

## The U.S. Climate Change Vision

Dr. John H. Marburger, III

*“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: first, to introduce new technologies for producing and using energy that can dramatically reduce the relationship between economic growth and the generation of greenhouse gases; second, to improve scientific tools and understanding needed to respond more effectively to the problems posed by climate change; and third, to enlist the cooperation of other nations to address the entire spectrum of climate change issues. To advance these aims, the U.S. spent approximately \$5.1 billion in FY 2004 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 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 U.S. is spending nearly \$2 billion per year on climate science within a well-defined strategic plan, developed and reviewed with wide input from 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 U.S. 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, the International Partnership for a Hydrogen Economy, the Carbon Sequestration Leadership Forum, the Generation IV International Forum for nuclear power, and the Renewable Energy and Energy Efficiency Partnership. These initiatives and bilateral partnerships bring together approximately 20 developing and developed nations who, with the United States account for more than 70% of global greenhouse gas emissions.

The U.S. initiated a vigorous and widely supported international initiative on integrated Earth Observations, a “system of systems” approach to improve knowledge of global conditions that is engaging 48 countries and the European Union. The U.S. just released a draft 10-year strategic plan that will provide the U.S. component to an integrated global Earth Observation System to be considered at a summit of the Group on Earth Observations early next year. This summit will be the third such meeting in less than two years.

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.

Dr. Marburger is Science Advisor to President George W. Bush and Director of the Office of Science and Technology Policy in The Executive Office of the President