

AGENCY: ENVIRONMENTAL PROTECTION AGENCY (EPA)

TITLE: Fellowship Support for Graduate Students in Engineering and Science

ACTION: Request for Application (RFA) or Request for Initial Proposals (RFIP)

RFA NO: OAR-ASD-05-18

CATALOG OF FEDERAL DOMESTIC ASSISTANCE (CFDA) NO: 66.034

DATES: The closing date for receipt of applications is November 14, 4:00 p.m. EST. Applications submitted via U.S. mail must be received in the Program Office by the closing date and time. No late proposals will be accepted.

SUMMARY: EPA's Office of Transportation and Air Quality (OTAQ) is soliciting applications for a cooperative agreement to provide up to four fellowships to graduate students in the fields of engineering and science, as related to mobile source air pollution. The goal of these fellowships is to support increased diversity at the graduate student level in the fields of engineering and science. In addition, under a separate program, the EPA will provide internships to these graduate students. These internships will introduce the selected graduate students to the possibilities of a career working to better understand and improve air quality through pursuing research and advances in science and technology related to reducing mobile source air emissions.

This cooperative agreement will annually fund up to four graduate-level students pursuing Master of Science or PhD. degrees in either engineering or science. This program will take place from January 1st, 2006, to December 31st, 2008.

Through this cooperative, EPA OTAQ is supporting the pursuit of advanced degrees in engineering and science by a diverse student population. As the United States faces increasing technical and scientific challenges at home and globally, it is important to ensure that it has a large diverse population of well-educated, highly-trained people to address and find solutions to these challenges, including the challenge of finding ways to improve air quality by reducing emissions from mobile air pollution sources.

FUNDING/AWARDS: The total estimate funding for this competitive opportunity is approximately \$425,000. EPA anticipates award of one cooperative agreement with an estimated annual value of \$85,000, resulting from this announcement, subject to availability of funds.

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Section I - Funding Opportunity Description.

A. Background

EPA's Office of Transportation and Air Quality is soliciting applications for a cooperative agreement to provide up to four fellowships annually for three years to graduate students pursuing Master of Science or PhD. degrees in either engineering or science, subject to availability of funds. This program will be in effect for 3 years, from January 1, 2006, to December 31, 2008.

The goal of these fellowships is to support increased diversity at the graduate student level in the fields of engineering and science, as related to mobile source air pollution. In addition, separately from this cooperative agreement, EPA will provide the graduate students selected for the fellowships with internships. These internships will introduce them to the possibilities of a career working to better understand and improve air quality through pursuing research and advances in science and technology related to reducing mobile source air emissions.

Through this cooperative agreement, EPA OTAQ is supporting the pursuit of advanced degrees in engineering and science by a diverse student population, as well as providing the selected graduate students with internships that will provide training to apply their academic knowledge to addressing real-world air quality issues at EPA OTAQ. As the United States faces increasing technical and scientific challenges at home and globally, it is important to ensure that it has a large diverse population of well-educated, highly-trained people to address and find solutions to these challenges, including the challenge of finding ways to improve air quality by reducing emissions from mobile air pollution sources.

B. Scope of Work

The fellowship program will operate under the recipient's guidance/corporation. The recipient will select graduate students from accredited graduate programs throughout the United States for up to four fellowships annually, subject to the availability of funding. The recipient will receive up to \$85,000 to oversee and provide fellowships for up to four graduate students pursuing Master of Science or PhD. degrees in either engineering or science. The recipient will receive \$15,000 to oversee and provide a fellowship for a graduate student pursuing a Master of Science degree. Of this amount, a minimum of \$12,000 will go toward the actual fellowship. The recipient will receive \$23,000 to oversee and provide a fellowship to a graduate student pursuing a PhD. degree. Of this amount, a minimum of \$20,000 will go toward the actual fellowship. The combination of graduate students pursuing Master and PhD. degrees that the recipient selects will not exceed the annual maximum of \$85,000 in funding, including administrative costs and

other direct costs (i.e., the recipient would not be able to select four graduate students pursuing PhD. degrees because the sum of the fellowships (\$23,000 X 4) would exceed \$85,000). The candidates that the recipient selects will be pursuing areas of study that align well with advanced vehicle technology research and the study of mobile source air emissions and methods to reduce them. Some examples include but are not limited to chemistry, chemical engineering, mechanical engineering, environmental science, environmental engineering, and earth sciences. If possible, the selected graduate students should have an expressed interest in working in the environmental field. The grantee will provide a list of the selected graduate students that includes each student's grade point average, area of study, and any notable achievements, awards, or accomplishments.

It is intended that the graduate fellowship program will be complemented with an internship program, funded separately from this cooperative agreement, in which the selected graduate students will work as interns at EPA OTAQ's National Vehicle Fuels and Emissions Laboratory (NVFEL) in Ann Arbor, Michigan. The selected students will be responsible for their travel and housing costs. The selected graduate students will be assigned to projects that will give them hands-on experience with the engineering or scientific aspects of mobile source air pollution control. Two of the graduate students will be assigned to projects in OTAQ's Advanced Technology Division and two will be assigned to projects in OTAQ's Assessment and Standards Division.

Each of the graduate students will be assigned a mentor that will work directly with and oversee the graduate student on his or her project. The mentor will also work to ensure that the graduate student has a fulfilling and positive learning and working experience at EPA.

Once the selection of the graduate students has been finalized, the recipient will monitor the academic performance of the students and check in with them via telephone at least once per month, or more frequently if needed. In addition, the recipient will have monthly conference calls, or more often if needed, with the EPA Project Officer to report on the academic performance of the students and for EPA to report on the performance of the students during their internships. The recipient and EPA will work together to address any questions, concerns, or issues that the chosen students might have that are related to this cooperative agreement.

At the end of each calendar year during the period of performance of the cooperative agreement, the recipient will send a report to EPA discussing the success of the cooperative agreement program for that year, the academic performance of the students during the fellowship/internship program, problems or issues encountered, how any problems or issues were resolved, and recommendations on improvements to the process. At the end of the period of performance for the cooperative agreement, the recipient will prepare a summary report that incorporates previous annual reports plus a report for the last year, as well as a summary of the overall success of the cooperative agreement and lessons learned.

C. EPA Strategic Plan Linkage and Anticipated Outcomes/Outputs

1. **Linkage to EPA Strategic Plan.** This project supports progress towards EPA Strategic Plan Goal 1 (Clean Air and Global Climate Change), Objective 1.1 (Healthier Outdoor Air), Sub-Objective 1.1.1 (More People Breathing Cleaner Air). This project supports EPA efforts to promote clean air education by providing opportunities for increased representation in the fields of engineering and environmental science for graduate students.

2. **Outcomes.** The outcome of this project will be that these graduate students will have a better understanding of the relationship between combustion engines and air pollution, and that they might use this understanding in their engineering or science careers to help research and design equipment, vehicles, and fuels that will contribute toward EPA's goal of cleaner air.

3. **Outputs.** The output of this project will be to support four graduate students in their pursuit of advanced degrees in engineering and science and provide them a chance to work in and learn about the engineering and scientific areas of reducing air pollution from mobile sources in order to improve air quality.

D. Supplementary Information.

The statutory authority for this action is Clean Air Act, Section 103(b)(5) which authorizes the award of cooperative agreements to conduct and promote coordination and acceleration of training for individuals relating to the causes, effects, extent, prevention, and control of air pollution.

Section II - Award Information.

A. What is the amount of funding available?

The total estimated funding for this competitive opportunity is approximately \$425,000. Project will be funded in one year increments of approximately \$85,000 over a five year period

B. How many agreements will EPA award in this competition?

EPA anticipates award of one cooperative agreement(s) resulting from this announcement.

Cooperative agreements permit substantial involvement between the EPA Project Officer and the selected applicants in the performance of the work supported. Although EPA will negotiate precise terms and conditions relating to substantial involvement as part of the award process, the anticipated substantial Federal involvement for this project may be:

1. close monitoring of the successful applicant's performance to verify the results proposed by the applicant;
2. collaboration during performance of the scope of work;
3. in accordance with 40C.F.R. 31.36(g), review of proposed procurements;

4. approving qualifications of key personnel (EPA will not select employees or contractors employed by the award recipient);
5. review and comment on reports prepared under the cooperative agreement (the final decision on the content of reports rests with the recipient).

C. What is the project period for awards resulting from this solicitation?

The estimated project period for awards resulting from this solicitation is January 1, 2006 through December 31, 2008. All projects must be completed within the negotiated project performance period of 3 years.

D. Can funding be used to acquire services or fund other partnerships?

Funding may be used to acquire services or fund partnerships, provided the recipient follows procurement and sub-award or sub-grant procedures contained in 40 CFR Parts 30 or 31, as applicable. Successful applicants must compete contracts for services and products and conduct cost and price analyses to the extent required by these regulations. The regulations also contain limitations on consultant compensation. Applicants are not required to identify contractors or consultants in their proposal. Moreover, the fact that a successful applicant has named a specific contractor or consultant in the proposal EPA approves does not relieve it of its obligations to comply with competitive procurement requirements.

Sub-grants or sub-awards may be used to fund partnerships with universities and non-profit organizations. Successful applicants cannot use sub-grants or sub-awards to avoid requirements in EPA regulations for competitive procurement by using these instruments to acquire commercial services or products to carry out its cooperative agreement. The nature of the transaction between the recipient and the sub-grantee must be consistent with the standards for distinguishing between vendor transactions and sub-recipient assistance under Subpart B Section .210 of [OMB Circular A-133](#), and the definitions of “sub-award” at 40 CFR 30.2(ff) or “sub-grant” at 40 CFR 31.3, as applicable. EPA will not be a party to these transactions.

E. Can projects be partially funded?

EPA reserves the right to partially fund proposals/applications by funding discrete activities, portions, or phases of the proposed project. If EPA decides to partially fund the proposal/application, it will do so in a manner that does not prejudice any applicants or affect the basis upon which the proposal/application, or portion thereof, was evaluated and selected for award, and that maintains the integrity of the competition and the evaluation/selection process.

Section III - Eligibility Information.

A. Eligible Entities.

Proposals will be accepted from States, territories, Indian Tribes, and possessions of the U.S., including the District of Columbia, international organizations, public and private universities

and colleges, hospitals, laboratories, other public or private nonprofit institutions, universities, state, local, multi-state, tribal governmental agencies and non-profit organizations, as defined by [OMB Circular A-122](#).

Non-profit organization, as defined by [OMB Circular A-122](#), means any corporation, trust, association, cooperative, or other organization which: (1) is operated primarily for scientific, educational, service, charitable, or similar purposes in the public interest; (2) is not organized primarily for profit; and (3) uses its net proceeds to maintain, improve, and/or expand its operations. For this purpose, the term "non-profit organization" excludes (i) colleges and universities; (ii) hospitals; (iii) state, local, and federally-recognized Indian tribal governments; and (iv) those non-profit organizations which are excluded from coverage of this Circular in accordance with paragraph 5 of the Circular.

Non-profit organizations described in Section 501(c)(4) of the Internal Revenue Code that engage in lobbying activities as defined in Section 3 of the Lobbying Disclosure Act of 1995 are not eligible to apply.

B. Threshold Eligibility Criteria.

None.

C. Are matching funds required?

No.

D. Substantial Compliance

Applications that do not substantially comply with the application submission instructions and requirements set forth in Section IV will be rejected. Applications and initial proposals must be received by the EPA on or before the solicitation closing date published in Section IV of this announcement. Applications received after the published closing date will be returned to the sender without further consideration. Also, applications exceeding the funding limits described herein will be returned without review.

Section IV - Application and Submission Information.

A. How to Obtain Application Package.

Applicants may download individual grant application forms, or electronically request a paper application package and an accompanying computer CD of information related to applicants/grant recipients roles and responsibilities from EPA's Office of Grants and Debarment website at: (http://www.epa.gov/ogd/grants/how_to_apply.htm).

B. Content and Form of Application Submission.

Applications must contain a narrative workplan, budget, budget narrative and one original completed and signed SF-424.

1. A complete application must contain the following:
 - A. SF-424 Application for Federal Assistance, with original signature
 - B. Narrative Work Plan (including Detailed Itemized Budget), in the format detailed below
 - C. SF-424 A, Budget by categories and indirect cost rate
 - D. SF-424 B, Assurances for non-construction programs
2. The narrative workplan should conform to the following outline:
 - a. Cover Letter: Describe your organization's qualifications for the project; must be signed by an official with the authority to commit your organization to the project; and written on your organization's official letterhead.
 - b. Summary Information Page:
 1. Project Title.
 2. Applicant Information. Include applicant (organization) name, address, contact person, phone number, fax and e-mail address.
 3. Funding Requested. Specify the amount you are requesting from EPA.
 - c. Project Description: The project description must provide a concise overview of how the applicant will implement and conduct its operation and include a Project Work Plan (including a description of all tasks, dates of completion, products and deliverables, and proposed budget).

The narrative work plan must discuss how the proposal addresses each of the selection criteria in Section V and include:

1. A detailed project summary, describing specific actions and methods to be undertaken and the responsible institutions;
2. The associated work products to be developed (e.g. partnership agreements, if any);
3. An explanation of project benefits to the public;
4. An explanation of how project outcomes (e.g., fuel economy and emissions benefits) will be designed for reinvestment;
5. A detailed explanation of how project success will be evaluated; (*Refer to Section V(A), Evaluation Criteria, "Performance Measurement."*)
6. A description of the roles of the applicant and partners, if any;
7. Plan for tracking and measuring progress toward achieving the expected environmental outputs/outcomes identified in Section I of this announcement, and

8. Biographical information on key personnel identified.
 9. U.S. Citizenship. EPA's training cooperative agreement regulations cited in 40 CFR 45.135(a) require cooperative agreement-funded trainees to be citizens of the U.S. or of its territories or possessions, or must be lawfully admitted to the U.S. for permanent residence. Applicants must specify the percentage of their student population that meets this requirement.
 10. Stipends. Describe the process that will be used to ensure proper management and payment of student stipends.
 11. Reporting/Recordkeeping. The recipient must have the ability to maintain records of students according to major, project identification, dates of fellowship/internship, and any other pertinent information that would be used in final reports.
 12. Student Application Processing and Evaluation. The recipient must have a system to process and evaluate student applications. At a minimum, the application process must be able to evaluate applicants on the basis of their academic record, computer skills, and relevant work experience. If possible, writing ability and special academic awards or honors should also be considered.
 13. Student Eligibility Requirements for EPA Internships - Students must be enrolled in or have been accepted into an accredited graduate school program. Students must have a GPA of 2.8 or higher to meet eligibility requirements at EPA.
 14. Internship Management - The recipient must describe their recruitment priorities, fellowship management and expectations in terms of interaction with EPA.
 15. Program Effectiveness - The applicant must discuss how they plan to evaluate, on a yearly basis, the success of the fellowship/internship program.
- d. Detailed Itemized Budget: The proposal must include a detailed budget which clearly explains how funds will be used for the following categories:
1. Personnel
 2. Fringe Benefits
 3. Contractual Costs
 4. Travel
 5. Equipment
 6. Supplies
 7. Other (including intern stipends)
 8. Total Indirect Costs (must include documentation of accepted indirect rate)
 9. Total Cost

If not self-evident, entries under each category must be explained in a budget narrative or in the project description. Costs proposed in the budget should be linked directly to the proposal.

- e. Key Personnel: The applicant must submit an appendix with the resumes of up to three (3) key personnel who will be significantly involved in the project.

- f. Reporting Requirements. Discuss quarterly updates (schedule to be established by EPA) and a detailed follow-up final report. The final report must include: summary of the project, advances achieved if applicable, and costs of the project. In addition, the final report shall discuss the problems, successes, lessons learned from the demonstration project that could help overcome structural, organizational or technical obstacles to implementing a similar project elsewhere.
- g. Programmatic Capability. Applicants must submit information relating to the programmatic capability criteria to be evaluated under the ranking factor(s) in section V of the announcement. EPA will consider information provided by the applicant and may consider information from other sources including Agency files.

Applicants are strongly advised to avoid submission of non-essential materials unrelated to the proposal's requirements. All application materials must be completed in English. Only the applicant recommended for award will be required to submit a full application package.

C. Submission Dates and Times.

- 1. The deadline for submission of completed application packages is November 14, 4 p.m. EST. All application packages must be received in the program office listed below by the deadline. Applications received after the deadline will not be considered for funding.
- 2. **Confidential Business Information.** In accordance with 40 CFR 2.203, applicants may claim all or a portion of their application/proposal as confidential business information. EPA will evaluate confidential claims in accordance with 40 CFR Part 2. Applicants must clearly mark applications/proposals or portions of applications/proposals they claim as confidential. If no claim of confidentiality is made, EPA is not required to make the inquiry to the applicant otherwise required by 40 CFR 2.204 (c)(2) prior to disclosure.
- 3. Because of the unique situation involving U.S. mail screening, EPA highly recommends that applicants use an express mail option to submit their applications. Please provide original proposal and four copies (no binders or spiral binding) to the following address:

Express Delivery Address (FedEx, UPS, DHL, etc.) or U.S. Postal Service
U.S. EPA
National Vehicle and Fuel Emissions Laboratory
Attention: Greg Janssen
Assessment and Standards Division
2000 Traverwood Drive
Ann Arbor, MI 48105

- 4. All applicants are required to provide a Dun and Bradstreet (D&B) Data Universal Numbering System (DUNS) number when applying for a Federal grant or cooperative agreement. Applicants can receive a DUNS number, at no cost, by calling the dedicated

toll-free DUNS Number request line at 1-866-705-5711, or visiting the D&B website at: <http://www.dnb.com>.

Section V - Application Review Information.

Each eligible application will be evaluated according to the criteria set forth below. Applicants must directly and explicitly address these criteria as part of their application submittal. Each application will be rated under a points system, with a total of 100 points possible.

A. Evaluation Criteria.

Criteria	Maximum Points Per Criterion
Access to a Diverse Body of Graduate Students from All Over US: Methods used by the applicant to recruit a diverse range of engineering and science graduate students from all over the United States.	25
Recommendation of Fellowship/Internship Candidates: Methods that the applicant will use to select up to four graduate students per year for the EPA fellowships and internships.	25
Programmatic Capability. Extent to which proposal demonstrates the applicant’s technical capability to successfully carry out this project. This factor will evaluate the applicant’s: <ul style="list-style-type: none"> • Past performance in successfully completing federally and/or non-federally funded projects similar in size, scope, and relevance to the proposed project; • History of meeting reporting requirements on prior or current assistance agreements with federal and/or non-federal organizations and submitting acceptable final technical reports; • Organizational experience and plan for timely and successful achievement of the objectives of the project; • Staff expertise/qualifications, staff knowledge, and resources or the ability to obtain them to successfully achieve the goals of the project; • Proposed method for recruitment, supervision, and evaluation of the graduate students/interns as they carry out their fellowships; • Administration – system for reporting, record keeping, and tracking outreach and related activities. 	30
Performance Measurement. Effectiveness of applicant’s plan for tracking and measuring progress toward achieving expected outputs and outcomes identified in Section 1 of this announcement.	20

B. Other Factors. None.

C. Review and Selection Process.

Each application will be evaluated by a team chosen to address the full range of considerations contained in the evaluation criteria. The evaluation team will base its evaluations solely on the selection criteria disclosed in this notice. (see Section V(A), Evaluation Criteria).

Completed evaluations will be referred to the recommending official for approval. The highest

numerically-ranked proposal (subject to the quality of proposals and availability of funds) will be recommended for award.

The Office of Transportation and Air Quality expects to complete the Evaluation/Selection process and make recommendations to EPA's Office of Grants and Disbarment by December 2, 2005. All applicants will be notified with 15 days of selection decisions, regarding their application's status.

Section VI - Award Administration Information.

A. Award Notices.

Following final selections, all applicants will be notified regarding their application's status.

1. EPA anticipates notification to successful applicant(s) will be made via telephone, electronic or postal mail within 15 days of selection. This notification, which advises that the applicant's proposal has been selected and is being recommended for award, is not an authorization to begin performance. The award notice signed by the EPA grants officer is the authorizing document and will be provided through postal mail. At a minimum, this process can take up to 60 days from the date of selection.
2. EPA anticipates notification to unsuccessful applicant(s) will be made via electronic or postal mail within 15 days of selection decisions. In either event, the notification will be sent to the original signer of the application.

B. Administrative and National Policy Requirements.

1. A listing and description of general EPA Regulations applicable to the award of assistance agreements may be viewed at:
http://www.epa.gov/ogd/AppKit/applicable_epa_regulations_and_description.htm
2. Executive Order 12372, Intergovernmental Review of Federal Programs may be applicable to awards, resulting from this announcement. Applicants selected for funding may be required to provide a copy of their proposal to their [State Point of Contact](#) (SPOC) for review, pursuant to Executive Order 12372, Intergovernmental Review of Federal Programs. This review is not required with the Initial Proposal and not all states require such a review.
3. Grants and agreements with institutions of higher education are subject to 40 CFR Parts 30 and 40 and [OMB circular](#) A-122 for non-profits and A-21 for institutions of higher learning.
4. Programmatic Terms and conditions will be negotiated with the selected recipient.

C. Reporting Requirement.

Monthly conference calls, annual progress reports and a detailed final report will be required. Annual reports summarizing student performance, problems encountered, recommendation for improvements, and summary of expenditures-to-date are required. The schedule for submission of annual reports will be 30 days after the end of the calendar year. The Final report shall be completed within 90 calendar days of the completion of the period of performance. The final report should include: a summary of how each student has performed, problems encountered, lessons learned, and a final summary of expenses.

While the Agency will negotiate precise terms and conditions relating to substantial involvement as part of the award process, EPA expects to closely monitor the successful applicant(s) performance, collaborate during the performance of the scope of work, approve the substantive terms of proposed contracts, approve the qualifications of key personnel, review and comment on reports prepared under the cooperative agreement, and evaluate the engineering improvements on an EPA demonstration project. EPA will not select employees or contractors employed by the recipient(s) and the final decision on the content of reports rests with the recipient(s).

D. Disputes.

Assistance agreement competition-related disputes will be resolved in accordance with the dispute resolution procedures published in 70 FR (Federal Register) 3629, 3630 (January 26, 2005) which can be found at: <http://a257.g.akamaitech.net/7/257/2422/01jan20051800/edocket.access.gpo.gov/2005/05-1371.htm>. Copies of these procedures may also be requested by contacting Greg Janssen at (734) 214-4285 or at janssen.greg@epa.gov.

E. Pre-Award Administrative Capability Review.

Non-profit applicants recommended for funding under this solicitation will be subject to pre-award administration capability reviews consistent with sections 8.b, 8.c and 9.d of EPA Order 5700.8

Section VII - Agency Contact.

FOR FURTHER INFORMATION CONTACT: Greg Janssen, U.S. EPA National Vehicle and Fuel Emissions Laboratory, Assessment and Standards Division, 2000 Traverwood Drive, Ann Arbor, MI 48105. Phone (734) 214-4285; Fax: (734) 214-4939 or email to: janssen.greg@epa.gov

All questions or comments must be communicated in writing via postal mail, facsimile, or electronic mail to the contact person listed above. Answers will be posted, weekly, until the closing date of this announcement at the OAR Grants/Funding webpage (http://www.epa.gov/air/grants_funding.html).

Section VIII - Other Information.

The EPA Grant Award Officer is the only official that can bind the Agency to the expenditure of funds for selected projects resulting from this announcement.