

RE-ENERGYSE
(Regaining our Energy Science and Engineering Edge)

Funding Profile by Subprogram

(dollars in thousands)

	FY 2009 Current Recovery Act Appropriation	FY 2009 Current Appropriation	FY 2010 Current Appropriation	FY 2011 Request
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RE-ENERGYSE	0	0	0	5,000
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Mission

The mission of RE-ENERGYSE (Regaining our Energy Science and Engineering Edge) is to provide the education and training necessary to build a highly skilled U.S. clean energy workforce dedicated to solving the world’s greatest energy challenges.^a

Benefits

RE-ENERGYSE supports scientific discovery and innovation at universities across the United States. This program will provide important educational support to bolster nuclear engineering and science programs at U.S. universities, which supports continued use of nuclear power. A robust nuclear industry and infrastructure will result in multiple benefits for our Nation: clean, secure energy supply and lower greenhouse-gas emissions.

Annual Performance Results and Targets

RE-ENERGYSE contributes to the Secretary’s Goal of *Innovation: Lead the World in Science, Technology, and Engineering* and to the National Nuclear Infrastructure GPRA Unit Program Goal. RE-ENERGYSE supports university nuclear engineering programs through scholarships and fellowships. These fellowships will complement existing Federal efforts and will help ensure that the next generation of scientists and engineers are available to support existing and future nuclear energy generation capacity and provide necessary innovation.

Means and Strategies

RE-ENERGYZE will use various means and strategies to achieve its GRPA Unit Program Goal. However, various external factors may impact the ability to achieve these goals. The program also performs collaborative activities to help meet its goals.

^a In FY 2011, the Office of Nuclear Energy (NE) will provide funds through RE-ENERGYSE for scholarships and fellowships. This activity will be coordinated with RE-ENERGYSE activities funded within the Office of Energy Efficiency and Renewable Energy (EERE). NE and EERE funds are requested in separate accounts to be consistent with appropriated intent; RE-ENERGYSE funds requested within NE will only support nuclear technology education.

The Department will implement the following means:

- Provide scholarships and fellowships to support nuclear engineering university programs through RE-ENERGYSE.

The Department will implement the following strategies:

- Strategically plan and implement activities by coordinating with experts in education, the Department of Energy's (DOE) Office of Science, the Department of Labor, the Department of Education, the National Science Foundation (NSF), and the American Academy of Community Colleges, to ensure that this program fills educational gaps and does not duplicate efforts;
- Leverage the capacity of universities, the DOE National Laboratories, educational foundations, and industry to offer educational and research opportunities that will make a critical difference in informing and inspiring students to pursue careers in clean energy;
- Reach out broadly to universities, community colleges, and other relevant institutions to encourage widespread involvement of diverse communities, as well as constructive competition to stimulate the development of outstanding programs;
- Develop the outreach infrastructure necessary to communicate and disseminate curricula and other programs materials and importantly enable collaboration and feedback;
- Issue competitive solicitations to ensure that high quality institutions have the means and interest to create and sustain education and training efforts;
- Dedicate up to 10 percent of each subprogram for metric driven program evaluation activities and peer reviews;
- Create energy-specific materials at the school grade K-12 levels to engage, excite, and educate;
- Provide direct channels feeding energy-accredited and up-to-date materials into K-12 schools and communities; and
- Attract qualified candidates to competitive higher education programs.

These strategies will result in efficient and effective management of the program, thus putting the taxpayers' dollars to more productive use.

In carrying out the program's mission, the program performs the following collaborative activities:

- Work closely with RE-ENERGYSE to implement the means and strategies and ensure a well coordinated, efficient, effective program.

Validation and Verification

The NE conducts various internal and external reviews and audits to validate and verify program performance. Periodic program reviews evaluate progress against established plans. NE holds monthly, quarterly, semi-annual, and annual reviews, consistent with program management plans and project baselines, to ensure technical progress, cost, and schedule adherence, and responsiveness to program requirements. Internally, NE provides continual management and oversight of its Research and Development (R&D) and vital infrastructure programs. Examples of NE's R&D programs include Reactor Concepts RD&D and Fuel Cycle R&D. NE infrastructure programs, such as the Radiological Facilities Management program and the Idaho Facilities Management program, are managed using similar oversight techniques. NE will work closely with RE-ENERGYSE verify and validate the impacts of the program through a variety of means, such as assembling an expert panel to review and accredit program materials, using effective performance and effectiveness evaluation processes, and conducting workshops to inform priorities. A wide range of education and science organizations (e.g.,

NSF, National Center for Education Statistics, National Science Board, Department of Education, and National Science Teachers Association) will be consulted to provide data for the development of program priorities.

RE-ENERGYSE

Funding Schedule by Activity

(dollars in thousands)

	FY 2009	FY 2010	FY 2011
RE-ENERGYSE	0	0	5,000

Benefits

NE is providing funds for scholarships and fellowships through RE-ENERGYSE to support the development of future nuclear researchers, scientists, and engineers. Strengthened university nuclear programs will help support the Nation’s current and future nuclear energy needs.

Detailed Justification

(dollars in thousands)

	FY 2009	FY 2010	FY 2011
RE-ENERGYSE	0	0	5,000
In FY 2011, the RE-ENERGYSE program plans to fund approximately 88 one-year scholarships and 30 three-year fellowships to students enrolled in nuclear energy-related fields of study of disciplines at U.S. universities and two-year colleges.			
Total, RE-ENERGYSE	0	0	5,000

Explanation of Funding Changes

FY 2011 vs. FY 2010 (\$000)

RE-ENERGYSE

In FY 2011, new funding is being requested for this program to support the Department’s broad educational effort that cuts across DOE programs to coordinate, standardize, and evaluate Science, Technology, Engineering, and Mathematics education programs.

Total Funding Change, RE-ENERGYSE

+5,000
+5,000