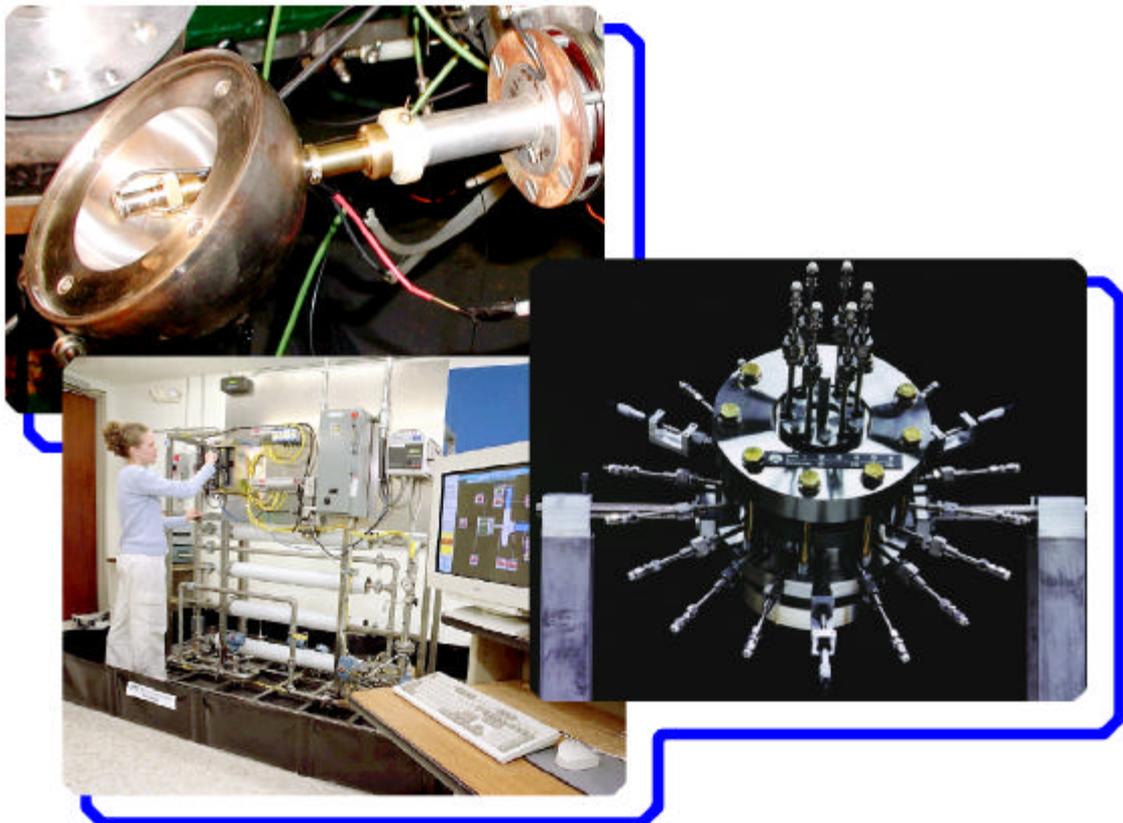


Nuclear Energy Research Initiative



**Annual Report
2001**

NUCLEAR ENERGY RESEARCH INITIATIVE

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NUCLEAR ENERGY RESEARCH INITIATIVE

FOREWORD

The Nuclear Energy Research Initiative (NERI) began in fiscal year 1999 as the core of a new, restructured Federal effort to develop advanced nuclear energy. NERI grew out of the recommendations made in the November 1997 report by the President's Committee of Advisors on Science and Technology on Federal energy research and development. Its purpose is to apply the successful methodologies to select quality research projects that have been used for years by scientific agencies such as the National Science Foundation. Using independent, expert peer-review to competitively select project proposals from a wide range of researchers in academia, national laboratories, and industry.

Adapting this methodology to the more applied nature of nuclear energy technology development has been a challenging and rewarding experience for the Department. Excellent research covering many areas of science and technology that might never have been conducted using more traditional approaches to funding research is now underway, adding significantly to the body of knowledge. NERI has supported innovative solutions to the key issues facing the generation of electric energy using nuclear fission—namely, proliferation, safety, waste generation and disposal, and economics. NERI has pointed the way for efforts such as the Generation IV Nuclear Energy Systems initiative and spawned a significant increase in international cooperation. Furthermore, NERI has helped maintain the Nation's nuclear science and engineering infrastructure.

This Annual Report summarizes research progress based on information submitted by the principal investigators for each of the NERI projects initiated in FY1999. Also included in this document are the abstracts for the FY2000 NERI research awards. This report is a first step in disseminating the results of NERI research to the wide R&D community to spur yet more innovation to assure a bright future for nuclear energy in the United States and the world.



William Magwood IV, Director
Office of Nuclear Energy, Science and Technology

NUCLEAR ENERGY RESEARCH INITIATIVE

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