The Association of American Universities (AAU) urges House and Senate appropriators to provide $7.5 million for the Department of Energy (DOE) Office of Science Graduate Fellowship Program in FY12. This program is consistent with the DOE Protecting America’s Competitive Edge (PACE) graduate fellowship program authorized in the America COMPETES Act of 2007. Without this $2.5 million increase over FY10 and FY11 funding, the fellowship program will be unable to fund a new cohort of DOE fellows, placing in jeopardy the future of the program. The Senate Energy and Water Appropriations Subcommittee approved bill includes the increase, while the House-passed version of the bill does not.

Issue

Without the $2.5 million increase for the program that was provided by the Senate subcommittee, the DOE fellowship program will be able to provide support only for the current FY 2010 cohort of fellows. No new money was provided to the fellowship program in FY 2011, so already a year has passed where a new cohort of DOE fellows was not awarded. The additional funding is needed to support both the current fellows and to conduct a competition for a new cohort in FY12.

Background

The Office of Science first initiated the DOE Office of Science Graduate Fellowship Program in FY10 with an initial cohort of 150 graduate students. This included 80 fellowships supported by $12.5 million provided in the American Recovery and Reinvestment Act (ARRA), and 70 students supported by $5 million provided by Congress in the FY10 Energy and Water Development Appropriations bill. The program’s goal is to encourage talented U.S. citizens to pursue research-focused graduate studies in areas of basic research important to DOE’s missions.

The $12.5 million in ARRA funding is being used to support 80 fellows for the entire duration of their three-year fellowships. The additional 70 fellows have been supported by $5 million in annual appropriations from the FY10 and FY11 Energy and Water Development Bills. To allow the latter group of fellows to complete their full three-year fellowships, $5 million is needed in the FY12 Energy and Water Development Appropriations Bill. No new funding for the fellowship program was provided in FY 2011 which meant that a new cohort of fellows could not be brought into the program.

DOE requested $16.1 million for the fellowship program in FY12. This was intended to support both the existing cohort of fellows through the completion of their three-year fellowships and to allow for 150 new fellowship awards to be made this fiscal year. If funding for the program in FY12 is not above $5 million—which would only be enough to support the final year for the 70 non-ARRA funded fellows—no new fellowship awards can be made, placing the future of the program in jeopardy. In order for the DOE program to be effective, new fellowship awards must be made on an annual basis. This will require a commitment by Congress to ramp up funding over a three-year period until it reaches the steady-state level needed to sustain a continuing round of three-year fellowship awards.
Justification for the DOE Office of Science Graduate Fellowship Program

It is imperative that mission-specific scientific departments and agencies like DOE support the development of their future workforce and not rely on the National Science Foundation (NSF) to take up this task. Other mission agencies, such as the Department of Defense, the National Institutes of Health, and NASA support major fellowship programs aimed at fulfilling workforce needs relating to their specific missions.

Prior to the creation of the DOE Graduate Fellowship Program, the Department had no coordinated program specifically designed to meet the nation’s long-term workforce needs related to DOE’s missions in energy, environmental research, and scientific discovery. A 2008 NSF survey found that, of the 2,235 post-doctoral students working at DOE national laboratories, only 889 (40%) were U.S. citizens. This confirmed recent studies by the National Academies and other organizations that found the U.S. is falling behind other nations in the production of highly qualified technical workers in the energy field. The DOE Office of Science Graduate Fellowship Program was designed to help remedy this situation by encouraging more U.S. citizens to pursue and obtain graduate degrees in fields critical to the Department’s missions. This is consistent with goals outlined in the America COMPETES Act, which specifically called for the creation of a new DOE Graduate Fellowship Program. Calls for support for additional graduate fellowships were also contained in the seminal National Academies Report, “Rising Above the Gathering Storm.”

Fellowship Program Goals and Objectives
DOE fellowship awards target students interested in pursuing graduate degrees in disciplines such as physics, chemistry, biology, mathematics, engineering, and computer and environmental sciences, which are of specific interest to the Department and its national laboratories. By enabling DOE fellows to work with researchers at the Office of Science and DOE national laboratories, the Department aims to train students who could be recruited to fill a significant number of scientific and technical positions at national laboratories that are expected to be vacated by retiring scientists and engineers over the course of the next 5-10 years.

Program Criteria
Applicants must be U.S. citizens pursing graduate studies at U.S.-accredited colleges or universities. Awards are competitively selected on the basis of a review of applications using established merit review criteria.

Support Levels
The fellowship provides up to three years of support ($50,500 per year) for each student, including a stipend for tuition and fees; an annual stipend for living expenses; and a research stipend that can be used for costs associated with a student’s research, travel to conferences, and use of DOE scientific facilities.

Program Evaluation
Program evaluation will include pre- and post-surveys of students, as well as longitudinal studies that determine whether students continue to pursue careers in scientific and technical fields vital to DOE’s missions.

For more information on the DOE Graduate Fellowship Program, please visit http://scgf.orau.gov.