VIEWS AND ESTIMATES
COMMITTEE ON SCIENCE
FISCAL YEAR 2005

BACKGROUND

As the House and Senate begin consideration of the President's Fiscal Year 2005 (FY05) budget request, there is no question that a great deal of debate will revolve around the budget deficit and its impact on the long-term economic health of the Nation. As these discussions move forward, the Science Committee urges Congress to recognize the importance and contributions of science and technology to productivity and economic growth—and consequently—fiscal security.

Indeed, nothing benefits federal revenues over the long-term as much as accelerated economic growth, and nothing fuels long-term growth more than science and technology.

Further, the strength of the U.S. scientific enterprise has long been a crucial component of America's national security. Advancements in science and technology were critical to the nation's ability to triumph in the Cold War. (Indeed, Cold War-era investments in science and technology, especially those made in the wake of the Soviet launch of Sputnik, laid much of the foundation for the broad, successful scientific and engineering enterprise the U.S. boasts today.) New ideas, understandings and technologies spawned by research and development are just as essential to winning the war against terrorism.

As the President's Science Advisor Dr. John Marburger noted in testimony before the Science Committee, "This Administration understands that science and technology are major drivers of economic growth and important for securing the homeland and winning the war on terrorism." Department of Homeland Security (DHS) Undersecretary Charles McQueary echoed this sentiment at the same hearing, stating that "the nation's advantage in science and technology is key to securing the homeland."

SCIENCE COMMITTEE AGENDA

In the second session of the 108th Congress, the Science Committee's top objective will be to lead efforts to evaluate and consider the President's space exploration initiative. The Committee's views on the initiative will be embodied in reauthorization legislation for the National Aeronautics and Space Administration (NASA). The Committee will also emphasize oversight of some of the key programs the Committee has helped put into place, including the work of the DHS Science and Technology (S&T) Directorate; important interagency R&D activities such as nanotechnology, climate change research, networking and information technology, and cybersecurity; and Department of Energy (DOE) R&D activities at the Office of Science. The Committee will also work to strengthen funding and activities at the National Science Foundation (NSF) and the National Institute of Standards and Technology (NIST). With regard to these agencies, the Committee notes particular priorities of preserving the Math and Science Partnerships program at NSF and ensuring that NIST has adequate funding to fulfill new

responsibilities in areas such as the development of technical standards for voting machines.

OVERALL R&D FUNDING

Consistent with the President's overall FY05 budget request, the budget request for R&D primarily would increase funding for the Department of Defense (DOD) and DHS (7 and 15 percent, respectively). All other R&D receives an average increase of 2.3 percent. The R&D budget increases are almost entirely for development (8 percent), while basic and applied research are almost flat-funded (0.6 and 0.5 percent increases, respectively). The Committee believes the proposed funding for basic research is insufficient. Funding short-term development at the expense of longer-term basic and applied research is not advisable, and neglects those portions of R&D where government support is most crucial.

The Committee also believes that the budget must fully consider appropriate balances between defense and non-defense R&D spending and between biomedical and non-biomedical spending. At $69 and $29 billion, respectively, the R&D budgets of DOD and the National Institutes of Health (NIH) comprise 75 percent of the total R&D budget, including 93 percent of the FY05 increases (*Analytical Perspectives,* p. 59). While fully acknowledging the important contributions of these agencies, the Committee urges that similar attention be given to other important R&D agencies, such as NSF, DOE, and NIST.

INTERAGENCY ACTIVITIES

Presidential Initiatives

The Administration's budget highlights five "multi-agency R&D priorities" and provides a precise budget breakdown for three of them—work on networking and information technology, nanotechnology, and climate change. The Committee strongly endorses these initiatives, and agrees that they deserve priority in funding.

The Administration proposes a 2 percent increase from the FY04 estimated level for the interagency program on nanotechnology. This increase includes a 20 percent increase for nanotechnology programs at NSF, which is merited. Additional funds, beyond the administration's request, are needed for the nanotechnology programs at NIST and the DOE Office of Science.

The Administration proposes spending $2 billion for the interagency Climate Change Science Program, approximately the same as enacted in FY04. The Committee supports the proposal to dedicate $240 million to the interagency Climate Change Research Initiative, a 42 percent increase above the FY04 enacted level. This Initiative focuses on short-term results to support improved public debate and decision-making. However, the Committee notes that much of the increase for CCRI appears to reflect reclassification of ongoing research activities.

The Administration proposes a 1 percent decrease from the FY04 estimated level for the interagency program on Networking and Information Technology Research and Development (NITRD). This program includes important work on high-end computing and high-confidence software and systems, and the Committee believes that funding for work in this area should be raised, not lowered.

While cybersecurity R&D is not a formal Presidential initiative, significant effort is being put into programs in this area at a number of agencies. While the budget requests $76 million for cybersecurity R&D and education and training programs at NSF (up 19 percent) and $18.5 million for cybersecurity R&D at NIST (up 48 percent), this funding is still well below the levels authorized in the *Cyber Security Research and Development Act* (P.L. 107-305). In addition, within the DHS Science and Technology (S&T) Directorate, the FY05 budget requests only $18 million for cybersecurity R&D, the same level as in FY04. The Committee believes that increased funding for, and increased coordination of cybersecurity R&D programs are needed.

The Committee also endorses the two other multi-agency R&D initiatives, which relate to combating terrorism (discussed in the next section) and to hydrogen (discussed in the section on the Department of Energy).

RECOMMENDATIONS FOR AGENCIES

FULL COMMITTEE

Department of Homeland Security (DHS)

The Committee wrote the portion of the Homeland Security Act that created DHS's S&T Directorate. The Committee is pleased that the Administration has requested a 15 percent increase in funding for R&D in DHS.

Most of the requested R&D funding for DHS ($1.04 billion) is for the S&T Directorate, which receives a 14 percent increase. A significant part of the increase is directed toward operational expansion of the BioWatch system, which is designed to monitor major cities for biological agents. Funding for more basic research programs does not fare as well. The funding for University Programs decreases dramatically, from $69 million in FY04 to $30 million in FY05. The Committee is concerned that if DHS does not make and maintain investments in basic research, including research at universities and national laboratories, the next generation of homeland security technologies will not be available against the next generation of threats.

The FY05 budget request proposes to commence consolidation of the department's R&D programs into the S&T Directorate by transferring $24 million worth of R&D activities from the U. S. Coast Guard and from the Federal Air Marshal Service. The Committee is supportive of the consolidation, and looks forwarded to the remaining research programs in the Department being moved into the S&T Directorate.

SUBCOMMITTEE ON ENERGY

Department of Energy (DOE)

The Committee has jurisdiction over DOE's non-military national laboratories, civilian energy research, development, and demonstration programs, and commercial application of energy technology activities.

Office of Science

The Committee believes that the Administration's FY05 request for DOE's Office of Science, which funds 40 percent of the Nation's physical science research, is inadequate. The budget proposes funding the Office at $3.4 billion, a reduction of 2 percent. This is significantly less than the $4.2 billion included in the House-passed conference report for H.R.6, *The Energy Policy Act of 2003*.

The proposal also falls far short of the goal of the President's Council of Advisors on Science and Technology, which recommended in a 2002 report that the FY04 budget request should begin bringing funding for the physical sciences into parity with that of the life sciences. DOE's Office of Science is the largest federal supporter of the civilian physical sciences, a critical component of the federal research portfolio that has been dwarfed by support for biomedical research in recent years.

The Committee is particularly concerned about the future of user facilities and academic research funded by the Office of Science. In recent years, funding limitations have forced many user facilities to restrict the number of hours they are available to researchers, causing investments that have cost taxpayers billions to sit idle. This year's budget not only continues the problem, but may make it worse in future years. Included in the budget are preliminary design and long-lead acquisition for three new projects (the International Thermonuclear Experimental Reactor, a protein factory, and the Linac Coherent Light Source). The Committee is concerned that if work begins on these projects in such a constrained budgetary environment, either the construction of the facilities will be prolonged, raising their costs, or core research programs may have to be cut.

Over the last few years, the Committee has repeatedly expressed concern about the deterioration of many DOE facilities. To address this deterioration, the FY 05 budget proposes to reduce allocations for infrastructure and to allow third parties to build new facilities that the federal government will then lease. While this approach may be feasible in some instances, it is important that adequate safeguards be in place to ensure that private interests serve public needs rather than the other way around. Further, the Committee is concerned that this approach does not adequately address the ongoing infrastructure needs of DOE facilities.

Energy Supply R&D

The Committee is concerned that R&D related to energy efficiency and alternative sources of energy is underfunded, especially at a time of higher fuel prices. Energy efficiency and renewable research has been reduced by 1.3 percent since FY 01.

The Committee supports the President's initiative calling for America to lead the world in developing hydrogen-powered automobiles and the necessary fueling infrastructure to support them, although many details have not yet been determined. The Committee is pleased that the Administration has requested $228 million for hydrogen technology programs, a 28 percent increase over FY04 enacted levels.

The Committee is concerned, however, that the proposed increases in hydrogen programs come at the expense of much of the rest of the R&D funded by DOE's Energy Efficiency and Renewable Energy account. For example, biomass R&D, which is crucial to increasing our energy independence while helping American farmers, receives a significant cut.

The Committee is troubled by the Administration's diminished commitment to nuclear energy research, especially the Advanced Fuel Cycle Initiative (AFCI) and the Nuclear Energy Research Initiative (NERI). The AFCI develops technologies that can reduce the volume and long-term toxicity of high-level waste, which is critical to the responsible stewardship of spent nuclear fuel. NERI, which funds innovative, peer-reviewed nuclear research at universities, has been the source of new ideas for improving the safety and performance of nuclear energy. These technologies may also enhance national security by reducing the danger of proliferation of nuclear materials.

While the Committee continues to support the Clean Coal program with the requirements that were included in H.R. 6, the Committee has concerns about the FutureGen project, which is to be funded with rescinded Clean Coal funds. In particular, the Administration's request for $237 million for the FutureGen project includes language that would exempt the project from the basic good government provisions needed to control costs.

SUBCOMMITTEE ON ENVIRONMENT, TECHNOLOGY AND STANDARDS

Environmental Protection Agency (EPA)

EPA's Office of Research and Development (ORD) is responsible for 80 percent of EPA's R&D activities, and it receives the majority of funds available in the agency's Science and Technology (S&T) account. ORD serves a unique role in environmental R&D: it conducts basic and applied research that supports EPA's regulatory programs and investigates the next generation of environmental challenges. To meet these needs, ORD conducts intramural research at EPA's many laboratories and it supports extramural

research at colleges and universities through the Science to Achieve Results (STAR) grant program.

For FY05, the budget request includes $689 million for S&T at EPA, an 11.8 percent reduction. Much of this cut stems from a 35 percent reduction in funding for the STAR extramural grant program. This reduction—which would decrease available funding for ecological research by $22.2 million, pollution prevention research by $5 million, endocrine disruptor research by $4.7 million, and mercury research by $2 million — results from the STAR program's poor score in the Office of Management and Budget's Program Assessment Rating Tool (PART Review). The poor score is surprising in that it comes just a year after the program was endorsed by the National Research Council in its report, *The Measure of STAR*. The Committee plans to hold hearings shortly to review OMB's assessment of the STAR program, and will seek restoration of the STAR funds if the criticisms of the program seem unjustified.

The Committee is also troubled by the proposed elimination of ORD's building decontamination research program. EPA has been working closely with DHS and the Centers for Disease Control and Prevention to aid in the detection and removal of biological and chemical contaminants in the environment. EPA has brought expertise to the table that other agencies do not have. The budget neither explains why this program is eliminated nor indicates whether the $8.3 million currently spent on building decontamination research will be transferred to another agency to carry out this important work.

The Committee is pleased the budget includes funding for the STAR Fellowship program, which supports graduate student fellowships in environmental science. However, the Committee believes the program should be funded at $10 million, the level enacted in FY03 and FY04.

The Committee also supports the budget request for increased funding to improve computational toxicology, which helps reveal the sequence of events by which chemicals can cause adverse effects in humans, and the Integrated Risk Information System, which provides critical human health information that enables health-based decision-making.

Department of Commerce - National Oceanic and Atmospheric Administration (NOAA)

NOAA's activities include providing weather forecasts and warnings, charting the seas for navigation, developing guides for the use and protection of ocean and coastal resources, and performing research to improve understanding of marine, coastal and atmospheric environments. The Committee has jurisdiction over four of NOAA's five line offices—the National Ocean Service, the Office of Atmospheric and Oceanic Research, the National Environmental Satellite Data and Information Service, and the National Weather Service.

The FY05 budget request for NOAA is $3.4 billion, a decrease of $308 million (8.3 percent). Most of the reduction is due to the elimination of earmarks, and the Committee supports this overall level of funding for NOAA.

The Committee is pleased with the requested increase of $13.5 million for climate change research and observations. Most of the increase is to support the Climate Change Research Initiative, which focuses on priority areas such as ocean observations, aerosol research and carbon cycle research.

The Committee also supports the request of $898 million for satellite programs at NOAA. This request is a $71 million (8.6 percent) increase over the FY04 enacted level of $827 million. The increase is for procurement, acquisition, and construction of the next generation of weather satellites, and it is in line with the long-term budget plans for these satellite systems. The Committee remains concerned, however, that the most recent polar satellite budget plan, if enacted, could result in a gap in polar satellite coverage at the end of this decade. The plan proposes that the last of the old generation satellites be launched without having a new satellite available as a backup in the event of a launch failure. If such a loss were to occur, no replacement satellite would be available until the next scheduled launch date—a gap in coverage of up to 21 months. Polar weather satellites provide data for three- to seven-day weather forecasts, hurricane and storm tracking, and climate science observations. The Committee held a hearing about this problem last year and it is working with the General Accounting Office (GAO) to examine the costs and risks associated with NOAA's polar satellite program. To date, the cost of the entire program has risen from original estimates of $6.5 billion to the most recent estimate of $7.4 billion.

The Committee strongly supports NOAA's request for $27 million for satellite data product processing and distribution, and $26 million for satellite product development, readiness and application. The Committee is concerned about NOAA's current and future capability to utilize, manage, and store satellite and weather data critical for forecasting and research. These funding levels will ensure that our large investment in satellites is fully utilized with timely and useful satellite data products.

The Committee is pleased the Administration has requested an increase of $2.2 million over the FY04 enacted level of $5.3 million for the Space Environment Center. The Center, which predicts the effects of solar storms, is vital to our ability to mitigate damage to our telecommunications, aviation, and electricity industries during such storms.

Department of Commerce - Technology Administration

The bulk of the Technology Administration's funding goes to the National Institute of Standards and Technology (NIST), the nation's oldest federal laboratory, which has consistently provided high-quality research in a wide variety of fields, including homeland security, nanotechnology, health care, building science, and computer security. The budget request includes $422 million for the core NIST laboratory functions (the

Scientific and Technical Research and Services account, or STRS) in FY05 - an increase of about $84 million (according to updated NIST figures), or almost 25 percent. The Committee strongly supports this request, which is especially needed to restore steep funding cuts NIST's base programs sustained in FY04. The full increase is necessary to restore the cuts.

The proposed request must cover the cost-of-living increase for federal employees, the one-time costs associated with purchasing equipment for the new Advanced Measurement Laboratory (AML), the loss of internal NIST funding from the proposed elimination of the Advanced Technology Program (ATP), and the costs of laying off employees who worked on ATP. The entire remainder of the proposed increase would be needed to restore the cuts made in FY 04.

The request includes funding for a number of initiatives important to many sectors of our Nation's economy and security, including nanomanufacturing, cybersecurity, and standards development and testing for equipment for first responders and the military. The request could also enable NIST to undertake its responsibilities under the *Help America Vote Act* (HAVA) to help develop technical standards for voting equipment, although no funds have been explicitly requested for that purpose. NIST needs at least $2.8 million in both FY 04 and FY 05 to begin to carry out its vital responsibilities under HAVA. The Committee views the funding of NIST's activities under HAVA as a top priority.

The Committee supports the budget request of $33.7 million for NIST's construction account, which includes funding to complete the upgrades at the Central Utility Plant at NIST's laboratory in Boulder, Colorado. The Committee also is pleased that construction of the AML in Gaithersburg, Maryland will be completed on schedule. The Committee supports the $25 million requested for FY05 in the Research Support Account (part of the STRS account) for new scientific instruments that would make the AML fully operational. Funding for this equipment is critical to the nanomanufacturing initiative proposed for FY05, and it will ensure that full advantage can be taken on AML's world-class facilities.

The Committee is concerned that the $39 million request for the Manufacturing Extension Partnership (MEP) fails to restore the devastating 65 percent cut in FY04. MEP provides smaller manufacturers with technical assistance to become more competitive, and it has a proven track record; numerous studies bear out its contributions to the economy. The FY04 level of funding will result in a downsizing process (currently underway) that will close many MEP centers and potentially cripple the program. The proposed budget for FY05 would only reinforce this trend. The Committee believes that it will reduce the effectiveness of MEP at a time when it is most needed.

The Committee continues to support ATP and is disappointed that the Administration has included no funds for ATP in the FY05 request. The Committee supports funding the program at the FY04 enacted level ($169 million).

Department of Commerce - National Technical Information Service (NTIS)

The Committee looks forward to working with the Administration to keep NTIS functioning as a self-sustaining entity.

SUBCOMMITTEE ON RESEARCH

National Science Foundation (NSF)

The National Science Foundation (NSF) is the primary source of federal funding for non-medical basic research conducted at colleges and universities. NSF funds basic research across nearly all disciplines of science and engineering, making NSF-supported research integral to progress in national priority areas such as health care and national security, among others. In addition, NSF sponsors programs to improve K-12 and undergraduate education, and its fellowships and research assistantships support many graduate and post-doctoral students.

NSF continues to receive high marks from the Office of Management and Budget for the quality of its management and for the excellence of its programs. As in the FY04 budget request, NSF was awarded two green lights on the Executive Branch Management Scorecard. Also, in the past year, four NSF programs were examined using the Program Assessment Rating Tool (PART): Nanoscale Science and Engineering, Information Technology Research, Facilities, and Individuals (programs directed toward math, science, and engineering education and training of students at the K-12, undergraduate, and graduate levels). All received ratings of Effective (the highest rating).

The FY05 budget request for NSF is $5.75 billion, an increase of 3 percent, or $167 million over the FY04 level. This insufficient request is $1.6 billion below the funding level in the *National Science Foundation Authorization Act of 2002* (P.L. 107-368). The budget requests the largest percentage increases for personnel and administrative initiatives and for construction of major research facilities.

The Research and Related Activities (RRA) account, which contains the funds for most NSF research grants programs, receives a 4.7 percent increase. However, actual spending on research programs would increase by only 2.8 percent because the Administration transfers into the research account funds that would be used to close out the Math and Science Partnerships program (an education and human resources program).

While recognizing that budget realities may not allow Congress to fund NSF at the guidance level provided in the current authorization, the Committee still believes that significant increases for NSF's overall budget are warranted. Congress should provide as much funding as possible to strengthen support for core science and education programs, and priority areas such as information technology and nanoscale science and engineering research.

Education and Human Resources

The Committee strongly opposes the proposed cuts for programs in NSF's Education and Human Resources (EHR) account. The Committee is especially troubled by the proposal to eliminate the NSF's Math and Science Partnership Program. This program was specifically authorized as part of the *National Science Foundation Authorization Act of 2002*. The Committee strongly believes that NSF is the only federal agency with a proven record of selecting education projects that offer the best hope to narrow the achievement gap and raise student performance in math and science. Through its competitive, merit-based process, NSF is uniquely qualified to use its decades of experience in education research and evaluation to appraise grant proposals and to strengthen the link between research findings and classroom practice. The Partnerships program should be funded at the authorized level of $200 million.

The Committee also opposes proposed cuts in two other programs that were created in the 2002 Act. The Noyce Scholarship Program and the Tech Talent Program (referred to as the Science, Technology, Engineering and Mathematics Talent Expansion Program, or STEP) should be funded at their authorized levels of $20 million and $30 million, respectively.

United States Fire Administration (USFA)

The U.S. Fire Administration (USFA) was created in 1974 to aid localities in reducing the loss of life and property from fires and related emergencies. As an entity of the Federal Emergency Management Agency (FEMA), USFA was officially transferred into the Department of Homeland Security in March of 2003. Last November, the President signed Science Committee legislation reauthorizing USFA activities through FY 2008, including $63 million for FY05 (P.L. 108-169). The budget request does not specify a level of funding for USFA. USFA should remain a distinct entity within DHS.

From FY01 through FY03, USFA also administered the (separately authorized) Assistance to Firefighters Grant Program. This popular program provides direct assistance to local fire departments for training, purchase of equipment, and other purposes. In the FY 04 appropriations act for DHS, the program was transferred to the DHS Office of Domestic Preparedness (ODP). The FY05 budget request includes $500 million for the fire grant program at ODP. As the fire grant program authorization is due to expire this year, the Committee plans a comprehensive review of the program in preparation for reauthorization later this year. This review will include thorough consideration of which agency is most appropriate to administer the program, as well as an examination of the effectiveness of the program at improving first responder preparedness.

National Earthquake Hazards Reduction Program (NEHRP)

NEHRP is an interagency program that Congress created in 1977. It includes NSF, NIST, FEMA, and the U.S. Geological Survey (USGS). The program aims to reduce the loss of life and property from earthquakes by improving emergency response, increasing our understanding of earthquake risks, and improving earthquake engineering.

The President's overall FY05 request for NEHRP is $114.5 million, including $57.7, $46.5, $20.5, and $1.8 million, for NSF, USGS, FEMA, and NIST, respectively. With the exception of NSF NEHRP activities, which receive a 20 percent increase for earthquake engineering simulation research, these amounts are roughly flat compared to FY04 levels. The Committee remains concerned that NEHRP continues to operate without true interagency coordination, and has reported legislation, H.R. 2608, that seeks to address this problem. H.R. 2608 passed the House late last year and is awaiting action in the Senate. The Committee also notes its concern for the low funding request for the Advanced National Seismic System (ANSS), which has been continually funded at less than 10 percent of authorized levels.

SUBCOMMITTEE ON SPACE AND AERONAUTICS

National Aeronautics and Space Administration (NASA)

The budget request provides $16.244 billion for NASA in FY05, an increase of 5.6 percent, by far the largest percentage increase for any civilian science agency. The budget is shaped by the President's proposed space exploration initiative and constitutes, in many respects, a first down payment on the President's proposal to send humans back to the moon and eventually on to Mars "and beyond."

The Committee has just begun holding hearings on the President's initiative and does not yet have a position on it. Moreover, the Committee's evaluation of the proposed initiative has already highlighted many unanswered questions about its costs. As a result, the Committee cannot yet evaluate whether NASA's overall FY 05 budget request is appropriate, or too high or too low. Instead, in this document, the Committee will note some of the areas of concern in the FY 05 budget proposal, and in the budget that has been laid out for the four ensuing fiscal years. These comments are also informed by a NASA chart that projects spending out to 2020, by which time humans will have returned to the moon if the initiative unfolds as planned.

Under the President's plan, the Space Shuttle and International Space Station programs remain the centerpieces of NASA's human spaceflight program for the near term. Nearly half of NASA's FY05 budget is dedicated to these two programs.

It is unclear whether the FY05 budget for the Space Shuttle is adequate to return to flight. Recently, NASA announced that the Shuttle would not resume flying before March 2005 – a year later than NASA's original projections and about five months later than the most recent estimate. The Committee is pleased that NASA is not rushing the return to flight. But the delays highlight the inherent uncertainty about what tasks will need to be completed to return to flight and what expenses those tasks will entail.

The understandable delays in returning to flight necessarily raise concerns about whether NASA's schedule for completing construction of the Space Station are overly optimistic. The President's initiative assumes that Station construction will be completed around 2010, freeing up funds for other endeavors and avoiding an extremely costly recertification of the Shuttle. (The Columbia Accident Investigation Board said the Shuttle should not be flown after 2010 unless it were recertified.)

The Committee is also unable to evaluate the proposed $1.1 billion FY05 budget for Biological and Physical Research, most of which would be spent on the Space Station. Under the President's initiative, NASA is to reorient the Station research program to focus on the biological research needed to overcome the impediments that space presents to astronauts' long-term survival. NASA has just begun to develop that new research program, so it is impossible to know what it should cost.

The Committee also needs additional information to evaluate the $428 million FY05 budget request for the Crew Exploration Vehicle (CEV), the new vehicle NASA intends to design to transport humans on missions to the Space Station, the moon and beyond. The FY05 funding is the first installment on a development project that NASA estimates will cost $6.6 billion between FY05 and FY09 and another $8.4 billion by the time the CEV is ready to achieve its first flight with humans on-board in 2014.

NASA's proposed FY05 budget for Space Science is $4.1 billion, an increase of approximately 5 percent over FY04 levels. As part of the President's initiative, the FY05 budget for Space Science includes a new robotic program for lunar exploration. The FY05 budget also reflects the transfer of a major portion of Project Prometheus out of Space Science and into the new Exploration Systems account.

While the budget for Space Science appears to be adequate, the Committee is still reviewing the projects that will be deferred or eliminated to carry out the President's proposal. Of particular interest is the Joint Dark Energy Mission, which was to have been funded by NASA and DOE. The Committee is also concerned with NASA's decision to cancel future Hubble servicing missions. Any decision to reinstate Hubble servicing missions would likely require additional funding in the FY05 budget.

NASA's proposed FY05 budget for Earth Science is $1.4 billion, a decrease of nearly 3 percent from FY04 levels. The Committee believes that the budget request for these programs is inadequate to meet the pressing needs for better satellite data. The cuts, which are designed to help fund the exploration initiative, seem ill-timed when the Administration has announced a significant new global change research plan.

The Committee is also troubled by the limited funding the budget provides for NASA's Aeronautics program. The budget cuts the program by nearly 3 percent, down to less than $919 million for FY05. Aeronautics research has long been level funded, and it is especially disadvantaged as NASA's overhead costs of operating infrastructure fall disproportionately on this program.

Federal Aviation Administration (FAA)

The Committee continues to be disappointed with the tepid support for Federal Aviation Administration research and development activities. The budget request of $237.4 million represents a slight decrease from FY04 enacted levels, and is significantly less than the $356.2 million authorized by the *Vision 100 – Century of Aviation Reauthorization Act* (P.L. 108-176), signed by the President on December 12, 2003.

The FAA, together with other federal departments and agencies, is embarking on an extensive, long-term project to develop a next generation air traffic management system. The Committee believes this activity, coupled with ongoing research, demands greater investment.

The FY05 request for the FAA's Office of the Associate Administrator for Commercial Space Transportation (AST) is $11.9 million. The Committee is optimistic that eventual passage of legislation (H.R. 3752) authorizing AST to develop regulations for commercial human space flight will result in the development of a robust and profitable new industry. The Committee, however, remains concerned that AST is continuing to develop burdensome and costly launch regulations that will undermine the competitiveness of the existing U.S. expendable launch industry.

Department of Commerce—Office of Space Commercialization

The Committee urges continued support for this Office. The Office has played a useful role in promoting the commercial space industry and in removing unnecessary impediments to its development. The Office needs to take a stronger role in legal and policy discussions within the government and be more aggressive in assisting U.S. commercial space providers in their efforts to conduct business with the government.