreed to serve on the panels, and all you who have come to be a part of this important day.

Six years ago last Friday -- I can hardly believe it, but it was six years ago last Friday that I announced my intention to run for President -- challenging America to embrace and to vigorously pursue a vision of our country for the 21st century: to make the American Dream alive for every person responsible to work for it, to keep our country the world's strongest force for peace and freedom and prosperity, to bring our people together across all the lines that divide us into one America.

Shortly afterward I came here to Georgetown to this great hall to outline specific strategies and new policies to achieve that vision, rooted in our values of opportunity and responsibility, faith and family and community; designed to help Americans seize the opportunities and solve the problems of this new age. It was clear to me that our new direction had to be rooted in some basic guideposts -- that we had to be oriented toward the future, not the past; toward change, not the status quo; toward partnership, not division; toward giving all a chance, not just the few; and finally toward making sure America leads, not follows.

We tried to develop a new approach to government, where we didn't claim to do everything and we wouldn't tolerate doing nothing, but instead we focused on giving people the tools to make the most of their own lives and creating the conditions that would allow them to succeed.

And we had new policies -- the economic policies and trade policies, education policy, crime and welfare, policies toward the working poor, policies to bolster families and help them balance work and child-rearing, policies in health care and foreign policy and, yes, policies in the environment.

In the last four years and eight months, I think it's fair to say that, together, we have made real progress toward that vision for the 21st century. We stand at the threshold of that century stronger than most people thought was possible back in 1991, with our economy thriving, our social fabric mending, our leadership in the world strong. We have a solid foundation of achievement on which to stand as we take on the remaining challenges to build that bridge to the 21st century.

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We are back here at Georgetown today because global climate change clearly is one of the most important of those challenges, and also one of the most complex, crossing the disciplines of environmental science, economics, technology, business, politics, international development and global diplomacy; affecting how we and all others on this planet will live, support our families, grow our food, produce our energy and realize our dreams in the new century.

That's why we've put together this White House Conference on Climate Change, bringing together experts and leaders with a wide range of knowledge and a wide range of views. People of goodwill bring to this conference many honest disagreements about the nature of the threat we face and how we should respond. That is healthy in a democracy like ours. My hope is that we will take advantage of this forum to actually talk with each other rather than past each other. For it is our responsibility to work together to achieve two vital and compatible goals, ensuring the continued vitality of our planet and expanding economic growth and opportunity for our people.

Despite the complexities of these challenges, we have good reason to be optimistic, beginning with our 220-year record of making all manner of difficult problems solvable, and, importantly, a very good record in the last generation of environmental progress. For in the last generation alone, we came together to heed Rachel Carson's warnings and banned DDT and other poisons. We cleaned up rivers so filthy they were catching on fire; phased out lead in gasoline and chemicals that were eating a hole in the ozone layer. We worked with citizens to conserve the headwaters forest of Northern California, restore the Florida Everglades, protect Yellowstone National Park from the assaults of mining -- in each case, proving that environmental stewardship does not have to hamstring economic growth.

Indeed, in tackling the difficult task of cutting sulphur dioxide emissions with an innovative system of permit trading, the United States is well ahead of the schedule we set for ourselves and well below the projected cost in cleaning the environment. I believe we can find that same common ground as we address the challenge of climate change.

Before we begin our discussion today, I think it's important for me to explain the four principles that will guide my approach to this issue. First, I'm convinced that the science of climate change is real. We'll hear more about this today from our first panel. But for me the bottom line is that, although we do not know everything, what we do know is more than enough to warrant responsible action.

The great majority of the world's climate scientists have concluded if we don't cut our emission of greenhouse gases, temperatures will arise and will disrupt the global climate. In fact, most scientists say this process has already begun. I might add that I had nothing to do with scheduling this conference on the day which is predicted to be the hottest October 6th that we have ever had in Washington, D.C. (Laughter.)

I know not everyone agrees on how to interpret the scientific conclusions. I know not everyone shares my assessment of the risks. But I think we all have to agree that the potential for serious climate disruption is real. It would clearly be a grave mistake to bury our heads in the sand and pretend the issue will go away.

The second principle is that when the nations of the world meet in December in Kyoto, Japan, we must be prepared to cc to realistic and binding goals on our emissions of greenhouse gas

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With 4 percent of the world's population, we enjoy more than 20 percent of the world's wealth -- which helps to explain why we also produce more than 20 percent of the world's greenhouse gases. If we expect other nations to act on the problem, we must show leadership.

The third principle is that we must embrace solutions that will allow us to continue to grow our economy as we honor our global responsibilities and our responsibilities to our children. We've worked far too hard to revitalize the American Dream to jeopardize our progress now. Therefore, we must emphasize flexible market-based approaches. We must work with business and industry to find the right ways to reduce greenhouse gas emissions. We must promote technologies that make energy production and consumption more efficient.

There are many people here today from companies that are addressing the climate change in innovative ways, taking steps that will save money for American families even as we reduce the threat of global warming. For example, a number of leading electric utilities, including AEP, Southern Company, Niagara Mohawk and Northern States Power, are working with homeowners to promote a new technology called geo-exchange, using geothermal pumps to heat and cool homes far more cheaply than traditional systems while reducing greenhouse gas emissions by 40 percent or more. Ballard Power and United Technologies are leading pioneers in developing fuel cells that are so clean, their only exhaust is distilled water.

Right now, Ballard is working with Chrysler, Mercedes Benz and Toyota to introduce fuel cells into new cars. Both of these technologies represent the kind of creative solutions that will make our job much easier.

The fourth principle is that we must expect all nations, both industrialized and developing, to participate in this process in a way that is fair to all. It is encouraging that so many nations in so many parts of the world are developing so rapidly. That is good news for their people and it is good for America's economic future. But as we've seen right here at home, rising energy demands that accompany economic development traditionally have meant large increases in greenhouse gas emissions. In fact, if current trends continue, emissions from the developing world will likely eclipse those from the developed world in the next few decades.

But they have an opportunity to pursue a different future without sacrificing economic growth. The industrialized world alone cannot assume responsibility for reducing emissions. Otherwise, we'll wind up with no reduction in emissions within a matter of a few decades. In Kyoto, therefore, we will ask for meaningful, but equitable commitments from all nations. Second, we must explore new ways for American businesses to help these rapidly growing countries to meet their developmental needs with cleaner and more efficient energy technologies.

Today I hope we can take a step forward in putting all four of these principles into effect. We have studied this issue long enough to know that there are sensible options for action. It is our job now to pull them together into a coherent plan.

Nearly three decades ago when the Apollo astronauts first went to the Moon, we gained an entirely new perspective on the global challenge we face today. For looking down on Earth from the vantage point that revealed no political boundaries or divisions, the astronauts had the same chilling sensation. They were simply awestruck by how tiny and fragile our planet is -- protected from the harsh void of space by an atmosphere that looked as thin and delicate as the skin of an onion. Every astronaut since has experienced the same insight, and they've even given it a name -- the Overview Effect. It has instilled in each new astronaut a passion to convince people we must work together on Earth's behalf.

Rusty Schwieckart has said, you realize that on that little blue and white thing, there is everything that means anything to you -- all history and music and poetry and art and death and birth and love -- all of it on that little spot out there you can cover with your thumb.

To the best of my knowledge, only one person here has actually experienced the Overview Effect firsthand -- Dr. Mae Jemison, a former shuttle astronaut and current international development expert who will participate in our third panel discussion this afternoon. Nonetheless, I challenge everyone in this room to rise to a vantage point high enough to experience the overview effect. It will enable us to reach common ground.

Let me say when the Vice President was talking and Father O'Donovan was talking, I was looking around this old hall that I have loved for so long, and I found it utterly amazing that I first came here 33 years ago. I was reading this morning up at Camp David the list of people who were going to be here today, and I found it utterly amazing that a few of you I first talked to as long as 20 years ago about the need to build an alternative energy future for America. And I find it completely amazing that five-eighths of my presidency is behind me.

I make these points for this reason: If you think about the benchmarks in your own life, it doesn't take long to live your life. And what seems at the beginning of your life a very long time, seems to have passed in the flash of an eye once you have experienced it. These great developments, such as the one we're here to talk about today, occur over many life spans. And popular democracies are far more well-organized to take advantage of opportunities or deal with immediate crises than they are to do the responsible thing, which is to take a moderate, but disciplined approach far enough in advance of a train coming down the track to avoid leaving our children and our grandchildren with a catastrophe.

So I ask you to think about that. We do not want the young people who sat on these steps today, for whom 33 years will also pass in the flash of an eye, to have to be burdened or to burden their children with our failure to act. Thank you. (Applause.)

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10:48 A.M. EDT

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Global Research Program
Divider Title: _____

CLIMATE CHANGE: US GLOBAL CHANGE RESEARCH PROGRAM

Background: The US Global Change Research Program (USGCRP) is a National Research Program conducted under the auspices of the National Science and Technology Council (NSTC) Committee on Environment and Natural Resources. The NSTC is a cabinet-level council established by President Clinton in November 1993 and is the principal means for coordinating science and technology issues across the Federal government.

The USGCRP began as a Presidential Initiative, and was codified by the Global Change Research Act of 1990. The program's fundamental purpose is to increase understanding of the Earth system and thus provide a sound scientific basis for national and international decision making on global change issues.

Participants: USDA, DOC (NOAA and NIST), DOD, DOE, HHS, DOI, DOS, EPA, NASA, NSF, the Smithsonian Institution, OMB, and OSTP.

Scientific Focus: The USGCRP supports four key areas of Earth system studies that are of scientific and practical importance:

- *Seasonal to Interannual Climate Variability*, focused on the development and refinement of forecasts of seasonal and interannual climate variability, including study and prediction of the El Niño-Southern Oscillation phenomena in the tropical Pacific Ocean. These forecasts are used for economic planning and development in climate-sensitive sectors such as agriculture, water supply, and public health.
- *Climate Change Over Decades to Centuries*, with an emphasis on prediction of long-term climate change and its impacts on natural resources, public health, and socio-economic sectors. This effort is focused on understanding the effects of increasing atmospheric concentrations of CO₂, and the rising temperatures and changing patterns of precipitation associated with this increase, thus providing the knowledge required for society to address these changes.
- *Changes in Ozone, UV Radiation, and Atmospheric Chemistry*, focused on advancing understanding of the causes, rate, magnitude, and consequences of changes in stratospheric ozone, UV radiation, and atmospheric chemistry. This research has unambiguously identified chlorofluorocarbons (CFCs) from human activities as the cause of the Antarctic ozone hole. Observations of declining CFC growth rates demonstrate the efficacy of the policies adopted to protect the ozone layer.
- *Changes in Land Cover and Terrestrial and Aquatic Ecosystems*, focused on increasing understanding of the basic processes governing the functions and structure of terrestrial, and aquatic ecosystems. A special emphasis is placed on efforts to inventory the current land cover of the Earth and to document and understand the causes and consequences of land-cover changes, including effects on biodiversity.

CLIMATE CHANGE: US GLOBAL CHANGE RESEARCH PROGRAM

Background (continued)

New Research Directions: Improved understanding of the impacts of global change is needed to achieve a sustainable future. A series of new research and assessment activities are addressing this need:

- The first National Assessment of Climate Change Impacts has been initiated to examine the vulnerabilities of various U.S. regions and economic and environmental sector to climate change. The Assessment will be completed in 1999. It will become a contribution from the US to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) in 2001.
- As part of this process, the USGCRP sponsored an initial set of regional impacts workshops focused on the Great Plains, Alaska, the Southeast, the Northwest, the Southwest, New England, and the Mid-Atlantic. Additional workshops covering remaining regions of the US will be conducted by mid-1998.
- Additional new activities include increased focus on regional-scale estimates of the rate and magnitude of climate change and other aspects of global change; regional analyses of the environmental and socio-economic consequences of climate change and other global-scale changes in the context of other stresses; and integrated assessments of the implications for society and the environment of climate change and other aspects of global change.

CLIMATE CHANGE: US GLOBAL CHANGE RESEARCH PROGRAM

Talking Points

- It is imperative that we maintain the US Global Change Research Program's (USGCRP) strong effort in climate change science, which provides us with the understanding of the climate system, how it is changing, and the likely impacts of this change on society and on the environment we cherish.
- Design of effective climate change adaptation and mitigation strategies are not possible without the solid knowledge base provided by the USGCRP, and that is why we are continuing strong support for this coordinated interagency effort.
- While the USGCRP shows a minute decrease in overall funding (\$3 million out of almost \$1.9 billion), taking a closer look reveals that the only decline is in NASA satellite and data system activities.
- Substantial increases are proposed for science activities at other agencies , including \$20 million at NSF, \$9 million at DOC, \$6 million at EPA, and \$5 million at DOE.

USGCRP Budget (\$millions)

	FY98	FY99 req
USDA	58	59
DOC (NOAA/NIST)	62	71
DOE	108	113
DOI	29	29
EPA	15	21
HHS	4	5
NSF	167	187
SI	7	7
NASA "ground"	275	275
NASA "space"	1092	1097
	(50*)	
total	1867	1864

***\$50 million that may be transferred from NASA Earth Science to Space Station account.**

CLIMATE CHANGE: US GLOBAL CHANGE RESEARCH PROGRAM

Questions and Answers

Q: Why is the USGCRP budget declining? I can see that it is a very small change, but with climate change such a high priority it seems strange that the USGCRP is reduced.

You are correct that the decrease is very small: \$3 million, which is something like 2/10 of 1% of the budget. If you unpack the numbers a little, you can see that the only decrease is in NASA, and there it is mainly a small reduction in funding of space hardware and data management activities. Many of the other science activities in the USGCRP are getting healthy increases, including those at NSF, EPA, and DOC, and we are seeing some exciting new science in the program, including the initiation of the first National Assessment of climate change impacts.

The Administration remains absolutely committed to support of global change research. Global-scale environmental changes, including ozone depletion, climate change, and loss of biodiversity, are some of the most serious issues facing our nation and the world. We will continue strong support for this activity, as have the past three Administrations. We simply cannot turn away from this challenge. Increased understanding is our most fundamental requirement for dealing with these issues.

To take just one example, we know that the climate is already changing due to human influences. We need improved prediction of the rate, magnitude, and regional consequences of change, and identification of the most effective mitigation and adaptation strategies. The USGCRP is making a major contribution to these critical tasks and has initiated the first National Assessment of Climate Change Impacts to focus on some of these questions.

Q: How do you respond to the criticism of the USGCRP in the NRC Pathways Report?

In the first place, it is clear that the NRC "Pathways" summary (the only part released so far) recognizes that the USGCRP has led to significant advances in our understanding of global change. It also identifies opportunities for improvement, and we believe that study will prove to be a valuable document and will help the Administration and the agencies in our ongoing effort to improve the USGCRP and ensure that it focuses on the highest priority science questions. In fact, the report defines a set of science questions that we feel will be very influential in setting the future research agenda of the USGCRP. We look forward to the release of the remainder of the report.

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Kyoto Talking Points

Divider Title: _____

KYOTO PROTOCOL

Basic Talking Points

January 1998 (DRAFT 1/21/98 5:30pm)

Global climate change is the premier environmental challenge of the 21st century, and the risks it poses justify sensible preventive steps. Addressing this issue is one of the United States' greatest imperatives, for this and future generations. Recognizing the solid foundation of climate science, President Clinton is committed to effective action to reduce greenhouse gas emissions. But the United States cannot do it alone. Only a strong and sustained international effort will succeed in limiting the buildup of greenhouse gases in the atmosphere to safe levels.

The Kyoto Protocol is an historic step in launching such an international effort. It is also a major victory for the United States approach of harnessing the power of the free market to protect the global environment. The essential elements of the Kyoto Protocol include binding emissions targets for developed countries and flexible market mechanisms for achieving those targets. Both the structure of the targets and the means for reaching them closely resemble U.S. proposals.

Emissions Targets

- Under the Kyoto Protocol, the United States is to reduce emissions 7% below 1990 levels over the period 2008-2012. Reductions for other major industrialized powers are similar: 8% below 1990 levels for the European Union and 6% below 1990 levels for Japan.
- This agreement is based on a somewhat different accounting system than that used to calculate the initial U.S. proposal of reaching 1990 emissions levels by 2008-2012 -- so that the 7% reduction is fairly close to the President's initial proposal.
- As proposed by the U.S., the structure of the emissions targets is both environmentally comprehensive and economically sound. Emissions targets are spread over a multi-year period, do not begin until 2008, include all six greenhouse gases, and account for the role of forests in absorbing carbon from the atmosphere.

Market Mechanisms

- The Kyoto Protocol includes the U.S. proposal on international emissions trading -- an efficient means to ensure that emissions reductions are achieved at the least cost. Through a U.S. domestic program to reduce acid rain, we have proven that emissions trading is an effective way of channeling the free market to clean up the environment.
- Through a separate provision, the Kyoto Protocol establishes the right for the U.S. and other developed countries to participate with developing countries in specific projects to cut emissions, from which both parties benefit. This part of the Protocol -- called the clean development mechanism -- encompasses the U.S. proposal on joint implementation and is another important free market tool for cutting emissions cost-effectively.

Developing Countries

- President Clinton and Vice President Gore have also called for the meaningful participation of key developing countries in reducing emissions. The Kyoto Protocol makes a down payment on this goal, though more remains to be done to meet the Administration's standard.
- The United States is not yet bound by the Kyoto Protocol. The President and Vice President have said that they will not submit the Protocol to the Senate for ratification until meaningful participation from developing countries is achieved, and the Clinton Administration is committed to working with developing nations to this end.

Economic Implications

- Achieving the emissions cuts called for in the Kyoto Protocol is consistent with maintaining U.S. economic growth and competitiveness. The U.S. successfully defeated proposals for unrealistic emissions targets that would have been overly expensive to reach, while also winning support for international emissions trading and other free market measures that provide cost-effective solutions.
- In October 1997, President Clinton outlined a comprehensive and economically sound plan for reducing U.S. greenhouse gas emissions. This plan emphasizes win-win partnerships to cut emissions by improving energy efficiency; the critical need to develop new, cleaner energy technologies; and the role of market-based, common sense tools for achieving emissions reductions. (For more information, see attached.)

**THE HISTORIC KYOTO AGREEMENT:
A CRITICAL FIRST STEP IN A GLOBAL EFFORT TO ADDRESS GLOBAL
WARMING**

December 11, 1997

The Kyoto agreement represents an historic and unprecedented step to reduce the threat of global warming in an environmentally strong and economically sound way. It involves 160 nations, and recognizes the crucial importance of specific steps to address climate change. The leadership offered by the President and Vice President allowed this agreement to be completed -- and generations from now, the agreement will be remembered as establishing the core elements of a strong, realistic, and legally binding framework.

- **Target and Timetable:** The United States agreed to a binding target of reducing greenhouse gas emissions to 7 percent below a baseline based on 1990 levels by 2008-2012. The agreement is based on a somewhat different accounting system -- so that the 7 percent reduction is fairly close to the President's initial proposal.
- **Market-Based:** The agreement reflects an historic emphasis on market-based mechanisms to address an environmental problem.

Emissions trading: The agreement includes a framework for emissions trading among industrialized countries, to ensure the best means of reducing emissions.

Joint Implementation: The agreement includes a Clean Development Mechanism, under which U.S. businesses will be able to do joint projects in developing countries. This is a win-win that transfers needed technology to developing countries, while allowing our companies to earn credits for reducing greenhouse gas emissions.

- **Comprehensive Agreement:** The United States successfully pushed for coverage of all six greenhouse gases, which most other major economies opposed, as well as coverage of so-called "sinks", such as forests, which absorb carbon. The inclusion of sinks and all six gases is a major U.S. victory, ensuring comprehensive protection of the environment.
- **Developing Country Participation:** Global warming is a global problem requiring a global solution. We have therefore adopted a two-step process to address this problem. This agreement locks in hard commitments by the developed countries, and makes a down payment on developing country commitments through the the Clean Development Mechanism. But the President has made very clear that the United States would not take on legally binding targets until there is meaningful participation by developing countries. We will be working hard over the coming months and years to secure that participation.

THE PRESIDENT'S THREE-STAGE PLAN ON CLIMATE CHANGE

To achieve reductions in greenhouse gases, the President's plan will proceed in three stages:

- **Stage 1: Priming the Pump Through R&D, Tax Incentives, Incentives for Early Action, Federal Leadership, and Industry Consultations.** The first stage of the President's package includes a 9-point action plan -- including \$5 billion in tax incentives and spending for energy efficiency, incentives for early action, a set of Federal energy initiatives, and industry-by-industry consultations to explore their best ideas on how to reduce emissions in a cost-effective manner (including market-oriented standards for energy efficiency). The first economic review would occur near the end of Stage 1.
- **Stage 2: Review and Evaluation.** The second stage, which would begin around 2004, will build upon the programs adopted in Stage 1, by including a review of our progress and an evaluation of next steps as we move toward a market-based permit trading system for carbon emissions. During this second stage, the details of the permit system would be refined and perhaps tested. Such a permit system is similar in concept to the one that dramatically cut acid rain emissions -- although the scale would be significantly larger than that program. The second economic review would occur near the end of Stage 2.
- **Stage 3: Meeting Binding Targets Through Domestic and International Emissions Trading Program.** In the third stage, we would reduce emissions to below 1990 levels by 2008-2012, through a market-based domestic and international emissions trading system. Before beginning this third stage, the second economic update and review would allow Congress and the President to evaluate how the economy had responded to a decade's worth of experience in the first two stages of the President's plan. The President is committed to working with labor and Congress to insure that we give proper assistance to any workers dislocated by the changes in energy use from any climate change plan.

This three-stage program recognizes the long-term nature of the effort in three ways:

- By adopting a graduated approach to emissions reductions, it allows us to exploit the tremendous opportunities for win-win reductions first.
- By adopting a system of regular scientific and economic updates and reviews, it allows us to monitor our progress and re-assess our success in reducing emissions, the state of scientific knowledge, and how the economy is responding to our efforts. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period.
- By insisting that the United States will not adopt binding obligations without key developing country participation and by emphasizing the importance of an international trading system and joint implementation, we take advantage of low-cost reduction possibilities wherever they occur -- either here or abroad.

Major Provisions of the Kyoto Protocol

On December 11, 1997, the Third Conference of the Parties reached agreement on a significant first step. The Kyoto Protocol contains the core elements of a strong, realistic framework to protect both the environment and the global economy. Together, industrialized nations agreed to significant reductions of their greenhouse gas emissions. In addition to these cuts, the most important elements of this agreement are the coverage of all six greenhouse gases and the flexible market mechanisms that the U.S. pioneered in designing. These elements are signal achievements, and mark an historic breakthrough of the world's industrialized nations for establishing a global and flexible framework for tackling this issue. These elements will significantly lower the cost of addressing climate change and will be the main engines to channeling investment and technology to the developing world.

Kyoto is only the first step in a long process, however, as we have to complete the task of integrating developing nations into this framework. This was the most disappointing aspect of Kyoto. While the United States saw some signs of progress on this front, we have considerable work ahead of us.

Binding targets: The treaty includes a target for all industrialized countries taken together of 5/6% below 1990 levels during the 2008 to 2012 timeframe.

- **Proposed national emission targets:** The EU committed to a 8% reduction; the U.S. to 7%; and Japan to 6%.
- **Later start date:** Nations agreed to begin reductions at a later starting date, allowing more time to replace capital intensive investments in their energy sector.
- **Five year budget periods:** The Kyoto Protocol adopted the idea of allowing nations to set their target for the average of emissions over a five year emissions budget period, a U.S.-proposed innovation. Allowing nations to reach their emissions budget over a multi-year period gives them flexibility in meeting their target and in responding to fluctuations in energy usage from economic performance, new investment in energy-efficient equipment, and weather variation.

All Greenhouse Gases: The agreement covered all six major greenhouse gases, including three synthetic gases whose use is growing at a rapid rate and whose impact on the environment is longer lasting. The U.S. urged this approach as a more comprehensive approach to addressing the issue.

Carbon sinks: The agreement includes accounting for so-called carbon sinks such as forests, which absorb carbon. By giving nations credit for protecting and promoting forests, the Protocol will encourage sustainable land management and provide cost-effective means of achieving emission reductions.

International market mechanisms: The agreement establishes market mechanisms such as international emissions trading. International trading is designed to achieve the greatest reductions in emissions at the lowest possible cost. Nations that effectively reduce their emissions can sell excess reductions to other less successful nations. Similar measures have helped to dramatically cut the costs of stopping acid rain and phasing out leaded gasoline. The rules for how this system will work are to be established over the next years, after which time nations may submit the protocol for ratification.

Developing Nations: Much work remains to bring industrialized nations into this framework; this remains the principal task ahead of us for the coming years. Nevertheless, the protocol contains several elements that encourage developing nations to reduce their emissions and prepare them to take steps as they develop to become full members of a global framework:

- **Clean Development Mechanism:** As designed by Brazil, this mechanism will allow developed countries to contribute to their target through emission reductions in developing countries, providing incentives for private investment in new energy-saving technologies in developing countries. It also will help to direct resources to developing countries particularly vulnerable to the adverse effects of climate change.

National Security Provision: Industrialized nations agreed that this treaty should not impede national security considerations. Emissions resulting from multilateral military operations were exempted from the agreement, as were bunker fuels stored in overseas bases.

THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release

December 11, 1997

**REMARKS BY THE VICE PRESIDENT
ON KYOTO AGREEMENT**

**The Roosevelt Room
The White House**

12:30 P.M. EST

THE VICE PRESIDENT: Thank you very much. Senator Lieberman, I want to begin by thanking you for your very generous words and for your own leadership. I want to acknowledge your wife, Hadassah -- Joe and Hadassah Lieberman have been great friends to Tipper and me over the years, and I just really admire the principled leadership that Joe Lieberman has brought to environmental issues and practically every other issue that he has dealt with.

I also want to express my thanks to Deb Callahan of the League of Conservation Voters, and Tom Kasten, President of TriGen Industries, for being part of this program. I want to acknowledge my colleagues in President Clinton's Cabinet -- Secretary of the Interior Bruce Babbitt; Secretary of Energy Federico Pena; Administrator of the EPA Carol Browner; the Director of the Federal Emergency Management Administration James Lee Witt; Gene Sperling, head of the Nation Economic Council; Deputy Secretary of Treasury Larry Summers; and Deputy Secretary of Labor Kitty Higgins; and Deputy Secretary of Transportation Mort Downey; Jim Baker of NOAA; and Rich Rominger, Deputy Secretary of Agriculture. I also want to acknowledge Stu Eizenstat and Katie McGinty, both of whom are still coming back from Kyoto.

There are leaders of the business and environmental organizations here -- forgive me for not trying to acknowledge everyone -- but there are some oil company leaders, companies that specialize in conservation products, leaders in businesses that trade emissions rights and so forth. And thank you all for being here.

History was made yesterday in Kyoto because, for the first time, the industrialized nations of the world agreed to a binding and realistic framework to deal with the enormous challenge of global warming. Because of yesterday's agreement, we can now begin to reduce the forms of air pollution that cause global warming. Our air and water here at home will be cleaner, and our businesses will be more competitive in the new global economy.

Over the course of the next century, it will mean that our children's future will be more secure from the dangers that scientists have warned about -- more record floods and droughts, spreading infectious diseases, melting glaciers and rising sea levels and stronger, more

frequent storms.

I'm extremely proud of the work of our negotiating team and I'm especially proud of the work of our chief negotiator, Under Secretary of State Stu Eizenstat, who did a superb job in pulling together all of the facets of this negotiation and he really did a great job; and as mentioned by Senator Lieberman, the work of Katie McGinty, who joined Stu during the final work there. I also want to thank Under Secretary Tim Worth for the five years of hard work that he put into this agreement, and all of the others who have put so much time and effort into this over a long period of time.

No question about the fact that these have been among the most difficult negotiations ever held -- maybe the most difficult. One of the individuals that I met with in Kyoto earlier this week described them as an intricate, three-dimensional chess game. I think that kind of understates the difficulties of it. Over 160 nations participated and there were, as everyone knows, deep and profound differences among the different delegations.

But we hung tough, and in the end the final agreement was based on the core elements of the American proposal. And make no mistake, we stuck by the President's principles and we prevailed. This agreement reflects most of the key elements of the President's plan. It's based on the simple idea that it will not be government bureaucrats or regulators, but free markets and free minds that will be our best bet to win the battle against global warming, while lifting the lives and the hopes of citizens around the world.

The agreement will enhance growth and create new incentives for the rapid development of technologies through a system of joint implementation and emissions trading. It creates binding limits. It asks us to do what we promised, not promise what we cannot do. It is comprehensive, including all six greenhouse gases. And some of you know that there was a big fight there -- we wanted all six of them; most of the rest of the world just wanted to cover half of the greenhouse gases. It's also based on the specific timeline that we proposed. And it will create a level playing field for American industry.

I think that all Americans can and should be proud of the role that our country played in leading the world to finish this agreement. And we would not have reached this critical moment in what has been a decade's long fight, if it had not been for the vision and tenacity of President Clinton. As someone who has cared very deeply about this issue for a long time, I want to express my personal gratitude to President Clinton for his leadership and courage.

Although Kyoto is indeed an important turning point, everybody understands we still have a lot of hard work ahead of us. In many ways, this is just beginning. We still have to press for meaningful participation by key developing nations. We made a good start on that and laid down a foundation, put in place a framework and a negotiating process that will continue in the months ahead on that point. And let's be clear, as we said from the very beginning, we will not submit this agreement for ratification until key developing nations participate in this effort. This is a global problem that will require a global solution. But I am confident that with the framework achieved in Kyoto and the continued negotiations with the developing world

begun there, we will be able to meet this test.

In the coming days and months it will be critical that we avoid looking at this effort through a narrow, political lens. Too much is at stake. We must focus instead on the longer-term future of our planet and our economy, and on the health and well-being of our families and communities.

This is not a Democratic or Republican problem. Nor is it a problem for any one nation alone. It is a problem for the entire world. It's new in that respect, and it requires new thinking and the kind of leadership that President Clinton has provided. The stakes are simply too high -- environmentally, economically and morally -- for us to allow the special interests to get in the way of the common interest of all human kind.

So many times in our nation's history we have banded together and successfully met what seemed to be an insurmountable environmental challenge. And each time the skeptics have said it couldn't be done at all or it could only be done at the cost of ruining our economy. We've heard that often. And each time they were wrong. From cleaning up our rivers and lakes, to combating acid rain, to tackling ozone depletion and others, our technology and our innovation have allowed Americans to enjoy a cleaner environment and a stronger economy at the same time.

Never in history have we had the kind of forceful, persistent environmental protection efforts we've had here in the United States over the last five years, and we've had the strongest sustained economic recovery at the same time that we've had in more than a generation -- 13.5 million new jobs, record low unemployment, the deficit almost eliminated, higher wages and more new businesses while inflation declined. So cleaning up the environment and strengthening our economy go hand in hand.

Before I go to your questions, let me conclude by saying I'm very optimistic today. I believe the American people can meet the challenge of global warming and end up with a better and stronger economy in the process. So on behalf of President Clinton, I call on all Americans in our best bipartisan tradition to join together in this critical undertaking, to stand with us on the right side of history. For in the end, I think that at core of global warming is not just a challenge, but an opportunity to create a cleaner and more sustainable environment with new jobs and new businesses and a more secure future.

Thank you very much. I appreciate you all being here. (Applause.)

Q Mr. Vice President, how much will this treaty cost the average American in either higher taxes or energy costs?

THE VICE PRESIDENT: Well, we've completely ruled out new taxes of any kind as a means of meeting our obligations under this treaty. We have specifically indicated that the President will propose in his State of the Union address new tax incentives -- that is tax cuts -- to encourage the purchase of the new technologies that will be necessary in order to have more

efficient uses of energy and generate less pollution.

Q Mr. Vice President, will you wait until after Argentina next year, when maybe the developing countries will come on board, before this treaty is officially submitted to the Senate?

THE VICE PRESIDENT: Well, as we said from the very beginning, we will not submit this for ratification until there's meaningful participation by key developing nations. Now, there is a negotiation now underway that will aim toward the meeting in Buenos Aires next November. However, there will also be bilateral talks with key developing nations.

And the progress made in the Kyoto treaty on joint implementation with credit offers mechanisms for pulling developing nations into this, voluntarily. And based on what we heard during these talks in Kyoto, I can tell you that while the world was given the impression that there was a monolithic opinion on the part of the developing world, actually lots of these developing countries have a different position and want to be a part of this treaty. Some of them are suffering the impacts of global warming already. Some of them are trying to urge the others to join in this.

And so we've got a big task ahead of us, but we've got some prospects of getting agreement to bring key developing countries in. We will not -- let me repeat -- we will not submit it to ratification, as we've said from the very beginning, until we have that participation from key developing countries.

Q Mr. Vice President, when you talk about -- are you talking about voluntary -- (inaudible.) The second part of the question is, even before the agreement -- (inaudible) --

THE VICE PRESIDENT: Well, first of all on your first question, no, we're not talking about voluntary limits. We're talking about voluntary agreements to join in binding limits. That's a big difference. And we don't have that yet, but we're heading in that direction and I think that there's reason for optimism that eventually we will get there.

Now, as for the second part of your question, there's going to be a huge debate in our country in the years ahead about why it's in our best interests to secure the future for the next generation and the generations after that. The fact is, we've reached a new period in history when the power that we have with new technologies in our civilization, multiplied by the larger population around the world, leads to the emissions of these greenhouse gases, a form of pollution that traps more heat in the atmosphere and changes the climate. And the consequences are devastating, unless we act. And the awareness of that fact has been growing steadily.

And I think that, as Senator Lieberman said a moment ago, the American people are ahead of the politicians where cleaning up the environment is concerned. They want cleaner air, they want cleaner water, they want less pollution, and they want the new technologies that create new jobs and new businesses as we take the lead here in the United States in making and selling this new generation of products around the world.

Roger V. Salazar @ OVP

12/11/97 11:00:16
AM

Record Type: Record

To: See the distribution list at the bottom of this message

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Subject: VP Statement on Kyoto Agreement -- 12/10

THE WHITE HOUSE

Office of the Vice President

For Immediate Release
Wednesday, December 10, 1997

Contact : (202) 456-7035

STATEMENT OF THE VICE PRESIDENT

I was extremely gratified to learn that the nations of the world agreed in Kyoto today to take strong, binding action against global warming. This historic agreement lays a solid foundation for long-term efforts to protect our climate while creating new opportunities for economic growth.

All Americans can be proud of the role our country played in securing this comprehensive agreement. The core elements were those laid out in President Clinton's proposal, and in the final hours, our skillful negotiating team led by Ambassador Stu Eizenstat led the way in bridging gaps among nations.

Addressing global warming is a long-term challenge and the Kyoto agreement is a vital turning point. Clearly, more work is needed. In particular, we will continue to press for meaningful participation by key developing nations. We are confident that can be achieved.

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FY 99 CCTI Budget

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EMBARGOED UNTIL 10:06 AM, SATURDAY, JANUARY 31, 1998

PRESIDENT CLINTON'S \$6 BILLION CLIMATE CHANGE INITIATIVE January 31, 1998

"Our overriding environmental challenge tonight is the worldwide problem of climate change, global warming, the gathering crisis that requires worldwide action... We have it in our power to act right here, right now. I propose \$6 billion in tax cuts and research and development to encourage innovation, renewable energy, fuel-efficient cars, energy-efficient homes." President Bill Clinton, State of the Union address, January 27, 1998

A \$6 billion initiative over 5 years to cut greenhouse gas emissions. Following the historic Kyoto agreement reached in December 1997, the Administration is proposing a dramatic new program of tax cuts and R&D aimed at cutting greenhouse gas emissions. The initiative amounts to \$6.3 billion over 5 years -- \$1.3 billion more than the \$5 billion package the President promised in his October 22 speech on this issue.

\$3.6 billion in tax credits. The proposed package contains \$3.6 billion over the next 5 years in tax cuts for energy efficient purchases and renewable energy.

- **Tax credits for fuel efficient cars.** The tax package includes tax credits of \$3,000 to \$4,000 for consumers who purchase advanced technology, highly fuel efficient vehicles -- expected to total \$660 million over the next five years.
- **Tax credits for rooftop solar systems.** Another tax provision provides a 15 percent credit (up to \$2,000) for purchases of rooftop solar electricity and hot water systems -- to provide incentives for meeting the Million Solar Roofs goal.
- **Other tax credits for energy efficiency.** The tax cuts also include a 20 percent credit (subject to a cap) for purchasing energy-efficient building equipment, a \$2,000 credit for purchasing energy-efficient new homes, an extension of the wind and biomass tax credit, and a 10 percent investment credit for the purchase of combined heat and power systems.

\$2.7 billion in new R&D spending. The package also contains \$2.7 billion over the next 5 years in additional research and development spending -- covering the four major carbon-emitting sectors of the economy (buildings, industry, transportation, and electricity), plus carbon removal and sequestration, Federal facilities, and crossing cutting analyses and research. Selected examples of the R&D effort include:

- **Partnership for a New Generation of Vehicles (PNGV).** PNGV is a government-industry effort to develop attractive, affordable cars that meet all applicable safety and environmental standards and get up to three times the fuel efficiency of today's cars. In FY99, the combined proposal for PNGV is \$277 million, up from \$227 million appropriated in FY98. Similar government-industry efforts are proposed to develop cleaner, more efficient diesel engines for both light trucks and heavy trucks.
- **Renewable energy.** The package includes expanded research partnerships for key renewable technologies such as wind, photovoltaics, geothermal, biomass, and hydropower to accelerate price reductions and improve performance. The FY99 budget proposes a \$100 million increase in DOE for solar and renewable energy R&D -- a 37 percent increase over FY98.

Climate Change Technology Initiative: \$3.6 Billion in Tax Incentives

Last fall, the President announced a nine-point plan to begin addressing climate change, including a five-year, \$5 billion package of tax incentives and research and development spending to spur energy efficiency and help develop low-carbon energy sources. With the historic agreement in Kyoto in December 1997 to reduce greenhouse gas emissions, the President is now proposing a \$6.3 billion initiative over 5 years -- including \$3.6 billion of tax incentives that will encourage energy efficiency and help develop low-carbon energy sources (see Table 1). The initiative covers the four major carbon-emitting sectors of the economy (buildings, industry, transportation, and electricity).

TABLE 1

Tax Incentives	Revenue effect (dollars in billions)
	Total FY1999-2003
Buildings	
Provide tax credit for energy-efficient building equipment	-1.4
Provide tax credit for new energy-efficient homes	-0.2
Provide tax credit for rooftop solar systems	-0.1
Transportation	
Provide tax credits for highly fuel efficient vehicles	-0.7
Equalize tax treatment of parking and transit and vanpool benefits	-0.1
Industry	
Provide tax credit for combined heat and power systems	-0.9
Provide tax credit for certain circuit breaker equipment	*
Provide tax credit for PFC/HFC recycling equipment	*
Electricity	
Extend tax credit for electricity produced from wind and biomass	-0.2
Climate Change Tax Initiative Total	-3.6

* Less than -\$50 million.

BUILDINGS

- ***Tax credit for energy-efficient building equipment.*** Improvements in the energy efficiency of both residential and commercial buildings can be obtained through tax credits that encourage the purchase of highly efficient equipment: fuel cells, electric heat pump water heaters, natural gas water heaters, electric heat pumps, natural gas heat pumps, and advanced central air conditioners. The credit would be 20 percent of the cost of the investment, subject to a cap. The credit would generally be available for equipment purchased between January 1, 1999 and December 31, 2003.

- ***Tax credit for new energy-efficient homes.*** The energy efficiency of new homes could be improved through the use of energy efficient building practices and efficient heating and cooling equipment. To encourage the purchase of new highly energy-efficient homes, a tax credit would be provided equal to one percent of the purchase price (up to a maximum credit of \$2,000) of new homes that greatly exceed building standards. The full credit would be available for homes purchased between January 1, 1999 and December 31, 2003. A credit of up to \$1,000 would be available for homes purchased between January 1, 2004 and December 31, 2005.
- ***Tax credit for rooftop solar systems.*** Solar energy systems have the potential to reduce greenhouse gas emissions and energy costs for businesses and individuals. A tax credit equal to 15 percent of the cost of rooftop photovoltaic (PV) systems and solar water heating systems would make these systems more affordable and encourage their purchase. The maximum credit would be \$2,000 for PV systems and \$1,000 for solar water heating systems. The credit would apply to equipment placed in service between January 1, 1999 and December 31, 2003 for solar water heating systems, and December 31, 2005 for rooftop PV systems.

INDUSTRY

- ***Tax credit for combined heat and power (CHP) systems.*** CHP systems use thermal energy that is otherwise wasted in producing electricity by more conventional methods. To encourage and accelerate investment in CHP equipment, a 10 percent tax credit would be provided for investments in CHP systems that meet certain energy efficiency requirements. The credit would apply to property placed in service between January 1, 1999 and December 31, 2003.
- ***Tax credit for replacement of certain circuit breaker equipment.*** Sulfur hexafluoride (SF₆), an extremely harmful greenhouse gas, is used in some large power circuit breakers used in the transmission and distribution of electric power. A 10 percent tax credit would be provided for the purchase of new circuit breakers that replace certain circuit breakers that are prone to leak SF₆. The credit would apply to new equipment placed in service between January 1, 1999 and December 31, 2003.
- ***Tax credit for perfluorocarbon (PFC) and hydrofluorocarbon (HFC) recycling equipment.*** PFCs and HFCs are extremely potent greenhouse gases and are used extensively in the semiconductor manufacturing industry. A 10 percent tax credit would be provided for the purchase of PFC/HFC recycling equipment to recover gases used in the production of semiconductors. The credit would apply to equipment placed in service between January 1, 1999 and December 31, 2003.

TRANSPORTATION

- ***Tax credit for highly fuel efficient vehicles.*** Cars and light trucks (including minivans, sport utilities, and pickups) currently account for 20 percent of greenhouse gas emissions. Tax credits for highly fuel efficient vehicles will help to move vehicles that are ultra efficient from the laboratory to the highway. Tripling a car's fuel economy reduces its emissions of carbon dioxide by 67 percent; doubling a car's fuel economy reduces its emissions of carbon dioxide by 50 percent.
 - ***Credit for vehicles with triple the base fuel economy.*** This credit would be \$4,000 for each vehicle that gets three times the base fuel economy for its class. The \$4,000 credit would be available for purchases of qualifying vehicles beginning January 1, 2003. The credit amount would phase down to \$3,000 in 2007, \$2,000 in 2008, and \$1,000 in 2009, and would phase out in 2010.
 - ***Credit for vehicles with twice the base fuel economy.*** This credit would be \$3,000 for each vehicle that gets twice the base fuel economy for its class. The \$3,000 credit would be available for purchases of qualifying vehicles beginning January 1, 2000. The credit amount would phase down to \$2,000 in 2004, \$1,000 in 2005, and would phase out in 2006.
 - These credits would be available for all qualifying vehicles, including cars, minivans, sport utility vehicles, pickup trucks, and electric vehicles.
 - The Administration looks forward to working with the auto manufacturers and other interested parties on the details of the tax incentives.
- ***Equalize the tax treatment of parking and transit benefits.*** This initiative would equalize the tax treatment of parking benefits and transit and vanpool benefits. To encourage public transportation and vanpools, employers would be allowed to provide tax free transit and vanpool benefits in lieu of compensation, up to the same amount that they can provide for parking beginning January 1, 1999.

ELECTRICITY

- ***Extension of tax credit for electricity produced from wind and biomass.*** To encourage the production of electricity from wind and certain biomass, a 5-year extension is proposed for the present 1.5 cent per kilowatt hour tax credit (adjusted for inflation after 1992). The present credit, which applies to facilities placed in service before July 1, 1999, would be extended for five years.

Climate Change Technology Initiative: \$2.7 Billion in Research and Development

January 31, 1998

Last fall, the President announced a nine-point plan to begin addressing climate change, including a five-year, \$5 billion package of tax incentives and research and development spending to spur energy efficiency and help develop low-carbon energy sources. With the historic agreement in Kyoto in December 1997 to reduce greenhouse gas emissions, the President is now proposing a \$6.3 billion initiative over 5 years -- including \$2.7 billion in increased R&D spending (see Table 1). For FY 1999, the budget shows \$473 million in increased spending on climate-change related technologies (\$1.292 billion vs. \$819 million in FY 1998) and \$421 million in tax incentives, for a total first-year initiative of \$894 million.

TABLE 1

Direct Programs	Dollars in Millions				
	1997 Actual	1998 Estimate	1999 Proposed	Dollar Change: 1998 to 1999	Total Increase 1999-2003
BY AGENCY					
Energy	657	729	1060	+331	+1,899
Environmental Protection Agency	86	90	205	+115	+677
Housing and Urban Development	--	--	10	+10	+10
Commerce	--	--	7	+7	+38
Agriculture	--	--	10	+10	+86
R&D Program Total	743	819	1,292	+473	+2,710
Climate Change Technology Total	743	819	1,713	+894	+6,345

TABLE 2

Direct Programs	Dollars in Millions		
	1998 Estimate	1999 Proposed	Dollar Change: 1998 to 1999
BY AREA OF EFFORT			
Buildings	146	264	+118
Industry	156	216	+60
Transportation	246	356	+110
Electricity	220	332	+112
Carbon Sequestration and Cross-Cutting Research	0	42	+42
Policy Analysis, Market Incentives	6	26	+20
Program Direction	45	57	+12
Climate Change Technology Direct R&D Total	819	1,292	+473

Columns may not add due to rounding.

The principal focus of the initiative is an R&D portfolio that covers the four major carbon-emitting sectors of the economy (buildings, industry, transportation, and electricity), plus carbon removal and sequestration, Federal facilities, and crossing cutting analyses and research. (In Table 2, Federal facilities are included under Buildings.)

BUILDINGS

- ***Partnership for Advanced Technologies in Housing (PATH).*** HUD will lead a team that includes DOE and EPA to work with the building industry to develop, demonstrate, and deploy housing technologies and practices that are inexpensive, highly efficient, and attractive to consumers. This effort will also focus on streamlining Federal, state, and local codes and regulations, education outreach, and creating local markets for PATH housing using pilot sites and demonstrations.
- ***Million Solar Roofs.*** In June of 1997, the President announced an initiative to encourage the installation of one million solar hot water and solar photovoltaic (PV) installations on buildings over the next 10 years. DOE will fund cost-reduction R&D for solar thermal and rooftop PV systems, and will establish partnerships with communities, builders, and other Federal agencies to promote the use of building-mounted solar systems.
- ***Increased R&D.*** In addition to encouraging the deployment of the best available technologies, DOE is also increasing its research on building systems modeling, to help architectural engineers, and on major components such as next-generation heat-pumps, cooling systems, furnaces, and lighting.

INDUSTRY

- ***Partnerships with industry.*** DOE works closely with industry on technology roadmaps and plans to reduce energy consumption and secure early reductions in greenhouse gas emissions. Industries already engaged in this effort include aluminum, steel, glass, paper and forest products, metal casting, and chemicals. These technology roadmaps form the basis for cost-shared R&D with industry teams and consortia.
 - This work will be enhanced within DOE, and complementary efforts will be undertaken by EPA, USDA, and DOC (NIST), which will lead to voluntary greenhouse gas reduction programs within industry.
- ***Advanced power generation.*** R&D will be accelerated on advanced turbines, fuel cells, and other technologies, and new approaches to capturing useful work or heat through several temperature stages (e.g. electric generation, industrial process steam, steam building heat) in factories or commercial buildings will be demonstrated. When commercially accepted, these systems will allow us to capture the waste heat the Nation now throws away.

TRANSPORTATION

- ***Partnership for a New Generation of Vehicles (PNGV).*** A government-industry effort to develop attractive, affordable cars that meet all applicable safety and environmental standards and get up to three times the fuel efficiency of today's cars, or roughly 80 miles per gallon. Five agencies participate in PNGV -- DOE is the largest player, followed by EPA, DOC, NSF, and DOT.
 - The program will lead to "concept cars" in the year 2000 and production prototypes in 2004.
 - This winter, industry and the government have announced the designs that they will pursue -- hybrid vehicles that combine a power source (a piston engine or fuel cell) with battery storage and electric motors.
 - In FY99, the combined request for PNGV-related work in those agencies is \$277 million, up from \$227 million appropriated in FY98.
- ***Partnerships for Light and Heavy Trucks.*** Similar government-industry efforts are proposed to develop cleaner, more efficient diesel engines for both light trucks and heavy trucks.
 - DOE has been engaged in R&D on cleaner, more efficient large truck engines for several years, and that effort will be stepped up in FY99, in coordination with increased work on large diesel engines at EPA and DOD.
 - A government-industry partnership is currently being formed for R&D on smaller diesel engines suitable for light trucks and sport-utility vehicles (SUVs), which are the fastest-growing class of passenger vehicles. A clean, efficient diesel engine could improve the fuel-economy of light trucks and SUVs by 35 percent.
- ***Sustainable Transportation.*** This initiative would promote alternatives to single-occupancy vehicle travel using pilot projects in selected communities modeled after the highly successful approach adopted by the Portland, Oregon metropolitan region.
 - The sustainable transportation programs in EPA and DOE will be coordinated with existing and planned DOT programs. (DOT is not funded within the Climate Change Technology Initiative, however.)

ELECTRICITY

- **Renewable energy.** Expand research partnerships for key renewable technologies such as wind, photovoltaics, geothermal, biomass, and hydropower to accelerate price reductions and improve performance. The same programs will also be supporting increased R&D in hydrogen production and storage and in superconductivity.
 - The FY99 budget proposes a \$100 million increase in DOE for solar and renewable energy R&D -- a 37 percent increase over FY98.
- **Nuclear power-plant life extension.** DOE will initiate an R&D effort addressing the critical technology needs to allow currently-operating nuclear power plants to safely extend their operating lifetimes by 10 to 20 years. Under current NRC licences, approximately 60 gigawatts of electric generating capacity would have to be retired between now and 2015. Providing the technologies necessary to safely operate these plants for another 10 to 20 years will make the transition to other low-carbon energy sources, such as solar and renewable energy, much easier.
- **Innovative coal combustion technologies.** In FY99, DOE will initiate a research program on innovative new approaches to coal combustion that offer the possibility of much lower carbon emissions than existing technologies.

CARBON REMOVAL AND SEQUESTRATION

- **Sequestration R&D.** Research initiatives are being funded in both basic and applied research to find ways to remove carbon dioxide (CO₂) from combustion gases and sequester (store) the carbon so that it does not enter the atmosphere.
 - DOE's basic science office will engage in biochemical and microbial research.
 - DOE's fossil energy office will conduct an applied sequestration R&D program, jointly managed with the basic science office.
 - USDA will initiate research on enhancing the carbon-sequestering capabilities of agricultural species. NIST will support complementary biotechnology work on plant metabolism and carbon use.

CROSSCUTTING ANALYSIS AND RESEARCH

- ***Emissions credits, incentives, and trading.*** EPA will lead an effort, assisted by DOE, to evaluate options for a domestic trading system and early reduction program in industry. The Federal government will work with stakeholders to understand their views and interests, and to build the institutional capacity needed to implement a carbon emissions credit and trading system.
- ***Program and science assessments.*** DOE will lead efforts to assess the implications of new research results produced by the Global Change Research Program, in order to determine what geographic and technological responses may be appropriate.

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Buenos Aires

Divider Title: _____

THE BUENOS AIRES CLIMATE CHANGE CONFERENCE
STATE DEPARTMENT FACT SHEET
DECEMBER 1998

OVERVIEW

- At a conference held November 2-13, 1998, in Buenos Aires, Argentina, the Parties to the UN Framework Convention on Climate Change agreed to a two-year action plan for advancing the ambitious agenda outlined in the historic Kyoto Protocol. The Protocol commits developed countries to reduce emissions of the greenhouse gases most scientists believe are causing global warming, and provides innovative, market-based tools for achieving those reductions. [See box].
- The Buenos Aires conference (known also as the “Fourth Session of the Conference of the Parties” or “CoP-4”) also saw a significant breakthrough on the issue of developing country participation in international efforts to address climate change. Argentina became the first developing country to announce its intention to take on a binding emissions target for the 2008-2012 time period. Kazakhstan announced that it intended to do so as well.
- During the Buenos Aires conference, on November 12, 1998, the United States signed the Kyoto Protocol at the United Nations in New York. Signing reaffirms the United States’ commitment to work with other nations to meet the Protocol’s ambitious environmental goals and ensures a continued strong U.S. role in settling issues left unresolved at Kyoto. Signing does *not* impose an obligation on the United States to implement the Kyoto Protocol. (The Protocol cannot become binding on the United States without the approval of the United States Senate.) The President will not submit the Protocol to the U.S. Senate for approval without the meaningful participation of key developing countries in efforts to address climate change.

SUMMARY OF ACCOMPLISHMENTS

BUENOS AIRES ACTION PLAN

- By securing a plan of action with a deadline for developing key aspects of the operational framework of the Kyoto Protocol, the United States achieved one of its primary diplomatic objectives in Buenos Aires.
- In the Buenos Aires action plan, the Parties resolved to reach decisions by the end of 2000 on a number of key issues, including:
 - Rules and guidelines for Kyoto's market-based mechanisms (e.g., emissions trading, joint implementation, and the Clean Development Mechanism);
 - Compliance rules and procedures, including consequences for non-compliance;
 - Development and transfer of cleaner, climate-friendly technologies; and
 - Consideration of the adverse impacts of climate change and response measures.

THE KYOTO PROTOCOL

In December, 1997, in Kyoto, Japan, some 160 countries reached an historic agreement to cut greenhouse gas emissions in an effort to fight global warming -- one of the most profound environmental challenges of the 21st century.

The Kyoto Protocol includes binding emissions targets for developed nations -- 8% below 1990 emissions levels for the European Union; 7% for the United States; and 6% for Japan -- as well as U.S. proposals for flexible, market-based measures to ensure that these targets can be met in a cost-effective manner. The key market-based provisions are:

- **International emissions trading among nations with emissions targets.** Under an emissions trading regime, countries or companies that find it relatively expensive to reduce emissions may purchase additional emissions units from those emitters that have more units than they need (because they have already met their targets with room to spare). Trading encourages reductions where they can be achieved at the lowest cost, thus getting the world the most greenhouse gas reductions for each available dollar, euro or yen.
- **Clean Development Mechanism (CDM).** Industrialized countries will be able to use certified emissions reductions from projects in developing countries to contribute to their compliance with greenhouse gas reduction targets.
- **Joint implementation among developed countries.** Countries with emissions targets may get credit towards their targets through joint project-based emissions reductions in other such countries.

The Protocol includes additional elements of flexibility:

- **Emissions targets are to be reached over a five-year commitment period. The first commitment period will be 2008-2012.** Allowing emissions to be averaged over a commitment period helps smooth out short-term fluctuations due to economic performance or weather. Having a decade before the start of the binding period will allow more time for companies to make the transition to greater energy efficiency and/or lower carbon technologies.
- **Emissions targets include all six major greenhouse gases.** This will provide more comprehensive environmental protection while lending additional flexibility to nations and companies in meeting their targets.
- **Activities that absorb carbon, such as planting trees, can be used as offsets against emissions of greenhouse gases.** Including these so-called "carbon sinks" will encourage activities such as afforestation, reforestation, and better forestry and agriculture conservation practices.

BUENOS AIRES ACTION PLAN (continued from page 1)

- The plan of action for proceeding on Kyoto's market-based mechanisms includes a list of critical operational issues raised by Parties, including:
 - Transparency in tracking transfers of emissions units;
 - Allocating risk in emissions trades; and
 - Measurement, reporting and verification issues.
- The Parties decided to continue the Activities Implemented Jointly pilot phase for emissions reduction and carbon sink activities. This will provide, in particular, the least developed and small island states additional opportunities to develop projects and gain experience that will

allow them to participate more fully in the Protocol's Clean Development Mechanism.

CARBON SINKS

- In addition to the Buenos Aires Action Plan, the Parties agreed to move forward with a process to define, measure and verify various categories of carbon sinks and have tasked the Intergovernmental Panel on Climate Change (IPCC) (an international body of over 2000 of the world's leading climate scientists and experts) with conducting a comprehensive study on land-use, land-use change, and forestry activities.
 - As part of this process, the Parties accepted the offer of the United States to host a workshop in the spring of 1999 on additional sink categories, such as those created by improved conservation and management of forests, agricultural soils, and grasslands.
 - Once the IPCC report is finished in the spring of 2000, the Parties will be in a position, at the following Conference of the Parties, to consider further decisions on the scope and use of carbon sinks under the Protocol.

DEVELOPING COUNTRY PARTICIPATION

- On November 11th, Argentina became the first developing country to announce its intention to adopt a binding emissions target for the 2008-2012 time period. Kazakhstan followed the next day with a similar pledge. While the issue of developing country participation in the Protocol remains far from resolved, these announcements signaled a clear shift in the terms of the international debate.
- The announcements by Argentina and Kazakhstan present a new challenge to the Parties. The Protocol does not now provide for nations to voluntarily assume binding emissions targets. Thus, future conferences will need to find pathways under the Protocol in order to facilitate greater developing country participation. Possibilities include a supplemental agreement that would modify the Protocol as it enters into force.
- Greater engagement in Buenos Aires on the part of developing countries was evidenced in other areas as well. One notable example was the growing interest of countries in Latin America and Africa in the Clean Development Mechanism, one of the Protocol's market-based provisions that provides incentives for investment in clean technology projects.
- Climate change is a global problem requiring a global solution. Thus, securing meaningful participation from key developing countries remains a top priority for the United States. The Administration will continue a "full-court diplomatic press" in this area.

PRIVATE SECTOR INVOLVEMENT

- Another encouraging development in Buenos Aires was the active participation of the private sector. Business representatives were involved in two roundtables on the Kyoto mechanisms and technology transfer. Private sector representatives will continue to have opportunities to participate in upcoming international meetings on a number of climate issues.