THE SECRETARY OF COMMERCE
Washington, D.C. 20230

SEP 9 2002

The President
The White House
Washington, D.C. 20500

Dear Mr. President:

We are writing to report on our progress since you established a new management structure to lead the comprehensive federal climate change science and technology program. You designated that a cabinet-level Committee on Climate Change Science and Technology Integration, which we jointly lead with annual rotation as Chairman, take direct responsibility for operational oversight of the interagency programs in climate change science and technology development. The Committee's oversight function is greatly assisted by the regular participation of Office of Science and Technology Policy Director John Marburger and Council on Environmental Quality Director James Connaughton. The senior management supervision of climate science and technology development also includes the deputy secretary-level Interagency Working Group on Climate Change Science and Technology, as illustrated in the enclosed figure.

On June 11, 2001, you committed the Federal Government to pursue a broad range of strategies to address the important issues of global climate change by launching three initiatives: the Climate Change Research Initiative to accelerate science-based climate change policy development, the National Climate Change Technology Initiative to advance energy and sequestration technology development, and increased international cooperation to engage and support other nations on climate change and clean technologies. Moreover, on February 14, 2002, you complemented these initiatives by calling for increased incentives to reduce greenhouse gas emissions through improvements to the Department of Energy's Voluntary Reporting of Greenhouse Gases program. This letter provides you with an update on progress being made in these four related areas: (1) federal climate research, (2) technology development, (3) the voluntary emissions reduction program, and (4) collaborative international activities being led by the Department of State.

Federal Climate Research

Comprehensive activities are under way to accelerate the elements of our Nation's climate and global change research, monitoring, and decision tool development that will provide the most useful information to inform public discussion on climate change issues in a timely way. This work is being carried out in the new observation-rich era that is emerging as a result of the significant U.S. investments in monitoring systems that allow us to better characterize and understand the Earth system.

We have asked the Climate Change Science Program Office (CCSPO) to undertake consolidated interagency management of the U.S. Global Change Research Program (USGCRP), conducted according to the provisions of the Global Change Research Act of 1990, and the Climate Change Research Initiative (CCRI). This will ensure internal consistency of the focused CCRI studies within the larger body of global change research conducted by the USGCRP and other supporting programs.

A comprehensive interagency inventory of climate and global change research programs was initiated by CCSPO in May. This essential stocktaking exercise (the first conducted in several years) will enhance coordination, efficiency, and effectiveness of the entire research effort. All CCSPO agencies have fully participated in this inventory and these include: the Department of Commerce, Department of Energy, National Science Foundation, National Aeronautics and Space Administration, Department of Agriculture, Environmental Protection Agency, Department of the Interior, Department of Health and Human Services, Smithsonian Institution, Department of State, Agency for International Development, Department of Defense, and Department of Transportation. The inventory review has also involved the Office of Science and Technology Policy, the Office of Management and Budget, and the Council on Environmental Quality. An analysis of the inventory will be completed by mid-September, and will provide important input to the specification of priority CCRI elements in FY 2004 budget planning. We are also developing metrics for each of the CCRI and USGCRP research programs so that we can effectively assess their progress.

The annual report describing the ongoing activities and plans of the USGCRP, *Our Changing Planet*, is undergoing agency review, and will be published in October. This FY 2003 edition of *Our Changing Planet* incorporates information on the CCRI, including plans aimed at accelerating the reporting of scientific information to support public discussion of climate change issues.

A fully updated strategic plan for U.S. global change research is under development. This will be the first comprehensive update to the strategic plan for the USGCRP (and CCRI) since the original plan resulting from the 1990 Global Change Research Act was adopted. A draft of the updated plan will be made available for public comment by early November and will undergo comprehensive review by the scientific community, interested stakeholders, the general public, and interested international specialists at the *Workshop on U.S. Climate Change Science Program* to be held in Washington, D.C., on December 3-5, 2002. The workshop will "jump start" a comprehensive review of the updated research and reporting plans for U.S. global change research. The workshop will focus on key unresolved scientific issues, plans for needed global climate and ecosystem monitoring systems, and plans to develop and demonstrate decision support tools to facilitate public discussion about climate change issues. The workshop will also review plans and schedules for future USGCRP/CCRI reports on specific findings. A final version of the strategic plan, taking account of workshop and other written comments, as well as National Academy of Science review comments, will be published in April 2003.

All these activities are being carried out in support of the implementation of our new research strategy, which focuses on three broad tiers of activities: (1) *scientific inquiry*, which has been the core activity over the years, with several key uncertainties continuing to need resolution; (2) *observations and monitoring systems*, which have always been a key part of the program, but have often been insufficiently integrated to support strategy analyses; and (3) development of *decision support tools*, including detailed analyses of projected environmental, economic, and energy system outcomes of various scenarios. The CCRI activities will enhance the larger ongoing USGCRP by providing targeted focus to each of these three tiers where significant improvements in decision-relevant information is possible during the next 2 to 5 years.

CCSPO staff is regularly involved in discussions with a wide array of members of the national and international scientific communities, and with a broad group of climate stakeholder representatives. The program encourages comments and critiques from all sources and welcomes in-person discussions, subject only to the practical limitations of staff time. With respect to staff, the USGCRP coordinating office staff is being augmented with specialists to address the focused CCRI questions.

Technology Development

The National Climate Change Technology Initiative (NCCTI) is continuing its in-depth review of federal research and development (R&D) activities, and is developing approaches to pursue advanced technologies that can yield cost-effective means to mitigate the risks associated with climate change. The current state of U.S. climate change technology R&D is being assessed and ways to strengthen basic research, enhance private-public partnerships, and promote cutting-edge technologies are being examined. Options for improving technologies for measuring and monitoring greenhouse gas emissions are being explored by the Department of Energy and other collaborating agencies.

To find creative ways to motivate the development of innovative technologies, a process of open solicitations for technologies to compete against each other using the criteria of emissions reduction, avoidance, or sequestration potential is being pursued. This approach will help ensure that all possible options are explored.

High priority technologies that are now being pursued include: hydrogen-based energy systems, biofuels, low-speed wind turbines, fuel cells for transportation, zero net energy buildings, CO_2 capture and geologic sequestration, terrestrial sequestration research in forest management, and agricultural land management. Recent examples of progress in these areas include:

Fuel Cells for Transportation - The transport sector accounts for about one-third of U.S. carbon emissions, of which slightly more than half is from light-duty passenger vehicles. These carbon emissions from transportation can be sharply reduced or eliminated if the vehicles are fueled by hydrogen, with carbon emissions, if any, from hydrogen production sequestered. A major effort is under way to enable the development of a hydrogen production and delivery infrastructure.

Additionally, a key companion technology is the hydrogen fuel cell. The Department of Energy plans to accelerate fuel cell R&D in several areas. The new FreedomCAR research partnership will focus on developing technologies such as fuel cells and hydrogen from domestic renewable sources. The long-term results of this cooperative effort will be cars and trucks that are more efficient, less expensive to operate, and emit no harmful pollutants or greenhouse gases.

CO_2 Capture and Sequestration - Research and development to better understand the natural processes by which carbon is converted, recycled, and reused in natural systems, particularly in deep geologic settings, is being carried out. The scientific basis for large- scale carbon sequestration in geologic reservoirs such as coal seams, deep brine fields, and oil and gas reservoirs is being studied. Research awards were recently made in this area and a consortium of fossil energy stakeholders, state and local agencies, technology developers, and university researchers is being formed to examine diverse sequestration approaches, especially in the geologic area.

Agriculture and Forestry - The Federal Government is enhancing conservation programs that have the benefit of sequestering carbon in forested areas, including their soils, and offsetting agricultural emissions of greenhouse gases. These programs include the Conservation Reserve Program, which assists farm owners and operators to conserve and improve soil, water, air, and wildlife resources by removing environmentally sensitive land from agricultural production and returning it to long-term resource-conserving (including carbon) cover; the Environmental Quality Incentives Program, which helps producers make beneficial and cost-effective changes to cropping and grazing systems, nutrient and pest management, and conservation measures to improve soil, water, and related natural resources; the Wetland Reserve Program, which restores and protects wetlands with the result that carbon is stored in those ecosystems; and the Forest Stewardship Program, which provides additional technical and financial assistance to nonindustrial, private forest owners.

Voluntary Emissions Reductions Program

On July 8, 2002, we joined Agriculture Secretary Veneman and Environmental Protection Agency Administrator Whitman in recommending improvements to the Department of Energy's Voluntary Reporting of Greenhouse Gases program. The primary goal of these improvements is to create a comprehensive and transparent program to report and credit real greenhouse gas reductions.

The proposed improvements also include developing fair, objective, and practical methods for reporting baselines, calculating real results, and awarding transferable credits for actions that lead to real greenhouse gas reductions. Developing such methods is central to achieving the objective of "measurement accuracy, reliability, and verifiability," as specified in your February 14, 2002, direction to the four of us.

We are aggressively pursuing improvements in the Voluntary Reporting of Greenhouse Gases program. Elements of this process include stakeholder workshops; updating technical guidelines; public comment periods to review the revised guidelines; developing reporting forms, software, and a public-use database; and Office of Management and Budget clearance of the new reporting forms. After completion of this process, we plan to adopt new guidelines by January 2004, for reporting 2003 annual data. The process will fully engage the many stakeholders who are concerned about climate change.

In addition to improving the voluntary emissions reduction registry, the Department of Energy and the Environmental Protection Agency have been working with energy intensive companies and industry sectors to identify opportunities for cost-effective greenhouse gas reductions and to facilitate consensus-building on common reporting methodologies and voluntary strategies.

Support for Collaborative International Activities

The United States continues to lead all nations in research and technology development directed at climate change. We are maintaining our support of the U.N. Framework Convention on Climate Change (UNFCCC) and the Intergovernmental Panel on Climate Change (IPCC). We are especially pleased that Department of Commerce scientist Dr. Susan Solomon was recently elected co-chair of the IPCC Working Group I, focusing on the scientific information regarding climate change.

The Department of State reports that numerous high-level interagency bilateral climate dialogues are in progress. These include support of joint climate change programs, scientific research programs, as well as technical and policy discussions in Australia, Canada, Central America (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama), European Union, India, Italy, Japan, and People's Republic of China. The Department of State leads these bilateral efforts, which involve several other agencies, including the Department of Energy, Department of Commerce, U.S. Agency for International Development, Environmental Protection Agency, Department of Agriculture, and Department of Transportation. More high-level bilateral activities are expected in the near future, including joint research and cooperation with Brazil, Mexico, Republic of Korea, Russian Federation, South Africa, and Ukraine. In addition, the Departments of State and Energy co-chair a newly established interagency Task Force on International Energy Cooperation to oversee collaborative efforts on the research, development and deployment of current and emerging cleaner energy technologies.

U.S. obligations under the UNFCCC are being met through broad-based interagency activities in many other countries. These include diplomatic engagements (including Ministerial meetings), institution and long-term capacity building (an example is U.S. support for development of climate offices in Ukraine), education and training on key issues of significance to the United States (such as international workshops on monitoring of greenhouse gases), technology-focused support and assistance (for example, the June U.S.-Indo workshop on fuel cells), and mitigation programs (such as methane emissions reduction and improved forest management practices). Additional international efforts include recent meetings with the Asia-Pacific Economic Cooperation (APEC) and representatives from several European nations to develop support for a

global observing system, and numerous initiatives to transfer clean energy technology to developing and transition countries, measure greenhouse gas emissions, promote improved land use to capture and store carbon in soils and plants, assess potential impacts of climate change in other countries, and develop capacities to adapt to potential climate change. We are also promoting tropical forest conservation through the Tropical Forest Conservation Act, thereby helping to address the world's greenhouse gas problem through the storage of carbon in tropical forests.

Our interagency activities will continue on a very active path forward, involving science and technology improvements, substantial enhancement of the emission reduction program, and rapidly increasing international collaboration to address the important issues associated with climate change. We will provide similar updates on our progress every 6 months, and more frequently when warranted by specific developments.

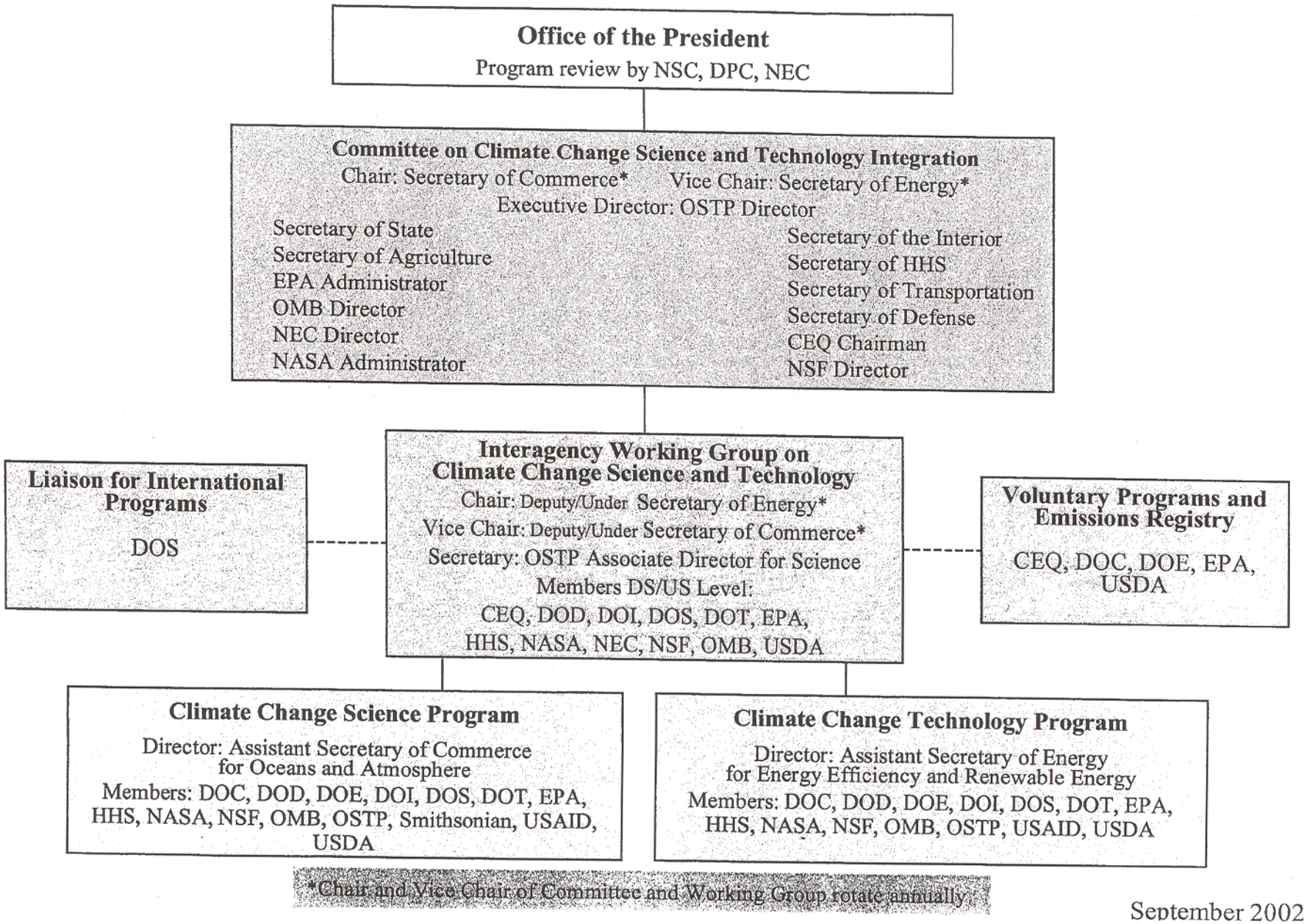
Respectfully,

Spencer Abraham
Secretary of Energy, and
Vice-Chairman of the Committee on
Climate Science and Technology Integration

Donald L. Evans
Secretary of Commerce, and
Chairman of the Committee on
Climate Science and Technology Integration

Enclosure

Climate Science and Technology Management Structure



*Chair and Vice Chair of Committee and Working Group rotate annually.

September 2002