

AGENCY: ENVIRONMENTAL PROTECTION AGENCY (EPA)

TITLE: "DYNAMIC GLOBAL ECONOMIC MODELING OF GREENHOUSE GAS EMISSIONS AND MITIGATION FROM LAND-USE ACTIVITIES"

ACTION: Request for Initial Proposals (RFIP) - Initial Announcement

RFIP NO: OAR-CPPD-04-09

CATALOG OF FEDERAL DOMESTIC ASSISTANCE (CFDA) NO: 66.034

DATES: The closing date and time for receipt of Initial Proposals is June 30, 2004, 2:00 p.m. EST. Applications submitted via U.S. Mail must be received by the closing date and time.

Final applications will be accepted, only, from those eligible entities whose Initial Proposal has been successfully evaluated and selected for award. EPA will notify selected applicants not later than July 30, 2004.

The closing date and time for receipt of Final Proposals is August 31, 2004. 2:00 p.m. EST.

SUMMARY: This notice announces the availability of funds and solicits proposals to advance the development of dynamic global economic modeling of greenhouse gas emissions and mitigation from land-use, land-use change, and forestry activities (LULUCF). Three categories of economic modeling efforts will be considered: general equilibrium, partial equilibrium land-use sectoral modeling, and integrated assessment modeling of land-use climate change impacts.

FUNDING/AWARDS: The total estimated funding for this competitive opportunity is \$3 million. In FY 2005, total funding shall not exceed \$600,000. Cooperative agreements resulting from this announcement will be funded incrementally. Additional funds may be added in each subsequent year of the agreement. EPA anticipates award of at least one cooperative agreement resulting from this competitive opportunity; however, award of up to three cooperative agreements ranging in annual value from \$50,000 to \$200,000 is possible; subject to availability of funds, and the quality of proposals submitted.

Eligible entities are encouraged to submit multi-year applications. All projects must be completed within the negotiated project performance period of one to five years.

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I. Funding Opportunity Description

A. Background.

The Non-CO₂ Gases and Sequestration Branch (NGSB) of EPA's Office of Atmospheric Programs undertakes analyses of CO₂ sequestration and non-CO₂ greenhouse gas (GHG) inventories and mitigation alternatives, including land-use related GHG emissions and mitigation. NGSB develops partial and general equilibrium economic modeling and integrated assessment modeling to support sectoral, national, and global policy analyses.

Changes in land-use practices are regarded as an important component of strategies to mitigate greenhouse gases. Modifications to land-use activities can reduce emissions of both CO₂ and non-CO₂ gases (methane (CH₄), and nitrous oxide (N₂O)), increase sequestration of atmospheric CO₂ into plant biomass and soils, and produce lower emission biomass fuel substitutes for fossil fuels. Estimates to date suggest that land-use mitigation could be relatively inexpensive per unit mitigated compared to traditional energy related mitigation strategies.

Assessing the global role of land-use in mitigation strategies requires global economic modeling of dynamic land-use behavior and markets. The economics of forest carbon sequestration is a particularly complex intertemporal problem in that sequestration rates and harvesting and land conversion decisions are functions of the dynamic age of trees, as well as forest species composition, management intensity, and market factors. Similarly, assessing land-use response to climate changes requires integrated assessment models capable of representing intertemporal bio-physical land potential with respect to dynamic climatic conditions and subsequent economic land-use responses given land potential.

In support of this dynamic global modeling initiative, NGSB participates in and supports a number of modeling efforts, including development of global land-use and greenhouse gas data with the Global Trade Analysis Project (GTAP) at Purdue University (for details, visit the project website at: http://www.gtap.agecon.purdue.edu/databases/projects/Land_Use_GHG/default.asp); and, dynamic global forest sector modeling of GHG mitigation and costs as part of the Stanford Energy Modeling Forum EMF-21 study (the EMF-21 research will be published in a forthcoming special issue of *The Energy Journal*).

B. Scope of Work.

EPA seeks to fund proposals that advance dynamic global economic modeling of greenhouse gas emissions and mitigation from land-use, land-use change, and forestry activities (LULUCF). Specifically, three categories of modeling will be considered: general equilibrium, partial equilibrium land-use sectoral modeling, and integrated assessment modeling of land-use climate change impacts. A funded proposal will develop a modeling methodology and framework to support economic analyses of the intertemporal role of LULUCF in regional and global GHG emissions and mitigation and/or the economic land-use consequences of climate change induced by GHG emissions. EPA will review proposals for their potential to advance LULUCF modeling's ability to provide more accurate and comprehensive economic GHG emissions and

mitigation analyses and economic land impacts analyses.

The research should utilize the GTAP global land-use and greenhouse gas data and leverage methodologies employed in the static modeling of land-use GHG mitigation with GTAP data. The proposal should demonstrate expertise in dynamic economic mathematical programming (general equilibrium, partial equilibrium, and/or integrated assessment) and global climate analysis, as well as experience with the GTAP modeling framework and global database, and familiarity with the climate role and analysis of LULUCF.

Some areas of interest for model development, with respect to LULUCF economic behavior, are:

1. Endogenous dynamic GHG emissions as a function of LULUCF activities.
2. Endogenous dynamic portrayal of climate-policy-responsive land-use GHG mitigation options and costs in land management decisions.
3. Dynamic modeling of land competition within and between forestry, agriculture, and other economic sectors as a driver for land-use activities.
4. The intertemporal role of LULUCF mitigation relative to mitigation options in energy intensive sectors, e.g., industrial, transportation, and electricity.
5. Endogenous dynamic land-use responses to and subsequent economic impacts from climate induced changes in land productivity (i.e., changes in technical land-use potential), as well as GHG emissions sensitivity to climate (e.g., many agricultural non-CO₂ gases are sensitive to climate). Model development in this area might also include a dynamic endogenous climate response to GHG emissions.

Eligible entities are encouraged to submit multi-year applications. All projects must be completed within the negotiated project performance period of one to five years.

C. Supplementary Information

The statutory authority for this action is Clean Air Act, Section 103(b)(3) which authorizes the award of grants for research, investigations, experiments, demonstrations, surveys, and studies related to the causes, effect, extent, prevention and control of air pollution.

II. Award Information

A. What is the amount of funding available?

The total estimated funding for this competitive opportunity shall not exceed \$3 million. In FY 2005, total awarded funding shall not exceed \$600,000. Cooperative agreements resulting from this announcement will be funded incrementally. Additional funds may be added in each subsequent year of the agreement.

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

EPA anticipates award of at least one cooperative agreement resulting from this competitive opportunity; however, award of up to three cooperative agreements ranging in annual value from

\$50,000 to \$200,000 is possible; subject to availability of funds; and, if based on the evaluated results of all proposals, doing so will support useful alternative modeling approaches and modeling across the three modeling categories being considered under this request.

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 will be:

1. close monitoring of the successful applicant's performance;
2. collaboration during performance of the scope of work;
3. approving substantive terms of proposed contracts;
4. approving qualifications of key personnel (EPA will not select employees or contractors employed by the 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 2005 through December 2009. Eligible entities are encouraged to submit multi-year applications. All projects must produce deliverables annually. All projects must be completed within the negotiated project performance period of one to five 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 subaward or subgrant 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.

Subgrants or subawards may be used to fund partnerships with non profit organizations and governmental entities. Successful applicants cannot use subgrants or subawards to avoid requirements in EPA grant 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 subgrantee must be consistent with the standards for distinguishing between vendor transactions and subrecipient assistance under Subpart B Section .210 of [OMB Circular A-133](#), and the definitions of "subaward" at 40 CFR 30.2(ff) or "subgrant" at 40 CFR 31.3, as applicable. EPA will not be a party to these transactions.

III. Eligibility Information

A. Eligible Entities.

Proposals will be accepted from state, local, multi-state, and tribal governmental agencies, universities, 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.

B. Cost Sharing or Matching.

Cost-Sharing or Matching is not required, as a condition of eligibility, or otherwise, for proposals selected for award.

IV. Application and Submission Information

A. How to obtain Application Package.

The complete grants application package can be downloaded from EPA's Office of Grants and Debarment website at: http://www.epa.gov/ogd/grants/how_to_apply.htm Potential applicants may request a paper copy of the application package by contacting one of the agency contacts listed in Section VII of this announcement.

B. Content and form of Application Submission.

1. **Initial Proposals.** Applicants must submit one original signature Initial Proposal and two complete copies. Initial Proposals may not exceed 17 pages in length and must conform to the following outline:
 - a. Overview of the organization, its mission, and related experience (1-2 pages);
 - b. Description of key project activities and approaches (3-7 pages);
 - c. Brief biographical sketches of key technical experts who will be involved in the project (3 pages maximum);
 - d. Detailed budget narrative (3 pages maximum);
 - e. SF 424a (2 pages).

Applicants are strongly advised to avoid submission of extemporaneous materials. Proposals exceeding the maximum page limitation will not be considered. The maximum page limitation shall include any pieces that may be submitted by a third party (e.g., references or letters confirming commitments). All application materials must be completed in English. The minimum acceptable font size for application materials, excluding the SF 424a, shall be

10 pitch.

2. **Final Applications.** (*FINAL APPLICATIONS WILL BE ACCEPTED, ONLY, FROM THOSE ELIGIBLE ENTITIES WHOSE INITIAL PROPOSAL HAS BEEN SUCCESSFULLY EVALUATED AND SELECTED FOR AWARD. **DO NOT INCLUDE THESE DOCUMENTS WITH THE INITIAL PROPOSAL.***)

Applicants whose Initial Proposals have been evaluated and selected for award must submit one original signature document and two copies of the completed federal grant application package and narrative workplan. All application materials must be completed in English.

- a. A complete **FINAL APPLICATION** must contain the following, in the sequential order shown:

1. SF-424 Application for Federal Assistance, with original signature.
2. Narrative Statement, in the format detailed below.
3. Other supporting documentation.
4. SF-424 A, Budget by categories and indirect cost rate.
5. SF-424 B, Assurances for non-construction programs.
6. Debarment and Suspension Certification.
7. Certification Regarding Lobbying and SF LLL, if applicable.
8. EPA Form 4700-4 Preaward Compliance review report.
9. Quality Assurance Narrative Statement, if applicable.
10. Copy of Negotiated Indirect Cost Rate Agreement, if applicable.
11. Biographical Sketch.
12. E-mail address or self-addressed envelope (to receive notification of receipt of application).

- b. The narrative statement should conform to the following outline:

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.
4. Project period. Provide beginning and ending dates (for planning purposes, applicants should assume funds will be available in January, 2005).
5. Narrative Workplan. Summarize the project and specifically explain how the project meets the evaluation criteria detailed in *Section V(A)* of this solicitation.
6. Qualifications. Summarize your technical experience and knowledge. Demonstrate how your qualifications meet the evaluation criteria detailed in *Section V(A)* of this solicitation.
7. Total Project Cost. Specify total cost of the project. Identify funding from other sources including any in-kind resources.
8. Detailed Itemized Budget. Clearly explain how EPA funds will be used. Provide a budget for the following categories:
 - Personnel

- Fringe Benefits
 - Contractual Costs
 - Travel
 - Equipment
 - Supplies
 - Other
 - Total Direct Costs
 - Total Indirect Costs: must include documentation of accepted indirect rate
 - Total Cost
9. Reporting Requirements. Discuss quarterly progress (schedule to be established by EPA). Quarterly progress reports should include: a summary of performance progress-to-date, problems encountered, successes achieved, and lessons learned.

C. Submission Date and Times.

1. The closing date and time for submission of completed Initial Proposal packages is June 30, 2004, 2:00 p.m. EST. All proposal packages must be received in the program office listed below by the closing date and time. Proposals received after the closing date and time will not be considered for funding. Electronic or facsimile transmission of Initial Proposals/Final Applications will not be accepted.
2. The closing date and time for submission of completed Final Application packages is August 31, 2004, 2:00 p.m. EST. *(Final applications will be accepted, only, from those eligible entities whose Initial Proposal has been successfully evaluated and selected for award.)*
3. Because of the unique situation involving U.S. mail screening in Washington, DC, EPA highly recommends that applicants use express mail to submit their proposals. Initial Proposals and Final Applications should be addressed to:

Express Delivery Address (FedEx, UPS, DHL, etc)

U.S. EPA

Attn: Christopher Emanuel
OAR/Office of Atmospheric Programs
1310 L Street, NW, Rm. 1013J
Washington, DC 20005
 (202) 343-9460

Regular Mail Delivery Address (U.S. Postal Service)

U.S. EPA

Attn: Christopher Emanuel (Mail Code 6202J)
 OAR/Office of Atmospheric Programs
 1200 Pennsylvania Avenue, NW
 Washington, DC 20460

V. Application Review Information

A. Evaluation Criteria.

Each eligible application will be evaluated according to the criteria set forth below. Initial proposals that are best able to directly and explicitly address these criteria will have a greater likelihood of being selected for award. Each proposal will be rated under a point system, with a total of 100 points possible.

Criterion	Maximum Points per Criterion
Benefit to the public: Describe the importance of the project and its potential to develop methods and tools that support private and public analyses of intertemporal global LULUCF activities in terms of GHG emissions, mitigation, and economic productivity. The initial proposal shall describe: (1) the modeling product to be produced, (2) the value of the product to the public in terms of the audience served and the types of analysis that will be supported by the modeling product, and (3) the uniqueness and contribution of the product relative to previous and other on-going modeling. EPA will review proposals for their potential to advance LULUCF modeling's ability to provide more accurate, comprehensive, and contemporary economic GHG emissions and mitigation analyses and economic land impacts analyses.	40
Experience of key personnel: For Initial proposals, briefly describe the experience of key personnel identified, and designate a primary contact, who will be responsible for the implementation of the grant and will serve as a liaison with EPA staff. EPA will review biographical sketches to determine if staff experience is commensurate with activities proposed and the modeling categories of this request. Detail experience in general equilibrium, partial equilibrium, and/or integrated assessment modeling and global climate analysis, as well as experience with the GTAP modeling framework and global database, and familiarity with the climate role and analysis of LULUCF.	35
Cost effectiveness: Applicants shall describe their ability to leverage grant funds. EPA will review budget narratives and form SF 424a to determine if costs are reasonable and commensurate with activities proposed.	15
Past experience: For Initial proposals, briefly describe organizational experience with federal grants and cooperative agreements, include short project descriptions and deliverables lists.	10

B. Other Factors.

EPA reserves the right to make decisions on applications based on factors that help ensure geographic equity, demonstration of a variety of technical approaches, and the advancement of modeling across the three modeling categories considered under this request.

C. Review and Selection Process.

Each Initial proposal will be evaluated by a team chosen to address the full range of land-use

emission and mitigation activities and economic analysis and modeling. The Evaluation Team will base its evaluation solely on the selection criteria disclosed in this notice (*see Section V (A), Evaluation Criteria*).

Completed evaluations will be referred to a Selection Committee that is responsible for further consideration and final selection. The highest numerically-ranked proposal(s)(subject to the quality of proposals, availability of funds, and consideration of *Section V(B), Other Factors*) will be selected for award and required to submit Final Applications.

VI. Award Administration Information

A. Award Notices.

Following evaluation of Initial Proposals, all applicants will be notified regarding their application's status.

1. Initial Proposal Notifications.

- a. EPA anticipates notification to *successful* applicant(s) will be made, via telephone, electronic or postal mail by July 30, 2004. The notification will advise the applicant that its Initial Proposal has been successfully evaluated and selected. The notice shall require submission of a Final Application. (*Refer to Section IV(B), Content and form of Application Submission.*)
- b. EPA anticipates notification to *unsuccessful* applicant(s) will be made via electronic or postal mail by July 30, 2004. In either event, the notification will be sent to the original signer of the application.

2. Final Proposal Notifications.

- a. The closing date and time for submission of completed Final Application packages is August 31, 2004, 2:00 p.m. EST.
- b. EPA anticipates notification to *successful* applicant(s) regarding the status of Final Applications will be made, via telephone, electronic or postal mail by September 30, 2004. 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 90 days from the date of selection.

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. 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>.

C. Reporting Requirement.

Quarterly progress reports will be required. The quarterly progress report should include: a summary of performance progress-to-date, detailed expenditures-to-date, problems encountered, successes achieved, and lessons learned. The schedule for submission of quarterly progress reports will be established, by EPA, after award.

VII. Agency Contact

All questions, while this funding opportunity is open, should be e-mailed to: cppd.grant-funding-inquiries@epa.gov. Answers will be posted, bi-weekly, until the closing date for this announcement at the OAR Grants/Funding website (http://www.epa.gov/air/grants_funding.html).

FOR FURTHER INFORMATION CONTACT: Christopher Emanuel, US EPA, Office of Atmospheric Programs, 1200 Pennsylvania Avenue, N.W. (MC 6202J), Washington, DC 20460, Phone: (202) 343-9460, Fax (202) 343-2202: [e-mail:emanuel.christopher@epa.gov](mailto:emanuel.christopher@epa.gov).

VIII. Other Information

Applicants should clearly mark information in their application which they consider confidential. EPA will make final confidentiality decisions in accordance with Agency regulations at 40 CFR Part 2, Subpart B.

EPA reserves the right to reject all proposals or applications and make no award as a result of this announcement. 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.

Formal disputes challenging the Agency award decision, will be resolved using the Dispute Procedures at 40 [CFR](#) 30.63 and 40 CFR 31.70.