

Office of Energy Research

Notice 96-05

Research for Improving Vehicular Transportation and Reducing Energy Consumption and Pollution from Manufacturing Processes

DEPARTMENT OF ENERGY

Energy Research Financial Assistance Program Notice 96-05; Research for Improving Vehicular Transportation and Reducing Energy Consumption and Pollution from Manufacturing Processes

AGENCY: U.S. Department of Energy (DOE)

ACTION: Notice inviting grant applications

SUMMARY: The U. S. Department of Energy (DOE), hereby announces interest in receiving grant applications for performance of basic and applied research to support two important, long-term national objectives: 1) improving vehicular transportation, and 2) reducing energy consumption and pollution from energy and pollution intensive manufacturing processes. Within the DOE, the Office of Energy Research interests are in support of basic research and the Office of Energy Efficiency and Renewable Energy interests are in support of applied research. Each component within the Department of Energy will use its own funding authorities and appropriations to administer funding in support of this project.

DATES: Potential applicants are strongly encouraged to submit a brief preapplication. All preapplications, referencing Program Notice 96-05, should be received by DOE by 4:30 P.M. E.S.T., March 1, 1996. A response discussing the potential program relevance of a formal application generally will be communicated to the applicant within 30 days of receipt. The deadline for receipt of formal applications is 4:30 P.M., E.D.T., May 1, 1996, to be accepted for merit review and to permit timely consideration for award in fiscal year 1996.

ADDRESSES: All preapplications, referencing Program Notice 96-05, should be sent to Dr. Walter M. Polansky, Office of Computational and Technology Research, ER-33 (GTN), Office of Energy Research, U.S. Department of Energy, 19901 Germantown Road, Germantown, MD 20874-1290.

After receiving notification concerning successful preapplications, applicants may prepare formal applications and send them to: U.S. Department of Energy, Office of Energy Research, Grants and Contracts Division, ER-64, 19901 Germantown Road, Germantown, Maryland 20874-1290, Attn: Program Notice 96-05. The above address for formal applications must be used when submitting formal applications by U.S. Postal Service Express Mail, any commercial mail delivery service, or when hand carried by the applicant.

FOR FURTHER INFORMATION CONTACT: Dr. Walter M. Polansky, Office of Computational and Technology Research, ER-33 (GTN), Office of Energy Research, U.S. Department of Energy, 19901 Germantown Road, Germantown, MD 20874-1290, (301) 903-5995.

SUPPLEMENTARY INFORMATION: DOE encourages submission of applications to conduct high-quality research on the fundamental issues that will underpin future vehicular technologies and conversion of energy and pollution intensive industrial processes to more environmentally sound and energy efficient processes. Applications received by DOE under their normal competitive application mechanisms may also be deemed appropriate for consideration under this announcement and may be funded under this program. It is anticipated that the results of the research will be published in the peer-reviewed, archival scientific literature.

Vehicular Transportation: Basic research in vehicle transportation technologies will be needed to move beyond immediate regulatory and technology goals to meet future demands for conserving natural resources, for safety, and for minimizing adverse environmental consequences. In a workshop held in January, 1995, and jointly sponsored by NSF and DOE, basic research needs for future vehicular technologies were identified and discussed. Areas of frontier research of particular interest to NSF are, for example, modeling and simulation of energy processes, fundamental understanding of surfaces and interfaces, relevant nano-science, energy relevant new materials, advances in sensors and control methodology, and understanding catalytic and electrochemical processes.

Copies of the workshop report entitled "Basic Research Needs for Vehicles of the Future" can be found on the Office of Basic Energy Sciences World Wide Web pages at:
<http://www.er.doe.gov/production/bes/bes.html>

Reducing Energy Consumption and Pollution from Energy and Pollution Intensive Manufacturing Processes: It is widely recognized that a critical and pervasive issue for the 21st Century will be the balancing of industrial activity and environmental stewardship, and that more knowledge is needed to make effective choices to achieve that balance. There are seven industries that consume 80 percent of the energy and produce over 90 percent of the wastes in the manufacturing sector; these seven industries are: chemicals, petroleum refining, forest products, steel, aluminum, glass, and metal casting.

Identification and clarification of specific areas where new knowledge is needed to address, in the longer term, industry-related environmental issues occurred through a joint DOE and NSF-sponsored workshop held in New Orleans January 4-6, 1996. The workshop consisted of two parts. In the first part, issues specific to the automotive, chemical, energy, electronics, and metals industries were considered. In the second part, general crosscutting issues such as sensors; monitoring and controls; manufacturing and processing; health; ecological and environmental impacts, including bioprocessing during manufacturing; life cycle and risk analysis (integrated assessment); resource management; recovery; renewables; and the underlying environmental chemistry issues were covered. Applications in these crosscutting areas received under additional solicitations from the Office of Energy Research may be considered under this program.

Further information on the NSF/DOE workshop can be obtained by consulting the material on the Office of Basic Energy Sciences World Wide Web pages at:
<http://www.er.doe.gov/production/bes/bes.html>

Recommendations taken from efforts conducted by the Office of Energy Efficiency and Renewable Energy (EE/RE) of the Department of Energy, will also be used to appropriately direct applications. EE/RE is interested in research that is directed towards near term results, particularly with regard to reduced energy consumption and reduced waste production in the steel, aluminum, forest products, glass, metal casting, chemicals, and petroleum refining industries. Those wishing to address applied problems in these industries may contact Harvey C. Wong of the Office of Industrial Technologies, EE-20, U.S. Department of Energy, Washington, DC 20585; 202-586- 9235 for further information, or by consulting the material on the World Wide Web at: <http://www.nrel.gov/oit/documents/technology.html>

Information Regarding Applications for Assistance: To strengthen the probability that proposed research will contribute in the future to improved technologies and processes, applicants are encouraged to develop working collaborations with appropriate and relevant industries. Applications involving industrial collaboration will receive preference over applications of equal scientific merit but lacking such collaboration. All formal applications will receive peer review by members of the scientific community at large. In addition, applications considered for funding by DOE will be reviewed for relevance to the missions of the Department and its technology programs.

To minimize undue effort on the part of applicants and reviewers, interested parties are invited and encouraged to submit preapplications. Applicants submitting preapplications demonstrating the greatest likelihood of success in competition will be encouraged to submit formal applications for research grants. The brief preapplication, in accordance with 10 CFR 600.10(d)(2), should consist of two to three pages of narrative describing the research objectives and methods of accomplishment. The preapplications will be reviewed relative to the scope and research needs identified by DOE and NSF through workshops and other means. Telephone and FAX numbers are required parts of the preapplication, and electronic mail addresses are desirable.

In Fiscal Year 1996, it is anticipated that approximately \$2,000,000 from DOE will be available for grants for research related to automotive technologies and approximately \$5,000,000 from DOE will be available for research related to reducing energy and pollution. Multiple-year funding of grant awards is expected and is also contingent upon the availability of funds. These are new programs and, therefore, there are no previous applicable award sizes. However, awards sizes in similar programs at DOE range from \$50,000 to \$250,000 with terms from one to three years. Renewal of the award for another term will be dependent upon success factors such as publications and peer-review of the renewal application.

The number of awards and the range of funding will depend on the number of applications received and selected for award. Information about the development, submission, and the selection process, and other policies and procedures may be found in 10 CFR Part 605, and in the Application Guide for the Office of Energy Research Financial Assistance Program. The

Application Guide is available from the Office of Computational and Technology Research, ER-33 (GTN), Office of Energy Research, U.S. Department of Energy, 19901 Germantown Road, Germantown, MD 20874-1290. Telephone requests may be made by calling (301) 903-5995. Electronic access to ER's Financial Assistance Guide is possible via the Internet using the following E-mail address: <http://www.er.doe.gov/>

The Catalog of Federal Domestic Assistance Number for this program is 81.049, and the solicitation control number is ERFAP 10 CFR Part 605.

Issued in Washington, DC.

John Rodney Clark
Associate Director
for Resource Management
Office of Energy Research

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