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U.S. Department of Energy Requests \$4.1 Billion Investment As Part of the American Competitiveness Initiative

Funding to support basic scientific research

WASHINGTON, DC – As part of the American Competitiveness Initiative, U.S. Secretary of Energy Samuel W. Bodman today announced that the Fiscal Year (FY) 2007 budget requests \$4.1 billion for the Department of Energy's (DOE) Office of Science, a \$505 million (14.1%) increase over FY 2006 funding. This budget puts DOE's Office of Science on the path to doubling its budget by FY 2016. The increased funding represents a major contribution to our national investment in basic science research - research critical to ensuring American competitiveness in the world, and to enhancing our energy security in the years ahead.

"This is an historic step and will change the future of science in this country," Secretary Bodman said. "Continued American leadership in science is critical to our ability to innovate and grow. These funds will also provide new educational and training opportunities that will give the next generation of scientists, teachers, and engineers the tools they need to succeed."

As part of the Bush Administration's broader effort to help keep America at the forefront of scientific innovation and development, this funding expands key programs that promote and advance basic scientific research that supports and strengthens DOE's energy and national security goals. The FY 2007 budget request makes bold investments to improve America's energy security while protecting our environment, puts policies in place that foster continued economic growth, spurs scientific innovation and discovery, and addresses the threat of nuclear proliferation.

"The American Competitiveness Initiative will continue America's preeminence in science, and will ignite innovation to keep America competitive," said Dr. Raymond Orbach, Director of the Office of Science. "This funding will be coupled with efforts to make much more effective use of our national laboratories for research and development leadership in the physical sciences."

Basic Energy Sciences Program (\$1,421.0 million)

This is a \$286.4 million increase over FY 2006. This program conducts research and builds and operates user facilities to expand scientific foundations for new and improved energy technologies, to advance materials science, and to understand and mitigate the environmental impacts of energy use. A large portion of this request enables the Office of Science to continue design and construction of the Linac Coherent Light Source (\$105.9 million total), the world's first x-ray free electron laser, which will make it possible for scientists to watch matter in action, one molecule at a time, and to witness chemical reactions at the microscopic level in real time. The structural knowledge obtained with x-rays holds the key to understanding the properties of matter such as mechanical strength, magnetism, transport of electrical currents and light, energy storage, and catalysis. Likewise, in biology much of what we know about structure and function on a molecular level comes from x-ray studies. Such knowledge forms the basis for the development of new materials and molecules and the enhancement of their properties, which in turn will advance technology, fuel our economy, and improve our quality of life.

Funding increases will also support nanoscale science research (+\$51 million); the Hydrogen Fuel Initiative (+\$17.5 million); the first full year of operations of the Spallation Neutron Source at the Oak Ridge National Laboratory (+\$99.7million); and provides research and development (R&D) and project engineering design for the National Synchrotron Light Source II project (+\$45 million).

Biological and Environmental Research (\$510.3 million)

This is a \$54.6 million increase over our FY 2006 request. This program includes increases for several high visibility activities. The microbe based Genomics GTL program research request increases by \$49 million over the FY 2006 Appropriation for additional research on imagining and characterization of complex microbial communities for energy and environmental applications, including hydrogen production. The Human Genome program increases by \$11.7 million to support enhanced operations at the joint Genome Institute. Funding for Medical Applications research remains level.

High Energy Physics Program (\$775.1 million)

This is a \$58.4 million increase over FY 2006. This funding for grants and full experimental facility operations will be used to further explore basic research to explore the laws of nature governing the most basic constituents of matter and the forces binding them. These are fundamental principles at the heart of physics and the physical sciences. Project engineering and design funding of \$10.3 million is requested for the new Electron Neutrino Appearance project.

Nuclear Physics Program (\$454.1 million)

This is an \$87 million increase over FY 2006. This funding supports research to provide new insights and knowledge of the structure and interaction of atomic nuclei and the primary forces of particles of nature in nuclear matter. The funding increase restores operations at both the Thomas Jefferson National Accelerator Facility (TJNAF) and the Relativistic Heavy Ion Collider (RHIC). In addition, new funding is requested for a TJNAF power upgrade and a new injector for RHIC.

Fusion Energy Sciences Program (\$319.0 million)

This is a \$31.3 million increase over FY 2006. This will support a national research effort to advance plasma science, fusion science, and technology needed for an economical and environmentally safe fusion energy source. A key portion of this budget has been allocated to participation in the second year of the ITER project (\$60.0 million total), an international fusion experimental reactor, and, if successful, the critical next step on the path toward harnessing the energy of nuclear fusion to generate electricity to heat homes and fuel America's economy. The funding increase supports full participation in ITER, and the balance of the Fusion program is maintained at near FY 2006 levels.

Advanced Scientific Computing Research Program (\$318.7 million)

This is an \$84.0 million increase over FY 2006. This program conducts mathematics and computing research, and delivers hi-tech computational and networking capabilities to scientists nationwide. The objective is to provide a pathway to a point when computers will be so powerful that researchers will be able to attack a wide range of previously impossible scientific problems through modeling and simulation. Such developments will allow the U.S. to maintain leadership in this strategic area and accelerate innovation, saving unprecedented amounts in product development costs and giving the U.S. economy a myriad of competitive advantages.

Workforce Development for Teachers and Scientists Program (\$11.0 million)

This is a \$3.8 million increase over FY 2006. This funding will provide continued education opportunities to America's students and teachers of science, technology, engineering and mathematics.

DOE's Office of Science is the single largest supporter of basic research in the physical sciences in the nation and helps ensure U.S. world leadership across a broad range of scientific disciplines. The Office of Science supports a diverse portfolio of research at more than 300 colleges and universities nationwide, manages ten world-class national laboratories with unmatched capabilities for solving complex interdisciplinary scientific problems, and builds and operates the world's finest suite of scientific facilities and instruments used annually by more than 19,000 researchers to extend the frontiers of all areas of science.

For more information, visit: <http://www.eere.energy.gov/>

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