

network can be obtained from the Web site, <http://public.ornl.gov/ameriflux/Participants/Sites/Map/index.cfm>.

(2) *Upgrading micrometeorological and biological measurements at existing AmeriFlux sites within the upper Midwest region that are currently co-located with planned field program(s) of NACP, as noted in item (1) above.*

Upgrades that will be considered include: Instrumentation for better quantifying CO<sub>2</sub> fluxes; precise measurements of atmospheric CO<sub>2</sub>; enhanced measurement capacity to deliver the full suite of core measurements recommended in the AmeriFlux science plan, <http://public.ornl.gov/ameriflux/About/scif.cfm>; improved availability, calibration, quality control and documentation of site data; redundancy of equipment to minimize data gaps; and systemic corresponding biological measurements for independent estimation of net ecosystem productivity (NEP). Priority will be given to requests that improve cohesion of network measurements. With improved precision and accuracy of atmospheric CO<sub>2</sub> concentration measurements, emphasis will be placed on sites that will augment initial phases of NACP intensive field programs and observing networks. In addition, since the overall value of the AmeriFlux network and its contribution to NACP depend on data sharing and data inter-comparison, only those existing AmeriFlux sites that have made NEE, biological and NEP data available to the science community through the AmeriFlux network data system (Carbon Dioxide Information Analysis Center) will be eligible for upgrade awards.

For both items (1) and (2) applicants are strongly encouraged to review NACP goals and major elements (NACP, 2002), and explain and justify how proposed research will likely contribute to the overall NACP research strategy, and specifically how the research will improve measurements of carbon flux measurements and estimates of carbon budgets and sinks. Importantly, the proposed research must demonstrate a capability to produce high-quality measurements and provide seasonal and annual estimates of net ecosystem exchange of CO<sub>2</sub>. Additionally, best efforts of the proposed research are expected to produce core AmeriFlux measurements (e.g., NEE, carbon budgets and fluxes of ecosystem components, including uncertainty estimates) in quantities and format that would be compatible with related NACP land-based carbon inventories and with atmospheric CO<sub>2</sub> concentration and profiling data. For item (1) upgraded

capacity might include investments in instrumentation, reference gases, more systematic measurement protocols, for example.

(3) *Support of selected Science Team AmeriFlux activities that would contribute most effectively to science goals in NACP.* This could include, for example, participation in priority field programs that require synthesis and integration using measurements and modeling of AmeriFlux results as part of intensive campaigns and NACP biological inventories. For reference, applicants may wish to review current AmeriFlux activities (<http://public.ornl.gov/ameriflux/Participants/Sites/Map/index.cfm>). Applications addressing this technical requirement must identify how proposed augmentation of current research and analysis would contribute to the NACP.

NACP Reference: The North American Carbon Program (NACP), A Report of the NACP Committee of the U.S. Carbon Cycle Science Steering Group, Steven C. Wofsy and Robert C. Harriss, Co-chairs, 2002. Available from the USGCRP Office, 1717 Pennsylvania Avenue, NW., Suite 250, Washington, DC 2006.

#### Program Funding

It is anticipated that approximately \$2.0 million will be available for grant awards in Fiscal Year 2003, contingent upon availability of appropriated funds. Previous awards for the creation and operation of a new site have ranged from \$100,000 up to \$300,000 per year, with most not exceeding \$200,000. Each site application must provide a "facility" budget and an "operational" budget. Applications to create a new AmeriFlux site may be eligible for a multi-year award, where the first-year budget would include costs of site development and instrumentation, and successive-year budgets would include nominal operational costs. Applications to upgrade measurement capacity at an existing AmeriFlux site would be limited to a one-year award because most of the investment is expected to be for equipment. Sustaining operational budgets would be reflected in existing grants or renewal applications. Multi-year applications may not exceed 3 years in duration. Most awards are expected to meet these criteria; however, applications with exceptional budgeting circumstances should discuss them with the Program Manager for this solicitation. Funding of multiple year grant awards is contingent upon availability of appropriated funds.

#### Merit Review

Applications will be subjected to scientific merit review (peer review) and

will be evaluated against the following evaluation criteria listed in descending order of importance as 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 process will include program policy factors such as the relevance of the proposed research to the terms of the announcement and agency's programmatic needs. Note that external peer reviewers are selected with regard to both their scientific expertise and the absence of conflict-of-interest issues. Non-Federal reviewers may be used, and submission of an application constitutes agreement that this is acceptable to the investigator(s) and the submitting institution.

#### Submission Information

Information about the development and submission of applications, eligibility, limitations, evaluation, selection process, and other policies and procedures may be found in 10 CFR part 605, and in the Application Guide for the Office of Science Financial Assistance Program. Electronic access to the Guide and required forms is made available via the World Wide Web at: <http://www.sc.doe.gov/production/grants/grants.html>. DOE is under no obligation to pay for any costs associated with the preparation or submission of applications if an award is not made.

The research project description must be 15 pages or less, exclusive of attachments and must contain an abstract or summary of the proposed research. On the SC grant face page, form DOE F 4650.2, in block 15, also provide the PI's phone number, fax number and e-mail address.

Attachments include curriculum vitae, a listing of all current and pending federal support, and letters of intent when collaborations are part of the proposed research. Curriculum vitae should be submitted in a form similar to that of NIH or NSF (two to three pages).

The applicants are asked to submit an electronic copy of the abstract in ASCII format to [karen.carlson@science.doe.gov](mailto:karen.carlson@science.doe.gov). The abstract should include the following information: PI and co-PI's, their institutions, brief summary of research, including identification of principal subcontractor/collaborators even if no funds are requested for their support.