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## Presidential Climate Action Project

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# U.S. Presidents on Climate Change, Energy and Security

Prepared for the Presidential Climate Action Project by Andrew Barnett

### Introduction

Every President for the past 30 years has gone on record in support of reducing America's dependence on foreign oil.

U.S. Presidents have been advised since at least 1965 that the greenhouse gases (GHG) emitted as a result of burning fossil fuels will cause significant global warming.

Yet as the campaign for the 44<sup>th</sup> presidency began in 2007, oil imports and carbon emissions had reached record levels and were predicted to continue climbing for decades to come.

U.S. GHG emissions, which have grown 17% since 1990, are expected to be 28% higher than 1990 levels by 2012. Since the 1970s, America's temperature has increased at about twice the global average rate.<sup>1</sup>

Meantime, the United States imports 60% of its oil today compared to less than 30% at the time of the oil crises of the 1970s. Our oil imports are projected to reach as much as 67% of our petroleum consumption by 2030.<sup>2</sup>

Decades ago, the experts said it wouldn't cost much to cut the nation's greenhouse gas emissions. The National Academy of Sciences concluded in 1991 that the U.S. could reduce or offset its GHG emissions by up to 40% of 1990 levels "at low cost, or at some net savings, if proper policies are implemented."<sup>3</sup> It recommended energy conservation

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<sup>1</sup> Congressional Research Service, *Climate Change: Science and Policy Implications*, RL 33849, Jan. 25, 2007, p. 4.

<sup>2</sup> Energy Information Administration Annual Energy Outlook 2007, p. 97

<sup>3</sup> National Academy of Sciences, *Policy Implications of Greenhouse Warming*, National Academy Press, 1991, p. 73.

and efficiency, making global warming a factor in future energy planning and applying “full social cost pricing” to energy decisions.

But most of those recommendations were not adopted and by 2007 a new term – the “procrastination penalty” – had entered the American lexicon as experts predict that the costs of mitigating and adapting to climate change are increasing with each passing year.

In assertive, often eloquent language, past Presidents called upon the nation to unify around the goals of energy independence and climate protection. Yet most of their objectives have not been achieved and their visions of greater energy security and a stable climate have not been realized. While an impressive array of environmental legislation has been passed and implemented over the last three decades, it is reasonable to conclude that leadership has failed on our “addiction to oil” and on global warming. Neither Presidents, nor Congressional leaders, nor business, financial and civil leaders, have succeeded in unifying the country around these fundamental issues of national security. Nor have the American people insisted on leadership through the electoral process.

As candidates in the 2008 presidential election fashion their positions on these two critical issues, it is instructive to look back at what past Presidents and their advisors have said.<sup>4</sup>

#### **President’s Science Advisory Panel, November 1965**

Carbon dioxide is being added to the earth’s atmosphere by the burning of coal, oil and natural gas at the rate of 6 billion tons a year. By the year 2000 there will be about 25% more CO<sub>2</sub> in the atmosphere than at present. This will modify the heat balance of the atmosphere to such an extent that marked changes in climate, not controllable through local or even national efforts, could occur. Possibilities of bringing about countervailing changes by deliberately modifying other processes that affect climate may then be very important.<sup>5</sup>

#### **President Richard Nixon: 1970 State of the Union Address**

I now turn to a subject which, next to our desire for peace, may well become the major concern of the American people in the decade of the seventies.

In the next 10 years we shall increase our wealth by 50 percent. The profound question is: Does this mean we will be 50 percent richer in a real sense. 50 percent better off, 50 percent happier?

Or does it mean that in the year 1980 the President standing in this place will look back on a decade in which 70 percent of our people lived in metropolitan areas choked by

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<sup>4</sup> The follow quotes from U.S. Presidents are excerpts, rather than full transcripts, of their statements.

<sup>5</sup> President’s Science Advisory Panel, *Restoring the Quality of our Environment: Report of the Environmental Pollution Panel*, the White House, November 1965, p. 9.

traffic, suffocated by smog, poisoned by water, deafened by noise, and terrorized by crime?

These are not the great questions that concern world leaders at summit conferences. But people do not live at the summit. They live in the foothills of everyday experience, and it is time for all of us to concern ourselves with the way real people live in real life.

The great question of the seventies is, shall we surrender to our surroundings, or shall we make our peace with nature and begin to make reparations for the damage we have done to our air, to our land, and to our water?

Restoring nature to its natural state is a cause beyond party and beyond factions. It has become a common cause of all the people of this country. It is a cause of particular concern to young Americans, because they more than we will reap the grim consequences of our failure to act on programs which are needed now if we are to prevent disaster later.

Clean air, clean water, open spaces -- these should once again be the birthright of every American. If we act now, they can be.

We still think of air as free. But clean air is not free, and neither is clean water. The price tag on pollution control is high. Through our years of past carelessness we incurred a debt to nature, and now that debt is being called.

The program I shall propose to Congress will be the most comprehensive and costly program in this field in America's history.

It is not a program for just one year. A year's plan in this field is not a plan at all. This is a time to look ahead not a year, but 5 years or 10 years -- whatever time is required to do the job.

I shall propose to this Congress a \$10 billion nationwide clean waters program to put modern municipal waste treatment plants in every place in America where they are needed to make our waters clean again, and do it now. We have the industrial capacity, if we begin now, to build all within 5 years. This program will get them built within 5 years.

As our cities and suburbs relentlessly expand, those priceless open spaces needed for recreation areas accessible to their people are swallowed up -- often forever. Unless we preserve these spaces while they are still available, we will have none to preserve. Therefore, I shall propose now financing methods for purchasing open space and parklands now, before they are lost to us.<sup>6</sup>

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<sup>6</sup> While President Nixon does not specifically mention global warming in this address, the principles of environmental stewardship that he states apply directly to climate change, and several of the specific issues raised here, including urban sprawl, are related to increased fossil fuel consumption and greenhouse gas emissions.

The automobile is our worst polluter of the air. Adequate control requires further advances in engine design and fuel composition. We shall intensify our research, set increasingly strict standards, and strengthen enforcement procedures -- and we shall do it now.

We can no longer afford to consider air and water common property, free to be abused by anyone without regard to the consequences. Instead, we should begin now to treat them as scarce resources, which we are no more free to contaminate than we are free to throw garbage into our neighbor's yard.

This requires that the argument is often made that there is a fundamental contradiction between economic growth and the quality of life, so that to have one we must forsake the other.

The answer is not to abandon growth, but to redirect it. For example, we should turn toward ending congestion and eliminating smog the same reservoir of inventive genius that created them in the first place.

Continued vigorous economic growth provides us with the means to enrich life itself and to enhance our planet as a place hospitable to man.

Each individual must enlist in this fight if it is to be won...It is time for those who make massive demands on society to make some minimal demands on themselves. Each of us must resolve that each day he will leave his home, his property, the public places of the city or town a little cleaner, a little better, a little more pleasant for himself and those around him.

With the help of people we can do anything, and without their help, we can do nothing. In this spirit, together, we can reclaim our land for ours and generations to come.

Between now and the year 2000, over 100 million children will be born in the United States. Where they grown up -- and how -- will, more than any one thing, measure the quality of American life in these years ahead.

This should be a warning to us...

### **President Richard Nixon: State of the Union Address, January 30, 1974**

Last week, I sent to the Congress a comprehensive special message setting forth our energy situation, recommending the legislative measures which are necessary to a program for meeting our needs. If the embargo is lifted<sup>7</sup>, this will ease the crisis, but it

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<sup>7</sup> In 1973, several members of the Organization of Petroleum Exporting Countries placed an embargo on the shipment of oil to the West to protest Israeli policies and to raise the price of petroleum. The embargo led to a quadrupling of oil prices, an economic shock and fuel shortages and long gasoline lines in the U.S.

will not mean an end to the energy shortage in America. Voluntary conservation will continue to be necessary. And let me take this occasion to pay tribute once again to the splendid spirit of cooperation the American people have shown which has made possible our success in meeting this emergency up to this time...

Just as 1970 was the year in which we began a full-scale effort to protect the environment, 1974 must be the year in which we organize a full-scale effort to provide for our energy needs, not only in this decade but through the 21st century.

As we move toward the celebration 2 years from now of the 200th anniversary of this Nation's independence, let us press vigorously on toward the goal I announced last November for Project Independence. Let this be our national goal: At the end of this decade, in the year 1980, the United States will not be dependent on any other country for the energy we need to provide our jobs, to heat our homes, and to keep our transportation moving.

### **President Gerald Ford: State of the Union Address, January 15, 1975**

I am proposing a program which will begin to restore our country's surplus capacity in total energy. In this way, we will be able to assure ourselves reliable and adequate energy and help foster a new world energy stability for other major consuming nations.

But this Nation and, in fact, the world must face the prospect of energy difficulties between now and 1985. This program will impose burdens on all of us with the aim of reducing our consumption of energy and increasing our production. Great attention has been paid to the considerations of fairness, and I can assure you that the burdens will not fall more harshly on those less able to bear them.

I am recommending a plan to make us invulnerable to cutoffs of foreign oil. It will require sacrifices, but it--and this is most important--it will work...

A massive program must be initiated to increase energy supply to cut demand, and provide new standby emergency programs to achieve the independence we want by 1985...

Increasing energy supplies is not enough. We must take additional steps to cut long-term consumption...I have a very deep belief in America's capabilities.

### **President Jimmy Carter: Televised speech on April 18, 1977<sup>8</sup>**

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-- a dramatic lesson in the liabilities of relying on imported oil. At the time, the U.S. imported 28% of its oil -- less than half of its import level today.

<sup>8</sup> Jimmy Carter, "The President's Proposed Energy Policy." 18 April 1977. *Vital Speeches of the Day*, Vol. XXXXIII, No. 14, May 1, 1977, pp. 418-420.

Tonight I want to have an unpleasant talk with you about a problem unprecedented in our history. With the exception of preventing war, this is the greatest challenge our country will face during our lifetimes. The energy crisis has not yet overwhelmed us, but it will if we do not act quickly.

It is a problem we will not solve in the next few years, and it is likely to get progressively worse through the rest of this century.

We must not be selfish or timid if we hope to have a decent world for our children and grandchildren. We simply must balance our demand for energy with our rapidly shrinking resources. By acting now, we can control our future instead of letting the future control us.

Two days from now, I will present my energy proposals to the Congress. Its members will be my partners and they have already given me a great deal of valuable advice. Many of these proposals will be unpopular. Some will cause you to put up with inconveniences and to make sacrifices.

The most important thing about these proposals is that the alternative may be a national catastrophe. Further delay can affect our strength and our power as a nation.

Our decision about energy will test the character of the American people and the ability of the President and the Congress to govern. This difficult effort will be the "moral equivalent of war" -- except that we will be uniting our efforts to build and not destroy.

I know that some of you may doubt that we face real energy shortages. The 1973 gasoline lines are gone, and our homes are warm again. But our energy problem is worse tonight than it was in 1973 or a few weeks ago in the dead of winter. It is worse because more waste has occurred, and more time has passed by without our planning for the future. And it will get worse every day until we act.

The oil and natural gas we rely on for 75 percent of our energy are running out. In spite of increased effort, domestic production has been dropping steadily at about six percent a year. Imports have doubled in the last five years. Our nation's independence of economic and political action is becoming increasingly constrained. Unless profound changes are made to lower oil consumption, we now believe that early in the 1980s the world will be demanding more oil than it can produce.

The world now uses about 60 million barrels of oil a day and demand increases each year about 5 percent. This means that just to stay even we need the production of a new Texas every year, an Alaskan North Slope every nine months, or a new Saudi Arabia every three years. Obviously, this cannot continue.

We must look back in history to understand our energy problem. Twice in the last several hundred years there has been a transition in the way people use energy.

The first was about 200 years ago, away from wood -- which had provided about 90 percent of all fuel -- to coal, which was more efficient. This change became the basis of the Industrial Revolution.

The second change took place in this century, with the growing use of oil and natural gas. They were more convenient and cheaper than coal, and the supply seemed to be almost without limit. They made possible the age of automobile and airplane travel. Nearly everyone who is alive today grew up during this age and we have never known anything different.

Because we are now running out of gas and oil, we must prepare quickly for a third change, to strict conservation and to the use of coal and permanent renewable energy sources, like solar power.

The world has not prepared for the future. During the 1950s, people used twice as much oil as during the 1940s. During the 1960s, we used twice as much as during the 1950s. And in each of those decades, more oil was consumed than in all of mankind's previous history.

World consumption of oil is still going up. If it were possible to keep it rising during the 1970s and 1980s by 5 percent a year as it has in the past, we could use up all the proven reserves of oil in the entire world by the end of the next decade.

I know that many of you have suspected that some supplies of oil and gas are being withheld. You may be right, but suspicions about oil companies cannot change the fact that we are running out of petroleum.

All of us have heard about the large oil fields on Alaska's North Slope. In a few years when the North Slope is producing fully, its total output will be just about equal to two years' increase in our nation's energy demand.

Each new inventory of world oil reserves has been more disturbing than the last. World oil production can probably keep going up for another six or eight years. But some time in the 1980s it can't go up much more. Demand will overtake production. We have no choice about that.

But we do have a choice about how we will spend the next few years. Each American uses the energy equivalent of 60 barrels of oil per person each year. Ours is the most wasteful nation on earth. We waste more energy than we import. With about the same standard of living, we use twice as much energy per person as do other countries like Germany, Japan and Sweden.

One choice is to continue doing what we have been doing before. We can drift along for a few more years.

Our consumption of oil would keep going up every year. Our cars would continue to be

too large and inefficient. Three-quarters of them would continue to carry only one person -- the driver -- while our public transportation system continues to decline. We can delay insulating our houses, and they will continue to lose about 50 percent of their heat in waste.

We can continue using scarce oil and natural to generate electricity, and continue wasting two-thirds of their fuel value in the process.

If we do not act, then by 1985 we will be using 33 percent more energy than we do today.

We can't substantially increase our domestic production, so we would need to import twice as much oil as we do now. Supplies will be uncertain. The cost will keep going up. Six years ago, we paid \$3.7 billion for imported oil. Last year we spent \$37 billion -- nearly ten times as much -- and this year we may spend over \$45 billion.

Unless we act, we will spend more than \$550 billion for imported oil by 1985 -- more than \$2,500 a year for every man, woman, and child in America. Along with that money we will continue losing American jobs and becoming increasingly vulnerable to supply interruptions.

Now we have a choice. But if we wait, we will live in fear of embargoes. We could endanger our freedom as a sovereign nation to act in foreign affairs. Within ten years we would not be able to import enough oil -- from any country, at any acceptable price.

If we wait, and do not act, then our factories will not be able to keep our people on the job with reduced supplies of fuel. Too few of our utilities will have switched to coal, our most abundant energy source.

We will not be ready to keep our transportation system running with smaller, more efficient cars and a better network of buses, trains and public transportation.

We will feel mounting pressure to plunder the environment. We will have a crash program to build more nuclear plants, strip-mine and burn more coal, and drill more offshore wells than we will need if we begin to conserve now. Inflation will soar, production will go down, people will lose their jobs. Intense competition will build up among nations and among the different regions within our own country.

If we fail to act soon, we will face an economic, social and political crisis that will threaten our free institutions.

But we still have another choice. We can begin to prepare right now. We can decide to act while there is time.

That is the concept of the energy policy we will present on Wednesday. Our national energy plan is based on ten fundamental principles.

**The first principle** is that we can have an effective and comprehensive energy policy only if the government takes responsibility for it and if the people understand the seriousness of the challenge and are willing to make sacrifices.

**The second principle** is that healthy economic growth must continue. Only by saving energy can we maintain our standard of living and keep our people at work. An effective conservation program will create hundreds of thousands of new jobs

**The third principle** is that we must protect the environment. Our energy problems have the same cause as our environmental problems -- wasteful use of resources. Conservation helps us solve both at once.

**The fourth principle** is that we must reduce our vulnerability to potentially devastating embargoes. We can protect ourselves from uncertain supplies by reducing our demand for oil, making the most of our abundant resources such as coal, and developing a strategic petroleum reserve.

**The fifth principle** is that we must be fair. Our solutions must ask equal sacrifices from every region, every class of people, every interest group. Industry will have to do its part to conserve, just as the consumers will. The energy producers deserve fair treatment, but we will not let the oil companies profiteer.

**The sixth principle**, and the cornerstone of our policy, is to reduce the demand through conservation. Our emphasis on conservation is a clear difference between this plan and others which merely encouraged crash production efforts. Conservation is the quickest, cheapest, most practical source of energy. Conservation is the only way we can buy a barrel of oil for a few dollars. It costs about \$13 to waste it.

**The seventh principle** is that prices should generally reflect the true replacement costs of energy. We are only cheating ourselves if we make energy artificially cheap and use more than we can really afford.

**The eighth principle** is that government policies must be predictable and certain. Both consumers and producers need policies they can count on so they can plan ahead. This is one reason I am working with the Congress to create a new Department of Energy, to replace more than 50 different agencies that now have some control over energy.

**The ninth principle** is that we must conserve the fuels that are scarcest and make the most of those that are more plentiful. We can't continue to use oil and gas for 75 percent of our consumption when they make up seven percent of our domestic reserves. We need to shift to plentiful coal while taking care to protect the environment, and to apply stricter safety standards to nuclear energy.

**The tenth principle** is that we must start now to develop the new, unconventional sources of energy we will rely on in the next century.

These ten principles have guided the development of the policy I would describe to you and the Congress on Wednesday.

Our energy plan will also include a number of specific goals, to measure our progress toward a stable energy system.

These are the goals we set for 1985:

--Reduce the annual growth rate in our energy demand to less than two percent.

--Reduce gasoline consumption by ten percent below its current level.

--Cut in half the portion of United States oil which is imported, from a potential level of 16 million barrels to six million barrels a day.

--Establish a strategic petroleum reserve of one billion barrels, more than six months' supply.

--Increase our coal production by about two thirds to more than 1 billion tons a year.

--Insulate 90 percent of American homes and all new buildings.

--Use solar energy in more than two and one-half million houses.

We will monitor our progress toward these goals year by year. Our plan will call for stricter conservation measures if we fall behind.

I can't tell you that these measures will be easy, nor will they be popular. But I think most of you realize that a policy which does not ask for changes or sacrifices would not be an effective policy.

This plan is essential to protect our jobs, our environment, our standard of living, and our future. Whether this plan truly makes a difference will be decided not here in Washington, but in every town and every factory, in every home and on every highway and every farm.

I believe this can be a positive challenge. There is something especially American in the kinds of changes we have to make. We have been proud, through our history of being efficient people.

We have been proud of our leadership in the world. Now we have a chance again to give the world a positive example.

And we have been proud of our vision of the future. We have always wanted to give our children and grandchildren a world richer in possibilities than we've had. They are the ones we must provide for now. They are the ones who will suffer most if we don't act.

I've given you some of the principles of the plan.

I am sure each of you will find something you don't like about the specifics of our proposal. It will demand that we make sacrifices and changes in our lives. To some degree, the sacrifices will be painful -- but so is any meaningful sacrifice. It will lead to some higher costs, and to some greater inconveniences for everyone.

But the sacrifices will be gradual, realistic and necessary. Above all, they will be fair. No one will gain an unfair advantage through this plan. No one will be asked to bear an unfair burden. We will monitor the accuracy of data from the oil and natural gas companies, so that we will know their true production, supplies, reserves, and profits.

The citizens who insist on driving large, unnecessarily powerful cars must expect to pay more for that luxury.

We can be sure that all the special interest groups in the country will attack the part of this plan that affects them directly. They will say that sacrifice is fine, as long as other people do it, but that their sacrifice is unreasonable, or unfair, or harmful to the country. If they succeed, then the burden on the ordinary citizen, who is not organized into an interest group, would be crushing.

There should be only one test for this program: whether it will help our country.

Other generations of Americans have faced and mastered great challenges. I have faith that meeting this challenge will make our own lives even richer. If you will join me so that we can work together with patriotism and courage, we will again prove that our great nation can lead the world into an age of peace, independence and freedom.

### **President Ronald Reagan**

Conservation, of course, is a most helpful thing, and we should be practicing it, but I truly believe the answer to our energy problem is an energetic program of increasing our own supply, and this we have not done. I believe it could be done if the government would get off the back of the energy industry and turn it loose in the free marketplace. I not only believe that there is oil yet to be discovered but that there is enough oil left in the old wells that, at a proper price, could be brought to the surface through steam injection and other means that we could in several years be virtually self-sufficient. - *Ronald Reagan, "Reagan: A Life In Letters," p. 226, letter dated March 27, 1979.*

We will ensure that our people and our economy are never again held hostage by the whim of any country or cartel. - *President Ronald Reagan, Remarks on the Opening of the Knoxville, (Tennessee) International Energy Exposition, May 1, 1982*

## **George H.W. Bush in Helena, Montana- September 9, 1989**

This morning I spoke in Sioux Falls about a common concern of all of ours —the environment—about the need to awaken a new spirit of environmentalism across America. Here in Montana, I know that spirit exists.

This great state was once the scene of an epic battle—man against nature. Too often, the only question that mattered was what man could take from the Earth, not how we left it, or how we put it back.

Well, no more. Times have changed. The conservation ethic runs deep here. In the past two decades, Montana has enacted some of the most advanced environmental statutes in all of the fifty states. The citizens of the Big Sky State understand it's not man against nature—it's man and nature.

Montanans have made a decision never to let environmental exploitation go unchecked. We can have a strong ecology and a strong economy, and that is what I am committed to...

The single most significant word today in the language of all environmentalists is interdependence...The plain fact is this: pollution can't be contained by lines drawn on a map. The actions we take have consequences felt the world over. The destruction of the rain forest in Brazil. The ravages of acid rain that threaten not just our country, but our neighbors to the north and not just the East but the lakes and forests of the West as well. The millions of tons of airborne pollutants carried across the continents and the threat of global warming.

We know now that protecting the environment is a global issue. The nations of the world must make common cause in defense of our environment. And I promise you this: This nation, the United States of America, will take the lead internationally...

We're working hard to clean up America, but we can't stop there. We've got to work with the rest of the world to preserve the planet. We've already taken action. To preserve the ozone layer, we're going to ban all release of CFCs into the atmosphere by the year 2000. To prevent pollution of the world's oceans, we're going to end virtually all ocean dumping of sewage and industrial wastes by 1991.

And after that, anyone who continues to pollute is going to pay for it with stiff fines. And we're going to join forces with other nations.

In February, the United States will host the plenary meeting of the Intergovernmental Panel on Climate Change. In July, when I visited Poland and Hungary, I pledged America's help in tackling the increasingly serious pollution problems those two nations face. At the Paris economic summit, we helped the environment achieve the status that it

deserves at the top of the agenda for the seven major industrial democracies. And I mean to keep it right there at the top of the agenda.

America spends more than any other nation in the world on environmental research, and we're going to continue this pioneering effort to protect the environment and put that environmental expertise to work in the developing world as well. We cannot pollute today and postpone the cleanup until tomorrow.

We have got to make pollution prevention our aim. And sharing our expertise with the world is one way to do exactly that.

Today I want to announce a new environmental initiative—one that will bring the Environmental Protection Agency and the Peace Corps together in a joint venture in the service of the global environment.

Beginning in 1990, as part of their standard preparation for duty, Peace Corps volunteers will be trained by the EPA to deal with the full range of environmental challenges—water pollution, prevention, waste disposal, reforestation, pesticide management. Armed with greater knowledge about our environment, our Peace Corps volunteers are going to help spread the word in the developing world. They'll work to stop pollution before it starts and ensure that economic development and environmental stewardship go hand in hand..

We hold this land in trust for the generations that come after. The air and the Earth are riches we simply cannot squander.

### **President George H.W. Bush, September 11, 1990**

The Congress should, this month, enact measures to increase domestic energy production and energy conservation in order to reduce dependence on foreign oil...As you know, when the oil embargo was imposed in the early 1970's, the United States imported almost 6 million barrels of oil a day. This year, before the Iraqi invasion, U.S. imports had risen to nearly 8 million barrels per day. And we'd moved in the wrong direction. And now we must act to correct that trend.

### **President George H.W. Bush: Remarks on Signing the Earth Day Proclamation, January 3, 1990**

Twenty years ago this week, on another new year, President Nixon signed landmark environmental legislation -- the National Environmental Policy Act -- into law. The historic environmental laws of the seventies followed this step -- the Clean Air Act, the Clean Water Act, the laws regulating pesticides and toxic substances and hazardous waste. And that act created the CEQ (Council on Environmental Quality)...

We've made much progress in the last 20 years, spending hundreds of billions of dollars to make pollution control work. In 1987 alone, we spent a total of \$81 billion -- over 62 of it in the private sector. I'm particularly proud that in 1989 we were able to take a number of new initiatives. We've signed legislation to protect wetlands and valuable waterfowl habitat. We've added funds to expand our parks, forests, and wildlife refuges; and we've banned the import of ivory. And we plan to host an international conference on climate change this spring. We've proposed to phase out CFC's worldwide, and a ban on unsafe hazardous waste exports. We've proposed a phaseout of asbestos by 1997. And we've introduced the first major overhaul of the Clean Air Act in over a decade -- the most ambitious Clean Air Act proposed by any administration.

We need action on the revisions to the Clean Air Act we sent to Congress. The package was, in my view, carefully balanced to restore clean air for all Americans while sustaining job creation and competitiveness and economic growth. And I call on the Congress now to pass a Clean Air Act quickly, carefully, and responsibly -- a Clean Air Act that harnesses the power of the marketplace to provide future generations with a cleaner, safer environment without jeopardizing the economy or the jobs on which all Americans depend.

I believe with all my heart that we can serve both of these important goals. And if the Congress cannot pass a bill that preserves both, then I would not be able to sign it; I'd have to veto it. But the Federal Government is only part of the story. It is in the city halls and State capitals, in schools and in the workplace, in this country and around the world, that real progress on the environment will be made. Environmental awareness -- it's really got to be a second nature.

Earth Day can be part of the American tradition of private and public leadership that will help us reach that goal. In deciding to make this Earth Day proclamation the first proclamation of the new year -- and the new decade, I might add -- I want to make this point: Earth Day -- and every day -- should inspire us to save the land we love, to realize that global problems do have local solutions, and to make the preservation of the planet a personal commitment.

**President Bill Clinton: Remarks at the White House Conference on Climate Change, October 19, 1993**

This (global climate change) is an issue which has been of great concern to me for a long time. When I decided to seek this office back in 1991, I did it after having spent more than a decade as a Governor deeply frustrated by what seemed to me too often to be inevitable, persistent, aggravating conflicts between the impulse to promote economic opportunity for the people that I represented and the clear obligation, the moral obligation, on all of us to try to preserve this planet that we all share. And anyone with eyes to see could look down the road and recognize that, even with imperfect scientific knowledge, at some point the impulse to give people something to do would have to be reconciled with the obligation to preserve the planet we all share and that if there were

ways through the use of technology and partnerships and ingenuity to actually enhance economic opportunities while preserving the planet, how much better off we would all be...

That cannot be done unless we change our attitude about what we put into our atmosphere and how we respect the air we breathe. That requires us to meet head-on the serious threat of global warming...

On Earth Day I made a commitment to reduce our emissions of greenhouse gases to 1990 levels by the year 2000. And I asked for a blueprint on how to achieve this goal. In concert with all other nations, we simply must halt global warming. It is a threat to our health, to our ecology, and to our economy. I know that the precise magnitude and patterns of climate change cannot be fully predicted. But global warming clearly is a growing, long-term threat with profound consequences. And make no mistake about it, it will take decades to reverse. But the first step is before us today. And because most of our recommendations do not require legislation, something which will doubtless please the Congress with all the burdens they have already on their plate, we can take action on our plan beginning-today.

This plan is the result, as the Vice President has said, of genuine collaboration based on solid scientific and economic analysis, including funding to back up each and every proposal it contains. Like the announcement of our clean car initiative last month, this approach to global warming encourages public-private cooperation across a spectrum of economic, technological, and environmental questions. There are 50 separate initiatives in this plan, touching every sector of our economy because the problem, frankly, affects every sector of the economy...

Finally, to meet the challenge of global warming, as I have said with regard to cutting the deficit and reforming health care and in so many other areas, we frankly must all take some more personal responsibility. We will all benefit environmental and economically from the actions we are proposing today, and it will take all of us to make this plan work. So I say to all the American people: If your utility offers you help in conserving energy in your own home, seize it. If you own a business and the EPA offers you a chance to join the Green Lights program, do it. If you run a factory and the Department of Energy offers you a plan to help install an efficient motor system, use it. You will save money, and you will help your country and your fellow citizens...

The action plan reestablishes the United States as a world leader in protecting the global climate. I urge other industrial countries to move rapidly to produce plans as detailed, as realistic, and as achievable as ours. This initiative gives us a chance, a very, very good chance to reduce greenhouse gases, grow our economy, and create a new high-skill, high-wage job base in America.

We take pride here in this country in the love we have for our land, in our leadership among nations, in our ability to set new goals and solve new challenges. Today we have given life to those values again. And through them, we will help to build a healthier

environment and a stronger economy for decades to come. We also will help to meet our moral obligation to ourselves, our neighbors around the world, and most important to our children.

**President Bill Clinton: Remarks During the White House Conference on Climate Change, October 6, 1997**

**The President:** I think the more difficult argument (about climate change)...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? And 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—and because, after all, the full impact of whatever we do if we start tomorrow won't be felt for decades 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?

[John Holdren, a member of the President's Council of Advisors on Science and Technology, and a professor at Harvard University, used graphs to demonstrate the need to reduce the amount of greenhouse gas emissions in the atmosphere as soon as possible in order to avoid unmanageable degrees of climate change in the future.]

**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...

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.

**The President:** ...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 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 3 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?

...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...

**The President:** 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."

#### **Former President Bill Clinton: Speech at New York University, December 13, 2004**

The decisions we make or fail to make in this area (climate change) may have a bigger impact on America and the world than virtually all the things that were debated...

Tomorrow is here. It's time to stop worrying when, if ever, the current administration will change its mind about climate change. We should still continue to lobby for it...and if you have any influence with anybody in Congress, Republican or Democrat, for God's sake use it.

**Former President Bill Clinton: Remarks at Climate Change conference in Montreal, December 8, 2005**

I just got back from a week long trip in which I went all the way from the northernmost part of the inhabited world -- I went to St. Petersburg, the largest most northernmost city on the globe -- then to Kiev, Ukraine to do some of my AIDS work. And then I flew to Sri Lanka and Indonesia, where the summer is beginning, working on the Tsunami relief recovery for the United Nations. And I came back to Munich and London.

And when I was just wandering around the world, I read the following headlines: that scientists had dug more deeply than ever before into the Antarctic core and now could measure greenhouse gases -- both methane and carbon dioxide -- over the last 650,000 years. And the levels were markedly higher than at any point over the last 650,000 years. Now keep in mind the last ice age only receded 15,000 years ago, which enabled people to move up out of East Africa, across the world and to establish civilizations in every continent. That was when I was in Kiev I read that.

Then, I flew to Sri Lanka in the scorching heat of the early summer, and I read that 95 per cent of the glaciers in the Himalayas are melting, leading to a tripling of mudslides and other disasters from overflowing mountain lakes.

And then, as I flew back North, I read that the countries of the North Atlantic are at risk at getting markedly colder in the years ahead because of global warming, because more fresh water is flowing into the oceans and it's messing up the current rotation, and may block normal temperature changes and aggravate the winters in the North Atlantic. Those were just three little articles in six days.

At our Global Initiative, which the Mayor mentioned, in New York around the opening of the UN, we were told that insurance losses from severe weather events in the last 10 years were triple those of any previous decade in history. And I know that if the climate warms for the next 50 years at the rate of the last 10, rising sea levels in the North Atlantic will claim at least 50 feet of Manhattan Island. It might good for the value of the real estate that is left there, but it will be a very bad thing indeed. It will be a harbinger of changing of agricultural production patterns, millions of food refugees created throughout the world, intense disruptions.

There was an article the other day, Mr. Mayor, about the prospect that the North Pole might melt enough now in the summer time for people to have a sea route right across the top of the earth, and that won't raise the water level because the North Pole is all ice

anyway. But it's hard to believe that the North Pole could melt without significant run off of the Ice Cap on Greenland. And if that were to happen the environmental consequences would be calamitous, indeed.

So, there is no longer any serious doubt that climate change is real, accelerating and caused by human activities. We are uncertain about how deep and the time of arrival of the consequences. But, we are quite clear that they will not be good. So, what should we do about it?

Well, when I was President, I did what I could do in an atmosphere that was, to put it mildly, hostile. We took a lot of executive actions to green the White House and the executive branch of government. We applied higher efficiency standards to appliances in the United States. I sought and lost a carbon tax, and then sought and lost a 25-per-cent tax credit for the production or purchase of clean energy products.

But, we were active in a partnership for a new generation of vehicles with our auto manufacturers, and in the development of the Kyoto climate change accord, which in the end actually got Vice-President Gore personally involved with. It was not a perfect agreement, and there were criticisms of it at the time. The two most important of which were, first, that Kyoto would hurt the economies of the developed nations by chaining them to greenhouse gas reductions that were not achievable, and certain to lead to top down bureaucratic solutions that would wreck economic growth. The second was that Kyoto did not include developing nations which were already large greenhouse gas emitters in which given present rates of growth would become larger than even the United States, the worst offender, in the next few decades.

The second criticism was fair; the first one was just flat wrong. It was factually wrong. And we know from every passing year, we get more and more objective data that if we had a serious disciplined effort to apply on a large scale existing clean energy and energy-conservation technologies, we could meet and surpass the Kyoto targets easily in a way that would strengthen, not weaken our economies. That's the main point I came here to make...

Every country has got this challenge. How are we going to meet it? By a serious commitment to a clean energy future, that's how. We can create jobs out of wind energy, out of solar energy, out of bio-fuels, out of hybrid engines, out of a systematic determination to change the lighting patterns, the insulation patterns, the efficiency standards of all buildings and all appliances. We could make, in America, there is no telling how many jobs we could create if we'd just made a decision that in the rebuilding of New Orleans, it could become America's first "green" city. We would restore all the wetlands, and every building would have solar cells...

As the Mayor said, you've got over 190<sup>9</sup> mayors committed actually to meet the Kyoto accords. Think about this: if a mayor commits to meet the Kyoto accords, what's the difference in that and a country committing? A country commits to an abstract goal. If a mayor -- an executive officer -- makes a commitment, the mayor, he or she has decided already you're thinking: "how in the world am I going to do this?" And, before long, you put out a list of the 20 things you're going to do. And then you go and do it. Once you moved from the abstract to the particular, you drastically increase the level of support for whatever it is you're doing, and you occupy people in doing something they can see as positive, and good for the economy.

I take it no one in Denmark is embarrassed that they generate 20 per cent of their electricity from wind. That no one in The Philippines is ashamed that they generate 27 per cent of their electricity from geothermal. That Germany is proud to generate over 16,000 megawatts of electricity from wind. That Japan is glad that they have overtaken the United States, as has Germany, in the generation of electricity from solar cells. I think that the million (sic) people in the developing world -- largely in Latin America, but other places as well -- who have solar cells unconnected to central power stations on their homes, that generate enough electricity to turn on the lights and cook the food, for a monthly payment that is more or less equal to a month's supply of candles, are proud that they have that...

I hear people all the time when I say this -- this is almost 2006 -- look at me in a slightly patronizing tone and say: "Oh, there he goes again. He's been saying this stuff for 30 years, and everybody knows this can only be a small part of the answer. Everybody knows solar and wind could never be anything as much as oil and coal and nuclear and all that. Everybody knows that." Well, that's just not true.

If you look at the geothermal capacity of Japan alone, they could produce over half their electricity with geothermal. If you look at wind, the difference in wind and solar, and traditional energy sources is, wind and solar are more like blackberries, cell phones and fiat-screen televisions -- the more you use the cheaper it gets. Wind is going up to 30 per cent a year utilization -- that means it doubles every two-and-a-half years. Every time it doubles, the price drops 20 per cent. If you want the price to drop faster, increase the capacity faster.

Last year, solar cell usage -- had been going up 30 per cent per year -- last year, it increased 57 per cent in one year. Every time the capacity doubles, the price drops 20 per cent. America spends roughly \$ 180-billion (US) a year on gasoline -- varies depending on the price. If we spent half of that for seven years building wind mills, then we generate more electricity from wind than any other source. It's just not true you can't take any of this to scale. It's just that we are sort of rooted in old patterns of organization and financing.

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<sup>9</sup> President Clinton was referring to the "Mayors' Climate Protection Agreement" initiated by Mayor Greg Nichols of Seattle. As of the Spring of 2007, the number of Mayors who signed the agreement had increased to more than 400.

But, to make the main point, we know the capacity is there. In our country, 20 per cent of all electricity is consumed by lighting. If every home replaced every incandescent light bulb with a compact fluorescent one, which costs three times as much, lasts 10 times as long, emits one third as much greenhouse gases, every purchaser of a light bulb would save 25 to 40 per cent, no matter how many bulbs they purchased, just as long they were being used. And we would cut the greenhouse gas emissions attributable to lighting in America by 50 per cent. We could create a lot of jobs transferring the production of light bulbs from incandescent to compact fluorescent -- with another new technology just over the horizon I might add.

So, I just don't believe all of this stuff about how: "well, all these things are nice to talk about, but we can't really get there..."

There are two big obstacles to agreement, it seems to me. One is the general observation made -- more eloquently than I can make it -- hundreds of years ago by Machiavelli:

*There is nothing so difficult in human affairs than to change the established order of things because those who will be hurt by the change are quite certain of their loss, while those who will benefit are uncertain of their gain.*

We are trying to create an enormous new world here. And that's why the more concrete examples we have of success, the more important it is. Even though it may not be as satisfying as having everyone say: "OK, we're going to get to this level of reductions, by this date."

Second problem is the old energy economy is well-organized, well-financed and well-connected politically. The new economy is, by and large, entrepreneurial, creative, still-undercapitalized, and the markets are not all that well-organized...

So, my plea is that we get more corporations, cities, other local governments and NGOs involved in this; that we try to go forward multi-laterally; that we not give up on market mechanisms. This carbon market is going to take off, as long as we don't walk away from it. It's going to be an enormously successful thing and incredibly important in trying to help us deal with this, and moving big dollars around and getting big projects done.

And finally, that if we can't agree on targets, that we do what we would do if we were all mayors: we would change the terms of the game. You don't want to agree on a target, here's a hundred projects we can do. They will produce the results that the target seeks to achieve. They will be pro-free market. They will create jobs. They won't put anybody out of work. They'll give us an enormous new set of opportunities. And if all of our oil companies want to embrace them, then they can finance them, and diversify their operations, and create jobs, and make more money. And we could do the same thing in research, whether it is clean coal or hydrogen research...

I think it's crazy for us to play games with our children's future by not agreeing to do what manifestly we know will drastically enhance the economy as well as protect the environment. And give us a chance to share this planet together.

So, again, my plea is for us all to get together, let's try to go forward together. And if you can't agree on a target, agree on a set of projects so everybody has something to do when they get up in the morning. This is a terrible thing to paralyze ourselves, and give people an excuse, and let anybody off the hook from doing something. Let's find a way to walk away from here and walk into the future together, so that we all have something that will give our grandchildren this planet in a more prosperous and more humane way.

Thank you very much and God bless you all.

### **Former President Bill Clinton in Glasgow, Scotland, May 16, 2006**

The most profound security threat we face today is global warming. There may be other terrorist acts, and some of those acts may involve small-scale biological chemical or nuclear attacks.

There has never been a nation destroyed by terrorism alone and it's not about to start now. But I think this climate change has the capacity to change the way all of us live on earth.

If the world warms for 50 years at the rate of the last 10, we will lose our coastal cities in the United States and 50ft of Manhattan will be gone.

There is a lot of money to be made there. If I was a 25-year-old and I was starting my life over again I would go into clean energy. I would be a billionaire before you could turn around.

We live in an inter-dependent world and that can be good and bad or both

We have to try to move towards integrated communities with shared responsibilities and values. We have to do it with greater cooperation.

And we cannot let the government do it all because the government cannot do it all.

We do need a national defense and a military (but) it's far less expensive to make more partners and fewer enemies.

### **President George W. Bush: Letter to Members of the Senate on the Kyoto Protocol on Climate Change, March 13th, 2001**

My Administration takes the issue of global climate change very seriously.

As you know, I oppose the Kyoto Protocol because it exempts 80 percent of the world, including major population centers such as China and India, from compliance, and would cause serious harm to the U.S. economy. The Senate's vote, 95–0, shows that there is a clear consensus that the Kyoto Protocol is an unfair and ineffective means of addressing global climate change concerns.

As you also know, I support a comprehensive and balanced national energy policy that takes into account the importance of improving air quality...I do not believe, however, that the government should impose on power plants mandatory emissions reductions for carbon dioxide, which is not a "pollutant" under the Clean Air Act.

A recently released Department of Energy Report, "Analysis of Strategies for Reducing Multiple Emissions from Power Plants," concluded that including caps on carbon dioxide emissions as part of a multiple emissions strategy would lead to an even more dramatic shift from coal to natural gas for electric power generation and significantly higher electricity prices compared to scenarios in which only sulfur dioxide and nitrogen oxides were reduced.

This is important new information that warrants a reevaluation, especially at a time of rising energy prices and a serious energy shortage. Coal generates more than half of America's electricity supply. At a time when California has already experienced energy shortages, and other Western states are worried about price and availability of energy this summer, we must be very careful not to take actions that could harm consumers. This is especially true given the incomplete state of scientific knowledge of the causes of, and solutions to, global climate change and the lack of commercially available technologies for removing and storing carbon dioxide.

Consistent with these concerns, we will continue to fully examine global climate change issues—including the science, technologies, market-based systems, and innovative options for addressing concentrations of greenhouse gases in the atmosphere. I am very optimistic that, with the proper focus and working with our friends and allies, we will be able to develop technologies, market incentives, and other creative ways to address global climate change.

### **President George Bush: Remarks in the White House Rose Garden, June 11, 2001**

I've just met with senior members of my administration who are working to develop an effective and science-based approach to addressing the important issues of global climate change.

This is an issue that I know is very important to the nations of Europe, which I will be visiting for the first time as President. The earth's well-being is also an issue important to America. And it's an issue that should be important to every nation in every part of our world.

The issue of climate change respects no border. Its effects cannot be reined in by an army nor advanced by any ideology. Climate change, with its potential to impact every corner of the world, is an issue that must be addressed by the world.

The Kyoto Protocol was fatally flawed in fundamental ways. But the process used to bring nations together to discuss our joint response to climate change is an important one. That is why I am today committing the United States of America to work within the United Nations framework and elsewhere to develop with our friends and allies and nations throughout the world an effective and science-based response to the issue of global warming.

My Cabinet-level working group has met regularly for the last 10 weeks to review the most recent, most accurate, and most comprehensive science. They have heard from scientists offering a wide spectrum of views. They have reviewed the facts, and they have listened to many theories and suppositions. The working group asked the highly-respected National Academy of Sciences to provide us the most up-to-date information about what is known and about what is not known on the science of climate change.

First, we know the surface temperature of the earth is warming. It has risen by .6 degrees Celsius over the past 100 years. There was a warming trend from the 1890s to the 1940s. Cooling from the 1940s to the 1970s. And then sharply rising temperatures from the 1970s to today.

There is a natural greenhouse effect that contributes to warming. Greenhouse gases trap heat, and thus warm the earth because they prevent a significant proportion of infrared radiation from escaping into space. Concentration of greenhouse gases, especially CO<sub>2</sub>, have increased substantially since the beginning of the industrial revolution. And the National Academy of Sciences indicates that the increase is due in large part to human activity.

Yet, the Academy's report tells us that we do not know how much effect natural fluctuations in climate may have had on warming. We do not know how much our climate could, or will change in the future. We do not know how fast change will occur, or even how some of our actions could impact it.

For example, our useful efforts to reduce sulfur emissions may have actually increased warming, because sulfate particles reflect sunlight, bouncing it back into space. And, finally, no one can say with any certainty what constitutes a dangerous level of warming, and therefore what level must be avoided.

The policy challenge is to act in a serious and sensible way, given the limits of our knowledge. While scientific uncertainties remain, we can begin now to address the factors that contribute to climate change.

There are only two ways to stabilize concentration of greenhouse gases. One is to avoid emitting them in the first place; the other is to try to capture them after they're created.

And there are problems with both approaches. We're making great progress through technology, but have not yet developed cost-effective ways to capture carbon emissions at their source; although there is some promising work that is being done.

And a growing population requires more energy to heat and cool our homes, more gas to drive our cars. Even though we're making progress on conservation and energy efficiency and have significantly reduced the amount of carbon emissions per unit of GDP.

Our country, the United States, is the world's largest emitter of manmade greenhouse gases. We account for almost 20 percent of the world's man-made greenhouse emissions. We also account for about one-quarter of the world's economic output. We recognize the responsibility to reduce our emissions. We also recognize the other part of the story -- that the rest of the world emits 80 percent of all greenhouse gases. And many of those emissions come from developing countries...

Kyoto is, in many ways, unrealistic. Many countries cannot meet their Kyoto targets. The targets themselves were arbitrary and not based upon science. For America, complying with those mandates would have a negative economic impact, with layoffs of workers and price increases for consumers. And when you evaluate all these flaws, most reasonable people will understand that it's not sound public policy.

That's why 95 members of the United States Senate expressed a reluctance to endorse such an approach. Yet, America's unwillingness to embrace a flawed treaty should not be read by our friends and allies as any abdication of responsibility. To the contrary, my administration is committed to a leadership role on the issue of climate change.

We recognize our responsibility and will meet it -- at home, in our hemisphere, and in the world...

(The President went on to describe his National Climate Change Technology Initiative.)

...By increasing conservation and energy efficiency and aggressively using these clean energy technologies, we can reduce our greenhouse gas emissions by significant amounts in the coming years. We can make great progress in reducing emissions, and we will. Yet, even that isn't enough.

I've asked my advisors to consider approaches to reduce greenhouse gas emissions, including those that tap the power of markets, help realize the promise of technology and ensure the widest-possible global participation. As we analyze the possibilities, we will be guided by several basic principles. Our approach must be consistent with the long-term goal of stabilizing greenhouse gas concentrations in the atmosphere. Our actions should be measured as we learn more from science and build on it.

Our approach must be flexible to adjust to new information and take advantage of new technology. We must always act to ensure continued economic growth and prosperity for

our citizens and for citizens throughout the world. We should pursue market-based incentives and spur technological innovation.

And, finally, our approach must be based on global participation, including that of developing countries whose net greenhouse gas emissions now exceed those in the developed countries...

Our administration will be creative. We're committed to protecting our environment and improving our economy, to acting at home and working in concert with the world. This is an administration that will make commitments we can keep, and keep the commitments that we make.

### **President George W. Bush: State of the Union, January 28, 2003**

Our third goal is to promote energy independence for our country, while dramatically improving the environment. (Applause.) I have sent you a comprehensive energy plan to promote energy efficiency and conservation, to develop cleaner technology, and to produce more energy at home.

### **President George W. Bush, April 27, 2005**

Over the past decade our energy consumption has increased by more than 12 percent, while our domestic production has increased by less than one-half of 1 percent. A growing economy causes us to consume more energy. And, yet, we're not producing energy here at home, which means we're reliant upon foreign nations. And at the same time we've become more reliant upon foreign nations, the global demand for energy is growing faster than the growing supply. Other people are using more energy, as well. And that's contributed to a rise in prices.

Because of our foreign energy dependence, our ability to take actions at home that will lower prices for American families is diminishing. Our dependence on foreign energy is like a foreign tax on the American people. It's a tax our citizens pay every day in higher gasoline prices and higher costs to heat and cool their homes. It's a tax on jobs and it's a tax that is increasing every year.

The problem is clear. This problem did not develop overnight, and it's not going to be fixed overnight. But it's now time to fix it. See, we got a fundamental question we got to face here in America: Do we want to continue to grow more dependent on other nations to meet our energy needs, or do we want to do what is necessary to achieve greater control of our economic destiny?

I made my decision. I know what is important for this country to become less dependent on foreign sources of energy, and that requires a national strategy. Now, when I first got elected, I came to Washington and I said, we need a national strategy. And I submitted a national strategy to the United States Congress. And it has been stuck. And now it's time

for the Congress to pass the legislation necessary for this country to become less dependent on foreign sources of energy. (Applause.)

And the most important component of our strategy is to recognize the transformational power of technology.

### **President George W. Bush: State of the Union, January, 31 2006**

Keeping America competitive requires affordable energy. And here we have a serious problem: America is addicted to oil, which is often imported from unstable parts of the world.

The best way to break this addiction is through technology. Since 2001, we have spent nearly \$10 billion to develop cleaner, cheaper and more reliable alternative energy sources. And we are on the threshold of incredible advances. So tonight I announce the Advanced Energy Initiative -- a 22% increase in clean-energy research at the Department of Energy to push for breakthroughs in two vital areas. To change how we power our homes and offices, we will invest more in zero-emission coal-fired plants; revolutionary solar and wind technologies; and clean, safe nuclear energy.

We must also change how we power our automobiles. We will increase our research in better batteries for hybrid and electric cars and in pollution-free cars that run on hydrogen.

### **President George W. Bush: State of the Union, January 23, 2007**

Extending hope and opportunity depends on a stable supply of energy that keeps America's economy running and America's environment clean. For too long our nation has been dependent on foreign oil. And this dependence leaves us more vulnerable to hostile regimes, and to terrorists -- who could cause huge disruptions of oil shipments, and raise the price of oil, and do great harm to our economy.

It's in our vital interest to diversify America's energy supply -- the way forward is through technology. We must continue changing the way America generates electric power, by even greater use of clean coal technology, solar and wind energy, and clean, safe nuclear power. (Applause.) We need to press on with battery research for plug-in and hybrid vehicles, and expand the use of clean diesel vehicles and biodiesel fuel. (Applause.) We must continue investing in new methods of producing ethanol (applause) using everything from wood chips to grasses, to agricultural wastes.

We made a lot of progress, thanks to good policies here in Washington and the strong response of the market. And now even more dramatic advances are within reach. Tonight, I ask Congress to join me in pursuing a great goal. Let us build on the work we've done and reduce gasoline usage in the United States by 20 percent in the next 10 years.

(Applause.) When we do that we will have cut our total imports by the equivalent of three-quarters of all the oil we now import from the Middle East.

To reach this goal, we must increase the supply of alternative fuels, by setting a mandatory fuels standard to require 35 billion gallons of renewable and alternative fuels in 2017 -- and that is nearly five times the current target. (Applause.) At the same time, we need to reform and modernize fuel economy standards for cars the way we did for light trucks -- and conserve up to 8.5 billion more gallons of gasoline by 2017.

Achieving these ambitious goals will dramatically reduce our dependence on foreign oil, but it's not going to eliminate it. And so as we continue to diversify our fuel supply, we must step up domestic oil production in environmentally sensitive ways. (Applause.) And to further protect America against severe disruptions to our oil supply, I ask Congress to double the current capacity of the Strategic Petroleum Reserve. (Applause.)

America is on the verge of technological breakthroughs that will enable us to live our lives less dependent on oil. And these technologies will help us be better stewards of the environment, and they will help us to confront the serious challenge of global climate change. (Applause.)

**President George W. Bush's Position on Climate Change: Open Letter by James L. Connaughton, Chairman, Council on Environmental Quality, Feb 7, 2007**

Following last Friday's release of a new report by the U.N. Intergovernmental Panel on Climate Change, a number of media reports perpetuated inaccuracies that the President's concern about climate change is new. In fact, climate change has been a top priority since the President's first year in office.

Beginning in June 2001, President Bush has consistently acknowledged climate change is occurring and humans are contributing to the problem. Consider the following statements by the President:

\* "First, we know the surface temperature of the earth is warming...There is a natural greenhouse effect that contributes to warming...And the National Academy of Sciences indicates that the increase is due in large part to human activity." – June 11, 2001

\* "My Administration is committed to cutting our Nation's greenhouse gas intensity...by

18 percent over the next 10 years. This will set America on a path to slow the growth of our greenhouse gas emissions and, as science justifies, stop and then reverse the growth of emissions." – February 14, 2002

\* "America is on the verge of technological breakthroughs that will enable us to live our lives less dependent on oil...they will help us to confront the serious challenge of global climate change." – January 23, 2007

President Bush committed the United States to continued leadership on the issue and since 2001 has dedicated nearly \$29 billion to advance climate-related science, technology, international assistance, and incentive programs. This is far more than any other nation. Since 2002, the Administration has spent more than \$9 billion of this amount on climate change research and, under his direction, agencies developed a 10-year strategic research plan for climate science that was endorsed by the National Academy of Sciences. Further, federally funded scientists have conducted an abundance of research, published their findings in peer reviewed papers and journals and talked with colleagues, policymakers, and media around the world about their findings.

The President is firmly committed to taking sensible action on climate change that will, as the President said in 2002, “harness the power of markets, the creativity of entrepreneurs, and draw upon the best scientific research.” He also has set ambitious goals. In 2002, he announced plans to cut our Nation's greenhouse gas intensity -- how much we emit per unit of economic activity -- by 18 percent by 2012.

Between 2003 and 2006, the President committed nearly \$3 billion annually—more than any other country in the world – to climate change technology research and deployment programs. His administration is carrying out dozens of federal programs, including partnerships, consumer information campaigns, incentives, and mandatory regulations. These programs are directed at developing and deploying cleaner, more efficient energy technologies, conservation, biological sequestration, geological sequestration and adaptation. The U.S. is also the global leader in promoting the production and use of biofuels – consuming more than any other nation last year – and commercial deployment of highly efficient advanced coal technology – moving forward with a multi-billion dollar private sector commitment to build nine projects in nine states, qualifying for a billion dollars in new tax incentives, with more on the way this year.

Our unparalleled financial commitment and responsible policies are working, and we are on track to meet the President’s goal. Our emissions performance since 2000 is among the best in the world. According to the International Energy Agency, from 2000-2004, as our population increased and our economy grew by nearly 10%, U.S. carbon dioxide emissions increased by only 1.7%. During the same period, European Union carbon dioxide emissions grew by 5%, with lower economic growth.

Internationally, the President is working closely with his G-8 counterparts and other key world leaders to address the serious, long-term challenge of global climate change, recognizing that energy security, clean energy, and climate change go hand in hand and must be tackled in an integrated manner. Since 2001, the U.S. has established 15 bilateral climate partnerships with countries and regional organizations. In addition, there are multiple multilateral climate change initiatives. Among the most notable efforts is the recently established Asia-Pacific Partnership on Clean Development and Climate, which is a proactive approach to engage developing countries like India and China, which do not have targets under the Kyoto protocol.

This year the President once again made clear in his State of the Union Address his commitment to confronting climate change. The policies he has in place, coupled with his bold energy initiative to cut gasoline consumption by 20% in 10 years, will continue to yield results. The President has been, and will continue to be, an international leader on climate change by, in his words, “advancing new technologies that will enable us to do two things – strengthen our economy, and at the same time, be better stewards of the environment.”

## SUPREME COURT OF THE UNITED STATES<sup>10</sup>

MASSACHUSETTS ET AL. v. ENVIRONMENTAL PROTECTION AGENCY et al.

Argued November 29, 2006—Decided April 2, 2007

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Based on respected scientific opinion that a well-documented rise in global temperatures and attendant climatological and environmental changes have resulted from a significant increase in the atmospheric concentration of “greenhouse gases,” a group of private organizations petitioned the Environmental Protection Agency (EPA) to begin regulating the emissions of four such gases, including carbon dioxide, under §202(a)(1) of the Clean Air Act...

EPA ultimately denied the petition, reasoning that (1) the Act does not authorize it to issue mandatory regulations to address global climate change, and (2) even if it had the authority to set greenhouse gas emission standards, it would have been unwise to do so at that time because a causal link between greenhouse gases and the increase in global surface air temperatures was not unequivocally established. The agency further characterized any EPA regulation of motor-vehicle emissions as a piecemeal approach to climate change that would conflict with the President’s comprehensive approach involving additional support for technological innovation, the creation of non-regulatory programs to encourage voluntary private-sector reductions in greenhouse gas emissions, and further research on climate change, and might hamper the President’s ability to persuade key developing nations to reduce emissions.

Petitioners, now joined by intervenor Massachusetts and other state and local governments, sought review in the D. C. Circuit. Although each of the three judges on the panel wrote separately, two of them agreed that the EPA Administrator properly exercised his discretion in denying the rulemaking petition...

### **Held:**

...The harms associated with climate change are serious and well recognized. The Government’s own objective assessment of the relevant science and a strong consensus among qualified experts indicate that global warming threatens, *inter alia*, a precipitate rise in sea levels, severe and irreversible changes to natural ecosystems, a significant

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<sup>10</sup> This ruling of the U.S. Supreme Court is included here because it has an important bearing on the authority and obligation of the Executive Branch to regulate greenhouse gas emissions.

reduction in winter snowpack with direct and important economic consequences, and increases in the spread of disease and the ferocity of weather events. That these changes are widely shared does not minimize Massachusetts' interest in the outcome of this litigation...According to petitioners' uncontested affidavits, global sea levels rose between 10 and 20 centimeters over the 20th century as a result of global warming and have already begun to swallow Massachusetts' coastal land. Remediation costs alone, moreover, could reach hundreds of millions of dollars.

Given EPA's failure to dispute the existence of a causal connection between man-made greenhouse gas emissions and global warming, its refusal to regulate such emissions, at a minimum, "contributes" to Massachusetts' injuries....

EPA overstates its case in arguing that its decision not to regulate contributes so insignificantly to petitioners' injuries that it cannot be haled into federal court, and that there is no realistic possibility that the relief sought would mitigate global climate change and remedy petitioners' injuries, especially since predicted increases in emissions from China, India, and other developing nations will likely offset any marginal domestic decrease EPA regulation could bring about. Agencies, like legislatures, do not generally resolve massive problems in one fell swoop...but instead whittle away over time, refining their approach as circumstances change and they develop a more nuanced understanding of how best to proceed...That a first step might be tentative does not by itself negate federal-court jurisdiction. And reducing domestic automobile emissions is hardly tentative. Leaving aside the other greenhouse gases, the record indicates that the U. S. transportation sector emits an enormous quantity of carbon dioxide into the atmosphere.

While regulating motor-vehicle emissions may not by itself *reverse* global warming, it does not follow that the Court lacks jurisdiction to decide whether EPA has a duty to take steps to *slow* or *reduce* it...Because of the enormous potential consequences, the fact that a remedy's effectiveness might be delayed during the (relatively short) time it takes for a new motor-vehicle fleet to replace an older one is essentially irrelevant. Nor is it dispositive that developing countries are poised to substantially increase greenhouse gas emissions: A reduction in domestic emissions would slow the pace of global emissions increases, no matter what happens elsewhere...

EPA identifies nothing suggesting that Congress meant to curtail EPA's power to treat greenhouse gases as air pollutants... Also unpersuasive is EPA's argument that its regulation of motor-vehicle carbon dioxide emissions would require it to tighten mileage standards, a job (according to EPA) that Congress has assigned to the Department of Transportation. The fact that DOT's mandate to promote energy efficiency by setting mileage standards may overlap with EPA's environmental responsibilities in no way licenses EPA to shirk its duty to protect the public "health" and "welfare"...

Under the Act's clear terms, EPA can avoid promulgating regulations only if it determines that greenhouse gases do not contribute to climate change or if it provides some reasonable explanation as to why it cannot or will not exercise its discretion to determine whether they do. It has refused to do so, offering instead a laundry list of

reasons not to regulate, including the existence of voluntary Executive Branch programs providing a response to global warming and impairment of the President's ability to negotiate with developing nations to reduce emissions. These policy judgments have nothing to do with whether greenhouse gas emissions contribute to climate change and do not amount to a reasoned justification for declining to form a scientific judgment. Nor can EPA avoid its statutory obligation by noting the uncertainty surrounding various features of climate change and concluding that it would therefore be better not to regulate at this time. If the scientific uncertainty is so profound that it precludes EPA from making a reasoned judgment, it must say so. The statutory question is whether sufficient information exists for it to make an endangerment finding. Instead, EPA rejected the rulemaking petition based on impermissible considerations. Its action was therefore "arbitrary, capricious, or otherwise not in accordance with law".