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## CLIMATE CHANGE SCIENCE AND TECHNOLOGY

### *Research and Development Funding in the President's 2007 Budget*

#### **Climate Change Science Program**

The U.S. Global Change Research Program, authorized by the Global Change Research Act of 1990, and the President's Climate Change Research Initiative of 2001 are integrated in the comprehensive U.S. Climate Change Science Program (CCSP). The CCSP published the *Strategic Plan for the U.S. Climate Science Program* in 2003, describing a strategy for developing knowledge of climate variability and change and for application of this knowledge.

Based on the Strategic Plan, the CCSP has focused on nine key priority areas to accelerate the delivery of critical science-based information in support of decision making on climate change science issues:

- Aerosols-clouds-climate: Integrating new remote-sensing observations with expanded in situ observations to advance climate prediction capabilities
- Development of an integrated Earth system analysis capability
- Integration of water cycle observations, research and modeling: A prototype project
- Global Landsat data for answering critical climate questions
- North American carbon program integration
- Impacts of climate variability and change on ecosystem productivity and biodiversity
- Coping with drought through research and regional partnerships
- International Polar Year
- Integrated Ocean Observing System

The 2007 CCSP budget sustains the level enacted in 2006. The CCSP comprises over 13 agencies, but nearly 90% of the CCSP funding is distributed among NASA, NSF, NOAA and DOE. The Climate Change Research Initiative, a focused component of CCSP, is sustained at \$200 million in 2007.

#### **Climate Change Technology Program**

The U.S. Climate Change Technology Program (CCTP) supports research, development, deployment, and voluntary programs to reduce greenhouse gas emissions via renewable energy, fossil energy and nuclear energy, and also to improve efficiency and carbon sequestration. Led by DOE, CCTP recently published a Vision and Framework for Strategy which outlines six strategic goals that will guide the CCTP strategy planning and interagency coordination. These goals are:

- Reduce Emissions for Energy End-Use and Infrastructure
- Reduce Emissions from Energy Supply
- Capture and Sequester Carbon Dioxide
- Reduce Emissions of Non-CO<sub>2</sub> Greenhouse Gases
- Improve Capabilities to Measure and Monitor GHG Emissions
- Bolster Basic Science Contributions to Technology Development

CCTP will work toward these goals by employing several core approaches that will stimulate participation by others and ensure progress in this important area. These approaches include strengthening climate change technology research and development by helping to coordinate and prioritize ongoing activities, creating new opportunities for partnerships and international collaboration, and providing technology policy recommendations.