State of the Climate

An assessment of climate change and policy in the United States
January 24, 2008

As the United States approaches the end of the first decade of the 21st century, the most dangerous and difficult challenge of our time remains largely unaddressed. Global climate change continues unabated. The United States is the nation that is most responsible for the problem and most capable of contributing to the solution. Yet today, the United States stands virtually alone among developed nations in refusing to accept the need for decisive action.

Consequently, we regret to report that the state of the nation's climate policy is poor, and the climate and the ecosystems that depend upon it are showing increasing signs of disruption. Global climate change now threatens not only the environment, but also our national security, our economic stability, and our public health and safety. We can no longer discuss the State of the Union without assessing the state of the nation's climate.

The growing consequences of climate change have not appeared without warning. Physicist John Tyndall first identified the connection between the greenhouse effect and climate change in the 1860s. Swedish geochemist Svante Arrhenius predicted in 1896 that the burning of fossil fuels would result in global warming.

During the last century, American scientists including David Keeling and Roger Revelle used actual measurements to confirm that carbon dioxide concentrations were rising. Keeling, Revelle and others began expressing their concerns about global warming to U.S. presidents of both parties in the 1960s, a half century ago.

Now, after 20 years of assessing evidence in the most thorough scientific undertaking in history, the Intergovernmental Panel on Climate Change (IPCC) has concluded unequivocally that climate change is underway, that it is primarily the result of our consumption of fossil fuels, and that time is growing short if we are to avoid catastrophic consequences on a global scale.

As United Nations Secretary General Ban Ki-moon and the chair of the IPCC, Rajendra Pachauri, both have said, this is our defining moment.

In some areas, there have been positive developments during the past year.

In quick succession last November and December, the IPCC released the last of its 2007 reports; representatives of 130 nations gathered at Bali to begin discussions on how the international community will collaborate after the Kyoto Protocol expires in 2012; and Congress passed a new energy bill with several provisions important to climate stabilization. Universities, nongovernmental organizations and research institutions have proposed hundreds of new policies and programs, including many the President can implement quickly to put America on the path to a clean and prosperous 21st century economy.

To date, more than 780 of the nation's mayors representing more than 77 million Americans have signed the Mayor's Climate Protection Agreement – a pledge to cut emissions by at least the amount required by the Kyoto Protocol. The majority of states and a growing number of the nation's counties have implemented or are developing climate action plans. Major corporations and investors recognize the financial liabilities of unabated climate change and are instituting new business models while supporting climate-friendly national policies. Today, climate change is emerging as an important issue in the 2008 presidential campaign. Several of the candidates have issued detailed climate action platforms. Those who have not should.

Our nation has the ideas and many of the tools necessary to create a highly efficient economy powered by low-carbon, renewable, domestic resources, able to provide this and future generations with security, opportunity and stewardship. We are ready for comprehensive, prompt and transformative climate action.

These positive developments are overwhelmed, however, by the growth in greenhouse gas emissions. Our emissions in the United States are among the highest in the world, roughly twice the per capita emissions of Western Europe or Japan. Yet the people of Western Europe and Japan outscore the people of the United States on several key quality-of-life indicators, including life expectancy and infant mortality. Atmospheric concentrations of greenhouse gases are climbing rapidly to levels beyond those ever witnessed by human beings, destabilizing the climate in ways we cannot predict and may not be able to control. The early signs of climate change are appearing much more quickly than predicted. These signs are not restricted to the Arctic and Antarctic. We are seeing troubling patterns emerging in the United States that are consistent with the predicted impacts of climate change. For example:

- Heavy downpours have increased, with less precipitation coming in light rains and more in very intense rains over much of the nation.

- Atlantic hurricane activity has increased in recent decades, correlated with rising sea surface temperatures.
- Wildfires have increased sharply in the West in association with increased drought, and scientific studies have shown that this increase is likely attributable to human-induced warming. Recent research by scientists at the National Center for Atmospheric Research and the University of Colorado concludes that fires in the United States are releasing about 290 million metric tons of carbon dioxide each year, the equivalent of 4% to 6% of the nation's total emissions from burning fossil fuels.
- Snow pack is diminishing as more precipitation occurs as rain and as earlier melt and runoff deplete water supplies for the late spring and summer months.
- The timing of animal migrations and vegetation blooming has shifted to earlier in the spring.
- Weeds including ragweed are thriving, with implications for human health, such as an increase in allergy suffering.
- Insect pests are thriving, causing infestations of bark beetles and other bugs that are destroying large expanses of America's forests.

Several critical developments must take place by the time the 44th President delivers the State of the Union address one year from now.

1. We must recognize that global climate change is an issue that transcends politics and partisanship. No responsible leader of any political persuasion wants our nation to face a future of increasing heat waves, drought, fires, disease, natural disasters, coastal inundation, and species extinction. No responsible leader wishes to bequeath to our children a nation in peril, with far less security, fewer resources and a lower standard of living than we enjoy today.
2. We must accept that while climate science is complex, our options are simple. We have three. We can reduce greenhouse gas emissions to keep the impacts of climate change from growing far worse. We can adapt to the changes already underway. Or we can suffer. Some suffering is inevitable and we must help those least able to cope. But the more quickly we reduce emissions today and prepare for the consequences of emissions from the past, the less suffering there will be. Those are the realities that we must acknowledge and act upon now.
3. We must recognize that national climate policy and national energy policy are inextricably linked. The United States must make a deliberate and rapid transition

away from carbon-based fuels whose emissions cannot be captured and stored, whether the fuels come from foreign or domestic sources. We must turn with unprecedented speed to a future of energy independence, resource efficiency, renewable energy technologies and low-carbon fuels. Public policy must support only those technologies and resources that simultaneously stabilize the climate and enhance national energy security.

4. We must acknowledge that global climate change is more than an environmental issue. It affects national security by threatening instability in some of the most volatile regions of the world. It is an urgent economic issue in which the price of action is much less than the cost of inaction. It is a public health issue in which the spread of diseases in a warmer world can have devastating implications for our well-being and the costs of health care. It is a humanitarian issue, with the prospect of hundreds of millions of people being displaced by drought, hunger, and coastal flooding. It is a population and quality of life issue, challenging us to find ways for the world's people to achieve and sustain a decent standard of living. It is a moral issue, testing our character and our sense of responsibility to those least able to cope with climate change, as well as to future generations.

5. We must recognize not only the existence and threat of climate change, but the enormous opportunities that we can capture by addressing it. The transformation to a clean economy can open paths of possibility to all Americans, including those the old economy left behind. As the world's leading innovator, we should become the world's leading source of the technologies and products that will help all people in all nations – including our own – achieve dignity, security and high quality of life, while dramatically reducing effects on climate.

6. In addition to reducing greenhouse gas emissions, we must protect the Earth's natural ecological systems, particularly forests, which are the lungs of the planet and play a critical role in sequestering greenhouse gases. We have a global obligation to protect the world's tropical forests and to restore those that have been degraded.

7. We must not wait for other nations to go first. Developed and developing nations both must hold greenhouse gas emissions in check. But the United States will have little influence on other nations until we lead by example with a credible, comprehensive domestic program. Our first step in constructive engagement with the international community must be concrete action at home.

8. We must break the grip of special interests that are working to perpetuate the technologies, resources and practices that served us well in the past, but that now

threaten our future. Special interests cannot be allowed to prevail over the public good. We must vastly increase support for research, development and deployment of clean energy technologies, and encourage the coal, oil and gas industries to invest in these technologies for their future, as well as the nation's.

9. We must restore federal funding for Earth sciences and expand our research into the regional, local, social and economic impacts of climate change. The national Climate Change Science Program must produce the knowledge and deliver the information the American people need to mitigate, anticipate and adapt to the adverse impacts of global warming. We must engage the talents of our best scientists and engineers and restore respect for science in the federal government.

10. We must redefine "clean" and think long-term. Each product and energy resource must be evaluated for climate impact over its entire life cycle. A fuel that emits little carbon when it generates energy, but that produces significant greenhouse gas emissions when it is mined, refined and transported, is not truly clean. A biofuel that reduces oil imports but destroys our soils is not sustainable.

11. Finally, we must recognize that global climate change is the leadership issue of our time. Given the long lag time involved in reducing atmospheric concentrations of carbon, we cannot procrastinate any longer. This is indeed the defining moment for each of us as voters and consumers, for our generation, for our leaders, and for our world. We must not fail.

It is our hope and expectation that when the next President of the United States reports on the state of the union, we will hear that our nation is firmly on the path to climate stability, to a new economy that has learned to prosper within the limits of the Earth's natural systems, to energy independence and security, and to renewed respect for the United States around the world.

If this is our defining moment, then let us be known as a people of courage, morality, vision and goodwill – a people who gladly accept the responsibility of ensuring that the America of tomorrow is even better than the America of today. That commitment to the future is required of us if we wish to keep faith with those who founded our nation, with those who have sacrificed for it and with those around the world who look to the United States of America for hope.

Note: This State of the Climate message was prepared by the Presidential Climate Action Project (PCAP), an initiative at the University of Colorado Denver's Wirth Chair to create a 100-day climate action plan for the next President of the United States. A full list of the Statement's signatories can be found at PCAP's website: ***www.climateactionproject.com*** *Signatures on this statement do not imply endorsement of the PCAP plan or its contents. Signatories are representing themselves, not the institutions with which they are affiliated.*