

*Nuclear Energy Research  
Advisory Committee*



March 7, 2006

The Honorable Samuel W. Bodman, Secretary  
U.S. Department of Energy  
Washington, D.C. 20585

Dear Secretary Bodman:

Nuclear engineering has never been more important to our nation and the U.S. Department of Energy's mission than it is now. We confront challenges of defense from terrorism, such as the nuclear attribution program, a secure supply of independent, emissions-free energy, prevention of nuclear proliferation, and the maintenance of a safe but effective nuclear deterrent, in all of which the discipline of Nuclear Engineering has a leading role.

Therefore, the Nuclear Energy Research Advisory Committee (NERAC) is deeply concerned about the DOE budget request for the University Reactor Fuel Assistance and Support Program for FY 2007. The elimination of the program budget puts nuclear engineering educational programs at risk.

We request that you strongly support university nuclear science and engineering within the DOE Office of Nuclear Energy, Science and Technology (NE), and reestablish its full funding at \$27 million within the NE budget. This program provides important support for university programs, which have suffered substantial losses in faculty and graduate students over the past decade, that produce the critical expertise our Nation needs. It also directly supports the workforce and research infrastructure at DOE national laboratories in such areas as basic nuclear science and engineering, materials science, waste management, nuclear hydrogen production, isotopes for medical and industrial applications, medical therapy, naval nuclear propulsion, nuclear defense programs and advanced nuclear reactors and their associated fuel cycles including non-proliferation.

This University Reactor Fuel Assistance and Support Program has been an important factor in:

- Providing fellowships for graduate students, who are required to participate in DOE mission-driven activities, and scholarships for undergraduate students;
- Developing a diverse workforce by supporting nuclear engineering education efforts at Historically Black Universities and other Minority Serving Institutions;

- Providing research funding for graduate students and faculty in basic research in nuclear science and engineering via the Nuclear Engineering Educational Research program and the Radiochemistry Education Research Award;
- Providing infrastructure support for the university research and training reactors (URR) via the Innovations in Nuclear Infrastructure and Education program (INIE) and URR fuel assistance.

DOE funding (the National Science Foundation does not fund nuclear-related programs) has been critical in stemming the tide of nuclear engineering department closures and university research reactor shutdowns. The NERAC report on nuclear science and engineering programs (NERAC Blue Ribbon Panel Report, Corradini et al, 2000) highlighted the near-crisis status of these programs, noting that over the previous two decades, both the number of nuclear science and engineering programs and the number of university research reactors had decreased significantly.

Support for student aid, infrastructure and basic research through this funding has been a catalyst for the reversal of these downward trends in nuclear engineering educational programs and URRs, and sustaining continued growth in recent years. The DOE funding also has leveraged substantial additional support by industry and government.

Without this support, the nation's nuclear engineering departments and programs will be unable to sustain enrollment of graduate students and recruit top-notch undergraduates in fields related to nuclear energy production. Elimination of basic research and infrastructure support is certain to diminish nuclear engineering faculty support and graduate programs at the very time they will be expected to support national security needs as well as the rebirth of nuclear power in this country.

Continued efforts in encouraging nuclear science and engineering also are needed to provide "human capital" to lead the national laboratories, utilities, private companies, government, and universities to help guarantee our national security, as well as the Nation's secure future energy sources, and to enhance scientific, medical, and industrial applications of nuclear science and technology.

I am very appreciative of your leadership and grateful for your attention to this important issue.

Sincerely,



William F. Martin, Chairman  
Nuclear Energy Research Advisory  
Committee

cc:

The Honorable Josh Bolton, Director  
Office of Management and Budget

The Honorable John H. Marburger, III, Director  
Office of Science and Technology Policy