Office of Energy Research

Notice 97-12
Atmospheric Chemistry Program

Department of Energy
Office of Energy Research

Energy Research Financial Assistance Program Notice 97-12: Atmospheric Chemistry Program

AGENCY: U.S. Department of Energy

ACTION: Notice inviting grant applications

SUMMARY: The Office of Health and Environmental Research (OHER) of the Office of Energy Research, U.S. Department of Energy (DOE) hereby announces its interest in receiving applications to support the continuation of its Atmospheric Chemistry Program (ACP). The applications should address the continuation of experimental and theoretical study of atmospheric chemistry processes affected by energy-related air pollutants (i.e., sulfur oxides, nitrogen oxides, aerosols, and ozone). These studies are intended to be in support of DOE information needs under the National Energy Policy Act (Public Law 102-486).

DATES: To permit timely consideration for awards in Fiscal Year 1998, formal applications submitted in response to this notice should be received by 4:30 p.m. E.D.T., June 12, 1997.

ADDRESSES: Formal applications referencing Program Notice 97-12 should be forwarded to: U.S. Department of Energy, Office of Energy Research, Grants and Contracts Division, ER-64, 19901 Germantown Road, Germantown, MD 20874-1290, ATTN: Program Notice 97-12. This address must also be used when submitting applications by U.S. Postal Service Express Mail or any other commercial overnight delivery service, or when hand-carried by the applicant. An original and seven copies of the application must be submitted; however, applicants are requested not to submit multiple application copies using more than one delivery or mail service.

FOR FURTHER INFORMATION CONTACT: Mr. Rickey Petty, Environmental Sciences Division, ER-74, Office of Health and Environmental Research, Office of Energy Research, U.S. Department of Energy, 19901 Germantown Road, Germantown, MD 20874-1290, telephone: (301) 903-5548, E-mail: rick.petty@oer.doe.gov, fax: (301) 903-8519.

SUPPLEMENTARY INFORMATION: The Atmospheric Chemistry Program is part of the DOE's Global Change Research Program and is closely linked with other national and international programs. Collaborations are maintained with global change counterparts in other agencies, particularly NASA, NOAA, and the NSF. Internationally, the DOE ACP links with the World Meteorological Organization's (WMO) Global Atmospheric Watch (GAW) program,

particularly through the North American Regional Experiment (NARE), the Aerosol Chemistry Experiment (ACE) 1 and 2, North American Research Strategy for Tropospheric Ozone (NARSTO), and the Southern Oxidant Study (SOS).

Detailed descriptions of ACP plans, rationale, and foci are provided on the DOE ACP homepage at: http://www.atmos.anl.gov/ACP.

Research applications that demonstrate the continuity and progress of the DOE ACP during the 1993-1997 period (see research abstracts in http://www.atmos.anl.gov/ACP) addressing midlatitude tropospheric ozone and heterogeneous chemistry, atmospheric chemical-conversion processes, and wet-removal and air/surface exchange is encouraged. More so, applications addressing ozone research that is in support of the NARSTO are also encouraged.

In coordination with other federal agencies, the DOE is addressing recommendations from the National Academy of Sciences' report, "Aerosol Radiative Forcing and Climate Change." Thus, projects that enhance ongoing aerosol research, such as coupled aerosol-oxidant research through modeling, laboratory and field studies, are encouraged.

This notice requests applications for grants to support:

(Category 1): Research to understand the fundamental scientific phenomena associated with atmospheric ozone formation and removal processes. Such fundamental studies can take the form of modeling, laboratory, field, and theoretical investigations and analyses of mechanistic behavior. The research should also address the possible catalytic/inhibition effects of aerosols (especially in the lower stratosphere), and possible new chemical mechanisms influencing ozone behavior in the remote free troposphere, and a variety of scientific topics aimed at enhancing our ability to manage midlatitude regional-scale tropospheric ozone pollution. Field activities may be conducted cooperatively with major ACP field campaigns. ACP field campaigns may also include using the ACP G-1 Research Aircraft Facility.

(Category 2): Ozone and UV-B trend analysis, using past and emerging data sets. Of special interest in this category are investigations of interactions among ozone and ultraviolet (UV) radiation with regards to competing/compensating effects of other trace gases, aerosols and clouds, and their obscurance of ozone trend evaluations and associated UV-B impacts.

(Category 3): Research to understand the fundamental scientific phenomena associated with aerosol radiative forcing and climate change. Such studies should include research on aerosol forcing of climates that advances knowledge in the representation of aerosols in global climate models, particularly with respect to indirect climate effects; laboratory and theoretical research on aerosol optical properties; identification of aerosol molecular composition, particularly the organic fraction; development of an understanding of aerosol formation and growth in the atmosphere; studies elucidating the aerosol-CCN-cloud droplet-albedo relationship; execution of atmospheric closure experiments to test theoretical understanding; application of instrumentation technology for measuring aerosol properties in situ; and system integration and assessment utilizing sensitivity/uncertainty analyses.

It is anticipated that approximately $3 million will be available for multiple grant awards in FY 1998, contingent upon availability of appropriated funds. Applications may request project support up to three years, with out-year support contingent on availability of funds, progress of the research, and programmatic needs. Annual budgets are expected to range from approximately $50,000 to $500,000. Applications should include detailed and justified budgets for each year of support requested. The technical portion of the application should not exceed twenty-five (25) double-spaced pages. Lengthy application appendices are not encouraged.

Applications will be subjected to formal merit review (peer review) and will be evaluated against the following evaluation criteria listed in descending order of importance codified at 10 CFR 605.10(d):

1. Scientific and/or Technical Merit of the Project;

2. Appropriateness of the Proposed Method or Approach;

3. Competency of Applicant's personnel and Adequacy of Proposed Resources;

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 an agency's programmatic needs. Note, external peer reviewers are selected with regard to both their scientific expertise and the absence of conflict-of-interest issues. Non-federal reviewers will often be used, and submission of an application constitutes agreement that this is acceptable to the investigator(s) and the submitting institution.

To provide a consistent format for the submission, review and solicitation of grant applications submitted under this notice, the preparation and submission of grant applications must follow the guidelines given in the Application Guide for the Office of Energy Research Financial Assistance Program 10 CFR Part 605. Access to ER's Financial Assistance Application Guide is possible via the World Wide Web at: 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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