
NUCLEAR ENERGY RESEARCH INITIATIVE

I. Introduction

The United States Department of Energy (DOE) created the Nuclear Energy Research Initiative (NERI) in 1998 in response to recommendations provided by the President's Committee of Advisors on Science and Technology (PCAST). The purpose of NERI is to sponsor research and development (R&D) in the nuclear energy sciences to address the principal barriers to the future use of nuclear energy in the United States. NERI will also help preserve the nuclear science and engineering infrastructure within the Nation's universities, laboratories, and industry, and will advance the development of nuclear energy technology, enabling the United States to maintain a competitive position worldwide. It is the position of DOE that funding research at the Nation's research institutions and corporations will create solutions to important nuclear issues and that a new potential for nuclear energy will emerge in the United States. The DOE Office of Nuclear Energy, Science and Technology (NE) funds and administers the NERI program.

The Nuclear Energy Research Initiative Annual Report serves to inform interested parties of progress made in NERI on a programmatic level as well as research progress

made in individual NERI projects. Section 2 of this report provides more background on the creation and implementation of NERI, on the NERI mission and its goals and objectives, on the focus areas for NERI research, and on the management of the program. Section 3 provides some brief summaries of NERI research efforts and highlights the major accomplishments of the NERI program.

Sections 4 through 7 provide summary project status reports by research focus area. These status reports discuss NERI projects that have advanced sufficiently to enable DOE to report on their progress. Research objectives, progress made over the last two years since the initial report, and activities planned for the next year are described for each project. Also included in these chapters are the corresponding abstracts for the latest FY 2002 NERI research awards. Project numbers are designated by the fiscal year (FY) in which their proposal is submitted and the award was made. However, the bulk of the first year's research effort is typically completed in the subsequent fiscal year. At the end of the document there is an Index of NERI Projects sequentially ordered by FY and project number.