Office of Science
Notice 01-25

Development of Diagnostic Systems for Magnetic Fusion Energy Sciences Experiments

Department of Energy
Office of Science

Office of Science Financial Assistance Program Notice 01-25: Development of Diagnostic Systems for Magnetic Fusion Energy Sciences Experiments

AGENCY: U.S. Department of Energy

ACTION: Notice inviting grant applications

SUMMARY: The Office of Fusion Energy Sciences (OFES) of the Office of Science (SC), U.S. Department of Energy (DOE), announces its interest in receiving grant applications for the development of new measurement capabilities in magnetic fusion plasmas, leading to improved understanding of plasma behavior in fusion experiments. Programs planning to submit applications for renewal funding in FY 2002, should submit to this Notice.

DATES: To permit timely consideration for awards, applications submitted in response to this Notice must be received no later than 4:30 p.m., August 1, 2001. Electronic submission of formal applications will not be accepted.

Applicants are requested to submit a letter-of-intent by June 28, 2001.
THE DEADLINE FOR THE LETTER-OF-INTENT HAS BEEN EXTENDED TO JULY 27, 2001. [Added June 18, 2001]
THE DEADLINE FOR FORMAL APPLICATIONS HAS BEEN EXTENDED TO AUGUST 31, 2001. [Added June 18, 2001]

ADDRESSES: The completed formal applications referencing Program Notice 01-25 should be forwarded to: U.S. Department of Energy, Office of Science, Grants and Contracts Division, SC-64, 19901 Germantown Road, Germantown, Maryland 20874-1290, ATTN: Program Notice 01-25. 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.

Letters-of-intent referencing Program Notice 01-25 should be forwarded to: U.S. Department of Energy, Office of Science, Office of Fusion Energy Sciences, SC-55, 19901 Germantown Road, Germantown, Maryland 20874-1290, ATTN: John Sauter. Letters-of-intent can also be submitted via e-mail at the following address: john.sauter@science.doe.gov.

The letter of intent should include the title of the application, the name, telephone number, and e-mail address of the principal investigator(s), the requested funding, names and institutions of any collaborators, and a one-page abstract. These letters-of-intent will be used to organize and expedite the review process. Failure to submit a letter-of-intent will not negatively prejudice a responsive formal application that is submitted in a timely manner. Electronic submission of letters-of-intent is acceptable.

FOR FURTHER INFORMATION CONTACT: Darlene Markevich, SC-55 GTN, U.S. Department of Energy, 19901 Germantown Road, Germantown, MD 20874-1290, telephone (301) 903-4920, or by e-mail address darlene.markevich@science.doe.gov.
Or contact John Sauter, SC-55 GTN, U.S. Department of Energy, 19901 Germantown Road, Germantown, MD 20874-1290, telephone 301-903-3287, or by e-mail address john.sauter@science.doe.gov.

General Information: 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 Science Financial Assistance Program and 10 CFR Part 605. Electronic access to SC's Financial Assistance Guide and required forms is possible via the Internet using the following Web site address: http://www.science.doe.gov/production/grants/grants.html.

DOE is under no obligation to pay for any costs associated with the preparation or submission of applications.

SUPPLEMENTARY INFORMATION: Grant applications are sought for the development of new measurement capabilities in a given class of magnetic fusion devices that will lead to improved understanding of plasma behavior in magnetic fusion experiments. The magnetic fusion energy sciences community and OFES must recognize the measurement as necessary for advancing the magnetic fusion energy sciences program. Primary interest for this Notice is in experimental programs, although it is recognized that part of a coordinated application may include theory and modeling in support of experiments. Stand-alone theory applications will not be supported. Applications seeking funding to install and operate a routine diagnostic system will not be considered under this Notice. It is expected that funds provided to

the magnetic fusion experiments should be used to implement routine diagnostics, based on their own research program priorities. Diagnostics for the inertial fusion energy (IFE) program are not included in this Notice. These are developed and implemented separately under the OFES IFE program.

More detailed information about measurements that are needed for advancing the magnetic fusion program has been prepared by members of the fusion community. This information can be found at the following Web site: http://www.ofes.science.doe.gov/News/DiagDev.html. You may want to periodically check this Web site for any updates or additional information. Please keep in mind that only grant applications that are responsive to the requirements of this Notice will be considered for funding.

For more general information on the fusion energy sciences program, see the OFES Web site at http://www.ofes.science.doe.gov.

Funding Information: Approximately $2,200,000 of Fiscal Year 2002, funding will be available for awards resulting from this Notice. The number of awards and range of funding will depend on the number of applications received and selected for award. Multi-year funding of awards is expected, generally for three years, with funding provided on an annual basis. You are encouraged to submit applications with three-year project periods, unless the nature of your research requires a project period of less than three years. However, due to the anticipated funding levels for Fiscal Year 2002, the initial funding period may be less than twelve months, with two subsequent funding periods of one year each. The project period will be determined by OFES. New projects (i.e., research that is not considered a renewal of a current grant) selected for award may have a funding start date in Fiscal Year 2003.

Because future year funding is not anticipated to increase, applications should propose constant year effort (allowing for inflation). Future year funding will depend upon suitable progress and the availability of funds. Because of the total amount of available funding and the intent to have a broadly based program, applications with an annual requirement in any year in excess of $400,000 are less likely to be funded. The cost-effectiveness of the application will be considered when comparing applications with differing funding requirements. In cases where the proposed work assumes the availability of a facility, experimental apparatus, or base group to perform the work, the funding source(s) for these additional needs must be identified in the grant application.

A parallel request for Field Work Proposals will be issued to DOE Federally Funded Research and Development Centers (FFRDCs). All proposed programs will be evaluated using the same criteria regardless of the submitting institution.

Collaboration: Applicants are encouraged to collaborate with researchers in other institutions, such as universities, industry, non-profit organizations, federal laboratories, and Federally Funded Research and Development Centers (FFRDCs), including the DOE National Laboratories. In the case of collaborative applications submitted from different institutions, which are directed at a single research activity, each application must have a distinct scope of work and a qualified principal investigator who is responsible for the research effort being performed at his or her institution. Further information on preparation of collaborative proposals may be accessed via the Internet at http://www.science.doe.gov/production/grants/Colab.html.

Application Format: In order to enable the reviewers to read multiple applications, the technical discussion of the research in the application must be limited to a maximum of twenty-five (25) pages (not including figures). The progress report that must be included with renewal applications is not part of the page limit. Although it is not required, due to the anticipated number of reviewers, it would be helpful if applicants submitted fifteen (15) copies of their application; otherwise the standard number of copies must be received with each application as outlined in the Application Guide.

The application should include the name, telephone number, and e-mail address of the principal investigator(s).

The detailed description of the proposed research, in addition to the information required by 10 CFR Part 605, should contain the following items:

(1) A succinct statement of the goal of the research;
(2) A detailed research plan;
(3) The specific results or deliverables expected at the end of the project period;
(4) A detailed analysis of the adequacy of the facilities and budget;
(5) Evidence of the ability of the diagnostic system to make the proposed measurement;
(6) Discussion of how the research would lead to an improved understanding of plasma behavior in magnetic fusion devices;
(7) Discussion of why this research would have an important impact on the magnetic fusion science program;
(8) Discussion of the aspect of the proposed research that is developmental, as opposed to implementation of an existing measurement technique; and
(9) In cases where the proposed work assumes the availability of a facility, experimental apparatus, or base group to perform the work, include a letter of support from the principal investigator (or other appropriate person) of that facility or group. This letter should specify any technical, engineering, theory/modeling, etc. assistance that will be provided by that facility or group.

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;
4. Reasonableness and appropriateness of the proposed budget.
In addition to peer review, funding decisions will be based on program policy factors, such as relevance of the proposed research to the terms of this Notice and DOE's programmatic needs.

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

John Rodney Clark
Associate Director of Science
for Resource Management

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