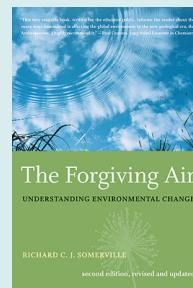


IF I WERE PRESIDENT A Climate Change Speech

BY RICHARD C. J. SOMERVILLE

*The following speech, written in the words of a fictional U.S. president, is the “fantasy” of Richard Somerville, Distinguished Professor Emeritus at Scripps Institution of Oceanography at the University of California, San Diego. Somerville is the author of *The Forging Air: Understanding Environmental Change*, a new edition of which is being published this year by the AMS. In the book, Somerville discusses the science of climate change, together with air pollution, stratospheric ozone depletion, and atmospheric aspects of other global environmental issues. The book, aimed at the general public, is up to date and includes a nontechnical summary of the main scientific findings of the 2007 Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).*

While Somerville’s book focuses on the hard science, what is to be done with such information—by scientists, politicians, and the general public—remains a complex and contentious issue. For the moment, perhaps the politics of climate change have created an environment where a presidential speech like this is more likely to come from a meteorologist’s imagination than from an actual president.



My fellow Americans:

In my first 100 days in office, I shall emphasize that addressing the challenge of climate change must be a high priority both nationally and internationally.

I pledge today that the United States will play a leadership role globally and will work cooperatively with other nations toward the goal of protecting the Earth’s climate for the benefit of all humankind.

In the days ahead, I shall lay out the many benefits for our nation of confronting climate change forcefully, including strengthening national security, promoting energy independence, and increasing economic prosperity and competitiveness.

I shall also outline the threats posed to the United States and the entire world if we continue to give climate change much less attention than it deserves. Americans must realize that the costs of neglecting climate change are very large in comparison to the costs of acting firmly and promptly.

Global climate change is real and serious and ought not to be a partisan issue. The main obstacle to progress is refusing to face reality and dismissing the problem. To produce effective actions for positive change, the nation needs strong leadership and political courage. Climate change is not a problem that the United States or the world can afford to procrastinate about any longer.

If we fail to act decisively, the result will inevitably be a severely degraded climate later this century. Different parts of the United States in

coming decades will be at risk for rising sea levels, decreased water supplies, altered precipitation patterns, floods, droughts, heat waves, and wildfires. The consequences will affect the domains of public health, economic prosperity, and national security.

Making the needed cuts in greenhouse gas emissions will not be possible by any single approach, and all routes to meet the challenge must be explored. The promising options include improving energy efficiency and energy conservation, greater reliance on renewable energy sources, temporary exploitation of nuclear power, and development of carbon capture and storage technology. We shall be pragmatic rather than ideological and favor whatever approaches work well.

This issue begins with the science of climate change. Rapid progress in research has created a body of sound settled science that must be acknowledged and used to inform wise public policy. We know that our climate is currently changing because of human activities, especially the increase in the amount of carbon dioxide, or CO₂, in the atmosphere. This increase in CO₂ is due entirely to human activities, mainly by burning coal and oil and natural gas, and also by deforestation.

As a result, the natural greenhouse effect has already been significantly escalated by human-caused increases in CO₂ and other heat-trapping emissions. The main immediate result is a warming of the Earth, but many other changes in our climate result from this interference with the climate system. The definitive scientific summary is found

in the most recent report of the Intergovernmental Panel on Climate Change—or IPCC—the group of climate scientists that shared the 2007 Nobel Peace Prize. Among the many scientific results highlighted in the IPCC report are the following:

- The largest CO₂ growth rate in modern times has occurred in the most recent decade. Any attempt to limit further climate change must be aimed at stabilizing the amount of CO₂ in the atmosphere. However, CO₂, the most important of the man-made greenhouse gases, continues to increase in the atmosphere, and more rapidly in recent years than previously. Thus, the trend is in the wrong direction. It must be reversed.
- Our planet is now about 1.4° Fahrenheit warmer than in the late nineteenth century. Observations of many kinds, such as air and ocean temperatures, melting ice and snow, and rising sea level, show that the warming of the climate system is unequivocal. Furthermore, most of the observed warming since the mid-twentieth century has at least a 90% chance of having been due to the human-caused observed increase in greenhouse gas amounts.
- The overall warming trend in the last 50 years is nearly twice that for the last century. North Atlantic hurricanes have intensified since 1970. Arctic temperatures have increased at about twice the global rate. Arctic sea ice has shrunk by about 2.7% per decade. Globally, 11 of the last 12 years are among the 12 warmest on record since reliable measurements began around 1850. The global ocean is warming to depths of at least about 2 miles. The ocean has absorbed more than 80% of the heat added to the climate system. Sea level rise averaged globally over the twentieth century has been about 7 inches. This rate has recently increased.

These are the facts, as established by science. They cannot be ignored.

The main goal in stabilizing the climate must be to quickly reduce the rate at which the global population emits CO₂ and other greenhouse gases into the atmosphere. The speed and size of this reduction will determine how much the climate will warm. Tokenism and good intentions are insufficient. Numbers are what matter: Rapid and quantitatively large reductions in global emissions are essential.

How much warming is tolerable? This is a judgment call, and reasonable people with different

tolerances for risk may differ somewhat, but science can help inform the decision. Several other countries have already made decisions about setting a safe limit to climate change. In 2007, the European Union adopted a goal to restrict global warming to no more than 2° Celsius (or 3.6° Fahrenheit) above the average preindustrial temperature level of the mid-nineteenth century. In order to fulfill this goal, the European Commission, the executive branch of the European Union, has agreed that developed countries will have to strive to reduce their emissions by 15%–30% by 2020. The European Parliament has proposed a European Union CO₂ reduction target of 30% for 2020 and 60%–80% for 2050.

Many expert climate scientists would support that decision, and as a first concrete step for the United States, I shall ask the Congress to join me in seeking bipartisan nationwide support for the following 10 urgent actions:

1. Establish concrete goals, timetables, and plans for reducing U. S. greenhouse gas emissions, consistent with those already adopted by the European Union as appropriate for developed countries.

2. Mount a nationwide climate-change education program and make clear to all Americans that these goals are the minimum necessary cuts in emissions of heat-trapping pollutants, that even deeper cuts are both desirable and achievable, and that as the level of man-made greenhouse gases in the atmosphere is reduced, the risk of dangerous climate change is correspondingly reduced.

3. Reform the patchwork of federal subsidies, taxes, and other incentives and disincentives so as to encourage large reductions in U. S. greenhouse gas emissions.

4. Emphasize that the first major steps in reducing our nation's greenhouse gas emissions should come from dramatic improvements in energy efficiency and energy conservation, and that these gains typically involve either low costs or actual significant savings.

5. Ensure that our national climate policy is based on sound science and also embraces principles of equity, fairness, and justice, protecting lower-income Americans and those employed in economic sectors adversely affected by climate-change policy.

6. Engage other nations vigorously in a diplomatic effort to find agreement on how all nations can act cooperatively to decrease heat-trapping emissions, in a manner consistent with their greenhouse gas emissions and their state of development and technological capacity.

7. Halt the construction of conventional coal-fired power plants. Instead, encourage the development of large-scale fossil fuel power plants with state-of-the-art carbon sequestration technology, as well as the exploration of innovative large-scale carbon sequestration options.

8. Increase on a sustainable basis the nation's scientific research effort to add to our knowledge of climate change science and the effects of climate change on all regions of the country and all sectors of the economy, while protecting the ability of all scientists to publish and discuss the results of their research freely and without censorship.

9. Revamp our nation's energy policy to immediately reduce and ultimately end our country's overwhelming dependence on fossil fuels, with all its adverse consequences, including the negative impacts of imported oil on the economy and on national security.

10. Partner creatively with the private sector and with states and municipal governments to achieve our national goals for reducing emissions of greenhouse gases.

Additional steps will be needed, but these 10 actions make a good beginning. Climate change presents both a challenge and an opportunity. The solutions must be global, because all nations share the climate, which is a global commons. While every nation will have a part to play, the United States can and must lead in using its immense resourcefulness and creativity to solve the problem.

The time to act is now. Some climate damage has already occurred, and much more is certain to occur, because of the world's collective failure to take adequate actions sooner. Delaying further only increases our costs and limits our options. The choice of what kind of planet Earth we leave to our children and grandchildren is in our hands today.

From this day forward, let no one doubt that the United States recognizes the importance of the climate-change issue and the overwhelming scientific basis for concern. This country will join with others, will lead, and will act vigorously to prevent dangerous human-caused interference with the climate system. The need is urgent. A great nation can meet a great challenge. We start today.