

Statement to the Subcommittee on Energy and Environment
Committee on Energy and Commerce

As Prepared by

Hon. Al Gore

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Mr. Chairman, Members of the Committee, distinguished guests; it is my great honor today to testify with my friend and former colleague, John Warner, whose long record of service to the Senate and to our country is remarkable.

Senator Warner has consistently looked with a steady gaze past the politics of the day to thoughtfully and intensely focus on the national interest.

His approach reminds me of another great Republican from another era, the great Senator Arthur Vandenberg, from Michigan, who helped to create the United Nations, NATO, and the Marshall plan. He understood that our nation, when faced with great peril, must rise above partisanship to meet the challenge.

I believe we have arrived at such a moment. Our country is at risk on three fronts. The economic crisis is clear. Our national security remains at risk so long as we remain dangerously dependent on flows of foreign oil from reserves owned by sovereign states that are vulnerable to disruption. The rate of new discoveries, as you know, is falling even as demand elsewhere in the world is rising. Most importantly, of course, we are—along with the rest of humanity—facing the dire and growing threat of the climate crisis. It is at the very heart of those threats that this Committee and this Congress must direct its focus. I am here today to lend my support to one of the most important pieces of legislation ever introduced in the Congress. I believe this legislation has the moral significance equivalent to that of the civil rights legislation of the 1960's and the Marshall Plan of the late 1940's.

By Repowering America with a transition to a clean energy economy and ending our dangerous over-reliance on carbon-based fuels, which is the common thread running through all three of these crises, this bill will simultaneously address the climate crisis, the economic crisis, and the national security threats that stem from our dependence on foreign oil.

We cannot afford to wait any longer for this transition. Each day that we continue with the status quo sees more of our fellow Americans struggling to provide for their families. Each day we continue on our current path, America loses more of its competitive edge. And each day we wait, we increase the risk that we will leave our children and grandchildren an irreparably damaged planet.

Passage of this legislation will restore America's leadership of the world and begin, at long last, to solve the climate crisis. It is truly a moral imperative. Moreover, the scientific evidence of how serious this climate crisis is becoming continues to amass week after week after week.

Let me share with you just a few recent examples:

-The Arctic is warming at an unprecedented rate. New research, which draws upon recently declassified data collected by U.S. nuclear submarines traveling under the Arctic ice cap for the last 50 years, has given us, for the first time, a three-dimensional view of the ice cap, and researchers at the Naval Postgraduate School have told us that the entire Arctic ice cap may totally disappear in summer in as little as five years if nothing is done to curb emissions of greenhouse gas pollution. For most of the last 3 million years, it has covered an area the size of the lower 48 states. Almost half of the ice has already melted during the last 20 years. The dark ocean, once uncovered, absorbs 90 percent of the solar heat that used to bounce off the highly reflective ice. As a direct consequence, some of the vast amounts of frozen carbon in the permafrost surrounding the Arctic Ocean are beginning to be released as methane as the frozen tundra thaws, threatening a doubling of global warming pollution in the atmosphere.

-Melting of the Greenland ice sheet has reached a new record, which was a staggering 60 percent above the previous high in 1998. The most recent 11 summers have all experienced melting greater than the average of the past thirty-five year time series (1973-2007). Glacial earthquakes have been increasing as the meltwater tunnels down through the ice to the bedrock below. Were the Greenland ice sheet to melt, crack up and slip into the North Atlantic, sea level would rise almost 20 feet.

-We already know that the Antarctic Peninsula is warming at three to five times the global average rate. That is why the Larsen B ice shelf, which was the size of Rhode Island, already has collapsed. Several other ice shelves have also collapsed in the last 20 years. Another large shelf, the Wilkins ice shelf—which is roughly the size of Northern Ireland—is now beginning to disintegrate right before our very eyes. A recent study in the journal *Science* has now confirmed that the entire West Antarctic Ice Sheet is warming. Scientists have told us that if it were to collapse and slide into the sea, we would experience global sea level rise of another 20 feet worldwide. Each meter of sea level increase leads to 100 million climate refugees. Recent studies have shown that many coastal areas in the U.S. are at risk—particularly Southern Florida and Southern Louisiana.

-Carbon dioxide pollution is changing the very chemistry of our oceans. Ocean acidification is already underway and is accelerating. A recent paper published in the journal *Science* described how the seawater off the coast of Northern California has become so acidic from CO₂ that it is now corrosive. To give some sense of perspective, for the last 44 million years, the average pH of the water has been 8.2. The scientists at Scripps measured levels off the north coast of California and Oregon at a pH of 7.75. Coral polyps that make reefs and everything that makes a shell are now beginning to suffer from a kind of osteoporosis because of the 25 million tons of CO₂ absorbed the oceans every 24 hours.

-Salmon have now disappeared off the coast of California. Researchers are now working

to determine the cause and whether or not this is due to acidity and the relationship between acidity and “dead zones” of extreme oxygen depletion that now stretch from the west coast of North, Central, and South America almost all the way across the Pacific. The health and productivity of all the world’s oceans are at risk.

-The Union of Forest Research Organizations, with 14 international collaborating partners, reported that forests may lose their carbon-regulating service and that it “could be lost entirely if the earth heats up 2.5 degrees Centigrade.” Throughout the American west, tree deaths are now at record levels, year after year. For the same reason, Canada’s vast forest is now contributing CO₂ to the atmosphere rather than absorbing it. The Amazon, the forests of Central Africa, Siberia, and Indonesia are all now at risk.

-This year, a number of groups ranging from the National Audubon Society to the Department of Interior, released the U.S. State of the Birds report showing that nearly a third of the nation’s 800 bird species are endangered, threatened or in significant decline due to habitat loss, invasive species and other threats including climate change. The major shift attributed to the climate crisis related to the migratory patterns and a large shift northward among a vast range of bird species in the U.S.

-Some of the most intriguing new research is in the area of extreme weather events and rainfall. A recent study by German scientists published in *Climatic Change* projects that extreme precipitation will increase significantly in regions that are already experiencing extreme rainfall. Man-made global warming has already increased the moisture content of the air worldwide, causing bigger downpours. Each additional degree of temperature increase causes another seven percent increase in moisture in the air, and even larger downpours when storm conditions trigger heavy rains and snows.

-To bring an example of this home, 2009 saw the eighth “ten year flood” of Fargo, North Dakota, since 1989. In Iowa, Cedar Rapids was hit last year by a flood that exceeded the 500-year flood plain. All-time flood records are being broken in areas throughout the world.

-Conversely those regions that are presently dry are projected to become much dryer, because higher average temperatures evaporate soil moisture.

-The American West and the Southeast have been experiencing prolonged severe drought and historic water shortages. In a study published in January 2008 in the journal *Science*, scientists from the Scripps Institute estimated that 60 percent of the changes in the West’s water cycle are due to increased atmospheric man-made greenhouse gases. It predicts that although Western states are already struggling to supply water for their farms and cities, more severe climatic changes will strain the system even more. Agriculture in California is at high risk. Australia has been experiencing what many there call a thousand-year drought, along with record high temperatures. Some cities had 110 degrees for four straight days two months ago. And then they had the mega-fires that caused so much death and destruction.

-Federal officials from our own National Interagency Fire Center report that we have seen twice as many wildfires during the first three months of 2009 as compared to the same period last year. Due to the worsening drought, the outlook for more record fires in Texas, Florida, and California is not good.

-A number of new studies continue to show that climate change is increasing the intensity of hurricanes. Although we cannot attribute any particular storm to global warming, we can certainly look at the trend. Dr. Greg Holland from the National Center for Atmospheric Research says that we have already experienced a 300-400 percent increase in category 5 storms in the past 10 years in the United States. Last August, hundreds of thousands of people had to evacuate as Hurricane Gustav hit the Gulf Coast. And then, of course, there is the destruction of Galveston and areas of New Orleans, where the residents are still recovering. The same is happening in the rest of the world. Last year, Cyclone Nargis inflicted catastrophic death tolls in Burma (Myanmar) killing twenty thousand people and leading to the suffering of many more.

For these and many other reasons, now is the time to act. And luckily, positive change is on the way.

In February, when the Congress voted to pass the stimulus bill, it laid the groundwork for critical investments in energy efficiency, renewables, a unified national smart grid and the move to clean cars. This was a crucial down payment that will create millions of new jobs, hasten our economic recovery, strengthen our national security, and begin to solve the climate crisis.

Now, we must take another step together, and pass the American Clean Energy and Security Act. Chairman Waxman and Chairman Markey have pulled together the best ideas in the Congress to begin solving the climate crisis while increasing our energy independence.

Let me highlight a few items in the bill that I believe to be of particular importance: It promotes the rapid introduction of the clean and renewable technologies that will create new jobs and reduce our reliance on carbon-based fuels.

It is time to close the carbon loophole and begin the steep reductions we need to make in the pollution that causes global warming.

It helps us use energy more efficiently and transmit it over a secure, modernized, digital smart grid system.

Of course this move to Repower America must also include adequate provisions to assist those Americans who would unfairly face hardship. For example, we must recognize and protect those who have toiled in dangerous conditions to bring us our present energy supply. We ought to guarantee good jobs for any coal miner displaced by impacts on the coal industry.

And this bill also focuses on intensive R & D to explore carbon capture and sequestration to determine whether and where it can be a key part of the solution.

Our country cannot afford more of the status quo, more gas price instability, more job losses, more outsourcing of factories, and more years of sending \$2 billion every 24 hours to foreign countries for oil. And our soldiers and their families cannot take another 10 years of repeated troop deployments to regions that just happen to have large oil supplies.

Moreover, the best way to secure a global agreement that guarantees that other nations will also reduce their global warming pollution is for the U.S. to lead the world in meeting this historic challenge. The United States is the world's leader. We are the only nation in the world that can. Once we find the moral courage to take on this issue, the rest of the world will come along. Now is the time to act before the world gathers in Copenhagen this December to solve the crisis. Not next year, this year.

I urge bipartisan support of this crucial legislation.