

reflects the importance of producing new energy sources and old energy sources made cleaner, and all of that being strong and important as it relates to new jobs.

Let's talk about jobs for a moment. I am very pleased we passed new tax laws. I am very pleased those new tax incentives and rewards are hitting the marketplace at this moment and the consumer's and investor's pocket. I believe out of that, new jobs will be created and possibly there will be a bit more consumer spending.

That child tax credit check that is hitting America's homes, I see Home Depot has picked up on it. They are saying, come out and spend your money and build a better home, make an addition, do some remodeling, and we will help you do it. That is called the free enterprise system at work, and that will generate jobs.

If we want to talk about a jobs bill, then pass S. 14. Pass a bill that will bring natural gas out of Alaska through Canada and into the lower 48. There will be hundreds of thousands of new jobs that will be created for the construction of that pipeline—not only those who will manufacture the pipe, but those who will clear the right-of-way and build the foundation and create the connectivity that will be combined to bring that gas to the lower 48, and of course, all of the other kinds of jobs, exploration, development and the new technologies.

The Senator from Michigan was talking about fuel cells a few moments ago. I was up in his State. I was at the Ford Laboratories at Dearborn a couple of years ago and drove a new hydrogen fuel-celled car. I hope that in my senior years I can buy a hydrogen fuel-celled car; its only pollution is a drop of water being emitted out the tailpipe of the car. I hope that is a form of new transportation for the future. If it is, it will create hundreds of thousands of new jobs; not just in crafting the car but in producing the hydrogen, in supplying the hydrogen, in building the refuel stations and the combination of things that go along with building a new energy source for a transportation fleet for our country.

That is what this bill is all about. Why is there so much resistance to it? Why some 300-plus amendments? I have looked at many of them, and from what I could see there are 25 or 30 amendments within that 300 that are legitimate, that have reasonable concern. I believe there are at least 200 of them that are there for a political statement or for blocking purposes.

The other side argues that we just cannot get our work done, that we need weeks more to deal with something we have already spent 12 days on, that we have already spent 3 years on. Why do we need 3 weeks more? Why can we not begin to work at 9 tomorrow morning and work until 8 tomorrow night and everybody come to the floor and, in a timely way, debate amendments, vote them up or down, move to table them,

move ourselves through this issue, and offer to the American people a comprehensive national energy policy that can make it to the President's desk, that can become law, that begins to put the kind of effort together to produce the nearly 400,000-plus jobs that are available inside this bill spread over a decade of development and growth of the kind reflective in S. 14?

How many of us got up this morning and simply walked over and flipped on the light switch and the lights came on? And how many mornings in one's life have they done that and the lights came on? Why, they come on every morning. We expect them to. We Americans have grown to believe that our energy is always there and always around us, and we take it for granted.

My wife and I flew back from Idaho yesterday. With my wife and I sitting on that jet airliner, it consumed hundreds of gallons of jet fuel just to get us from Idaho to Washington, DC. We took it for granted. Thousands of other Americans were doing the same thing yesterday. They do it every day of the week. They go to the airport. They get on an airplane. Thousands of gallons of jet fuel later, they arrive at their destination and they take it all for granted.

Somebody had to find it. Somebody had to transport it. Somebody had to refine it and somebody had to put it in the airplane. It is all energy.

Our great country is as rich as it is today, and our people are as fortunate as they are, in large part because we have always been able to look 10, 15, and 20 years down the road and build the infrastructure and do the research and do the exploration that brought on continual flows of abundant, reasonably priced energy. It has only been in the last two decades that we stopped producing, but we kept on consuming, and gas prices began to go through the roof. Brownouts and blackouts began to occur because we were not allowed to look into the future and say: Here is where we are going and here is what we are going to produce.

That is what S. 14 does. That is why it is so critical to our country at this moment in time that we become less dependent on foreign sources, more dependent on ourselves and our own production, our own initiative, our own capability, and we do so with conservation, with production, and that we are environmentally sensitive when we do it. That is all embodied in S. 14.

Why are we going to let this languish when we need to be passing it and getting it to the President's desk? One more year? Two more years? Let gas prices to the average consumer go up \$200 or \$300 a month and just say that is okay when we know that through increased exploration and development that does not have to happen?

So I challenge my colleagues over the course of the week that is at hand that we start tonight and we work through Tuesday, Wednesday, Thurs-

day and, as our leader said, Friday and Saturday and beyond if necessary, and let's get our work done for the American people, let's amend, let's pass S. 14, a national energy policy, and get ourselves to conference with the House to make this issue happen.

I yield the floor.

The PRESIDING OFFICER. The Senator from Oklahoma.

Mr. INHOFE. Mr. President, I understand there is a unanimous consent that I be recognized for such time as I shall consume.

The PRESIDING OFFICER. The Senator is recognized.

Mr. INHOFE. I say to the Senator from the great State of Idaho how accurate he is. If there is anything he overlooked, it was in addition to our having electricity, power, and energy in the country, it is also the No. 1 national security issue.

I can remember, as can the Senator from Idaho, way back in the Reagan administration when we were about 37 percent dependent on foreign countries for our ability to fight a war, and we still did not have an energy policy. As did the Senator from Idaho, I talked to President Bush, then-Governor Bush, before he ran, and he committed himself to an energy policy. It is absolutely essential. I agree we should stay whatever time it takes to get it done.

#### SCIENCE OF CLIMATE CHANGE

Mr. INHOFE. Mr. President, the comments made by the Senator from Idaho are such a good prelude to work into what I am about to say. I am chairman of the Environment and Public Works Committee, and in this capacity I have a responsibility because the decisions the committee will reach impact and influence the health and security of America.

What I am about to do—and it is for this reason that I am doing something that is politically stupid—I am going to expose the most powerful, most highly financed lobby in Washington, the far left environmental extremists.

The Senator from Idaho talked about the fact that we have to have electricity. Right now, we are dependent upon fossil fuels for 52 percent of our electricity in America. There are people trying to get us to do away with that. If that should happen, I think he has articulated very well what would happen to America if all of a sudden we had to go to natural gas. Already we are seeing some companies moving to Europe and other places because they are thinking that maybe we will buy on to this hoax that will stop us from being able to have fossil fuels. That is why when I became chairman of the committee, I established three guiding principles for that committee.

No. 1, we are going to make our decisions not on a political agenda but on sound science. No. 2, we are going to have a cost-benefit analysis. At least let the American people know what types of costs are involved in some of

these regulations that do not make any sense. No. 3, to change the attitude, an attitudinal change on the various bureaucrats, so they will be there not to rule the people but to serve the people. Without these principles we cannot make effective public policy decisions. They are necessary to both improve the environment and encourage economic growth and prosperity.

To the average person hearing, all you want is sound science, that sounds perfectly normal. Why would we not want sound science? Why predicate decisions on something that has nothing to do with sound science? But leftwing environmental communities insist sound science is outrageous. For them a pro-environment policy can only mean top-down command-and-control rules dictated by bureaucrats; science is irrelevant, instead for extremists. Politics and power are the motivating forces for making public policy. Sadly, that is true in the current debate over many environmental issues. Too often, emotions stoked by irresponsible rhetoric rather than facts based on objective science shape the contours of environmental policy.

A rather telling example arose during President Bush's first days in office when emotionalism overwhelmed science in the debate over arsenic standards in drinking water. Environmentalist groups, including the Sierra Club and the Natural Resources Defense Council, vilified President Bush for poisoning children because he questioned the scientific bases of the arsenic regulation implemented in the final days of the Clinton administration. The debate featured television ads financed by environmental extremist groups with children asking for another glass of arsenic-laced water. The science underlying the standard, which was flimsy, was hardly mentioned or held up to any scrutiny. In other words, millions of dollars were spent to make people think President Bush wanted to kill children. This is the kind of extremism we are facing on a daily basis.

The Senate went through a similar exercise we all remember in 1992. I was serving in the other body, but I was here during debate. That year some Members seized on data from NASA suggesting that an ozone hole was developing in the Northern Hemisphere. The Senate then rushed into panic mode, ramming through by a vote of 96-0 an accelerated ban on certain chlorofluorocarbon refrigerants. Only 2 weeks later NASA produced new data showing that their initial finding was a gross exaggeration and the ozone hole never appeared.

The issue of catastrophic global warming, which I will speak about today, fits perfectly this mode. Much of the debate over global warming is predicated on fear rather than science. Global-warming alarmists see a future plagued by catastrophic flooding, war, terrorism, economic dislocations, drought, crop failures, mosquito-borne

diseases, and harsh weather, all caused by manmade greenhouse gas emissions. Hans Blix, the guy who could not find anything with both hands, chief of the U.S. weapons inspectors, sounded both ridiculous and alarmist when he said in March: I am more worried about global warming than I am of any major military conflict.

It is no wonder he could not find any weapons of mass destruction.

Science writer David Appell, who has written for such publications as the *Scientist* News and *Scientific American*, parroted Blix when he said global warming would "threaten fundamental food and water resources, it would lead to displacement of billions of people in huge waves of revenues, spawn terrorism, topple governments, spread disease across the globe."

Appell's next point deserves special emphasis because it demonstrates the sheer lunacy of the environmental extremists. He said global warming would be chaos by any measure, far greater even than the sum total of chaos of the global wars of the 20th century, and so in this sense, Blix is right to be concerned.

Sounds like a weapon of mass destruction to me. And that is what we are hearing.

No wonder the late political scientist Aaron Wildavsky called global warming alarmism the mother of all environmental scares.

Appel and Blix sound very much like those who warned us in the 1970s that the planet was headed for a catastrophic global cooling.

On April 28, 1975, *Newsweek* printed the article "The Cooling World" in which the magazine warned:

There are ominous signs that the earth's weather patterns have begun to change dramatically and that these changes may portend a drastic decline in food production—with serious political implications for just about every nation on earth.

Wait, these are the same guys who talk about global warming today.

In a similar form, *Time Magazine*, June 24, 1974, declared "Another Ice Age."

However widely the weather varies from place to place and time to time, when meteorologists take an average of temperatures around the globe, they find that the atmosphere has been growing gradually cooler for the past 3 decades.

Then we had the *Science News* article that talks of the same thing, and an article from *Science Digest* titled "Earth's Cooling Climate."

Decline in temperatures since 1940 raises question of man's role.

In 1974, the National Science Board, the governing body of the National Science Foundation, stated: During the last 20 to 30 years, world temperature has fallen, irregularly at first but more sharply over the last decade.

Two years earlier, the board had observed

judging from the record of the past interglacial ages, the present time of high temperatures should be drawing to an end . . . leading into the next glacial age.

That was the same timeframe that the global-warming alarmists are concerned about global warming. How quickly things change. Fear of the coming ice age is old hat, but fear that manmade greenhouse gases are causing temperatures to rise to harmful levels is in vogue now. That is popular. Go in any establishment in Washington and the liberals are talking about global warming. They do not care about what is happening with other countries and the weapons of mass destruction. They are concerned about global warming. That is the in thing to talk about.

Alarmists brazenly assert that this phenomenon is fact and the science of climate change is settled. In fact, it is far from settled. Indeed, it is seriously disputed.

I ask unanimous consent to have printed at the end of my remarks a July 8th editorial of this year by former Carter administration Energy Secretary James Schlesinger on the science of climate change.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See exhibit 1)

Mr. INHOFE. Dr. Schlesinger takes issue with alarmists who assert there is a scientific consensus supporting their views. He says, "There is an idea among the public that 'the science is settled.' That remains far from the truth."

Keep in mind, this is not someone from a Republican administration.

I refer to a chart demonstrating this is not really a partisan issue. There is no one more knowledgeable on energy than the former Secretary of Energy under the Carter administration. He has been saying there is scientific disagreement over global warming. It is controversial.

But anyone who pays even cursory attention to the issue understands that scientists vigorously disagree over whether human activities are responsible for global warming or whether those activities will precipitate national disasters. Only the scaremongers agree. I submit, furthermore, that not only is there a debate but the debate is shifting away from those who subscribe to global-warming alarmism.

After studying the issue over the last several years, I believe the balance of the evidence offers strong proof that natural variability, not manmade, is the overwhelming factor influencing climate, and that manmade gases are virtually irrelevant.

It is also important to question whether global warming is even a problem for human existence. Thus far, no one has seriously demonstrated any scientific proof that increased global temperatures would lead to the catastrophic predictions by alarmists. In fact, it appears just the opposite is true, that increases in global temperature have a beneficial effect on how we live our lives.

For these reasons, I will discuss an important body of scientific evidence and research that refutes the anthropogenic—which means manmade—theory

of catastrophic global warmings. I believe this research offers compelling proof that human activities have little or no impact on climate. This research, well documented in scientific literature, directly challenges the environment world view of the media, so they typically do not receive proper attention and discussion.

Certainly, members of the media would rather level personal attacks on scientists who question "accepted" global warming theories than engage on the science. So you have two groups at work here: The environmental extremists doling out to you the lies and the money to politicians and the liberal media that nests with them. This is an unfortunate artifact of the debate, a relentless increase in personal attacks on certain members of the scientific community who question so-called conventional wisdom.

I believe it is extremely important for the future of this country that the facts and the science get a fair hearing. Without proper knowledge and understanding, alarmists will scare the country into enacting its ultimate goal: Making energy suppression in the form of harmful mandatory restrictions on carbon dioxide and other greenhouse emissions the official policy of the United States of America.

Such a policy would induce serious economic harm, especially for the low-income and minority populations. Energy suppression, as official Government and nonpartisan private analyses have amply confirmed, means higher prices for food, higher prices for medical care, and higher prices for electricity, as well as massive job losses and drastic reductions in gross domestic product, all the while providing virtually no environmental benefit. In other words, it is a raw deal for the American people but especially the poor.

In a minute we are going to shift to the Kyoto Treaty. The issue of global warming garnered significant international attention through the Kyoto Treaty, which requires signatories to reduce their greenhouse gas emissions by considerable amounts below the 1990 levels. The Clinton administration, led by former Vice President Al Gore, signed the Kyoto Treaty on November 12, 1998, but never submitted it to the Senate for ratification. Let's remember what our Constitution says: If we want to join a treaty, the President takes the lead and then he submits it to be ratified by the U.S. Senate. It has never been submitted to us.

The treaty explicitly acknowledges as true that manmade emissions, principally from the use of fossil fuels, are causing global temperatures to rise, eventually to catastrophic levels. Kyoto enthusiasts believe if we dramatically cut back or even eliminate the use of fossil fuels, the climate system will respond by sending global temperatures back to normal levels—whatever normal levels would be.

In 1997, the Senate sent a powerful message that Kyoto was not accept-

able. In this resolution that was passed, called the Byrd-Hagel resolution, they said it is the sense of the Senate—this is very significant—that:

The United States should not be a signatory to any protocol to, or other agreement regarding, the United Nations framework convention on climate change of 1992, at negotiations in Kyoto in December of 1997, or thereafter, which would—

Would do what? No. 1: mandate new commitments to limit or reduce greenhouse gas emissions for the Annex 1 parties, unless the protocol or other agreement also mandates new specific scheduled commitments to limit or reduce greenhouse gas emissions for developing country parties within the same compliance period.

What they are saying, and what we voted on here right in this room, in this body, is that we are not going to ratify anything that does not impose the same regulations on developing countries as it does developed nations.

And second: that it would result in serious harm to the economy of the United States.

Obviously, that is very significant at this time. The treaty would have required the United States to reduce its emissions 31 percent below the level otherwise predicted for 2010. Put another way, the United States would have had to cut 552 million metric tons of CO<sub>2</sub> per year by the year 2008 through 2012.

As the Business Roundtable pointed out:

[That target is] the equivalent of having to eliminate all current emissions from either the United States transportation sector—

That is everything that is moving out there in transportation— or the utilities sector, [that would be] residential and commercial, or industry.

In other words, you have to eliminate everything in order to reach that.

The most widely cited and definitive study came from Wharton Econometric Forecasting Associates. According to Wharton Econometric Forecasting Associates' economists, Kyoto would cost 2.4 million U.S. jobs and reduce GDP by 3.2 percent, or about \$300 billion annually, an amount greater than the total expenditure on primary and secondary education in America. Certainly that would result in the serious harm to the economy of the United States that was voted on by this body without one dissenting vote.

Because of Kyoto, American consumers would face higher food, medical, and housing costs. For food, an increase of 11 percent; for medicine, an increase of 14 percent; and for housing, an increase of 7 percent. At the same time, an average household of four would see its real income drop by \$2,700 in 2010, and each year thereafter.

Under Kyoto, energy and electricity prices would nearly double and the gasoline prices would go up an additional 65 cents a gallon.

I hope somebody is listening out there.

Some of the environmental community have dismissed the Wharton re-

port as a tainted product. I point them to the 1998 analysis of the Clinton Energy Information Administration, the statistical arm of the Department of Energy, which largely confirmed Wharton's analysis. Keep in mind, all these disastrous results of Kyoto are predicted by the Wharton Econometric Forecasting Associates, a private consulting company founded by professors from the University of Pennsylvania's Wharton Business School.

This month the Congressional Budget Office provided further proof that Kyoto-like carbon regulatory schemes are regressive and harmful to economic growth and prosperity.

As the CBO—that is, the Congressional Budget Office—found:

The price increases resulting from a carbon cap would be regressive—that is, they would place a greater burden on lower-income households than higher-income households.

As to the broader macroeconomic effects of the carbon cap and trade schemes, the CBO said:

A cap-and-trade program for carbon emissions could impose significant costs on the economy in the form of welfare losses. Welfare losses are real costs to the economy in that they would not be recovered anywhere else in the form of higher income. Those losses would be borne by people in their role as shareholders, consumers and workers.

Some might respond that the Government can simply redistribute the wealth, redistribute the income, in a form of welfare programs to mitigate the impact, but the CBO found otherwise. The CBO said:

The Government could use the allowance value to partly redistribute the costs of a carbon cap-and-trade program, but it could not cover these costs entirely. [And, further,] Available research indicates that providing compensation could actually raise the cost to the economy of a carbon cap.

That is what CBO said just this month.

Despite these facts, groups such as Greenpeace blindly assert that Kyoto "will not impose significant costs" and "will not be an economic burden."

Among the many questions this provokes, one may ask: Won't be a burden on whom exactly? Greenpeace doesn't elaborate. But according to a recent study by the Center for Energy and Economic Development sponsored by the National Black Chamber of Commerce and the U.S. Hispanic Chamber of Commerce, if the U.S. ratifies the Kyoto or passes domestic climate policies effectively implementing the treaty, the result would be to: disproportionately harm America's minority communities and place the economic advancement of millions of U.S. Blacks and Hispanics at risk.

This was the National Black Chamber of Commerce and the U.S. Hispanic Chamber of Commerce.

Among the study's key findings—and this is one that is very significant here, too, when we talk about unemployment rates—this line would be unemployment rates without Kyoto. It goes straight across. We can see it starting at about 10.5 percent, going across from the current time to 2012.

This line down here is the line for Hispanics. This is unemployment rates. The study concluded, if we should have to comply with Kyoto regulations, it would go up, unemployment would go up at that particular rate and, for Hispanics, at this particular rate.

It also affects the poverty rates for Blacks and Hispanics. Again, for Blacks, the poverty rate, if you take this as a baseline and take it straight across from the year 2000 to 2012, this being a little over 26 percent, then you follow with Kyoto, look at what happens to the poverty rate—the same thing happening down here for Hispanics. In other words, it is discriminatory against these particular individuals.

Among the study's key findings—again, let me remind you, this is not some organization that should be questioned; this is the National Black Chamber of Commerce and the U.S. Hispanic Chamber of Commerce, and among their findings: Kyoto will cost 511,000 jobs held by Hispanic workers and 864,000 jobs held by Black workers. Poverty rates for minority families will increase dramatically, and because Kyoto will bring about higher energy prices, many minority businesses will be lost.

This is not Senator JIM INHOFE talking, this is the National Black Chamber of Commerce and U.S. Hispanic Chamber of Commerce.

It is interesting to note, the environmental left purports to advocate policies based on their alleged good for humanity, especially the most vulnerable. Kyoto is no exception. Yet Kyoto and Kyoto-like policies developed in this body would cause the greatest harm to the very poorest of Americans.

Environmental alarmists, as an article of faith, peddled the notion that climate change, as Green Peace put it, is "the biggest environmental threat facing . . . developing countries."

Such thinking runs totally contrary to the public declaration of the 2002 World Summit on Sustainable Development, a program sponsored by the United Nations, which found that poverty is the No. 1 one threat to developing countries.

I would like at this point to talk a little bit about John Christy. Dr. John Christy is director of the Earth System Science Center at the University of Alabama, Huntsville, who passionately reiterated the point about poverty in the May 22 letter to the House Resources Committee Chairman, RICHARD POMBO of California. As an addendum to his testimony during the committee's hearing on the Kyoto Protocol, Dr. Christy, an Alabama State climatologist, talked eloquently about his service as a missionary in Africa.

I am going to dwell a little on this because I have had a mission in west Africa for quite a number of years and I have been there and have seen what he is about to describe as a reality. We talked about the poverty in America.

We talked about what is going to happen to minorities—Blacks and Hispanics in America.

Let us look at where the poverty is the worst. Dr. Christy said, "Poverty is the worst polluter." As he noted, bringing modern, inexpensive electricity to developing countries would raise living standards and lead to a cleaner environment. Kyoto, he said, would be counterproductive, and, as I interpret him, immoral, for Kyoto would divert precious resources away from helping those truly in need to a problem that doesn't exist and a solution that would have no environmental benefit.

The following is an excerpt of a letter worth quoting at length. This is Dr. Christy talking about his experience in Africa:

The typical home was a mud-walled, thatched-roof structure. Smoke from the cooking fire fueled by undried wood was especially irritating to breathe as one entered the home. The fine particles and toxic emissions from these in-house, open fires assured serious lung and eye diseases for a lifetime. And, keeping such fires fueled and burning required a major amount of time, preventing the people from engaging in other less environmentally damaging pursuits.

I've always believed that establishing a series of coal-fired power plants in countries such as Kenya (with simple electrification to the villages) would be the best advancement for the African people and the African environment. An electric light bulb, a microwave oven and a small heater in each home would make a dramatic difference in the overall standard of living. No longer would a major portion of time be spent on gathering inefficient and toxic fuel. The serious health problems of hauling heavy loads and lung poisoning would be much reduced. Women would be freed to engage in activities of greater productivity and advancement. Light on demand would allow for more learning to take place and other activities to be completed. Electricity would also foster a more efficient transfer of important information from radio or television. And finally, the preservation of some of the most beautiful and diverse habitats on the planet would be possible if wood were eliminated as a source of energy.

Providing energy from sources other than biomass (wood and dung), such as coal-produced electricity, would bring longer and better lives to the people of the developing world and greater opportunity for the preservation of their natural ecosystems. Let me assure you, notwithstanding the views of extreme environmentalists, that Africans do indeed want a higher standard of living. They want to live longer and healthier with less burden bearing and with more opportunities to advance. New sources of affordable, accessible energy would set them down the road of achieving such aspirations.

These experiences made it clear to me that affordable, accessible energy was desperately needed in African countries.

As in Africa, ideas for limiting energy use, as embodied in the Kyoto protocol, create the greatest hardships for the poorest among us. As I mentioned in the Hearing, enacting any of these noble-sounding initiatives to deal with climate change through increased energy costs, might make a wealthy urbanite or politician feel good about themselves, but they would not improve the environment and would most certainly degrade the lives of those who need help now.

Some in this body have introduced Kyoto-like legislation that would seri-

ously hurt low-income and minority populations.

Last year, Tom Mullen, president of the Cleveland Catholic Charities, testified against S. 556, the Clean Power Act of last year, which would have had a lot of Kyoto-type implications; that it would impose onerous and unrealistic restrictions, including a Kyoto cap on carbon monoxide emissions by electricity.

That was Tom Mullen before the committee which I chaired. He is the president of Catholic Charities in Cleveland. He has devoted his whole life to helping poor people.

He noted that this regime would mean higher electricity prices for the poorest citizens of Cleveland.

For those on fixed incomes, as Mr. Mullen pointed out, higher electricity prices present a choice between eating and staying warm in the winter. As Mr. Mullen said:

The overall impact on the economy in Northeast Ohio would be overwhelming, and the needs that we address at Catholic Charities in Ohio with the elderly and poor would be well beyond our capacity and that of our current partners in government and the private sector.

That is the sworn testimony of Mr. Mullen before my committee.

I see that Senator VOINOVICH from Ohio has approached the floor. He remembers very well when Tom Mullen of Catholic Charities of Ohio was in testifying. Senator VOINOVICH made several comments as to the seriousness that he believed this would impose upon the poor people of Ohio. There is no one more concerned about the poor people in Ohio than Senator VOINOVICH.

In addition to its negative economic impacts, Kyoto still does not satisfy Byrd-Hagel's concerns about developing countries. Though such countries as China, India, Brazil, South Korea, and Mexico are all signatories to Kyoto, they are not required to reduce their emissions even though they emit nearly 30 percent of the world's greenhouse gases.

It says we have to treat the developing nations the same as these countries that have signed onto the protocol. But they don't have to do it. Within a generation, they will be the largest emitters of carbon, methane, and other such greenhouse gases.

Despite the fact that neither of Byrd-Hagel's conditions has been met, environmentalists echoed by the liberal media have bitterly criticized President Bush for abandoning Kyoto. But one wonders why. Why don't they assail the 95 Senators—both Democrats and Republicans—who, according to Byrd-Hagel, presumably oppose ratification if the treaty came up on the Senate floor?

Why don't they assail former President Clinton or Vice President Gore who signed the treaty but never submitted it for ratification?

To repeat, it was a unanimous vote saying we cannot ratify Kyoto—the Kyoto Treaty that the President had

signed—unless they would take care of these needs; that is, treating developing countries the same as other countries and if it would provide for any kind of damaging economic effect.

So when you look at it, you see it was 95 to 0. You have Senators who are of the liberal persuasion—fine people but certainly a different philosophy than mine; Senators BOXER, COLLINS, FEINGOLD, DORGAN, GRAHAM, JEFFORDS, KENNEDY, KERRY, LIEBERMAN, Moseley-Braun, ROCKEFELLER, and many others—who are really sincerely talking in favor of this Kyoto Treaty, but they cast their vote against it. They said: We don't want to ratify this treaty, and we are not going to ratify this treaty unless it treats the developing countries the same as it does the developed nations and unless it doesn't perform any kind of damage to the economy.

If Byrd-Hagel would not ratify Kyoto if it caused substantial harm and if the developing countries were not required to participate in the same timetable, now it brings us to a very significant question: If the Byrd-Hagel conditions are ever satisfied, should the United States ratify Kyoto? Answering that question depends on several factors, including whether Kyoto would provide significant needed environmental benefits.

First, we should ask what Kyoto is designed to accomplish. According to the U.N.'s Intergovernmental Panel on Climate Change, Kyoto will achieve "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."

What does this statement mean? The IPCC offers no elaboration and doesn't provide any scientific explanation about what that level would be. Why? The answer is simple: thus far no one has found a definitive scientific answer.

Recently scientists have answered that question.

Dr. Fred Singer, an atmospheric scientist at the University of Virginia, who served as the first Director of the U.S. Weather Satellite Service, which is now part of the Department of Commerce, and more recently has served as a member and vice chairman of the National Advisory Committee on Oceans and Atmosphere, said:

No one knows what constitutes a "dangerous" concentration. There exists, as yet, no scientific basis for defining such a concentration, or even of knowing whether it is more or less than current levels of carbon dioxide.

One might pose the question: If we had the ability to set the global thermostat, what temperature would we pick? Would we set it colder or warmer than it is today? What would the optimal temperature be? The actual dawn of civilization occurred in a period climatologists call the "climatic optimum," when the mean surface temperature was about 1 to 2 degrees Cel-

sus warmer than it is today. If we could choose, what would we choose? Why not go 1 degree or 2 degrees higher, or 1 degree or 2 degrees cooler, for that matter?

The Kyoto emissions reduction targets are arbitrary, lacking any real scientific basis. Kyoto, therefore, will have no impact on global temperatures. This is not just my opinion but the conclusion that is reached by the country's top climate scientists.

Dr. Tom Wigley, a senior scientist at the National Center for Atmospheric Research, found that if the Kyoto protocol were fully implemented by all signatories—now, I will note this next point assumes that the alarmist science is correct, which, of course, it is not—if the Kyoto protocol were fully implemented, it would reduce temperatures by a mere .07 degrees Celsius by 2050 and .13 degrees Celsius by 2100.

What does this mean? Such an amount is so small that ground-based thermometers cannot even measure it. If you look at this chart, this shows the difference all the way from 2000 to 2050. You can see, while we have ups and downs, it is not measurable. We do not have equipment that could measure that precisely.

Dr. Richard Lindzen, an MIT scientist and member of the National Academy of Sciences, who has specialized in climate issues for over 30 years, told the Committee on Environment and Public Works—the committee I chair—on May 2, 2001, that there is a "definitive disconnect between Kyoto and science. Should a catastrophic scenario prove correct, Kyoto would not prevent it."

Similarly, Dr. James Hansen of NASA, considered the father of global warming—he is the guy who thought of all this stuff—said the Kyoto protocol—keep in mind, he is the father of this concept—"will have little effect" on global temperature in the 21st century. In a rather stunning followup, Hansen said it would take 30 Kyotos—let me repeat that—30 Kyotos to reduce warming to an acceptable level. If 1 Kyoto devastates the American economy, what would 30 Kyotos do?

So this leads to another question: If the provisions in the protocol do little or nothing measurable to influence global temperatures, what does this tell us about the scientific basis for Kyoto?

Answering that question requires a thorough examination of the scientific work conducted by the United Nations Intergovernmental Panel on Climate Change. I am going to refer to this as the IPCC. It is the U.N.'s Intergovernmental Panel on Climate Change which provides the scientific basis for Kyoto. In other words, that is what everything is based on. So I want to talk about that for a few minutes. The international climate negotiations and substance of claims were made by alarmists.

In 1992, several nations from around the world gathered in Rio de Janeiro

for the United Nations Framework Convention on Climate Change. This meeting was premised on the concern that global warming was becoming a problem. The United States, along with many other countries, signed the Framework Convention, committing them to making voluntary reductions in greenhouse gases. OK. That was 11 years ago.

Over time, it became clear that signatories were not going to reach their reduction targets as stipulated under Rio. This realization led to the Kyoto protocol of 1997, which was an amendment to the Framework Convention and which prescribed mandatory reductions only for developed nations; that is, the United States. Of course, you know that is another violation of Byrd-Hagel, that it would just affect the developed nations, not the developing nations.

The science of Kyoto is based on the assessment reports conducted by the Intergovernmental Panel on Climate Change, the IPCC. Over the last 13 years, the IPCC has published three assessments, with each one, over time, growing more and more alarmist.

The first IPCC assessment report, in 1990, found that the climate record of the past century was "broadly consistent" with the changes in the Earth's surface temperature, as calculated by climate models that incorporated the observed increase in greenhouse gases.

This conclusion is absurd, considering the climate cooled between 1940 and 1975, just as industrial activity grew rapidly after World War II. It has been difficult to reconcile this cooling with the observed increases in greenhouse gases.

Let's be sure we understand what is happening. In 1940, and then after the war, is when we had the huge increase in CO<sub>2</sub> and the greenhouse gases. Yet that precipitated a cooling period, not a warming period, totally contradicting the science.

After its initial publication, the IPCC's second assessment report, in 1995, attracted widespread international attention, particularly among scientists who believed that human activities were causing global warming. In their view, the report provided the proverbial smoking gun.

The most widely cited phrase from that report—which actually came from the report summary, as few in the media actually read the entire report—was that "the balance of the evidence suggests a discernible human influence on global climate." This, of course, is so vague that it is essentially meaningless.

What do they mean by "suggests"? For that matter, what do they mean by "discernible"? How much human influence is discernible? Is it a positive or negative influence? Where is the precise scientific quantification?

Unfortunately, the media created the impression that man-induced global warming was fact. On August 10, 1995,

the New York Times published an article titled "Experts Confirm Human Role in Global Warming"—not just inaccurate but just an outrageous lie. According to the Times account, the IPCC showed that global warming "is unlikely to be entirely due to natural causes." That is what they said.

Of course, when parsed, this account means fairly little. Not entirely due to natural causes? Well, how much then? One percent? Twenty percent? Eighty-five percent?

The IPCC report was replete with caveats and qualifications, providing little evidence to support anthropogenic theories—and "anthropogenic" means manmade—of global warming. The preceding paragraph in which the "balance of evidence" appears makes exactly that point. It reads:

Our ability to quantify the human influence on global climate is currently limited because the expected signal is still emerging from the noise of natural variability, and because there are uncertainties in key factors.

That is the IPCC. Those are their words which totally refute the case they are trying to make. Moreover, the IPCC report was quite explicit about the uncertainties surrounding the link between human actions and global warming.

Although these global mean results suggest that there is some anthropogenic component in the observed temperature record, they cannot be considered compelling evidence of a clear cause-and-effect link between anthropogenic forcing and changes in the Earth's surface temperature.

Remember the IPCC provides the scientific basis for the alarmists' conclusion about global warming. But even the IPCC is saying their own science cannot be considered compelling evidence.

Dr. John Christy, professor of Atmospheric Science and director of the Earth Systems Science Center at the University of Alabama, a key contributor to the 1995 IPCC report, participated with the lead authors in drafting the sections in the detailed review of the scientific text. He wrote—this isn't the IPCC; this is Dr. John Christy—in the *Montgomery Advertiser*, February 22, 1998, that much of what passes for common knowledge in the press regarding climate change is "inaccurate, incomplete, or viewed out of context."

Many of the misconceptions about climate change originated from the IPCC's six-page executive summary. It was the most widely read and quoted of the three documents published by the IPCC working group but—and this point is crucial—it had the least input from scientists and the greatest input from nonscientists.

Let me go to the third assessment. Five years later, the IPCC was back again, this time with the Third Assessment Report on Climate Change. In October of 2000, the IPCC "Summary for Policymakers"—that is not what the scientists said; that is what the politicians said—was leaked to the media which, once again, accepted the IPCC's

conclusions as fact. Based on the summary, the *Washington Post* wrote on October 30:

The consensus on global warming keeps strengthening.

In a similar vein, the *New York Times* competently declared on October 28:

The international panel of climate scientists, considered the most authoritative voice on global warming, is now concluding that mankind's contribution to the problem is greater than originally believed.

Look at how these accounts are couched. They are worded to maximize the fear factor. But upon closer inspection, it is clear that such statements have no compelling intellectual content. "Greater than originally believed," what is the baseline from which the *Times* makes that judgment? Is it .01 percent or 25 percent? And how much greater? Double? Triple? An order of magnitude greater?

Such reporting prompted testimony by Dr. Richard Lindzen before the Committee on Environment and Public Works, the committee I now chair. This was in May of 2001.

Dr. Lindzen said:

Nearly all reading and coverage of the IPCC is restricted to the highly publicized Summaries for Policymakers, which are written by representatives of government, NGO's, and business; the full reports, written by participating scientists, are largely ignored.

That is what Dr. Lindzen, who is one of the contributing scientists to the IPCC, has said. As it turned out, the policymakers' summary was politicized and radically different from the earlier draft. For example, the draft concluded the following concerning the driving case for climate change:

From the body of the evidence since IPCC (1996), we conclude there has been a discernible human influence on global climate. Studies are beginning to separate the contributions to observed climate change attributable to individual external influences, both anthropogenic and natural. This work suggests that anthropogenic greenhouse gases are a substantial contributor to the observed warming, especially over the past 30 years.

Keep in mind their conclusion:

However, the accuracy of these estimates continues to be limited by uncertainties in estimates of internal variability, natural and anthropogenic forcing, and the climate response to external forces.

In other words, they go all the way through the IPCC, the document on which all the extremists are basing their conclusions that anthropogenic actually contributes to global warming. Yet then they have a disclaimer at the very end.

The final version looks quite different and concluded instead:

In light of new evidence taking into account the remaining uncertainties, most of the observed warming over the last 50 years is likely to have been due to increases in greenhouse gas concentrations.

Keep in mind "warming over the last 50 years." Remember we showed you those charts going back 25 years. These

same people were yelling and screaming and complaining that there is a cooling period coming. They had all these fearful statements made about what is going to happen. Now they are saying over the past 50 years, when they themselves said 25 years ago that the concern was cooling.

This kind of distortion was not unintentional, as Dr. Lindzen explained for the Environment and Public Works Committee. Dr. Lindzen said:

I personally witnessed coauthors forced to assert their "green" credentials in defense of their statements.

This is testimony before our committee. This is from Dr. Lindzen, one of the contributors to the IPCC on which they base this premise.

In short, some parts of the IPCC process resemble a Soviet-style trial in which the facts are predetermined and ideological purity trumps technical and scientific examinations. The predictions in this summary went far beyond those in the IPCC's 1995 report.

The second assessment of the IPCC predicted that the Earth could warm by 1 to 3.5 degrees Celsius by the year 2100. The best estimate was a 2-degree Celsius warming by 2100. Both are highly questionable at best. That was the 1995 report.

In the third assessment, the IPCC dramatically increased that estimate to a range between 1.4 percent and 5.8 degrees Celsius, even though no new evidence had come to light to justify a dramatic change. In fact, the IPCC's median projected warming actually declined from 1990 to 1995. IPCC's 1990 initial estimate was 3.2 degrees Celsius. Then the IPCC revised 1992—2 years later—estimate was 2.6 degrees Celsius, followed by the IPCC revised 1995 estimate of 2.0 degrees Celsius. What changed?

As it turned out, the new prediction was based on faulty, politically charged assumptions about trends in population growth, economic growth, and fossil fuel use. The extreme case scenario of a 5.8-degree warming, for instance, rests upon an assumption that the whole world will raise its level of economic activity and per capita energy use to that in the United States. That is what it is based on. That energy use will be carbon intensive. This scenario is simply ludicrous. This essentially contradicts the experience of the industrialized world over the past 30 years. Yet the 5.8 degree figure featured prominently in news stories because it produced the biggest fear effect.

Moreover, when regional climate models of the kind relied upon by the IPCC attempt to incorporate such factors as population growth, "the details of future climate recede toward unintelligibility," according to Jerry Mahlman, Director of NOAA's Geophysical Fluid Dynamics Laboratory.

Even Dr. Stephen Schneider, an outspoken believer in catastrophic global warming, criticized the IPCC's assumptions in the journal *Nature* on May 3,

2001. In his article—this is the promoter of the catastrophic global warming fear mongers—Schneider asks:

How likely is it that the world would get 6 degrees [centigrade] hotter by 2100? [That] depends on the likelihood of the assumptions underlying the projections.

Keep in mind that Schneider is on the side of the alarmists. Schneider's own calculations, which cast serious doubt on the IPCC's extreme prediction, broadly agree with an MIT study published in April of 2001.

It found that there is a "far less" than one percent chance that temperatures would rise to 5.8 degrees C or higher, while there is a 17 percent chance the temperature rise would be lower than 1.4 degrees.

That point bears repeating: even global warming alarmists think the lower number is 17 times more likely to be right than the higher number. Moreover, even if the earth's temperature increases by 1.4 degrees Celsius, does it really matter? The IPCC doesn't offer any credible science to explain what would happen.

Gerald North of Texas A&M University in College Station, agrees that the IPCC's predictions are baseless, in part because climate models are highly imperfect instruments. As he said after the IPCC report came out: "It's extremely hard to tell whether the models have improved" since the last IPCC report. "The uncertainties are large." Similarly, Peter Stone, an MIT climate modeler, said in reference to the IPCC, "The major [climate prediction] uncertainties have not been reduced at all."

Dr. David Wojick, an expert in climate science, recently wrote in Canada's National Post:

The computer models cannot . . . decide among the variable drivers, like solar versus lunar change, or chaos versus ocean circulation versus greenhouse gas increases. Unless and until they can explain these things, the models cannot be taken seriously as a basis for public policy.

In short, these general circulation models, or GCMs as they're known, create simulations that must track over 5 million parameters. These simulations require accurate information on two natural greenhouse gas factors—water vapor and clouds—whose effects scientists still do not understand.

Because of these and other uncertainties, climate modelers from four separate climate modeling centers wrote in the October 2000 edition of *Nature* that, "Forecasts of climate change are inevitably uncertain." They go on to explain that, "A basic problem with all such predictions to date has been the difficulty of providing any systematic estimate of uncertainty," a problem that stems from the fact that "these [climate] models do not necessarily span the full range of known climate system behavior."

Again, to reiterate in plain English, this means the models do not account for key variables that influence the climate system.

Despite this, the alarmists continue to use these models and all the other

flimsy evidence I've cited to support their theories of man-made global warming—theories they so desperately want to believe.

Before I get into another subject, I see the Senator from Ohio, Senator VOINOVICH. I have been talking a little about the committee hearing we had. I believe it was at your invitation that Tom Mullins came and testified. I ask you if I am accurately portraying the comments he made concerning the poor people of your State of Ohio.

Mr. VOINOVICH. Mr. President, the Senator portrayed Tom Mullins' comments accurately. In the statement I am going to be making, I will refer to those remarks—the indication that many of the people who are promoting capping carbon at the altar of responding to the climate change promotion are not seeking to affect the impact that capping carbon would have on natural gas questions and on those people in our country who are least able to pay their energy costs.

Mr. INHOFE. I thank the Senator. I recall that he almost had tears in his eyes when he talked about the poor people of Ohio and the fact they have to make decisions about eating and heating their homes. It is a very serious thing.

Mr. VOINOVICH. I think the main purpose of his testimony was that in decisions we make in the Senate regarding environmental legislation, we ought to take into consideration the impact it is having on those who have to pay the energy costs that are increased as a result of those initiatives. There seems to be some type of disconnect between our environmental policy and our energy policy. What we are hoping to do here is to harmonize our environmental and energy policies so we can put together a policy that will reduce emissions and at the same time not destroy our economy and impact on the least of our brethren who pay a large percentage of what they have toward the cost of energy.

Mr. INHOFE. What Tom Mullins said is totally consistent with what I talked about earlier. In the National Black Chamber of Commerce and the U.S. Hispanic Chamber of Commerce they talked about the unemployment rate and how it hurts poor people. I think that to be very true.

Now I want to turn to temperature trends in the 20th Century. GCMs predict that rising atmospheric CO<sub>2</sub> concentrations will cause temperatures in the troposphere, the layer from 5,000 to 30,000 feet, to rise faster than surface temperatures—a critical fact supporting the alarmist hypothesis.

But in fact, there is no meaningful warming trend in the troposphere, and weather satellites, widely considered the most accurate measure of global temperatures, have confirmed this.

To illustrate this point, just think about a greenhouse. The glass panes let sunlight in but prevent it from escaping. The greenhouse then warms from the top down. As is clear from the

science, this simply is not happening in the atmosphere.

Satellite measurements are validated independently by measurements from NOAA balloon radiosonde instruments, with records extending back over 40 years. This is very critical. The extremists will tell you warming is occurring.

If you look at this chart of balloon data, extremists will tell you that warming is occurring, but if you look more closely you see that temperature in 1955 was higher than temperature in 2000.

A recent detailed comparison of atmospheric temperature data gathered by satellites with widely-used data gathered by weather balloons corroborates both the accuracy of the satellite data and the rate of global warming seen in that data.

To reiterate, the best data collected from satellites validated by balloons to test the hypothesis of a human-induced global warming from the release of CO<sub>2</sub> into the atmosphere shows no meaningful trend of increasing temperatures, even as the climate models exaggerated the warmth that ought to have occurred from a build-up in CO<sub>2</sub>.

Some critics of satellite measurements contend that they don't square with the ground-based temperature record. But some of this difference is due to the so-called "urban heat island effect." This occurs when concrete and asphalt in cities absorb—rather than reflect—the sun's heat, causing surface temperatures and overall ambient temperatures to rise. Scientists have shown that this strongly influences the surface-based temperature record.

In a paper published in the *Bulletin of the American Meteorological Society* in 1989, Dr. Thomas R. Karl, senior scientist at the National Climate Data Center, corrected the U.S. surface temperatures for the urban heat-island effect and found that there has been a downward temperature trend since 1940. This suggests a strong warming bias in the surface-based temperature record.

Even the IPCC finds that the urban heat island effect is significant. According to the IPCC's calculations, the effect could account for up to 0.12 degrees Celsius of the 20th century temperature rise, one-fifth of the total observed.

When we look at the 20th century as a whole, we see some distinct phases that question anthropogenic theories of global warming. First, a strong warming trend of about 0.5 C began in the late 19th century and peaked around 1940. Next, the temperature decreased from 1940 until the late 1970s.

Why is that decrease significant? Because about 80% of the carbon dioxide from human activities was added to the air after 1940, meaning the early 20th century warming trend had to be largely natural.

Scientists from the Scripps Institution for Oceanography confirmed this phenomenon in the March 12, 1999 issue

of the journal *Science*. They addressed the proverbial “chicken-and-egg” question of climate science, namely: when the Earth shifts from glacial to warm periods, which comes first: an increase in atmospheric carbon dioxide levels, or an increase in global temperature?

The team concluded that the temperature rise comes first followed by a carbon dioxide boost about 400 to 1,000 years later. This contradicts everything alarmists have been saying about manmade global warming in the 20th century. Repeat: The temperature precipitates the carbon dioxide increase.

We can go even further back, some 400,000 years, and see this phenomenon occurring, as the chart clearly shows. Yet the doomsayers, undeterred by these facts, will not quit. In February and March of 2002, the *New York Times* and the *Washington Post*, among others, reported on the collapse of the Larsen B ice shelf in the Antarctic Peninsula, causing quite a stir in the media, and providing alarmists with more propaganda to scare the public.

When we look at this chart, we can see this goes back 400,000 years. No one is going to refute this, but the Earth's natural 12,000-year cycle of increases and decreases in temperatures is followed by an increase and decrease in CO<sub>2</sub>. We can see the trends going all the way back. It has not really made a major change.

Although there was no link to global warming, the *Times* could not help but make a suggestion in its March 20 edition:

While it is too soon to say whether the changes there are related to a buildup of “greenhouse” gas emissions that scientists believe are warming the planet, many experts said it was getting harder to find any other explanation.

The *Times*, however, simply ignored a recent study in the *Journal of Nature* which found the Antarctic has been cooling since 1966.

Another study in *Science* recently found the West Antarctic ice sheet to be thickening rather than thinning. University of Illinois researchers also reported a net cooling on the Antarctic Continent between 1966 and 2000. In some regions, such as the McMurdo dry valleys, temperatures cooled between 1986 and 1999 by as much as 2 degrees during that timeframe.

In perhaps the most devastating critique of glacial alarmism, the American Geophysical Union found the Arctic was warmer in 1935 than it is today.

That bears repeating. Eighty percent of the carbon dioxide from human activities was added to the air after 1940. Yet the Arctic was warmer in 1935 than it is today.

So not only is glacial alarmism flawed, there is no evidence, as shown by measurements from satellites and weather balloons, of any meaningful warming trends in the 20th century.

I will now talk about health risks. The subject I am going to talk about is probably the most significant, so I hope people will not go away.

Even as we discuss whether temperatures will go up or down, we should ask whether global warming will actually produce the catastrophic effects the alarmists confidently predict.

What gets obscured in the global warming debate is the fact that carbon dioxide is not a pollutant. It is necessary for life. Numerous studies have shown that global warming can actually be beneficial to mankind.

Most plants, especially wheat and rice, grow considerably better when there is more CO<sub>2</sub> in the atmosphere. CO<sub>2</sub> works like a fertilizer; higher temperatures further enhance the CO<sub>2</sub> fertilizer effect.

In fact, the average crop, according to Dr. John Reilly of the MIT Joint Program on Science and Policy of Global Change, is 30 percent higher in a CO<sub>2</sub>-enhanced world. I repeat that: 30 percent higher in a CO<sub>2</sub>-enhanced world. This is not just a matter of opinion but a well-established phenomenon.

With regard to the impact of global warming on human health, it is assumed that higher temperatures will induce more deaths and massive outbreaks of deadly diseases. In particular, a frequent scare tactic by alarmists is that warmer temperatures will spark malaria outbreaks. Dr. Paul Reiter convincingly debunks this claim in a 2000 study for the Centers for Disease Control. As Reiter found:

Until the second half of the 20th century, malaria was endemic and widespread in many temperature regions—

This next point is critical— with major epidemics as far north as the Arctic Circle.

Reiter also published a second study in the March 2001 issue of *Environmental Health Perspectives* showing that “despite spectacular cooling, malaria persisted throughout Europe.”

Another myth is that warming increases morbidity rates. This is not the case, according to Dr. Mendelsohn, environmental economist from Yale University. Mendelsohn argues that heat stress deaths are caused by a temporary variability and not warming. In other words, you do not die of heat because of heat temperature; you die as a result of the variable change.

I wish to now go back to the IPCC's third assessment. In addition to trying to predict the future, the third assessment report looked into the past. The IPCC released a graph depicting global temperatures trending slightly downward over the last 10 centuries and then rather dramatically increasing beginning around 1900. The cause for such a shift, of course, is attributed to industrialization and manmade greenhouse gas emissions.

The now infamous “hockey stick” graph was enthusiastically embraced by IPCC which used it as a basis for the third assessment. Dr. Michael Mann at the University of Virginia was its principal authority. The study, which Mann and others conducted, examined climate trends over the past 1,000

years. As many scientists have pointed out since its publication, it contains many flaws.

Stay with me. First, Mann's study focuses on temperate trends only in the northern hemisphere. Mann extrapolated that data to reach the conclusion that global temperatures remained relatively stable and then dramatically increased at the beginning of the 20th century. That leads to Mann's conclusion that the 20th century has been the warmest in the last 1,000 years. As is obvious, however, such an extrapolation cannot provide a reliable global perspective of long-term climate changes.

Moreover, Mann's conclusions were drawn mainly from 12 sets of climate proxy data, of which 9 were tree rings, while the remaining 3 came from ice cores. Notably, some of the ice core data was drawn from the southern hemisphere—one from Greenland and two from Peru. What is left is a picture of the northern hemisphere based on eight sets of tree ring data—again, hardly a convincing global picture for the last 1,000 years.

Mann's hockey stick dismisses both the Medieval Warm Period—and that was roughly 800 A.D. to about 1300, 1350 A.D.—and the Little Ice Age which was from 1350 to 1850, two climatic events that are fairly widely recognized in the scientific literature to be accurate.

Mann believes that the 20th century is “nominally the warmest” of the past millennium and that the decade of the 1990s was the warmest decade on record.

The Medieval Warm Period and Little Ice Age are replaced by a largely benign and slightly cooling linear trend in climate until 1900. But as is clear from a close analysis of Mann's methods, the hockey stick is formed by crudely grafting the surface temperature record of the 20th century into a pre-1900 tree ring record.

This is a highly controversial and scientifically flawed approach. As is widely recognized in the scientific community, two data series representing radically different variables—temperature and tree rings—cannot be grafted together credibly to create a single series. In simple terms, as Dr. Patrick Michaels of the University of Virginia explained, this is like comparing apples to oranges.

Even Mann and his coauthors admit that if the tree ring data set were removed from their climate reconstruction, the calibration and verification procedures they used would undermine their conclusions.

A new study from the Harvard-Smithsonian Center for Astrophysics, which I will comment on shortly, strongly disputes Mann's methods and hypotheses. As coauthor Dr. David Legates wrote:

Although [Mann's work] is now widely used as proof of anthropogenic global warming, we've become concerned that such an analysis is in direct contradiction to most of the research and written histories available.

Our paper shows this contradiction and argues that the results of Mann . . . are out of step with the preponderance of the evidence.

The scientific evidence. That is worth repeating: Mann's theory of global warming is out of step with most scientific thinking on the subject.

What we are talking about in plain English is the science news by the environmental alarmist is not just flawed; it is just not there. But there is more.

Based in part on the data supporting the IPCC's key reports, thousands of scientists have rejected the scientific basis of Kyoto. Recently, 46 climate experts wrote an open letter to Canada's National Post on June 3 of this year claiming that the Kyoto Protocol lacks credible science. This is 46 leading climate experts.

I ask that the entire text of the letter from these 46 leading climate experts be printed in the RECORD at the conclusion of my remarks.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See exhibit 2.)

Mr. INHOFE. The scientists wrote that the Canadian Prime Minister essentially ignored an earlier letter they drafted in 2001. In it, they wrote:

Many climate science experts from Canada and around the world, while still strongly supporting environmental protection, equally strongly disagree with the scientific rationale for the Kyoto Accord.

In their June 3 letter, the group wrote to Paul Martin, a Canadian member of Parliament, urging him to consider the consequences of a Kyoto ratification. This is the country of Canada. Quoting now from that letter:

Although ratification has already taken place, we believe that the government of Canada needs a far more comprehensive understanding of what climate science really says if environmental policy is to be developed that will truly benefit the environment while maintaining the economic prosperity so essential to social progress.

Many scientists share the same view. I mentioned several other countries' leading climate scientists earlier in this speech. In addition, over 4,000 scientists, 70 of whom are Nobel Prize winners, signed the Heidelberg Appeal, which says that no compelling evidence exists to justify controls of anthropogenic greenhouse gas emissions; that is, manmade emissions.

Let me repeat that. Over 4,000 scientists, 70 of whom are Nobel Prize winners, signed the Heidelberg Appeal which says that no compelling evidence exists to justify controls of greenhouse gas emissions, manmade greenhouse gas emissions. They agree it is a hoax.

Now, I also want to point to a 1998 survey of State climatologists, which reveals that a majority of respondents have serious doubts about whether anthropogenic emissions of greenhouse gases present a serious threat to climate stability.

Then there is Dr. Frederick Seitz, a past president of the National Academy of Sciences and a professor emeritus at Rockefeller University, who compiled the Oregon Petition, and it reads as follows:

We urge the United States Government to reject the global warming agreement that was written in Kyoto, Japan, in December, 1997, and any other similar proposals. The proposed limits on greenhouse gases would harm the environment, hinder the advance of science and technology, and damage the health and welfare of mankind.

There is no convincing scientific evidence that human release of carbon dioxide, methane, or other greenhouse gases is causing or will, in the foreseeable future, cause catastrophic heating of the Earth's atmosphere and disruption of the Earth's climate. Moreover, there is substantial scientific evidence that increases in atmospheric carbon dioxide produce many beneficial effects upon the natural plant and animal environments of the earth.

That is Dr. Frederick Seitz, former president of the National Academy of Sciences.

The petition has 17,800 independently verified signatures, and for those signers who hold a Ph.D., 95 percent have now been independently verified. Environmental groups have attacked the credibility of this petition based on one false name sent in by some green pranksters. Several names are still on the list even though biased press reports have ridiculed their identity with the names of famous personalities. They are actual signers.

A guy named Perry Mason, for example, is a Ph.D. chemist. He was one of the signers.

The most significant thing that just recently came out is the Harvard Smithsonian 1,000-year climate study. Let me turn to an important new study by the researchers. The study entitled "Proxy Climatic and Environmental Changes of the Past 1,000 Years" offers a devastating critique of Mann's hypothesis calling into question the IPCC's Third Assessment, and indeed the entire intellectual foundation of the alarmists' views. It draws on extensive evidence showing that major changes in global temperatures result not from manmade emissions but from natural causes.

Smithsonian scientists, Willie Soon and Sallie Baliunas, with coauthors Craig Idso, Sherwood Idso, and David Legates, compiled and examined results from more than 240 peer-reviewed papers published by thousands of researchers over the past four decades. In contrast to Mann's flawed, limited research, the Harvard-Smithsonian study covers a multitude of geophysical and biological climate indicators. While Mann's analysis relied mostly on tree-ring data from the Northern Hemisphere, the researchers offer a detailed look at climate changes that occurred in different regions around the world over the last 1,000 years.

The range of the climate proxies—now, keep in mind, we are talking about one of them that was just primarily looking at tree rings, but these 240 studies that were analyzed in the Smithsonian-Harvard report looked at borehole data, cultural data, glacier advances or retreats, geomorphology, isotopic analysis from lake sediments or ice cores, tree or peat celluloses,

corals, stalagmite or biological fossils, net ice accumulation rate, including dust or chemical counts, lake fossils and sediments, river sediments, melt layers in ice cores, phenological and paleontological fossils, pollen, seafloor sediments, luminescent analysis, everything that fit every kind of proxy that could be known to science.

Based on this proxy data drawn from the 240 peer-reviewed studies, the authors offered highly convincing evidence to support the Little Ice Age and the Medieval Warm Period. As co-author Dr. Sallie Baliunas explained:

For a long time, researchers have possessed anecdotal evidence supporting the existence of these climate extremes.

What happened during these periods? We remember what happened during these periods. Baliunas notes that, during the Medieval Warm Period:

The Vikings established colonies in Greenland at the beginning of the second millennium that died out several hundred years later when the climate turned colder.

In England, she found that:

Vineyards had flourished during the medieval warmth.

In their study, the authors accumulated reams of objective data to back up these cultural indicators.

The Medieval Warm Period, or Medieval Optimum, occurred between 800 to 1300. Among the studies surveyed by the authors, 112 contained information about the warm period. Of these, 103 showed evidence for the Medieval Warm Period; two did not; seven had equivocal answers.

Looking just at the Southern Hemisphere, the authors found 22 studies, 21 of which confirmed the warm period and only one that did not.

The authors also looked at the 20th century and examined 102 studies to determine whether it was the warmest on record. Three studies said yes, 16 had equivocal answers, and of the remaining 83, 79 showed periods of at least 50 years that were warmer than any 50-year period in the 20th century.

I must say, to any reasonable person, these ratios appear very convincing and undoubtedly rest on a solid scientific foundation. Again, remember, the conclusions of this study are based on 240 peer-reviewed studies, and this chart shows what the Harvard-Smithsonian researchers concluded.

Peer review means they were rigorously reviewed and critiqued by other scientists before they were published. This climate study, published in March of 2003, is the most comprehensive of its kind in history. According to the authors, some of the global warming during the 20th century is attributable to the climate system recovering from the Little Ice Age. Global warming alarmists, however, vehemently disagree, and pull a scientific sleight of hand by pointing to the 140-year direct temperature record as evidence of warming caused by humans. But as the authors note:

The direct temperature measurement record is too short . . . to provide good measures of natural variability in its full dynamic range.

This research begs an obvious question: If the Earth was warmer during the Middle Ages than the age of coal-fired powerplants and SUVs, what role do manmade emissions play in influencing climate? I think any person with a modicum of common sense would say, not much and maybe none.

How did the media report on the Harvard-Smithsonian study? The big dailies, such as the New York Times and the Washington Post, basically ignored it. I was impressed by a fair and balanced piece in the Boston Globe. Unfortunately, some of the media could not resist playing politics of personal destruction.

Before I move on, I add another point about climate history. For the last several minutes, I have talked about natural climate variability over the past 1,000 years. We can go back even further in history to see dramatic changes in climate that had nothing to do with SUVs or powerplants. During the last few hundred thousand years, the Earth has seen multiple repeated periods of glaciation. Each ice age has ended because of dramatic increases in global temperatures which had nothing to do with fossil fuel emissions.

In fact, the last major glacier retreat, marking the end of the Wurm Glaciation, was only 12,000 years ago. At the end, the temperature was 14 degrees Celsius lower than today and climbed rapidly to present day temperature—and did so in as little as 50 years. Thus began our current Holocene Age of warm climates and glacier retreat.

These cycles of warming and cooling have been found so frequent and are so often so much more dramatic than the fractional degree changes measured over the last century that one wonders if the alarmists are simply ignorant of geological and meteorological history or simply ignoring it to advance their agenda.

What is the real story behind Kyoto? As I pointed out, the science underlying the Kyoto Protocol has been thoroughly discredited. But for some reason the drive to implement Kyoto continues apace in the United States and more fervently in Europe. What is going on here?

The Europeans continue to insist that the United States should honor its international responsibilities and ratify Kyoto. In June of 2001 Germany released a statement declaring the world needs Kyoto because its greenhouse gas reduction targets are indispensable.

Similarly, Swedish Prime Minister Goeran Persson, in June of 2001, said flatly and without explanation that "Kyoto is necessary." The question is, indispensable and necessary for what?

Certainly not for further reduction of greenhouse gas emissions, as Europe has proven. According to news reports earlier this year, the European Union has failed to meet its Kyoto targets. As we know, according to the best scientific evidence, Kyoto will do nothing to reduce global temperatures.

As it turns out, Kyoto's objective has nothing to do with saving the globe. In fact, it is purely political. The case in point, French President Jacques Chirac said during a speech at The Hague in November of 2002 that Kyoto represents "the first component of an authentic global governance." Keep in mind who we are talking about—Jacques Chirac of France. He wants the authentic global governance. You have to ask if we are going to let the French dictate our United States policy.

Margot Wallstrom, EU environment commissioner, takes a different view but one instructive about the real motives of Kyoto proponents. She asserts that Kyoto is about "the economy, about leveling the playing field for big businesses worldwide." In other words, we in this country should level the playing field so we are equal with the European Union. That is very significant in terms of what the real motives are.

Chirac and Wallstrom's comments mean two things: Kyoto represents an attempt by certain elements within the international community to restrain United States interests; second, Kyoto is an economic weapon designed to undermine the global competitiveness and economic superiority of the United States.

I am mystified that some in this body and in the media blithely assert that the science of global warming is settled; that is, fossil fuel emissions are the principal, driving cause of global warming.

In a letter to me concerning the next EPA administrator, two Senators wrote, "The pressing problem of global warming" is now "established scientific fact," and demanded that the new administrator commit to addressing it.

With all due respect, this statement is baseless for several reasons, as I outlined in detail above. The evidence is overwhelmingly in favor of those who do not see global warming proposing harm to the planet and who do not think human beings have an insignificant influence on the climate system.

This leads to another question: Why would this body subject the United States to Kyoto-like measures that have no environmental benefits and cause serious harm to the economy? There are several pieces of legislation, including several that have been referred to my committee, that effectively implement Kyoto without ratifying the treaty. From a cursory read of the Senate politics, it is my understanding some of these bills enjoy more than a modicum of support.

I urge my colleagues to reject them and follow the science to the facts. Reject approaches designed not to solve an environmental problem but to satisfy the ever-growing demand of environmental groups for money and for power and other extremists who simply do not like capitalism, free markets, and freedom.

Climate alarmists see an opportunity here to tax the American people. Con-

sider the July 11 Op-ed by J.W. Anderson of the Washington Post. Anderson, a former editorial writer of the Post and now a journalist in residence with Resources for the Future, concedes that climate science still confronts uncertainties, but his solution is a field tax to prepare for a potentially catastrophic future. Based on the case I have outlined today, such a course of action fits a particularly ideological agenda but is entirely unwarranted.

It is my fervent hope Congress will reject prophets of doom who peddle propaganda masquerading as science in the name of saving the planet. I urge my colleagues to put stock in scientists who rely on the best, most objective scientific data and reject fear as a motivating basis for making public policy decisions.

Let me be very clear: Alarmists are attempting to enact an agenda of energy suppression that is inconsistent with American values, freedom, prosperity, and environmental problems.

Over the past hour and a half I have offered compelling evidence that catastrophic global warming is a hoax. That conclusion is supported by painstaking work of the Nation's top planet scientists. We have those scientists who concluded that the Kyoto protocol has no environmental benefits; natural variability, not fossil fuel emissions, is an overwhelming factor influencing climate change; satellite data, confirmed by NOAA, confirms that no meaningful warming has occurred over the last century; and climate models predicting dramatic temperature increases over the next 100 years are flawed and highly imperfect.

These scientists include Dr. Fred Singer, from the University of Virginia; Dr. Tom Wigley, senior scientist at the National Center for Atmospheric Research; Dr. Richard Lindzen from the National Academy of Science. Everyone listed is someone whose credentials cannot be questioned.

If you study that, you will come to the same conclusions. These are objective scientists, not fundraisers for some far-left environmental extremist groups.

Finally, I return to the words of Dr. Frederick Seitz, a past president of the National Academy of Sciences, a professor emeritus at Rockefeller University, who compiled the Oregon Petition. He said:

There is no convincing scientific evidence that human release of carbon dioxide, methane, or other greenhouse gasses is causing or will, in the foreseeable future, cause catastrophic heating of the Earth's atmosphere and disruption of the Earth's climate. Moreover, there is substantial scientific evidence that increases in atmospheric carbon dioxide produce many beneficial effects upon the natural plant and animal environments of the Earth.

These are sobering words which the extremists have chosen to ignore. So what could possibly be the motivation for global warming alarmism? Since I have become the chairman of the Environment and Public Works Committee,

it has become pretty clear. It is fundraising. Environmental extremists rake in millions of dollars, not to solve environmental problems but to fuel their ever-growing fundraising machines, part of which are financed by the Federal taxpayers.

So what have we learned from the scientists and economists I talked about today? Five things, briefly:

No. 1, the claim that global warming is caused by manmade emissions is simply untrue and not based on sound science.

No. 2, CO<sub>2</sub> does not cause catastrophic disasters. Actually, it would be beneficial to our environment and the economy.

No. 3, Kyoto would impose huge cost on Americans, especially the poor.

No. 4, the same environmentalists who are hysterical over global warming today were just as hysterical in the 1970s over global cooling.

And, No. 5, the motives for Kyoto are economic, not environmental; that is, proponents favor handicapping the American economy through carbon taxes and more regulations.

So I will just conclude by saying: Wake up, America. With all the hysteria, all the fear, all the phony science, could it be that manmade global warming is the greatest hoax ever perpetrated on the American people? I believe it is.

And if we allow these detractors of everything that has made America great, those ranging from the liberal Hollywood elitists to those who are in it for the money, if we allow them to destroy the foundation, the greatness of the most highly industrialized nation in the history of the world, then we don't deserve to live in this one nation under God. So I say to the real people: Wake up, make your voice heard. My 11 grandchildren and yours are depending on you.

#### EXHIBIT 1

[From the Washington Post, July 7, 2003]

CLIMATE CHANGE: THE SCIENCE ISN'T SETTLED  
(By James Schlesinger)

Despite the certainty many seem to feel about the causes, effects and extent of climate change, we are in fact making only slow progress in our understanding of the underlying science. My old professor at Harvard, the great economist Joseph Schumpeter, used to insist that a principal tool of economic science was history—which served to temper the enthusiasms of the here and now. This must be even more so in climatological science. In recent years the inclination has been to attribute the warming we have lately experienced to a single dominant cause—the increase in greenhouse gases. Yet climate has always been changing—and sometimes the swings have been rapid.

At the time the U.S. Department of Energy was created in 1977, there was widespread concern about the cooling trend that had been observed for the previous quarter-century. After 1940 the temperature, at least in the Northern Hemisphere, had dropped about one-half degree Fahrenheit—and more in the higher latitudes. In 1974 the National Science Board, the governing body of the National Science Foundation, stated: "During the last

20 to 30 years, world temperature has fallen, irregularly at first but more sharply over the last decade." Two years earlier, the board had observed: "Judging from the record of the past interglacial ages, the present time of high temperatures should be drawing to an end . . . leading into the next glacial age." And in 1975 the National Academy of Sciences stated: "The climates of the earth have always been changing, and they will doubtless continue to do so in the future. How large these future changes will be, and where and how rapidly they will occur, we do not know."

These statements—just a quarter-century old—should provide us with a dose of humility as we look into the more distant future. A touch of that humility might help temper the current raging controversies over global warming. What has concerned me in recent years is that belief in the greenhouse effect, persuasive as it is, has been transmuted into the dominant forcing mechanism affecting climate change—more or less to the exclusion of other forcing mechanisms. The CO<sub>2</sub>/climate-change relationship has hardened into orthodoxy—always a worrisome sign—an orthodoxy that searches out heretics and seeks to punish them.

We are in command of certain essential facts. First, since the start of the 20th century, the mean temperature at the earth's surface has risen about 1 degree Fahrenheit. Second, the level of CO<sub>2</sub> in the atmosphere has been increasing for more than 150 years. Third, CO<sub>2</sub> is a greenhouse gas—and increases in it, other things being equal, are likely to lead to further warming. Beyond these few facts, science remains unable either to attribute past climate changes to changes in CO<sub>2</sub> or to forecast with any degree of precision how climate will change in the future.

Of the rise in temperature during the 20th century, the bulk occurred from 1900 to 1940. It was followed by the aforementioned cooling trend from 1940 to around 1975. Yet the concentration of greenhouse gases was measurably higher in that later period than in the former. That drop in temperature came after what was described in the National Geographic as "six decades of abnormal warmth."

In recent years much attention has been paid in the press to longer growing seasons and shrinking glaciers. Yet in the earlier period up to 1975, the annual growing season in England had shrunk by some nine or 10 days, summer frosts in the upper Midwest occasionally damaged crops, the glaciers in Switzerland had begun to advance again, and sea ice had returned to Iceland's coasts after more than 40 years of its near absence.

When we look back over the past millennium, the questions that arise are even more perplexing. The so-called Climatic Optimum of the early Middle Ages, when the earth temperatures were 1 to 2 degrees warmer than today and the Vikings established their flourishing colonies in Greenland, was succeeded by the Little Ice Age, lasting down to the early 19th century. Neither can be explained by concentrations of greenhouse gases. Moreover, through much of the earth's history, increases in CO<sub>2</sub> have followed global warming, rather than the other way around.

We cannot tell how much of the recent warming trend can be attributed to the greenhouse effect and how much to other factors. In climate change, we have only a limited grasp of the overall forces at work. Uncertainties have continued to abound—and must be reduced. Any approach to policy formation under conditions of such uncertainty should be taken only on an exploratory and sequential basis. A premature commitment to a fixed policy can only proceed with fear and trembling.

In the Third Assessment by the International Panel on Climate Change, recent climate change is attributed primarily to human causes, with the usual caveats regarding uncertainties. The record of the past 150 years is scanned, and three forcing mechanisms are highlighted: anthropogenic (human-caused) greenhouse gases, volcanoes and the 11-year sunspot cycle. Other phenomena are represented poorly, if at all, and generally are ignored in these models. Because only the past 150 years are captured, the vast swings of the previous thousand years are not analyzed. The upshot is that any natural variations, other than volcanic eruptions, are overshadowed by anthropogenic greenhouse gases.

Most significant: The possibility of long-term cycles in solar activity is neglected because there is a scarcity of direct measurement. Nonetheless, solar irradiance and its variation seem highly likely to be a principal cause of long-term climatic change. Their role in longer-term weather cycles needs to be better understood.

There is an idea among the public that "the science is settled." Aside from the limited facts I cited earlier, that remains far from the truth. Today we have far better instruments, better measurements and better time series than we have ever had. Still, we are in danger of prematurely embracing certitudes and losing open-mindedness. We need to be more modest.

#### EXHIBIT 2

The Hon. PAUL MARTIN, P.C.,  
*Member of Parliament, House of Commons, Ottawa, Ontario.*

DEAR MR. MARTIN: We understand from media reports that you believe that more consultation with the provinces should have taken place before moving forward with ratification of the Kyoto Accord. We would like to alert you to the fact that the current government neglected to conduct comprehensive science consultations as well. The statements by current Minister of the Environment David Anderson that Prime Minister Jean Chrétien's decision to ratify the Kyoto accord was based merely on a "gut feeling," not an understanding of the issue, clearly illustrates that a more thorough examination of the science should have taken place before a ratification decision was made.

If you are to lead the next government, we believe that a high priority should be placed on correcting this situation and conducting wide ranging consultations with non-governmental climate scientists as soon as possible in order to properly consider the range of informed opinion pertaining to the science of Kyoto.

Many of us made the same suggestion to the Prime Minister in an open letter on Nov. 25, 2002, in which we alerted Mr. Chrétien to the fact that Kyoto was not justified from a scientific perspective. That letter called on the government of Canada "to delay a decision on the ratification of the Kyoto Accord until after a thorough and comprehensive consultation is conducted with non-governmental climate specialists." It was explained to the Prime Minister that, "Many climate science experts from Canada and around the world, while still strongly supporting environmental protection, equally strongly disagree with the scientific rationale for the Kyoto Accord."

Unfortunately, the Prime Minister took no action on the issue and proceeded to ratify the accord without the government and the public having had the benefit of hearing a proper science debate on an issue that is sure to affect Canadians for generations to come.

We strongly believe that important environmental policy should be based on a strong

foundation of environmental science. Censoring credible science out of the debate because it does not conform to a pre-determined political agenda is clearly not a responsible course of action for any government. Your openness to re-examining the recent approach to the Kyoto file encourages us to believe that you may also be open to reconsidering the way in which the scientific debate was suppressed as well. We certainly hope so. Although ratification has already taken place, we believe that the government of Canada needs a far more comprehensive understanding of what climate science really says if environmental policy is to be developed that will truly benefit the environment while maintaining the economic prosperity so essential to social progress.

In the meantime, we would be happy to provide you with more information on this important topic and, for those of us who are able, we would like to offer to meet with you personally to discuss the issue further in the near future.

Above letter signed by:

Dr. Tim Ball, Environmental Consultant, 28 years Professor of Climatology, University of Winnipeg.

Dr. Madhav Khandekar, Environmental Consultant, former Research Scientist with Environment Canada. 45-year career in the fields of climatology, meteorology and oceanography.

Dr. Tad Murty, private sector climate researcher. Previously Senior Research Scientist for Fisheries and Oceans; conducted official DFO climate change/sea level review; Former Director of the National Tidal Facility of Australia; Current editor—"Natural Hazards".

Dr. Chris de Freitas (Canadian), Climate Scientist and Professor—School of Geography and Environmental Science, The University of Auckland, NZ.

Dr. Vaclav Smil, FRSC, Distinguished Professor of Geography; specialization in climate and CO<sub>2</sub>, University of Manitoba.

Dr. I.D. Clarke, Professor, Isotope Hydrogeology and Paleoclimatology, Department of Earth Sciences (arctic specialist), University of Ottawa.

Dr./Cdr. M. R. Morgan, FRMS, Dartmouth, Nova Scotia. Climate Consultant, Past Meteorology Advisor to the World Meteorological Organization and other scientific bodies in Marine Meteorology. Recent Research Scientist in Climatology at University of Exeter, UK.

Dr. Chris Essex, Professor of Applied Mathematics, University of Western Ontario—focuses on underlying physics/math to complex climate systems.

Dr. Keith D. Hage, climate consultant and Professor Emeritus of Meteorology, University of Alberta, specialized in micrometeorology, specifically western prairie weather patterns.

Dr. Kenneth Green, Chief Scientist, Fraser Institute, Vancouver, BC—expert reviewer for the IPCC 2001 Working Group I science report.

Dr. Petr Chylek, Professor of Physics and Atmospheric Science, Dalhousie University, Nova Scotia.

Dr. Tim Patterson, Professor, Department of Earth Sciences (Paleoclimatology), Carleton University, Ottawa, Ontario.

David Nowell, M.Sc. (Meteorology), Fellow of the Royal Meteorological Society, Canadian member and Past Chairman of the NATO Meteorological Group, Ottawa.

Dr. Fred Michel, Professor, Department of Earth Sciences (Paleoclimatology), Carleton University, arctic regions specialist, Ottawa.

Dr. Roger Pocklington, Ocean/Climate Consultant, F.C.I.C., Researcher—Bedford Institute of Oceanography, Nova Scotia.

Rob Scagel, M.Sc., Forest microclimate specialist, Principal Consultant, Pacific Phytometric Consultants, Surrey, B.C.

Dr. David Wojick, P.E., Climate specialist and President, Climatechangedebate.org, Sioux Lookout, Ontario/Star Tannery, VA.

Dr. S. Fred Singer, Distinguished Research Professor at George Mason University and Professor Emeritus of Environmental Science at the University of Virginia.

Dr. Richard S. Lindzen, Alfred P. Sloan Professor of Meteorology, Department of Earth, Atmospheric and Planetary Sciences at the Massachusetts Institute of Technology.

George Taylor, State Climatologist, Oregon Climate Service, Oregon State University, Past President—American Association of State Climatologists.

Doctorandus Hans Erren, Geophysicist/climate specialist, Sittard, The Netherlands.

Dr. Hans Jelbring—Wind/Climate specialist, Paleogeophysics & Geodynamics Unit, Stockholm University, Sweden. Currently, Manager Inventex Aqua Research Institute, Stockholm.

Dr. Theodor Landscheidt, solar/climate specialist, Schroeter Institute for Research in Cycles of Solar Activity, Waldmuenchen, Germany.

Dr. Zbigniew Jaworowski, Climate expert, Chairman of the scientific council of CLOR, Central Laboratory for Radiological Protection, Warsaw, Poland.

Dr. Art Robinson, Founder—Oregon Institute of Science and Medicine—focus on climate change and CO<sub>2</sub>, Cave Junction, Oregon.

Dr. Craig D. Idso, Chairman, Center for the Study of Carbon Dioxide and Global Change, Tempe, Arizona.

Dr. Sherwood B. Idso, President, Center for the Study of Carbon Dioxide and Global Change, Tempe, Arizona.

Dr. Pat Michaels, Professor of Environmental Sciences, University of Virginia; past president of the American Association of State Climatologists and a contributing author and reviewer of the IPCC science reports.

Dr. Sonja Boehmer-Christiansen, Reader, Department of Geography, University of Hull, UK, Editor, Energy & Environment.

Dr. Robert C. Balling, Jr., Director—Office of Climatology, Arizona State University.

Dr. Fred Seitz, Past President, U.S. National Academy of Sciences, President Emeritus, Rockefeller University, New York, NY.

Dr. Vincent Gray, Climate specialist, expert reviewer for the IPCC and author of "The Greenhouse Delusion; a Critique of 'Climate Change 2001'", Wellington, NZ.

Dipl.-Ing. Peter Dietze, energy and climate consultant, official scientific IPCC TAR Reviewer, Langensendelbach, Germany.

Dr. Roy W. Spencer, Principal Research Scientist, Earth System Science Center, The University of Alabama in Huntsville.

Dr. Hugh W. Ellsaesser, Atmospheric Consultant—four decades experience as a USAF weather officer and climate consultant at the Lawrence Livermore National Laboratory, CA.

Dr. Asmund Moene, Former head of the National Forecasting Center, Meteorological Institute, Oslo, Norway.

Dr. Freeman J. Dyson, Emeritus Professor of Physics, Institute for Advanced Studies, Princeton, New Jersey.

Dr. James J. O'Brien, Professor of Meteorology and Oceanography, Center for Ocean-Atmospheric Prediction Studies, Florida State University. Co-chaired the Regional Climate Change Study for the Southeast USA.

Dr. Douglas V. Hoyt, climate consultant, previously Senior Scientist with Raytheon/ITSS; Broadly published author of "The Role of the Sun in Climate Change".

Dr. Gary D. Sharp, Scientific Director, Center for Climate/Ocean Resources Study, Salinas, California.

Prof. Dr. Kirill Ya. Kondratyev, Academician, Counsellor RAS, Research Centre for Ecological Safety, Russian Academy of Sciences and Nansen International Environmental and Remote Sensing Centre, St. Petersburg, Russia.

Dr. Paal Brekke—Solar Physicist, specialist in sun/UV radiation/Sun-Earth Connection, affiliated with the University of Oslo, Norway.

Dr. Richard S. Courtney, climate consultant, expert IPCC peer reviewer, Founding Member of the European Science and Environment Forum, UK.

William Kininmonth, Managing Director, Australasian Climate Research. Formerly head of Australia's National Climate Centre and a member of Australia's delegations to the Second World Climate Conference and the UN Intergovernmental Negotiating Committee for a Framework Convention on Climate Change.

Dr. Jarl R. Ahlbeck, Docent in environmental technology/science, Process Design Laboratory, the Swedish University of Finland, Biskopsgatan, Finland.

Dr. Lee C. Gerhard, Principal Geologist, Kansas Geological Survey; Adjunct Professor, Colorado School of Mines; Noted author and geological expert on climate history.

Mr. INHOFE. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. HARKIN. Mr. President, I ask unanimous consent the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

(The remarks of Mr. HARKIN are printed in today's RECORD under "Morning Business.")

#### ORDER OF PROCEDURE

The PRESIDING OFFICER. The Senator from West Virginia.

Mr. BYRD. Mr. President, I ask unanimous consent that I may proceed out of order for not to exceed 12 minutes before the order to go into executive session.

The PRESIDING OFFICER (Mr. FITZGERALD). Is there objection? Without objection, it is so ordered.

Mr. BYRD. Mr. President, I ask unanimous consent that this not delay the rollcall vote.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BYRD. Mr. President, I ask unanimous consent that I may vitiate the second request that was granted.

The PRESIDING OFFICER. Without objection, it is so ordered.

#### A FAST WAY AROUND THE CONSTITUTION

Mr. BYRD. Mr. President, I speak today on the subject: A fast track, a fast way around the Constitution.

Last Friday, I listened with great interest to the concerns that were raised in opposition to the free-trade agreements negotiated by the administration with Chile and Singapore.

Senators cited an abuse of Executive authority and the undermining of Congress' plenary powers. I was perplexed,