

**Statement of**  
**The Honorable John Marburger, III**  
**Director of the Office of Science and Technology Policy**

**before the**

**Subcommittee on Science, Technology and Space**  
**Commerce, Science, and Transportation Committee**  
**United States Senate**

**May 22, 2002**

Mr. Chairman and Members of the Subcommittee, I am pleased to appear before you today to discuss the President's Fiscal Year 2003 budget request for research and development.

When I testified prior to my confirmation by your Subcommittee last October, I expressed my desire to "form a close and productive relationship with Congress, which has long provided bipartisan and enduring support of our world-leading science and engineering enterprise. The counsel and support of Members of Congress is an essential element of continued U.S. leadership across the frontiers of scientific knowledge." I look forward to working with you, Mr. Chairman, and your Subcommittee, to demonstrate this commitment to science and engineering excellence once again this year. President Bush has set forth an agenda for science funding in the forthcoming fiscal year that takes advantage of important opportunities for discovery and development and sustains the basic machinery of research and development that will be necessary for continued national leadership in science and technology.

Last October I also referred to the fact that we must make important choices together because we have neither unlimited resources nor a monopoly of the world's scientific talent. I continue to believe that wise choices among the multitudes of possible research programs are necessary and that we must decide which programs to launch, encourage, and enhance and which ones to modify, reevaluate, or redirect in keeping with our national needs and capabilities. The President's FY 2003 Budget includes principles that will improve the management of the Nation's science and technology enterprise, taking advantage of best practices, and emphasizing the importance of good planning, execution, reinforcement of good performance, and changing poor performance. I look forward to working with Congress to ensure that the federal government's significant investment, now over \$100 billion, is deployed to optimal effect.

## **PRESIDENT BUSH'S FY 2003 R&D BUDGET**

Shortly after I was confirmed as Director of the Office of Science and Technology Policy at the end of October, the Director of the Office of Management and Budget invited me to attend internal OMB decision-making sessions involving science programs. This series of meetings gave me a greater appreciation for the issues and an opportunity to represent the science perspective on important aspects of the forthcoming budget, such as increased accountability and performance measures for R&D agencies. Following these meetings, my office has continued to work closely with OMB to share information and develop a mutual understanding of the complex issues involved in establishing the Nation's science and technology budgets.

As you well know, agency budget proposals are submitted to OMB in mid-September for their review. The terrorist attacks on September 11 dramatically changed the context for this budget. The attacks laid bare vulnerabilities in our physical security and exacerbated weaknesses in our economy. The priorities of the Nation drastically changed in a matter of hours.

The budget reflects the change in priorities and three primary goals:

- Winning the war on terrorism;
- Protecting the homeland;
- Reviving our economy.

Recognizing that science must play a role in these priorities, the President provides for an unprecedented level of investment in federal R&D, marking the first time in history that a President has requested an R&D budget greater than \$100 billion. At \$112 billion, up 8 percent overall from last year, this is the largest requested increase for R&D in over a decade.

The R&D budget is an imperfect measure of support for traditional science and technology activities. Another compilation, the Federal Science and Technology Budget, was originally proposed by the National Academy of Sciences to highlight the federal investment in research programs central to the creation of new knowledge. In this "FS&T" portfolio, the President's budget is up 9 percent. The FS&T activities account for nearly all of federal basic research, over 80 percent of federal applied research, and about half of civilian development, in addition to some other activities such as training and education in some R&D agencies.

Mr. Chairman, this is a good budget for science, and I look forward to working with Congress to see it successfully enacted.

These science and technology investments will enable the Nation to:

- Enhance homeland security, national security, and global stability;
- Promote long-term economic growth that creates high-wage jobs;
- Support a healthy, educated citizenry;
- Harness information technology;

- Improve environmental quality; and
- Maintain world leadership in science, engineering, and mathematics.

Now let me direct your attention to some specifics within this budget.

### **Interagency Initiatives**

The budget increases funding for a number of priority research areas that require multi-agency efforts. Information technology, nanotechnology, and health research continue to be high priorities for our Nation. The past year also has seen an increase in priority for climate change R&D. After the events of September 11<sup>th</sup>, antiterrorism efforts naturally lead the list.

- **Antiterrorism** – our success in preventing, detecting, and responding to terrorist activities over the long term will depend on technology. The President’s FY 2003 Budget continues the Administration’s strong support of research and development to counter emerging terrorist threats by increasing R&D funding for homeland security and combating terrorism (including protecting critical infrastructure) from nearly \$1 billion in 2002 to an estimated \$3 billion in 2003.
- **The National Nanotechnology Initiative** will increase by 17 percent over last year. This \$679 million multi-agency initiative focuses on long-term research on the manipulation of matter at the atomic and molecular levels, giving us unprecedented opportunities for new classes of devices as small as molecules and machines as small as human cells.
- **Networking and Information Technology R&D** will increase by 3 percent. This brings the overall investment to \$1.9 billion in this mature, but still critically important area. It provides the base technologies necessary for the U.S. to maintain its dominant position in the application of information technology to critical national defense and national security needs, as well as to scientific research, education, and economic innovation.
- **Improving human health** depends on health research that draws on the capabilities of many agencies. During the Presidential campaign, the President promised to double the budget of the National Institutes of Health (NIH) by 2003 from its 1998 levels. That commitment is met in this budget, which includes the final installment, a \$3.9 billion increase, paving the way toward better diagnostics, treatments, and cures that affect the lives of all Americans.
- **Climate Change** research has become an important driver for the Nation’s research agenda. The President created two new initiatives in this budget. The Climate Change Research Initiative will share \$40 million among five agencies, and the National Climate Change Technology Initiative will receive \$40 million within the DOE budget. The ongoing U.S. Global Change Research Program will receive \$1.7 billion, a \$44 million (3 percent) increase.

## Highlights of Agency FS&T Budgets

The following examples provide a snapshot of the Administration's S&T request within the agencies under the jurisdiction of the Subcommittee.

- **National Aeronautics and Space Administration (NASA).** The budget provides \$8.7 billion (an 8 percent increase) for NASA's programs in the FS&T budget, including \$3.4 billion for Space Science (a 13 percent increase) and \$2.9 billion for Aerospace Technology. The latter includes planned funding increases for NASA's Space Launch Initiative (\$759 million), which will lead to safer and lower cost commercial launch vehicles to replace the Space Shuttle.
- **National Science Foundation (NSF).** The budget provides a \$241 million increase (5 percent) for NSF. This increase will provide \$678 million for NSF's lead role in the Networking and Information Technology R&D program, and \$221 million for NSF's lead role in the National Nanotechnology Initiative. The President's Math and Science Partnerships Initiative, aimed at increasing the quality of math and science education in Grades K-12, will increase by \$40 million to \$200 million. The budget also raises graduate level stipends from \$21,500 to \$25,000 annually, in order to further attract and retain the most promising U.S. students into graduate level science and engineering. NSF is very effective at managing competitive research programs, and the budget proposes transferring to NSF programs that will benefit from their effective management. These programs include Sea Grant from the National Oceanic and Atmospheric Administration, Water Quality Research from the U.S. Geological Survey, and Environmental Education from the Environmental Protection Agency.
- **Department of Energy (DOE).** The budget provides \$5 billion for DOE's programs in the FS&T budget. The budget includes a 1.5 percent increase for DOE's science programs, as well as continued support for construction and operation of large scientific user facilities, including the Spallation Neutron Source. The budget also includes a \$22 million increase (up 6 percent) to DOE's Renewable Energy programs.
- **Department of Commerce (DOC).** The budget includes \$861 million for DOC programs in the FS&T budget. It provides \$402 million (an increase of over 20 percent) for research and physical improvements at NIST's Measurement and Standards Laboratories, and \$107 million for NIST's Advanced Technology Program to promote competitive, cost-shared R&D partnerships. The FS&T budget also provides \$297 million for NOAA to improve understanding of climate change, weather and air quality, and ocean processes.
- **Department of Transportation (DOT).** The budget provides \$548 million for DOT's programs in the FS&T budget, including \$421 million to support research to improve the quality and safety of the Nation's highway transportation infrastructure, and \$95 million for aviation security technology research.

- **Environmental Protection Agency (EPA).** The budget provides \$797 million (a 6 percent increase) for EPA's programs in the FS&T budget. The EPA budget funds research that provides a sound scientific and technical foundation for environmental policy and regulatory decision-making. The budget includes \$75 million for R&D in technologies and procedures to cope with future biological or chemical incidents.

In addition to the agencies that fall within your Subcommittee's jurisdiction Mr. Chairman, the Department of Defense R&D efforts increase \$5.4 billion (an 11 percent increase) to \$54.5 billion and the National Institutes of Health budget increases by \$3.9 billion (a 17 percent increase) to \$27.3 billion.

### **The President's Management Agenda**

Beyond funding these priority areas, the budget places emphasis on spending dollars effectively. The budget includes a scorecard to rate agency performance and progress in five important management areas. Although only one agency achieved a green light in any category, I am pleased that it is the National Science Foundation. The President's Management Agenda is as relevant to science missions as to other agency operations, and I look forward to working with OMB to make its provisions a more useful tool for all the agencies.

In particular, among the provisions of the President's Management Agenda are investment criteria for research programs pilot-tested at DOE this past year. In consultation with stakeholders from agencies, industry, and academia, OMB and OSTP are broadening the use of the criteria to all types of R&D programs across the government in 2004.

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Mr. Chairman and Members of the Committee, I hope that this overview has conveyed to you the extent of this Administration's commitment to advancing science and technology in the national interest. I look forward to achieving bipartisan support for a national S&T strategy that will combine the resources of industry, academia, non-profit organizations, and all levels of government to protect our citizens, advance knowledge, promote education, strengthen institutions, and develop human potential.

I ask for your support of OSTP's Fiscal Year 2003 budget request, and I also want you to know how much I appreciate the long-standing bipartisan support of this Subcommittee for the Office of Science and Technology Policy and for the science and technology enterprise. I would be pleased to answer any questions.