



**The United States
Environmental Protection Agency**



ENVIRONMENTAL TECHNOLOGY INITIATIVE

Announcement

**Fiscal Year 1995 Solicitation for
Socioeconomic Projects Related to
Pollution Prevention**

APPLICATION SUBMISSION CLOSING DATE: May 1, 1995

Apply to:

**U.S. Environmental Protection Agency
Office of Research and Development
Office of Exploratory Research (8703)
401 M Street, SW
Washington DC 20460**

Introduction

This Announcement describes a solicitation of the U.S. Environmental Protection Agency (EPA) to support projects directed toward furthering the objectives of the President's Environmental Technology Initiative (ETI). The ETI is an integral part of the Administration's broad new technology policy, which is outlined in "Technology for America's Economic Growth: A New Direction to Build Economic Strength." This government-wide policy recognizes that industry is the primary creator of new technology and the main engine of sustained economic growth. The policy assigns the federal government a catalytic role in promoting the development of new technologies for use across a range of sectors including auto manufacturing, computers and electronics, iron and steel, metal finishing and plating, petroleum refining, and printing—as well as converting defense technologies to civilian applications. The ETI addresses all of the above sectors that are concerned with environmental protection.

EPA seeks proposals to conduct socioeconomic initiatives related to pollution prevention—i.e., projects focused on policy reforms, opportunities for building innovation capacity, and diffusion of innovative prevention technologies. EPA's interests in this instance are clearly distinct from conventional socioeconomic research and development. That is, they go beyond study and analysis of issues to apply existing knowledge in pioneering attempts to effect social or institutional change with respect to promoting development and implementation of innovative technology.

EPA is directing approximately \$3.5 million this fiscal year (FY) in awards under this initiative to nonprofit organizations. Proposals averaging \$150,000 per year with a maximum duration of 2 years are sought.

Nonprofit organizations are generally defined as those organizations that qualify for such status under Section 501(c) of the Internal Revenue Service tax code. Examples of nonprofit organizations include public and private universities, as well as trade associations, professional societies, research consortia, and community development corporations.

This Announcement can be accessed on the Internet at the following Gopher and World Wide Webb (WWW) addresses:

Gopher: GOPHER.EPA.GOV
WWW: HTTP://WWW.EPA.GOV

Rationale

EPA has structured its ETI project-selection process for FY95 to conform to the strategic ETI objectives contained in the Agency's *Draft Technology Innovation Strategy* (EPA 543-K-93-002), January 1994. This strategy has the following objectives (please refer to the draft Strategy document for more detail on these objectives):

- 1) *Policy Framework*: Adapt EPA's policy, regulatory, and compliance framework to promote innovation;

- 2) *Innovation Capacity*: Strengthen the capacity of technology developers and users to succeed in environmental innovation;

- 3) *Diffusion*: Accelerate the diffusion of innovative technologies at home and abroad; and

- 4) *Environmental and Pollution Prevention Technologies*: Strategically invest funds in the development and commercialization of promising new technologies.

This solicitation is focused on pollution prevention-related proposals that support the first three objectives. Proposals relevant to the fourth objective are being sought jointly by the National Science Foundation (NSF) and EPA through a contemporaneous solicitation. Information about the joint solicitation can be obtained from either NSF (pfirth@nsf.gov; voice 703/306-1480) or EPA (202/260-7474).

The 1990 *Pollution Prevention Act* declares pollution prevention to be national policy and states that "...pollution should be prevented or reduced at the source whenever feasible." Pollution prevention is now considered EPA's preferred choice for environmental protection, and the Agency is seeking to integrate prevention as an ethic throughout all of its activities. Pollution prevention includes equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in industrial housekeeping, operational maintenance, employee training, or inventory control.

On July 22, 1994, EPA Administrator Browner announced the new environmental policy *Common Sense Initiative (CSI)*, which is designed to shift environmental protection from the current "pollutant-by-pollutant, end-of-pipe, command-and-control" approach to an "industry-by-industry, multimedia, prevention-oriented" approach. Six pilot industries were identified for CSI: auto manufacturing, computers and electronics, iron and steel, metal finishing and plating, petroleum refining, and printing. Proposals with relevance to these industries will receive priority consideration.

Program Scope

This EPA grant solicitation is intended to finance prevention-related projects supporting policy analysis (frameworks), institution building (innovation capacity), and domestic and international diffusion. Descriptions of the program areas that are addressed in this solicitation are provided below.

Policy-framework topics of interest include 1) strengthening incentives for the development and use of innovative prevention technologies and 2) identifying and reducing barriers to innovation. Aspects to be addressed include regulations and implementation mechanisms (e.g., permitting and compliance policies and programs). This program area encompasses all environmental media (water, air, etc.) and emphasizes pilot projects not analytical studies. Policy framework proposals often address issues that have a broader focus than pollution prevention alone. Such proposals are welcomed so long as they are also applicable to pollution prevention technologies or issues.

Policy framework focuses on environmental regulatory programs in the broadest sense, from regulation through compliance and enforcement. Projects selected in this areas will address regulatory programs to

- identify and enhance incentives for the development and use of prevention technologies;
- minimize barriers to the development and use of such technologies; and
- incorporate provisions into new and existing regulations and programs that maximize flexibility and widen the range of technologies accepted for use.

Special attention will be given to the use of market-based instruments for creating flexibility and incentives to innovate.

Innovation capacity proposals should be focused on how to assist, or catalyze, prevention technology development and commercialization efforts.

Examples of possible work in these areas are programs or projects to

- establish programs to standardize testing protocols and verify the cost and performance of innovative prevention technologies;
- provide pollution prevention technology testing centers;
- catalyze the efforts of many organizations to promote innovation by convening partnerships;
- develop and communicate timely information about high priority prevention technology gaps; and
- work jointly with organizations in the public and private sectors to identify and address nonregulatory sources of market inefficiency and failure in the environmental technology sector.

Proposals on *diffusion* of information should focus on new and improved means of fostering information networks, technical assistance, and outreach activities. Both domestic and international applications are encouraged. For example, there is a need to enhance the capacity of existing or newly created public and private sector diffusion activities to serve the potential users of pollution prevention technologies both domestically and abroad. Proposals may include activities relating to market demand, availability, cost, performance, opportunities for business development, and regulatory requirements.

General Selection Criteria

The objective of this solicitation is to harness the capability of the nonprofit sector to help address the goals of the ETI. EPA will not accept proposals that are not directly related to one of the previously mentioned areas of ETI focus. Moreover, proposals must address barriers to the development and use of innovative pollution prevention approaches to

be eligible unless they are addressing policy framework issues that will also benefit pollution prevention approaches as well as their target.

Each proposal will only be evaluated against one strategy objective based the information provided above. Proposals with relevance to industries highlighted by the *Common Sense Initiative* and the Design for Environment Program will receive priority consideration. Special consideration will also be given to projects that support small businesses and/or small communities. This focus on a select few industries is intended to provide concentrated support for cleaner technology development and commercialization and sustainable economic growth and increased competitiveness.

Many barriers to development and application of pollution prevention exist because of the lack of flexibility in the policy infrastructure. Thus, proposals that seek to make the implementation of environmental policy a process that is more friendly to technology innovation will also receive additional attention. This is the one area in which projects may go beyond the pollution prevention domain.

The most significant problems and creative solutions most likely will be identified by nonprofit organizations and industrial investigators working together on challenges posed by real problems. Projects must show appropriateness to current national concerns for pollution reduction or prevention; vague arguments that the proposed project may eventually be of value are not compelling.

This initiative particularly seeks innovative and high risk/high payoff ideas. It does not invite studies of "the problem" but rather specific approaches to possible solutions. Since the preparation of competitive proposals is very time-consuming, it is also well to present the following examples of what this initiative is *not*:

- *Not* basic research;
- *Not* technology development for pollution prevention, remediation, or control;
- *Not* diffusion of pollution control technology; and
- *Not* activities addressing processes to remove pollutants from waste streams or remediate waste problems.

Specific Selection Criteria

Proposals will be evaluated against the following factors:

- Does the project reduce uncertainty, improve flexibility, speed timing, enhance cost-effectiveness, address liability constraints, and/or diminish restraints on technology innovation?
- Is there broad applicability of the project's expected results (i.e., across levels of government, different states, or environmental media)? Is the problem clearly defined?

- Does the project complement current environmental legislative initiatives or significantly strengthen the nation's ability to meet existing statutory or regulatory goals?
- Will the project produce measurable, visible results in an expeditious time-frame? Action projects will be emphasized over studies. Do project participants have the authority to implement programmatic changes?
- Does the project support multi-organizational partnerships across the public and private sectors? Will the project include leveraging funds among the partnering organizations? Applicant's proposals will be given more consideration to the extent that matching funds or in-kind services from participating partners are included.
- Does the proposal address global, transboundary, or other international environmental issues directly affecting the United States or lower the cost of innovative technologies for use in the United States?

In addition, the following considerations relate to particular subtopics:

- Policy framework proposals will be reviewed with respect to their capability to advance the goals and activities of ETI; breadth of applicability of the expected results; potential to reduce barriers and create incentives; and projected probability of success.
- Proposals embracing the theme of innovation capacity should specifically be designed to be self-sustaining after ETI funds are expended.
- Domestic diffusion proposals must be customer-based, and should emphasize pollution prevention technology approaches. Special consideration will be given to projects that support small businesses and/or small communities.
- International diffusion proposals should address global or international environmental issues that directly affect the United States. Proposals should also result in improving U.S. competitiveness and trade objectives in the international arena.

The Application

Application forms and instructions are available in the EPA Research Grants Application Kit. Interested investigators should review the materials in this kit before preparing an application for assistance. The kits can be obtained at the following address:

U.S. Environmental Protection Agency
Office of Research and Development
Office of Exploratory Research (8703)
401 M Street, SW
Washington DC 20460

Each application for assistance must consist of Application for Federal Assistance Forms (Standard Forms (SF): 424 and 424A), separate sheets that provide the budget breakdowns

for each year of the project, the resumes of the principal investigator and coworkers, the abstract of the proposed project, and a project narrative. All certifications must be signed and included with the application.

The closing date for application submission is COB May 1, 1995.

To be considered, the original and eight copies of the fully developed research grant application, prepared in accordance with the instructions in the Application for Federal Assistance Forms, must be received by the EPA Office of Exploratory Research no later than the above closing date. Informal, incomplete, or unsigned proposals will not be considered. Completed applications should be sent via regular or express mail to the following address:

U.S. Environmental Protection Agency
Office of Research and Development
Office of Exploratory Research (8703)
401 M Street, SW
Washington DC 20460

Applications sent via express mail should have the following telephone number listed on the express mail label: (202) 260-7445.

Special Instructions

The following special instructions apply to all applicants responding to this request for application.

- Applications must be unbound and clipped or stapled. The SF-424 must be the first page of the application. Budget information should immediately follow the SF-424. All certification forms should be placed at the end of the application.
- Applicants must be identified by printing "ETI95" in block 10 of the SF-424. This will facilitate proper assignment and review of the application.
- A one-page abstract must be included with the application.
- The "project narrative" section of the application must not exceed 25, consecutively numbered, 8 1/2 x 11 inch pages of standard type (i.e., 12 point), including tables, graphs, and figures. For purposes of this limitation, the "project narrative" section of the application consists of the following five items:

1. Description of Project
2. Objectives
3. Results or Benefits Expected
4. Approach
5. General Project Information

Any attachments, appendices, and other references for the narrative section may be included but must remain within the 25-page limitation. Appendices will not be considered an integral part of the application.

Items not included under the 25-page limitation are the SF-424 and other forms, budgets, resumes, and the abstract. Resumes must not exceed two consecutively numbered pages for each investigator and should focus on education, positions held, and most recent or related publications.

Applications not meeting these requirements will be returned to the applicant without review.

Guidelines and Limitations

All recipients are required to provide a minimum of 1% of the total project cost, which may not be taken from federal sources. Subcontracts for research to be conducted under the grant should not exceed 40% of the total direct cost of the grant for each year in which the subcontract is awarded.

Eligibility

Nonprofit institutions located within the U.S., including public and private colleges and universities, are eligible under all existing authorizations. Federal agencies and federal employees, as well as state and local governments are not eligible to participate in this program. Potential applicants who are uncertain of their eligibility should contact EPA's Grants Operations Branch at (202) 260-9266.

Proprietary Information

By submitting an application in response to this solicitation, the applicant grants EPA permission to share the application with technical reviewers both within and outside of the Agency. Applications containing proprietary or other types of confidential information will be immediately returned to the applicant without review.

Funding Mechanisms

The funding mechanism for all awards issued under this solicitation will consist of a grant agreement between EPA and the recipient. In accordance with Public Law 95-225, a grant is used to accomplish a public purpose of support or stimulation authorized by federal statute rather than acquisition for the direct benefit of the Agency.

Minority Institution Assistance

Pre-application assistance is available upon request for potential investigators representing institutions identified by the Secretary, Department of Education, as Historically Black Colleges or Universities (HBCUs), Hispanic Association of Colleges and Universities (HACUs), or Native American or Tribal Colleges. For further information on minority assistance, contact Charles Mitchell by telephone at (202) 260-7448, by faxing a written request to (202) 260-0211, or by mailing it to the address for EPA's Office of Exploratory Research shown below.

Contacts

Additional general and technical information on this solicitation and the grants program may be obtained by contacting

U.S. Environmental Protection Agency
Office of Exploratory Research (8703)
401 M Street SW
Washington DC 20460
Phone: (202) 260-7474/Fax: (202) 260-0211