



PHYSICAL SCIENCES AND ENGINEERING
Research and Development Funding in the President's 2006 Budget

Research in the physical sciences and engineering is at the heart of technological innovation for priority areas of space exploration, nanotechnology, networking and information technologies, and defense technologies. Physical science research leads to a better understanding of nature and, indeed, our universe. Research in this area complements a number of critical investments such as those being made in the life sciences. The President's 2006 Budget sustains the Nation's investment in the physical sciences and engineering by making significant investments in these, and other, priority areas.

National Aeronautics and Space Administration. In 2005, a new vision for NASA programs focused on human and robotic exploration of the solar system and beyond was announced. This remains a high priority for the President's 2006 Budget by providing \$16.456 billion for NASA in FY 2006, an increase of 2.4%. The 2006 budget request makes some hard decisions, canceling some projects with high technical risk and whose cost estimates would have led to the certain cancellation and delay of several other important programs. The President's Budget provides \$5.5 billion for Science at NASA. This investment augments the Exploration Vision by supporting critical science programs that continue our exploration of the universe and help us sustain life on Earth.

Department of Energy. The Budget provides \$3.5 billion for DOE's Office of Science. The Budget includes funding for priorities such as nanotechnology (\$207M) and high-risk basic research in support of the hydrogen fuel initiative (\$32.5 million). The Budget also provides \$83 million to begin construction on the Linac Coherent Light Source—a revolutionary facility that will open entirely new realms of discovery in the chemical and material sciences—and \$107 million operations for the soon-to-be completed \$1.4 billion Spallation Neutron Source at Oak Ridge National Laboratory. Full operations funding will also enable peak scientific productivity of major particle physics facilities at Fermilab and Stanford.

National Science Foundation. The President's Budget provides \$5.605 billion for NSF, an increase of 2.4% over 2005. Included within this level is \$1.1 billion for the Mathematical and Physical Sciences Activity (MPS), an increase of 1.5% over FY2005, and increases in Geosciences of 2.2% (to \$709 million), and 3.5% for Engineering (to \$581 million). Within MPS, the themes to be emphasized include: the Physics of the Universe, Fundamental Mathematical and Statistical Science, Physical Sciences at the Nanoscale, Cyberinfrastructure, and the Molecular Basis of Life Processes.

Department of Commerce. A high priority for 2006, the President's Budget provides \$485 million for the National Institute of Standards and Technology laboratory programs, an increase of 8%. This includes nearly \$40M in new initiatives in research and measurements in high-leverage areas such as advanced manufacturing, nanomanufacturing, homeland security, biosystems and health, and quantum computing.

These physical science-related programs total \$12.8 billion in 2006. While these programs were funded at \$12.9 billion in 2005, this funding included over \$250 million in research earmarks, which work against a merit-based competitive selection process that tends to fund the best science.

Selected Civilian Physical Science-Related Programs (\$ in millions)

Department/Agency	2001 Actual	2005 Enacted	2006 Request	Change: 2001 to 2006	% Change: 2001 to 2006
NASA Science	4,371*	5,527	5,476	N/A*	N/A*
DOE Office of Science	3,190	3,600	3,463	273	9%
NSF (MPS, GEO, CISE, ENG)	2,322	2,939	2,997	675	29%
NIST "core" (not including ITS)	347	451	485	138	40%
NOAA Oceanic & Atmospheric Research	315	404	361	46	15%
TOTAL	10,545	12,921	12,782	2,237	21%

* NASA program funding levels before 2003 are not comparable to those from later years, due to full cost accounting. A comparable number for 2001 cannot be derived, but would likely be several hundred millions dollars more.