Office of Energy Research

Notice 97-08
Innovations in Fusion Energy Confinement Systems

Department of Energy
Office of Energy Research

Energy Research Financial Assistance Program Notice 97-08: Innovations in Fusion Energy Confinement Systems

AGENCY: U.S. Department of Energy

ACTION: Notice inviting grant applications

SUMMARY: The Office of Fusion Energy Sciences (OFES) of the Office of Energy Research, U.S. Department of Energy (DOE) announces its interest in receiving grant applications for innovative experiments in fusion energy confinement systems. Organizations with research projects funded under previous Notice 95-10 which are now due for continuation funding need not submit; however, those seeking renewal funding should submit a renewal application under this Notice. Successful applications will be funded early in FY 1998.

The Office of Fusion Energy Sciences is interested in applications for innovative experimental research that has the possibility of leading to improved fusion energy power plants (this includes tokamak based power plants with qualitatively improved performance). The research should be aimed at experimentally elucidating the physics principles involved. Research projects are sought which are unique, first of a kind and which provide new scientific insights. Although the main thrust of this initiative is experimental, consideration will be given to applications which are directed at scientific assessment of new concepts which are not ready for experimental investigation. Applications for research on existing large tokamaks, separate theory investigations, or initiatives in Inertial Fusion Energy should not be submitted in response to this notice. Collaborative applications submitted from different institutions which are directed at a single proposed experiment will be "bundled" and reviewed collectively.

DATES: To permit timely consideration for awards in Fiscal Year 1998 , applications submitted in response to this notice must be received no later than 4:30 p.m., May 15, 1997. No electronic submissions of formal applications will be accepted.

ADDRESSES: Completed formal applications referencing Program Notice 97-08 should be forwarded 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 97-08. The above address must also be used when submitting applications by U.S. Postal Service Express, any commercial mail delivery service, or when hand carried by the applicant.

FOR FURTHER INFORMATION CONTACT: Dr. Ronald A. Blanken, Science Division, ER-55, Office of Fusion Energy Sciences, U.S. Department of Energy, 19901 Germantown Road, Germantown, MD 20874-1290, Telephone: (301) 903-3306 or 3287, or by Internet address, ronald.blanken@mailgw.er.doe.gov.

SUPPLEMENTARY INFORMATION: In selecting applications for funding, the DOE Office of Fusion Energy Sciences will give priority to applications that can produce experimental results within three to five years after grant initiation. Theoretical research will be accepted for consideration under this Notice when bundled with and in support of an experimental application. The detailed description of the proposed project should contain the following items: (1) A detailed experimental research plan, (2) The specific results or deliverable expected at the end of the project period, (3) Goal of the experiment, (4) Synopsis of the experimental program plan, (5) Adequacy of the facilities and budget, (6) Discussion of why this research would have an important impact on the prospects for fusion energy power plants, and (7) Discussion of how the experiment would elucidate the physics principles of the innovation.

Applications concerned with scientific assessment of new concepts which are not ready for experimental investigation should have a well defined scope and a duration of no more than two years. These applications will be considered non-renewable. The product of such assessment would be a clear scientific description of the concept and its operation, its physics and engineering basis, critical analysis of major difficulties to be overcome in developing the concept as a net producer of energy through the fusion process, and an analysis of what would be achieved by moving to experimental research.

It is anticipated that up to $3,000,000 in FY 1998 will be available to start new projects from applications received in response to this Notice. The number of awards and range of funding will depend on the number of applications received and selected for award. Future year funding is anticipated to be greater but will depend on the nature of the applications, suitable experimental progress and the availability of funds. Because of the total amount of anticipated available funding and because of the intent to have a broadly based program, experimental applications with an annual requirement in any year in excess of $1,500,000 are unlikely to be funded. The cost-effectiveness of the application will be considered when comparing applications with differing funding requirements. Applications for scientific assessment of new concepts will be limited to a maximum of $150,000 in any year. Applications requiring annual funding as low as $50,000 are welcome and encouraged.

To enable all reviewers to read all applications, the application must be limited to a maximum of twenty (20) pages (including text and figures) plus not more than one page each of biographical information and publications of the principal investigator, plus any additional forms required as a part of the standard grant application.

An original and seven copies of each application must be submitted. Due to the anticipated number of reviewers, it would be helpful for each applicant to submit an additional seven copies of each application. In lieu of the seven additional copies, applicants may provide a 3.5-inch diskette containing the application in Portable Document Format (PDF). The label on the diskette must clearly identify the institution, principal investigator, and title of the application. (If the

applicant elects to submit a diskette, an original and seven copies of the application must still be submitted.)

Applications will be subjected to formal merit review and will be evaluated against the following criteria, which are listed in descending order of importance as set forth in 10 CFR Part 605:

1. Scientific and/or technical merit of the project;
2. Appropriateness of the proposed method or approach;
3. Competency of the applicant's personnel and adequacy of the proposed resources; and
4. Reasonableness and appropriateness of the proposed budget.

The evaluation will include program policy factors such as the relevance of the proposed research to the terms of the announcement and the agency's programmatic needs. General information about development and submission of applications, eligibility, limitations, evaluations and selection processes, and other policies and procedures may be found in the Application Guide for the Office of Energy Research Financial Assistance Program and 10 CFR Part 605. Electronic access to the Application Guide is possible via the Internet using the following Web site address: http://www.er.doe.gov/production/grants/grants.html

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

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for Resource Management
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Published in the Federal Register March 10, 1997, Vol. 62, No. 46, pages 10830-10831.