

## ENERGY SCIENCES COALITION FY 2006 Funding Statement

### **Support a \$250 million increase for the Department of Energy (DOE) Office of Science**

ESC supports FY 2006 funding for the Department of Energy (DOE) Office of Science of \$3.85 billion, \$250 million or 7 percent above the FY 2005 funding level. This level of funding would allow the Office of Science to move forward with the tremendous scientific opportunities outlined in its strategic and 20-year scientific facilities plans. ESC believes that this request is reasonable and necessary to keep United States science and engineering at the forefront of global research and development in the physical sciences. ESC is concerned that if the President's proposed 3.8 percent budget cut is enacted, the Office of Science will be forced to significantly reduce funding for its core research programs and substantially scale back operating times for its many user facilities -- which would mean that the U.S. would be cutting back its investments in critical areas of science while other nations are increasing theirs.

### **7-percent funding increase is critical**

A 7 percent increase for the DOE Office of Science represents the minimum amount the Office of Science needs to begin implementing its strategic and 20-year plans. ESC believes that this additional funding should be divided as follows:

- *One-third to maintain and strengthen DOE's core research programs, including those at universities;*
- *One-third to ensure efficient utilization of existing equipment and facilities; and,*
- *One-third to develop and construct the next-generation facilities necessary to maintain U.S. preeminence in scientific research.*

### **DOE has already developed plans to spend additional funds responsibly**

Over the past two years, the Department of Energy has developed three disciplined and thoughtful reports which provide a clear rationale for why additional funding for DOE science is warranted. These reports also establish a roadmap for how additional funds should be spent. Those documents are:

- Critical Choices: Science, Energy, and Security – Final Report of the Secretary of Energy Advisory Board's Task Force on the Future of Science Programs at the Department of Energy;
- Office of Science Strategic Plan; and,
- Facilities for the Future of Science: A Twenty-Year Outlook

The plans outlined by these reports were created with substantial input from the scientific community. Universities, scientific associations, and others embraced the recommendations and vision put forward.

### **Decades of underfunding are eroding the U.S. physical science infrastructure**

Despite the increase in appropriated funds for FY05, it is clear from DOE's own reports and other reports, including an October 2002 President's Council of Advisors on Science and Technology (PCAST) report, "Assessing the U.S. R&D Investment," the primary source of federal support for the physical sciences, the Office of Science remains significantly underfunded. If additional funds are not provided to the Office, our National labs will be forced to continue to defer maintenance and deteriorate; our best and brightest students will choose not to pursue careers in math, science, and engineering; and, innovation at our companies will suffer. On the other hand, a strong investment in science at the Department of Energy will help secure our nation's nuclear stockpiles; protect our national and economic security; and, spur the development and promotion of diverse, robust, and affordable energy supplies. The fundamental physical sciences research supported by the Office of Science is a long-term investment that is absolutely vital if we are to have the national capabilities necessary to overcome future challenges to our security, health, and economy.

### **Thank you to Congress for the FY 2005 Funding Increase to the DOE Office of Science**

In a very difficult budget and appropriations cycle, we deeply appreciate that Congress made the wise decision to increase funding for the Department of Energy's Office of Science in the Fiscal Year 2005 appropriations. The 3.0% increase in funding over FY2004 provided by the Congress will allow the thousands of researchers working in the physical sciences and engineering supported by the Office of Science to continue their important work in areas such as nanotechnology, high-end computing, plasma science, and particle physics. It is critical to maintain and strengthen the Office of Science in FY2006 and beyond.

**ENERGY SCIENCES COALITION**  
**Strong Support for the DOE Office of Science is Critical to the Nation**

**DOE Plays a Critical Role in Advancing U.S. Science**

DOE is the leading source of federal funds and facilities for research in the physical sciences, providing 42 percent of the federal investment in these disciplines. In subfields such as high-energy and nuclear physics, nuclear medicine, heavy-element chemistry, plasma physics and magnetic fusion and catalysis, DOE is the primary government sponsor. DOE also ranks high among federal agencies in overall support for research in computer science and engineering, and sponsors significant research and user facilities for the life and environmental sciences. DOE and its predecessor agencies have supported more than 65 Nobel laureates.

**DOE and Its User Facilities are a Unique Scientific Resource**

DOE's significant investment in major user facilities located at universities and national laboratories sets it apart from other research agencies. These facilities include large particle accelerators, experimental reactors, high-precision instruments, synchrotrons, massively parallel computers and high-resolution microscopes. More than 19,000 researchers use DOE's scientific facilities every year, nearly half of who are university faculty members and students. Were it not for DOE, these vital scientific facilities would not exist in the U.S.

**DOE-Funded Research is Advancing Scientific Frontiers and Improving Our Quality of Life**

Recent advances funded by the DOE Office of Science include the Nobel Prize-winning discovery of a new form of carbon, non-invasive detection of cancers and other diseases, improved computer models for understanding global climate change and new insights into the fundamental nature of matter and energy. The DOE Office of Science – not the National Institutes of Health – was the first federal agency to fund the Human Genome Project.

**DOE Provides Crucial Support for University Research and Students**

DOE directly supports the research of about 23,500 PhDs, postdocs and graduate students. Faculty and students also benefit substantially from their participation in research performed at the Department of Energy's national laboratories. DOE-funded research and education play a key role in strengthening the nation's scientific knowledge base and preparing the next generation of scientists and engineers.