

The Basics of Global Climate Change

What's the Problem?

The Earth's climate is changing. Over the past century, global temperature has increased, sea levels have risen, glaciers have receded, and precipitation has increased. While some amount of climate change is natural, mounting scientific evidence suggests an emerging human role.

By burning fossil fuels and cutting down forests, we are releasing large amounts of carbon dioxide into the air. Carbon dioxide is a greenhouse gas. It traps some of the sun's heat and keeps the planet warmer than it would otherwise be.

A certain balance of carbon dioxide in the atmosphere is necessary to sustain life as we know it, and natural processes have maintained this balance for millennia. We are changing it. Just since the Industrial Revolution, we have increased the carbon dioxide concentration in the atmosphere by nearly 30%.

Unless actions are taken to reduce carbon dioxide emissions, the atmospheric concentration of this gas could more than double in the next century. Scientists expect that this will cause global temperature to increase between 2.0 - 6.5 degrees Fahrenheit -- a faster rate of change than any seen in 10,000 years.

Why do we Care?

Rising global temperatures will further change the Earth's climate. Exactly how much and how fast remains uncertain. Nevertheless, the world's best climate scientists have carefully examined the potential impacts of projected temperature increases and have concluded that they are likely to be serious.

Warmer temperatures could increase heat-related deaths and lead to the spread of certain infectious diseases into formerly inhospitable areas. They could shift zones of agricultural productivity and threaten the survival of many animal and plant species. Rising sea levels could flood thousands of miles of U.S. coastline and render near-shore areas more susceptible to tidal surges and storms. More extreme weather, such as floods and droughts, could take additional lives and cause severe economic damage. While these changes could profoundly affect our society, they are likely to have even more serious consequences in the developing world where countries have less capacity to adapt.

What are we Doing?

Climate change is enormously complicated, and there remains a great deal about it that we do not understand. Still, almost every government in the world recognizes that climate change is a real and legitimate concern that merits a policy response.

Five years ago at the Earth Summit in Rio, the nations of the world agreed to an international climate change treaty. Under this treaty, the U.S. and other developed nations were to reduce their emissions of greenhouse gases to an agreed level by the year 2000.

For a variety of reasons, most countries, including ours, will not meet the Rio goal. This fact, coupled with better scientific evidence of global climate change, has led nations to try to negotiate a new climate change agreement. The plan is to conclude this agreement at a meeting in Japan this December.

The United States is now in the process of developing its policy for what such an agreement should look like and how emissions could be reduced domestically.

Climate Change: Basic Background

"The science is clear and compelling. We humans are changing the global climate. Concentrations of greenhouse gases in the atmosphere are at their highest levels in more than 200,000 years, and climbing sharply....Here in the United States, we must do better....In order to reduce greenhouse gases and grow the economy, we must invest more in the technologies of the future. I am directing my Cabinet to work to develop them. Government, universities, business and labor must work together....[I]n order to do our part, we have to first convince the American people and the Congress that the climate change problem is real and imminent."

-- President Bill Clinton
United Nations, June 26, 1997

Why is Climate Change on the Agenda Now?

In less than five months, the world's nations will convene in Kyoto, Japan to set binding greenhouse gas emission limits for developed nations. This meeting, called the Third Conference of the Parties, will follow critical negotiating sessions to be held in Bonn, Germany over the next several months.

The Kyoto Conference is the culmination of a process that began in 1992 at the United Nations Conference on Environment and Development in Rio de Janeiro (the "Rio Summit"). The Rio Summit produced the Framework Convention on Climate Change (the "Framework" or "FCCC"), to which 165 nations are presently parties.

Under the Rio Framework, developed nations agreed to a *non-binding* goal of lowering their emission of greenhouse gases to 1990 levels by the year 2000. Nearly every developed nation, including the U.S., will fail to achieve this goal.

In 1995, the parties to the Rio Framework met in Germany (the "First Conference of the Parties") and negotiated the Berlin Mandate. Under the Mandate, the parties agreed (i) that they would continue to pursue the Rio Framework's goals, (ii) that the developed nations should negotiate a "follow-on" agreement, which would cover the post-2000 period, and (iii) that there would be no new commitments for developing nations, though developing nations would be required to advance implementation of commitments they made in Rio.

In 1996, the parties met again at Geneva, Switzerland (the "Second Conference of the Parties"). There, the United States called for a binding agreement on greenhouse gas emissions in the post-2000 period. The Administration now intends to conclude such an agreement in December in Kyoto.

The Science is Compelling.

Greenhouse gases. Scientists have long understood that greenhouse gases in nature (principally water vapor, carbon dioxide, methane and nitrous oxides) keep the Earth's temperature an estimated 60 degrees Fahrenheit warmer than it would be absent such gases, thus sustaining our existence on the planet.

As a result of human activities, the concentration of greenhouse gases have increased markedly since the Industrial Revolution. The concentration of CO₂ -- which accounts for about 85% of all greenhouse gases -- has increased 30% since preindustrial times from 280 to 360 parts per million. Current projections indicate that, unless action is taken, atmospheric concentrations of CO₂ will dramatically increase in the next century to over 700 ppm -- which would be the highest level of CO₂ in 50 million years.

Scientific consensus. There is no serious scientific debate about the proposition that (1) greenhouse gases are rapidly building up in the atmosphere; (2) that these increased

concentrations will change our climate; and (3) that these changes may have serious adverse and disruptive consequences. Even those who would question whether climate change is *already* occurring recognize the truth of this fundamental proposition. During the next century, if we continue on a business-as-usual trajectory, climate models project an increase in global temperature of about 2-6.5° F -- a rate of warming faster than at any time in the last 10,000 years. By way of reference, a cooling in average temperatures of just 9° F brought on the last ice age.

In addition, the scientific evidence is clear and compelling that human activity -- notably increasing use of fossil fuels -- has in fact started to change the global climate. The UN-sponsored Intergovernmental Panel on Climate Change (the "IPCC"), concluded in 1995 that "the balance of evidence suggests that there is discernible human influence on climate change." Some 2600 of the world's leading scientists have publicly endorsed the IPCC's findings, saying that "[h]uman-induced global climate change is under way." The scientists observed that "further accumulation of greenhouse gases commits the Earth irreversibly to further global climatic change and consequent ecological, economic and social disruption." Among the evidence consistent with the view that climate change is already occurring:

- Average global temperature has increased by almost 1.0° F in the past century;
- The ten warmest years of the century have occurred since 1980, and 1995 was the warmest year on record;
- The 1980s were the warmest decade on record;
- Sea level has risen 4-10 inches in the past century.
- U.S. rainfall has increased 6% over the last century, an amount of water equal to half the yearly flow the Mississippi river;
- At the same time, increased evaporation has caused some areas, such as the Great Plains, California, Texas and Maine, to get drier.
- Mountain glaciers are melting worldwide. For example, Glacier National Park has lost 70% of its glacial area in the last 100 years.

The impact of a business-as-usual increase in greenhouse gas concentrations. The impacts could be very serious as CO₂ concentrations reach and exceed two times preindustrial levels:

- **Human Health:** Warmer temperatures are projected to increase fatalities from heat stress of the kind that killed 400 in Chicago in 1995 and expand the geographic ranges for diseases like malaria and dengue fever. Fifty to eighty million more cases of malaria alone are projected worldwide.
- **Extreme weather:** The change in the planet's water cycle is projected to lead to increased frequency and intensity of extreme weather events such as floods and drought.
- **Sea Level Rise:** Sea level is projected to increase by an additional 6-38 inches by 2100. Scientists' "best guess" estimate of a 20-inch rise would inundate 9,000 square miles of the United States, with Florida and the Gulf Coasts most at risk.

- **Agricultural Impacts:** Changes in growing seasons, water availability, soil moisture and precipitation could cause significant regional shifts in food productivity, with decreases in food production in many of the world's poorest regions.
- **Natural ecosystems will be degraded:** For example, during the next century the geographical range of forests is expected to move several hundred miles north exceeding the ability of many forests to migrate. The northeast may lose its beech trees and sugar maples. Western conifer forests will likely shrink.

Some Key Facts About Emissions.

- Climate change is a global issue, requiring a global response. While developed countries have contributed 75 percent of total greenhouse gas emissions since the beginning of the Industrial Revolution, by 2035, emissions from developing countries are expected to exceed those from developed countries.
- The United States, with only 4% of the world's population, is responsible for more than 20% of global emissions. U.S. per capita emissions are roughly 50% greater than the OECD average and eight times that of China.
- CO₂ emissions account for about 85% of all US greenhouse gas emissions, and fossil fuel combustion makes up 99% of U.S. CO₂ emissions.
- 1995 CO₂ emissions in the United States were divided equally among the three major end uses: buildings (35%), industry (34%), and transportation (31%).
- Current carbon emissions in the United States by fuel type are: petroleum (42%), natural gas (23%), and coal (35%)

Climate Change Can Be Addressed Without Hurting the Economy

The President's remarks to the Business Roundtable: "I have devoted my passion and the best ideas I could come up with to try to get this country in good shape economically and socially. But I do believe it is folly for us to believe that we can go into the next century without a strategy that says we're going to be responsible and we're going to do our part and lead the world on environmental issues . . . Let's find a way to preserve the environment, to meet our international responsibilities, to meet our responsibilities to our children, and grow the economy at the same time."

The economists agree. More than 2400 economists, including eight Nobel laureates, have publicly declared that, if implemented properly, emission reductions "would slow climate change without harming American living standards, and these measures may in fact improve U.S.

productivity in the longer run.”

Our international policies. The United States has proposed a three-part framework for achieving a stronger, more cost-effective and comprehensive treaty:

- **Binding Emission Targets.** To help guarantee the effectiveness of global efforts to reduce greenhouse gas emissions, the U.S. will promote binding targets for developed nations to reduce their emissions. Almost all developed nations, including the United States, will fall well short of the non-binding goals in the 1992 Rio Convention.
- **Flexibility.** To ensure that emission reductions are pursued in the most cost-effective manner, the Administration supports proposals for maximum flexibility, such as allowing the trading of emission permits among developed nations and allowing so-called “joint implementation,” under which developed and developing countries work together on specific energy projects to reduce emissions. These measures can provide strong incentives to achieve the greatest possible reductions at the lowest possible cost.
- **Participation of Developing Countries.** Climate change is a global problem that requires all nations to commit to appropriate action. While it is proper for industrialized nations to take the first steps, the developing countries -- whose emissions are projected to catch up with those of the developed world by 2035 -- must be part of the solution. The U.S. proposal calls on developing countries to advance their existing commitments under the 1992 Convention; and to agree to a subsequent negotiation in which, by 2005, they will accept binding targets and agree on a mechanism allowing “graduation” from developing country status to developed country status.

Our domestic policies. The President has not yet endorsed any emissions target or timetable, and specific policies to implement a target and timetable are still being developed. But the Administration’s policy work is guided by certain broad principles.

- President Clinton is committed to responsible, balanced action to confront the threat of climate change. The Administration rejects both extremes of the climate change debate: those who want to take drastic actions that would severely disrupt our economy and those who dismiss the scientific evidence and say we need not act.
- President Clinton will only take actions that preserve our vigorous economic growth. The Administration believes -- and has demonstrated -- that environmental protection and economic growth can and should go hand in hand.
- The Clinton Administration will emphasize solutions based on flexible, market-based policies, not government regulation. These programs include emissions

trading within the United States.

- The Clinton Administration will invest in research and development to promote technologies that reduce the emissions that cause climate change, save energy, and reduce our dependence on foreign oil. We will work to help American industry increase its role as the world leader in developing environmental technology.

The Administration Has a Strong Record to Build Upon.

Over the last four and a half years, the Administration has built a strong climate change record.

The Climate Change Action Plan (CCAP). CCAP began in 1993 with a goal of returning total U.S. greenhouse gas emissions to their 1990 levels by the year 2000. Although the CCAP will fall well short of this goal, CCAP programs will result in emissions reductions of about 76 million metric tons of carbon-equivalent by the year 2000.

The plan includes some 50 initiatives covering major sectors of the U.S. economy. It addresses energy demand, energy supply, and forestry. Agency participants include DOE, EPA, and USDA. The CCAP includes measures to reduce all significant greenhouse gases in all sectors of the economy. It is a voluntary program that relies on partnerships and cooperation between the public and private sectors in developing new low-emissions, high-efficiency technologies.

Because of lower-than-expected fuel prices and higher-than expected economic growth and electricity demand, overall emissions growth has outstripped the emissions reductions achieved by CCAP. Additionally, Congress has made significant reductions (about 40% in recent years) in CCAP's funding, thus preventing full implementation of some of CCAP's initiatives.

Federal energy consumption. The Energy Policy Act of 1992 and Executive Order 12902 challenge Federal building managers to reduce energy consumption by 20% per square foot by 2000, and 30% by 2005, relative to a 1985 baseline. With declining Federal resources available, the Federal Energy Management Program is emphasizing the use of private-sector investment through energy-saving performance contracting and utility financing of energy efficiency to meet these goals. The combination of Federal funding and anticipated private sector funding of up to \$4.3 billion through 2005 should make these goals attainable.

Partnership for a New Generation Vehicle (PNGV). Although the fuel economy of cars has nearly doubled in the last 25 years, Americans travel more than twice as many miles today as we did in 1970, with a net result of increased fuel consumption and increased greenhouse gas emissions from personal vehicles. While technology has reduced many of the emissions from automobiles, CO₂ emissions are the exception.

The PNGV program joins the big three U.S. automakers, Federal agencies and many suppliers of materials and equipment in an effort to develop a more efficient automobile. The program's goal

is to triple the fuel efficiency of passenger cars with no decrease in comfort or safety.

Partnership for Advancing Technologies in Housing (PATH). Energy use in buildings is responsible for about a third of U.S. greenhouse gas emissions, and rising. Major improvements can be made in the quality of housing, while reducing energy use by 50% or more and lowering costs. The PATH initiative will bring together building suppliers, assemblers, insurance companies, and state and local regulators to explore and demonstrate how innovation in construction markets can achieve environmental goals with an affordable, attractive product. Discussions are underway with jurisdictions in Colorado, Florida and California. HUD, DOE, and NIST are playing major roles.

Biomass Energy Initiative. The biomass energy initiative involves converting agricultural crops to liquid and gaseous fuels. The Departments of Energy and Agriculture are now working with private companies to improve technologies and to demonstrate the potential for such power projects to aid rural development. The initiative has sponsored pilot projects in New York, Minnesota and Iowa.

Million Solar Roofs Initiative. DOE will lead an effort to place one million solar energy systems on U.S. roofs by the year 2010, by using existing Federal grants, procurement, and other programs, and by working with local communities, businesses, governments, and utilities to increase sales of solar energy systems. By 2010, this initiative could avert carbon dioxide emissions equivalent to those of 850,000 cars and will produce the same electrical generating capacity as several coal-fired power plants.

The President's Committee of Advisors on Science and Technology (PCAST). The President directed PCAST to conduct a review of national energy R&D policies, which would assess their adequacy and "ensure the United States has a program that addresses its energy and environmental needs for the next century." PCAST will present its recommendations on publicly-supported R&D, incentives for private energy R&D, and commitments to international energy R&D, by October 1, 1997.

Regional Climate Change Workshops. The White House Office of Science and Technology Policy and the U.S. Global Change Research Program are sponsoring a series of workshops to examine the vulnerabilities of various regions of the United States to climate variability and climate change and to gather information across regions to support national scientific assessment (called for in the Global Change Research Act of 1990). Eighteen workshops with the full involvement of relevant stakeholders are being held in different regions of the country.

Climate Change Message

Climate change is a serious problem for us, our children and our grandchildren. The President is committed to taking responsible action to confront the threat that climate change poses. The United States will support international agreements that set realistic goals and that require participation by all countries -- industrial and developing. At home, we support flexible, market-based reforms based on the principle that vigorous economic growth and protection of the earth must go hand in hand. It is up to us not only to prepare our children for the world of the 21st century, but to protect that world for our children.

Climate Change Talking Points

The Need for Action

- There is now scientific consensus that (1) greenhouse gases are rapidly building up in the atmosphere; (2) that these increased concentrations will change our climate; and (3) that these changes may have serious adverse and disruptive consequences. Even those who would question whether climate change is *already* occurring recognize the truth of this fundamental proposition.
- In addition, the scientific evidence is clear and compelling that human activity -- notably increasing use of fossil fuels -- has in fact started to change the global climate. More than 2,600 of the world's leading scientists have said that "human-induced global climate change is underway" and that continued increases in emissions of carbon dioxide and other greenhouse gases "commits the earth irreversibly to further global climatic change and consequent ecological, economic and social disruption."
- Scientists agree that global warming and disruptions in the world's climate could seriously harm human health -- projections include an additional 50 million cases of malaria per year; increase the incidence and intensity of devastating floods and droughts; raise sea levels enough to inundate 9000 square miles along the U.S. coastline; decrease food production in some of the world's poorest nations; and threaten the survival of many plant and animal species.
- In December, more than 160 nations, including the United States, will meet in Kyoto in an effort to complete negotiations on a new international climate change agreement.

International Agreements -- Background and Principles

Background

- The new climate change convention will replace a 1992 agreement adopted at the Earth Summit in Rio. That agreement included *non-binding* commitments to reduce greenhouse gas emissions.
- The industrialized nations, including the United States, agree that the new convention should require them to set and reach *binding* commitments and timetables for reductions in greenhouse gas emissions.
- Members of the European Union and other industrialized countries have proposed that by the year 2010, developed nations agree to reduce their greenhouse gas emissions to a level 15 percent below 1990. The United States believes that target is unrealistic but we have not yet proposed our own target or timetable.

Principles

- The Clinton Administration is committed to rapid action to reach an agreement that is balanced, strong and cost-effective in time for the December meeting in Kyoto, Japan.
- The United States will only support an agreement that requires all nations to participate in a common solution to the global problem of climate change. Like other industrialized nations, we realize that our responsibility for large proportions of current emissions requires us to agree in Kyoto on binding targets for reductions. But any agreement must also require developing nations to commit to appropriate action. [Note: By the year 2035, scientists estimate that emissions from developing countries will exceed those of developed nations.]
- The Clinton Administration is committed to reaching an agreement that establishes realistic targets and timetables for reduced emissions. The United States will only make commitments that the President believes our nation can reach without slowing economic growth or damaging the economy.
- The United States believes that an agreement should be based on flexible, cost-effective methods to reduce emissions of greenhouse gases. Specifically, the United States proposal calls for "emissions trading" among industrialized nations and so-called "joint implementation," which will allow developed and developing countries to work together to reduce emissions on specific energy projects. These measures will provide strong incentives to achieve the greatest possible emission reductions at the lowest possible cost.

Domestic Policy – Background and Principles

Background

- The United States has 4 percent of the world's population and is currently responsible for more than 20 percent of the world's carbon dioxide emissions. Emissions produced by buildings, industry and transportation each account for roughly one-third of that total. Despite efforts to reduce emissions through federal programs and voluntary partnerships, U.S. emissions of carbon dioxide and other greenhouse gases substantially exceed 1990 levels. (We are not alone; almost all industrialized nations will fail to meet the non-binding pledge in the Rio agreement to reduce emissions to 1990 levels by the year 2000.)
- Current Clinton Administration programs to reduce emissions of greenhouse gases include a partnership with Detroit to triple fuel efficiency of passenger cars; pilot projects to help farmers and industry convert crops to liquid and gaseous fuels; and a Department of Energy program to add one million solar energy systems to buildings by the year 2010.

Principles

- President Clinton is committed to responsible, balanced action to confront the threat of climate change. The Administration rejects both extremes of the climate change debate: those who want to take drastic actions that would severely disrupt our economy and those who dismiss the scientific evidence and say we need not act.
- President Clinton will only take actions that preserve our vigorous economic growth. The Administration believes -- and has demonstrated -- that environmental protection and economic growth can and should go hand in hand. More than 2000 economists, including eight Nobel Laureates, have concluded that there are policy options "that would slow climate change without harming American living standards, and these measures may in fact improve U.S. productivity in the longer run."
- The Clinton Administration will emphasize solutions based on flexible, market-based policies, not government regulation. These programs include emissions trading within the United States.
- The Clinton Administration will invest in research and development to promote technologies that reduce the emissions that cause climate change, save energy, and reduce our dependence on foreign oil. We will work to help American industry increase its role as the world leader in developing environmental technology.

Conclusion

- Whenever the security of our people has been threatened, the United States has led the world to action. Climate change poses a threat to all people -- one that is not immediately apparent today but will grow in severity and significance in years to come. The world must act. And the United States must lead. The President has made it clear that he intends to do so and has committed himself both to develop balanced, flexible policies to accomplish our aims and to lead a major effort to educate the public about the importance of this issue -- an effort that will culminate in a White House Conference on Climate Change in early October. It is the challenge and the commitment of this Administration to continue promoting prosperity as we protect the environment.

REMARKS BY THE PRESIDENT
IN ADDRESS TO THE UNITED NATIONS
SPECIAL SESSION ON ENVIRONMENT AND DEVELOPMENT

The United Nations
New York, New York

June 26, 1997

Thank you very much. Mr. President, Mr. Secretary General, ladies and gentlemen: Five years ago in Rio, the nations of the world joined together around a simple but revolutionary proposition, that today's progress must not come at tomorrow's expense.

In our era, the environment has moved to the top of the international agenda because how well a nation honors it will have an impact, for good or ill, not only on the people of that nation, but all across the globe. Preserving the resources we share is crucial not only for the quality of our individual environments and health, but also to maintain stability and peace within nations and among them. As the father of conservation in our nation, John Muir, said, "When we try to pick anything out by itself, we find it hitched to everything else in the universe."

In the years since Rio, there has been real progress in some areas. Nations have banned the dumping of radioactive wastes in the ocean and reduced marine pollution from sources on land. We're working to protect the precious coral reefs, to conserve threatened fish, to stop the advance of deserts. At the Cairo Conference on Population and Development, we reaffirmed the crucial importance of cooperative family planning efforts to long-term sustainable development.

Here in America, we have worked to clean up a record number of our toxic dumps and we intend to clean 500 more over the next four years. We passed new laws to better protect our water, created new national parks and monuments, and worked to harmonize our efforts for environmental protection, economic growth and social improvement, aided by a distinguished Council on Sustainable Development.

Yesterday, I announced the most far-reaching efforts to improve air quality in our nation in 20 years, cutting smog levels dramatically, and, for the first time ever, setting standards to lower the levels of the fine particles in the atmosphere that form soot. In America, the incidence of childhood asthma has been increasing rapidly. It is now the single biggest reason our children are hospitalized. These measures will help to change that, to improve health of people of all ages, and to prevent as many as 15,000 premature deaths a year.

Still, we here have much more to do, especially in reducing America's contribution to global climate change.

The science is clear and compelling: We humans are changing the global climate. Concentrations of greenhouse gases in the atmosphere are at their highest levels in more than 200,000 years, and climbing sharply. If the trend is not changed, scientists expect the seas to rise two feet or more over the next century. In America, that means 9,000 square miles of Florida, Louisiana, and other coastal areas will be flooded. In Asia, 17 percent of Bangladesh, land on which 6 million people now live, will be lost. Island chains such as the Maldives will disappear from the map, unless we reverse the predictions.

Climate changes will disrupt agriculture, cause severe droughts and floods and the spread of infectious diseases, which will be a big enough problem for us under the best of circumstances in the 21st century. There could be 50 million or more cases of malaria a year. We can expect more deaths from heat stress. Just two years ago, here in the United States in the city of Chicago, we saw the tragedy of more than 400 of our citizens dying during a severe heat wave.

No nation can escape this danger. None can evade its responsibility to confront it. And we must all do our part -- industrial nations that emit the largest quantities of greenhouse gases today, and developing nations whose green house gas emissions are growing rapidly. I applaud the European Union for its strong focus on this issue, and the World Bank for setting environmental standards for projects it will finance in the developing world.

Here in the United States, we must do better. With 4 percent of the world's population, we already produce more than 20 percent of its greenhouse gases. Frankly, our record since Rio is not sufficient. We have been blessed with high rates of growth and millions of new jobs over the last few years, but that has led to an increase in greenhouse gas emissions in spite of the adoption of new conservation practices. So we must do better, and we will.

The air quality action I took yesterday is a positive first step, but more must follow. In order to reduce greenhouse gases and grow the economy, we must invest more in the technologies of the future. I am directing my Cabinet to work to development them. Government, universities, business and labor must work together. All these efforts must be sustained over years, indeed, over decades. As Vice President Gore said Monday, "Sustainable development requires sustained commitment." With that commitment, we can succeed.

We must create new technologies and development new strategies like emissions trading that will both curtail pollution and support continued economic growth. We owe that in the developed world to ourselves and, equally, to those in the developing nations.

Many of the technologies that will help us to meet the new air quality standards can also help us to address climate change. This is a challenge we must undertake immediately and one in which I personally plan to play a critical role.

In the United States, in order to do our part, we have to first convince the American people and the Congress that the climate change problem is real and imminent. I will convene a White House Conference on Climate Change later this year to lay the scientific facts before our people, to understand that we must act, and to lay the economic facts there so that they understand the benefits and the costs. With the best ideas and strategies and new technologies and increased productivity and energy efficiency, we can turn the challenge to our advantage.

We will work with our people and we will bring to the Kyoto conference a strong American commitment to realistic and binding limits that will significantly reduce our emissions of greenhouse gases.

I want to mention three other initiatives briefly that we are taking to deal with climate change and to advance sustainable development here and beyond our borders.

First, to help developing nations reduce greenhouse gas emissions, the United States will provide \$1 billion in assistance over the next five years to support energy efficiency, develop alternative energy sources and improve resource management to promote growth that does not have an adverse effect on the climate.

Second, we will do more to encourage private investment to meet environmental standards. The Overseas Private Investment Corporation will now require that its projects adhere to new and strengthened environmental guidelines, just as our Export-Import Bank already does and as I hope our allies and friends soon will. Common guidelines for responsible investment clearly would lead to more sustainable growth in developing nations.

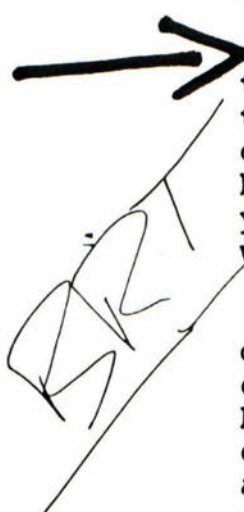
Third, we must increase our use of new technologies even as we move to develop more new technologies. Already, we are working with our auto industry to produce cars by early in the next century that are three times as fuel-efficient as today's vehicles. Now we will work with businesses and communities to use the sun's energy to reduce our reliance on fossil fuels by

installing solar panels on 1 million more roofs around our nation by 2010. Capturing the sun's warmth can help us to turn down the Earth's temperature.

Distinguished leaders, in all of our cultures we have been taught from time immemorial that, as Scripture says, "One generation passes away and another comes, but the Earth abides forever." We must strengthen our stewardship of the environment to make that true and to ensure that when this generation passes, the young man who just spoke before me and all of those of his generation will inherit a rich and abundant Earth.

Thank you very much.

hope that all of you are concerned by the consequences of the wholesale abolition of affirmative action on enrollment in higher education that we've seen in California and Texas. And I know a lot of employers of large companies have led the way in trying to preserve a sensible form of affirmative action. So I ask you to consider that because this is not just the President and the government. All of us are the stewards of whether we can become on America in the 21st century.



Finally, let me say on an issue that I know is a concern to some of you because I read your ad in the paper -- (laughter) -- think that we have to prove that we can grow the economy while not only preserving, but actually enhancing, the environment. And I believe most of you think we can do that. And I think the message you were trying to get across in the ad is, don't wreck the economy without knowing what you're doing. I understand that.

But let me say, I was very moved by the speech recently given by the Chairman of British Petroleum on the issue of climate change. I don't know how many of you read it, but essentially what he said is, look, nobody knows exactly what the impact of climate change is, but let's not deny anymore that the climate is changing and that it can't be good, and that no harm will be done if we take sensible steps to try to reduce greenhouse gas emissions and to do other things which will help us to preserve the environment.

We've had more extreme weather conditions in the United States in the last five years than we had in the previous 30. And we know from all the scientific studies what is happening to the temperature of the globe. What I ask you to do is to work with me in good faith to give our children a world worth living in.

A lot of you have made a good deal of money in your corporations by technologies which improve the environment. And if we have the strongest economy in the world, we will find a sensible way to grow that economy in a way that fulfills our responsibilities.

Today, with 4 percent of the world's population, we produce over 20 percent of the greenhouse gases. We're up 13 percent since 1990 when President Bush and his administration said we would try to hold constant through the year 2000.

I had an interesting conversation with Jiang Zemin in New York about a year ago, when he said, I don't want you to have a containment policy toward China. I said, I'm not sure -- I said, I don't want to have a containment policy toward China. I said, my biggest worry about you is that you'll get rich the same way we did. And if you do that, you might burn the air up because you've got 1.2 billion people. And we need to find an environmentally responsible way for China to grow.

So I ask you to join with us in partnership. There is no secret plan. There is no scheme here to try to put thousands of Americans out of business. I have devoted my passion and the best ideas I could come up with to try to get this country in good shape economically and socially. But I do believe it is folly for us to believe that we can go into the next century without a strategy that says we're going to be responsible and we're going to do our part and lead the world on the environmental issues -- because we all know what the evidence is. We don't know what the consequences are, and we don't want to go off and do something that we're not sure makes sense. But we can do this. We can do it together. We can do it.

And I ask you not to ever ask us to back away from that, but instead join hands with us and do what we've done for the last four and a half years. Let's find a way to preserve the environment, to meet our international responsibilities, to meet our responsibilities to our children, and grow the economy at the same time. I know we can do it. Look at the evidence of the last four years. We can do anything if we put our minds to it.

Thank you very much. (Applause.)

END

5:15 P.M. EDI

THE WHITE HOUSE
WASHINGTON

OFFICE OF THE STAFF SECRETARY

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July 24, 1997

**OPENING REMARKS BY THE PRESIDENT AND THE VICE PRESIDENT AT
DISCUSSION ON CLIMATE CHANGE**

THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release

July 24, 1997

OPENING REMARKS BY THE PRESIDENT
AND THE VICE PRESIDENT
AT DISCUSSION ON CLIMATE CHANGE

The East Room

1:57 P.M. EDT

THE VICE PRESIDENT: Please be seated ladies and gentlemen. On behalf of the President and the First Lady, it is my pleasure and honor to welcome all of you to the White House. I'm going to present the President in just a moment.

Before doing so, on his behalf, I would like to acknowledge the distinguished guests who are present. I will formally introduce our panel of Nobel laureates and university scientists in just a moment. I want to acknowledge members of the President's Cabinet who are here -- Administrator of the EPA Carol Browner; Secretary of Commerce Bill Daley; Secretary of Labor Alexis Herman; Secretary of Energy Federico Pena; Under Secretary of the Treasury Larry Summers; Director of the Federal Emergency Management Agency James Lee Witt; Chair of the Council on Environmental Quality Katie McGinty; the President's Science Advisor, Dr. Jack Gibbons, and other distinguished guests who are present. We meet today to discuss the future of our planet and the realities of global climate disruption.

I want to acknowledge one other person who is in the room somewhere and I haven't had a chance to see him yet, but Charles David Keeling is here. And, Dr. Keeling, thank you very much for joining us. And he was responsible, along with one other, in measuring carbon dioxide in the atmosphere for the very first time back in the last 1950s. And my own introduction to this issue came about as a direct result of the measurements which showed the annual cycle of carbon dioxide and the steadily increasing peaks of concentrations of carbon dioxide, and now, of course, we know other greenhouse gases, as well, that resulted from those measurements.

Later, when I came to the Congress quite a few years after that, in

holding hearings I saw that those concentrations had increased dramatically and, of course, all around the world scientists were studying it intensively. And now we will soon hear from these scientists about what the world's scientific conclusion is about what this means for increased droughts and floods, dramatic changes in the distribution of forests and croplands. And all of this gives rise to great concern that we are committing future generations to a planet that is altered in profound ways that can cause great harm to future generations.

This administration has always worked on a simple principle when addressing problems of a scientific and technical nature, and that principle is: Science must inform policy decisions. Scientists are by nature a cautious group, but the world's scientific community is telling us in many ways that they believe that we as a civilization are disrupting the balance of the world's climate. In the words of the 2,000 scientists who participated in the intergovernmental panel on climate change -- and I quote -- "there is a discernable human influence on global climate."

More than 2,600 scientists have signed a letter about global climatic disruption, which we'll be hearing more about in just a few minutes. Today, we hear about the concerns of scientists. They speak as eminent experts and as U.S. citizens who care about the future of this planet. Each has a resume far too long to recount, but let me briefly introduce those who are with us today.

Dr. Sherry Rowland won the 1995 Nobel Prize for Chemistry for his pioneering research in atmospheric chemistry, explaining the destruction of the stratospheric ozone layer. He is also a professor at the University of California at Irvine and an official with the National Academy of Sciences.

Dr. Mario Molina shares the 1995 Nobel Prize with Sherry Rowland. He is the Lee and Geraldine Martin Professor of Environmental Science at MIT.

Dr. Jane Lubchenco is an eminent ecologist, past President of the American Association for the Advancement of Science, very active with the AAAS, and also past President of the Ecological Society of America. She is currently the Wayne and Gladys Valley Professor of Marine Biology and a distinguished Professor of Zoology at Oregon State University.

Dr. Stephen Schneider is a climate scientist and professor at Stanford University, recipient of a MacArthur Fellowship and winner of the American Association for the Advancement of Science's Westinghouse Award for Public Understanding of Science and Technology.

Dr. Bob Shope has devoted his professional life to the study of viruses carried by biting insects. He is currently a professor in the Departments of Pathology and Microbiology and Immunology at the University of Texas.

Dr. Henry Kendall won the Nobel Prize for physics in 1990. He is Chairman of the Board of the Union of Concerned Scientists and the J.A. Stratton Professor of Physics at the Massachusetts Institute of Technology.

And John Holdren is an expert on energy and environmental science and delivered the Nobel Peace Prize acceptance lecture on behalf of the Pugwash Conferences. He is currently the Director of the Program on Science, Technology and Public Policy at the John F. Kennedy School of Government and Professor of Environmental Science and Public Policy in the Department of Earth

and Planetary Sciences at Harvard.

And now I would like to introduce the person who is leading our country and the world toward a recognition of what must be done to deal with this issue. It is my honor, ladies and gentlemen, to present the President of the United States, President Bill Clinton. (Applause.)

THE PRESIDENT: Thank you very much. Ladies and gentlemen, first let me thank you for being here -- members of the administration and concerned members of the public, the scientists and other experts that are here.

I would also like to say a special word of thanks to the Vice President. In one of our earliest meetings together -- we meet once a week and have lunch -- he went over the whole history of greenhouse gas emissions and climatic change. And I became convinced first that he was convinced that something was wrong. (Laughter.) Then I became convinced something was wrong. And it's been a great help to me, and I believe, to the people of the United States to have him in the position that he's in not only with the convictions that he has, but with the knowledge that he has. And I'm very grateful to him for what he has done to help me come to grips with this issue.

To me, we have to see this whole issue of climate change in terms of our deepest obligations to future generations. I have spent most of my time in the last four and a half years trying to prepare the American people for a new century and a new millennium. It is also very important that we protect the Earth for that new millennium, to make sure that people will be able to take advantage of all the things we are trying to do, the opportunities we are trying to create, the problems we are trying to solve.

It is obvious that we cannot fulfill our responsibilities to future generations unless we deal responsibly with the challenge of climate change. Whenever the security of our country has been threatened, we have led the world to a better resolution. That is what is at stake here. And the scientists have come here to explain why.

As the Vice President said, the overwhelming balance of evidence and scientific opinion is that it is no longer a theory, but now a fact that global warming is for real. The world scientists believe that if we don't cut our emissions of greenhouse gases, we will disrupt the global climate. In fact, there is ample evidence that human activities are already disrupting the global climate, and that if we stay on our current course, the average global temperatures may rise 2 to 6 degrees Fahrenheit during the next century.

To put that in some context, the difference in average temperature between the last Ice Age, which was 10,000 to 12,000 years ago -- 10,000 to 12,000 years ago -- and today, is about 9 degrees Fahrenheit. So we could have two-thirds of that change in 100 years unless we do something.

If we fail to act, scientists expect that our seas will rise one to three feet, and thousands of square miles here in the United States, in Florida, Louisiana and other coastal areas will be flooded. Infectious diseases will spread to new regions. Severe heat waves will claim lives. Agriculture will suffer. Severe droughts and floods will be more common. These are the things that are reasonably predictable.

In the face of this, the United States must confront a

challenge that in some ways is the most difficult of all democracy's challenges to face. That is, we have evidence, we see the train coming, but most ordinary Americans in their day-to-day lives can't hear the whistle blowing. They have no -- unless they have lived in a place where they have experienced severe and unusual and completely atypical weather disruptions in the last five years or so, the degree of the challenge is inconsistent with the actual perceived experience of most ordinary Americans. And this is true, indeed, throughout the world. And that presents us our challenge.

A democracy is premised on the proposition that if the American people, or any people in any democracy, know what the facts are and believe them, way more than half the time they will do the right thing. And so what we are doing today is beginning a process in which we ask the American people to listen to the evidence, to measure it against their own experience, but not to discount the weight of scientific authority if their own experience does not yet confirm what the overwhelming percentage of scientists believe to be fact today. This is a great exercise and a great test for our democracy.

I do want to say that I am convinced that when the nations of world meet in Kyoto, Japan, in December on this issue, the United States has got to be committed to realistic and binding limits

on our emissions of greenhouse gases. Between now and then, we have to work with the American people to get them to share that commitment. We have to emphasize flexible market-based approaches. We have to embrace research and development efforts in technology that will help us to improve the economy -- improve the environment while permitting our economy to grow. We have to ask all nations, both industrial and developing, to participate in this process.

But if we do this together, we can defuse this threat. And we can make the 21st century what it ought to be, not only for our children, but for all the children of the world. I believe the science demands that we face this challenge now. I'm positive that we owe it to our children. And I hope that we can find the wisdom and the skill to do democracy's work in the next few months, to build the consensus necessary to actually make action, as opposed to rhetoric, possible.

And for all of you for your commitment to that, I thank you.

And now I'd like to ask Dr. Rowland to be the first of our distinguished scientists to lead off. (Applause.)

* * * * *

THE PRESIDENT: I wish every American could hear what we've heard today. But thanks to our friends in the media, a good number of them will hear at least a portion of what we have heard today. And this is the beginning of a consistent long-term effort that we all have to make to involve the people of this country in this decision. And I thank you all for the points you've made because, in different ways each of them will resonate with citizens of this country in a way that I believe will give us the support we need to take the action that has to be taken.

In the weeks and months ahead, the Vice President, the Cabinet, other members of the administration and I will be out in the country discussing this. We'll be working with the American people; we'll be talking about solutions as well as problems. The truth is,

it's like anything else -- the quicker you get -- another answer Dr. Holdren might have given is that the quicker you get after this the less extreme the remedy you have to embrace to have a measurable effect to avoid an undesirable outcome. And the longer you wait, the more disruptive the ultimate resolution will be. So that's another thing that I'd like to emphasize.

Before we close I hope you will permit me to make a brief statement. Just before I came in here to this meeting I learned that today, and not very long ago, retired Supreme Court Justice William Brennan passed away. He was a remarkable human being, one of the finest and most influential jurists in our nation's history. He served on the Supreme Court for 34 years. He was perhaps during that period the staunchest, most effective defender of individual freedom against government intrusion.

His devotion to the Bill of Rights inspired millions of Americans and countless young law students, including myself. And one of the great honors I have had as President was to be able to award him the Presidential Medal of Freedom in my first year in office.

He once said, the role of the Constitution is the protection of the dignity of every human being and the recognition that every individual has fundamental rights which government cannot deny. He spent a lifetime upholding those rights, and he authored some of the most enduring constitutional decisions of this century, including *Baker v. Carr* on one person, one vote; *The New York Times v. Sullivan*, which brought the free speech doctrine into the latter half of the 20th century. The force of his ideas, the strength of his leadership and his character have safeguarded freedom and widened the circle of quality for every single one of us.

We will miss him greatly. And I know you join me in sending our best wishes and our prayers to his family and friends, and our gratitude for his life.

Thank you very much. (Applause.)

END

3:05 P.M. EDT



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Aug 4

THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release

August 4, 1997

REMARKS BY THE PRESIDENT
ON CLIMATE CHANGE

The Cabinet Room

10:25 A.M. EDT

THE PRESIDENT: Before we start, I think it's only fair to note that we are observing another anniversary of Helen's 50th birthday. (Laughter.) We wanted to give you a birthday cake with a tell-tale number of -- ("Happy Birthday" song is sung.) (Laughter and applause.)

MS. THOMAS: Now, may I have a press conference? (Laughter.)

THE PRESIDENT: I'm going to make a statement and you get the questions. (Laughter.)

MS. THOMAS: Thank you.

THE PRESIDENT: Take it to the press room and cut it up. (Laughter.)

MS. THOMAS: Thank you. This is painful. (Laughter.)

THE PRESIDENT: You don't make it look that way. It's painful for me, too. (Laughter.)

I'm glad to be joined today by the CEOs of 10 Fortune 500 companies who have come here to meet with me on climate change. These companies represent electric utilities, the oil and gas industry, finance, high technology, and heavy industry. They are all intimately interested in this issue and will be affected by whatever happens on it in our country and throughout the world.

We want a responsible approach to climate change. We believe that the science makes it clear that the climate is changing. I want to proceed based on some fairly straightforward and simple principles. First of all, as we get ready for the Kyoto conference, I believe there should be realistic but binding limits to emissions of greenhouse gases. I believe that we have to do it in a way that keeps our economy growing. And I believe that we ought to embrace flexible, market-based policies. I believe we should reemphasize and reenergize our efforts in research and development to find as many technological solutions to this as possible, and to keep our nation in the forefront of what is now a \$400 billion market for environmental technologies.

And finally, I believe the agreement has to be a global one. I think all nations, developed and developing, should be a part of this. So this is part of an ongoing process that I and our administration have undertaken to try to make sure we're working together with all the people who would be affected by this issue and try to reach, hopefully, a common position.

We're going to have a good meeting today, and I'm looking forward to it. And, again, I want to thank all the executives for coming here and giving vent to their views.

Q What do you think of the opposition, who says there is no such thing as global warming and that they don't agree with the scientists -- some of the scientists?

THE PRESIDENT: Well, I think that the real question is -- I don't think that very many people disagree with the fact that there is climate change now, I think there's some disagreement about what the impact of it is and what the appropriate response is. There's still some debate there. But I think the scientific evidence for the fact of climate change is pretty compelling.

We had that panel of scientists, including the Nobel Prize winners here the other day, and I received a letter from -- I don't know -- over 2,500 of them, from scientists about it. So I think that there's pretty clear evidence that the climate is changing and could be changing substantially. There is still some difference about what the consequences of that will be and what we ought to do about it.

But I think if we follow these principles, we'll be staking out a responsible position, which will permit us to continue to grow economically and do our part in the world. After all, we have only four percent of the world's population, but we account for 20 percent of the greenhouse gas emissions, which you would expect since have slightly over 20 percent of the world's output.

Q Mr. President, how seriously are you considering using a line-item veto to kill some provisions of the budget you'll sign into law tomorrow?

THE PRESIDENT: Well, I asked Mr. Bowles to -- once we got a budget agreement and it passed -- to institute an intensive process to review both the spending and the tax bills to see if there were any items that would be appropriate for the line-item veto. And I have not yet received the results of that review.

I support the line-item veto; I did all along. And I think if we have it, it ought to be used -- I believe that it ought to be used somewhat sparingly. And my experience as Governor was that once I used it a few times I didn't have to -- I didn't need to use it very much anymore. And that's what I would hope would happen. We'll just see -- you probably know more about the likely targets for it than I do at this point. I was interested in the big-picture items in the budget. We got virtually 100 percent of what I sought and I'm elated with the budget. I think it's good for America. I think it will keep the economy growing, and I think it's a responsible thing to do. So whatever I do on that shouldn't be in any way detracting from the terrific job that the Congress did on it.

Q Mr. President, one question on UPS -- the standards for presidential intervention are relatively high. Are you considering doing anything else to intervene to bring an end to the strike?

THE PRESIDENT: On UPS?

Q Yes, UPS.

THE PRESIDENT: Well, first we urged the federal mediator, and we got that. And we got -- obviously, it didn't work. I still think the parties ought to go back to the table. UPS is a very important company to our country and there are a lot of employees there, and I hope they go back to the table. But at this time I don't think any further action by me is appropriate.

THE PRESS: Thank you.

END

10:32 A.M. EDT