The U.S. Climate Change Vision

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AP/WWP Photo by Kenneth Lambert

President George W. Bush announces climate study initiatives, as Vice President Dick Cheney (left) and then-Secretary of State Colin Powell look on at the White House in June 2001.

The Bush administration is confronting climate change by making significant investments in new technologies and partnerships with other governments. "The vision here is to forge new energy technologies that all nations can use to meet their goals of limiting greenhouse gas emissions, without compromising the sustained improvements in living standards to which all nations aspire," says the author, science advisor to President George W. Bush and director of the Office of Science and Technology Policy in the Executive Office of the President.

Immediately before taking up his current positions at the White House in 2001, John Marburger, Ph.D., was director of the Brookhaven National Laboratory in Upton, New York. From 1980 to 1994 he was president of the State University of New York-Stony Brook.

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

President George W. Bush, June 11, 2001

With these words, President Bush clearly acknowledged the reality and seriousness of climate change and launched a responsible and practical climate policy with three primary aims:

- To introduce new technologies for producing and using energy that can dramatically weaken the link between economic growth and the generation of greenhouse gases.
- To improve scientific tools and understanding needed to respond more effectively to the problems posed by climate change.
- To enlist the cooperation of other nations to address the entire spectrum of climate change issues.

To advance these aims, the United States will spend $5.2 billion in fiscal year 2005 on climate change science research, advanced energy technologies, voluntary programs, and related international assistance—far more than any other nation.

U.S. climate-oriented technology initiatives are ambitious on a scale commensurate with the challenges: development of hydrogen technologies that can enable more efficient and carbon-free means of transportation and other applications, new kinds of power plants—"FutureGen" plants—that generate power from hydrocarbons but release no carbon to the atmosphere, and renewed commitment to research on future carbon-free forms of power generation such as nuclear fusion that can be scaled to an economically significant size. The vision here is to forge new energy technologies that all nations can use to meet their goals of limiting greenhouse gas emissions, without compromising the sustained improvements in living standards to which all nations aspire.

Climate science initiatives are critically important for the kind of long-range planning that must be done region by region around the world to rise to the challenge of climate change. Even modest advances in our understanding of weather and climate can have a positive

impact. The United States is spending nearly $2 billion per year on climate science within a well-defined strategic plan, developed and reviewed in consultation with the international scientific community and the National Academy of Sciences.

International cooperation is crucial for observing, understanding, preparing for, and mitigating potential impacts of climate change. The United States is by far the largest funder of activities under the United Nations Framework Convention on Climate Change (UNFCCC) and the Intergovernmental Panel on Climate Change (IPCC).

Bush administration international initiatives include:

The **Methane to Markets Partnership** is an action-oriented initiative that will reduce global methane emissions to enhance economic growth, promote energy security, improve the environment, and reduce greenhouse gases. Fourteen countries launched the initiative at a ministerial meeting on November 16, 2004 in Washington, D.C. [http://www.epa.gov/methane/international.html]

The **International Partnership for a Hydrogen Economy** was formed to implement internationally the goals of President Bush's Hydrogen Fuel Initiative and FreedomCar Partnership. The Partnership's 15 countries and the European Union (EU) are working together to advance the global transition to the hydrogen economy with the goal of making fuel cell vehicles commercially available by 2020. [http://www.eere.energy.gov/hydrogenandfuelcells/international_activities.html]

The **Carbon Sequestration Leadership Forum** is a framework to work cooperatively with global partners, including developing countries, on research, development, and deployment of carbon sequestration technologies in the next decade. [http://www.fe.doe.gov/programs/sequestration/cslf/]

The **Generation IV International Forum** for nuclear power is a multilateral partnership fostering international cooperation in research and development for the next generation of safer, more affordable, and more proliferation-resistant nuclear energy systems. [http://gen-iv.ne.doe.gov/intl.html]

The **Renewable Energy and Energy Efficiency Partnership** was formed at the World Summit on Sustainable Development in Johannesburg, South Africa, in August 2002 and seeks to accelerate and expand the global market for renewable energy and energy-efficiency technologies.

These initiatives and bilateral partnerships bring together approximately 20 developing and developed nations that, with the United States, account for more than 70 percent of global greenhouse gas emissions.

The United States mounted a vigorous and widely supported international initiative on integrated Earth observations, a "system of systems" approach to improving knowledge of global conditions that is engaging 55 countries and the European Union. A 10-year strategic plan, just released, maps out the U.S. component of an integrated Earth Observation System. Guidelines for the global system—the Global Earth Observation System of Systems, or GEOSS—were recently adopted at the third summit of the Group on Earth Observations in Brussels. The end result will be access to an unprecedented amount of environmental information, integrated into new data products benefiting societies and economies worldwide.

These actions add up to a thoughtful, visionary approach to the huge challenge of climate change. In President Bush's words, "My approach recognizes that economic growth is the solution, not the problem. Because a nation that grows its economy is a nation that can afford investments and new technologies." These investments are made on behalf of all nations and are essential for a sustainable global economy in the future. ■