



# **Request for Applications**

**Competitive Grants Program  
FY 2009**

## **Deadlines:**

**Pre-Proposal:**

**February 28, 2009**

**Full Application:**

**March 31, 2009**

## **FUNDING OPPORTUNITY DESCRIPTION**

### **ABOUT THE SUN GRANT INITIATIVE**

Authorized by Congress in 2004, the Sun Grant Initiative is a national network of land grant universities and U.S. Department of Energy laboratories partnering to build a biobased economy. Sun Grant institutions are charged with making significant advances in biobased industries for the benefit of America's independent farmers, rural communities, and public at large.

The mission of the Sun Grant Initiative is to (1) enhance national energy security through development, distribution and implementation of biobased energy technologies, (2) promote diversification in and the environmental sustainability of agricultural production in the United States through biobased energy and products technologies; (3) promote economic diversification in rural areas of the United States through biobased energy and product technologies; and (4) enhance the efficiency of bioenergy and biomass research and development programs through improved coordination and collaboration between the Department of Agriculture, the Department of Energy, and the land grant colleges and universities.

The Sun Grant Initiative is organized as a network of five land grant universities serving as regional Sun Grant Centers: South Dakota State University (North Central), Oregon State University (Western), Oklahoma State University (South Central), the University of Tennessee – Knoxville (Southeastern), and Cornell University (Northeastern).

These centers will facilitate federally funded research, extension, and education programs in their respective regions. These programs will embrace the multi-institution, multi-state, multi-disciplinary integrated approach that is at the heart of the land grant method of addressing needs and opportunities.

### **SOUTH CENTRAL REGION SUN GRANT CENTER**

The South Central Region Sun Grant Center (SGI-SC), located at Oklahoma State University in Stillwater, Oklahoma, will be the administrative unit for the region composed of the States of Arkansas, Colorado, Kansas, Louisiana, Missouri, New Mexico, Oklahoma and Texas.

## 2009 EXTERNAL GRANTS PROGRAM

SIG-SC has been funded for the Federal fiscal years (FY2007-2015) by a grant from the U.S. Department of Transportation (DOT). In 2007, the first competitive grants program for the South Central Region funded a total of \$2.4 million. These funds were divided between Seed Grants and Integrated Projects. With the release of the current RFA, it is expected that the SIG-SC will fund a total of approximately \$1.2 million for both Seed Grants and Integrated Projects.

### *Seed Grants*

Project guidelines allow up to two years with a maximum annual funding request of \$35,000 of DOT funds which includes facilities and administrative (F&A) costs at the institution's full **federally approved rate or 25% of total direct costs, whichever is the lesser amount**. Multi-institutional and multidisciplinary participation is preferred. Examples of possible projects include preliminary investigation, developing a specific educational component, and completing an existing project for either technology development or technology implementation. Awards will be incrementally funded, based on availability of funding from DOT and project progress. ***The application process consists of a pre-proposal and a full application.***

### *Integrated Projects*

Projects in this category have a three year maximum duration. Maximum annual funding request is \$125,000 of DOT funds which includes facilities and administrative (F&A) costs at the institution's full **federally approved rate or 25% of total direct costs, whichever is the lesser amount**. Proposals must include substantive, multi-institutional participation of at least two institutions with clearly defined roles and responsibilities for each partner. Multi-state and multidisciplinary participation is desired. Collaboration with external partners including industry, government or non-profit organizations is encouraged. Roles and responsibilities of each external partner must be clearly outlined through a letter of commitment. Awards will be incrementally funded, based on availability of funding from DOT and project progress. ***The application process consists of a pre-proposal and a full application.***

### ***Priority Areas***

SGI-SC invites proposals for support of research, extension, and education that will further its mission of developing viable alternative biobased energy sources and products while enhancing economic opportunities in rural areas. The following are priorities identified by the Department of Transportation and the South Central Regional Center. Proposals in the topic areas not included in the list below must show displacement of foreign oil through the enhancement of the biobased economy.

#### **BIOFUELS FEEDSTOCK DEVELOPMENT**

- Plant breeding and selection
- Agronomic practices for optimal sustainable yields
- Equipment technologies for sustainable harvests

#### **BIOFUELS CONVERSION PROCESSES**

- Conversion efficiency
- Cost of production
- Enzymatic conversion
- Thermo-chemical conversion

#### **BIOFUELS SYSTEMS ANALYSIS**

- Industrial ecology
- Feedstock transport, delivery and storage
- Biofuel transport and delivery infrastructure

#### **MULTIPLE LAND USE FOR BIOFUEL FEEDSTOCK PRODUCTION**

- Agricultural production
- Wildlife habitat
- Soil and water conservation
- Air quality
- Global climate change

#### **ECONOMICS, MARKETING & POLICY**

- Economics and policy
- Impact on food and feed markets

#### **ENVIRONMENTAL IMPACT**

- Life cycle emissions
- Green house gas emissions
- Carbon
- Energy balance
- NOX emissions
- Reduction in greenhouse gas emissions

#### **EDUCATION & OUTREACH PROGRAMS**

- e-Extension and rural development outreach

Please see SGI-SC Report <http://sungrant.okstate.edu/SGI%20Report.pdf> for additional regional priorities. Proposals that address near term issues associated with the general Sun Grant objectives also will be considered. Proposals should clearly state how the research or extension work addresses a biobased industry. We encourage collaborative, multidisciplinary, and multi-state projects.

## ELIGIBILITY INFORMATION

### ***Eligible Applicants***

To be eligible lead principle investigators (PI) must be employed by a land grant institutional system within the South Central Region. Investigators from any other U.S. University, industry or government agency may partner as a sub recipient with a principal investigator (PI) from a qualifying institution within the South Central Region. PIs and key personnel must demonstrate competency to implement and complete a project, provide fiscal accountability, prepare project reports and demonstrate a willingness to share information with researchers and other interested parties.

### ***Eligible Institutions***

Land grant institutional systems (i.e. 1862, 1890, and 1994) located in the states of Arkansas, Colorado, Kansas, Louisiana, Missouri, New Mexico, Oklahoma and Texas are eligible to apply as lead institutions. For information on the National Sun Grant Association and funding opportunities in other regions, please see the following website: <http://www.sungrant.org>.

### ***Cost Sharing/Matching Requirements***

DOT requires that 20% of the total project costs come from non-federal sources on all projects. No federal funds may be used as matching funds. Any waived F&A on the Federal funds cannot be used as part of the required match. However, institutional waived F&A on the matching direct costs can be used. Funds requested for technology development/implementation projects with industry or business partners will be given preference during the selection process if a match greater than 20% is provided. The degree of non-land grant institutional funding will also be a consideration in the review process. Grantees will be required to document and report matching on a monthly basis. Matching must be documented and auditable in the grantee's financial system.

### ***Cost Share/Matching Calculation Example***

An institution requesting \$100,000 in funds from Sun Grant must provide 20% of the total project costs as match or \$25,000. The total value of the project will be \$125,000 with 80% from federal funds (\$100,000) and 20% from non-federal funds (\$25,000).

## APPLICATION AND SUBMISSION PROCESS

### *Submission Deadlines*

**Pre-proposals** must be submitted electronically using Webnibus online application system no later than 5 p.m. C.S.T. on February 28, 2009.

Webnibus can be accessed at <http://sungrant.okstate.edu> under the “Funding Opportunities” tab.

**Full applications** (Seed Grant Project and Integrated Project) must be submitted electronically using Webnibus online application system no later than 5 p.m. C.S.T. on March 31, 2009. Webnibus can be accessed at <http://sungrant.okstate.edu> under the “Funding Opportunities” tab.

### *Pre-proposals*

A pre-proposal is **required** for both seed project grants and integrated project grants. Pre-proposals will be used to suggest possible collaborations in an effort to strengthen the full proposal. Forms will be submitted via an online Webnibus system accessed through the South Central Sun Grant Center website at <http://sungrant.okstate.edu> under the “Funding Opportunities” tab. Detailed submission instructions are also available on the site. The components of the pre-proposal are as follows:

1. Title page
  - a. Project title
  - b. Lead investigator(s) and institution
  - c. Budget estimate
  - d. Cost Share
  - e. Collaborators which include participating institutions and external partners
2. Narrative which includes a project description of no more than 4,000 characters or approximately two pages, double-spaced which should also indicate deliverables and potential impacts of the work by answering the following:
  - a. What problem or opportunity is to be addressed? Why is this project important?
  - b. Provide a brief and general description of the research methods you will use.
  - c. What are the expected deliverables? Delivery date of deliverables?
  - d. Who will be affected by the findings and how will they benefit from the results?
3. Biosketch of the lead investigator and senior personnel (two-page CV summary)

***Full Application (Seed Grants and Integrated Project Grants)***

The application package must consist of the following items. Submissions omitting any of these items will not be considered. The components must be entered into Webnibus, the on-line proposal system, as directed. Those components submitted in the pre-proposal will be carried over into the full proposal application.

1. Biosketch (Two page CV summary)
2. Senior personnel
3. Title page
4. Proposal sign-off sheet
5. Proposal summary
6. Pre-proposal narrative
7. Full proposal narrative
8. Budget
9. Budget justification
10. Suggested reviewers
11. File attachments of supporting documentation

***Content and Format of Application***

Forms must be submitted via the online Webnibus system accessed through the South Central Sun Grant Center website at <http://sungrant.okstate.edu> under the “Funding Opportunities” tab. Detailed submission instructions are also available on the site. More details on each section are as follows:

1. **Biosketch:** Two page curriculum vitae summary for each senior personnel. You may edit each section.
2. **Senior Personnel:** All senior personnel for your project need to be registered in the online proposal system Webnibus. Please show all senior personnel, including those added since the pre-proposal submission.
3. **Title page:** Complete information as requested by the online proposal submission system.
4. **Proposal Sign-Off Sheet:** The PI, co-PIs and departmental/institutional approvers must all certify the proposal prior to submission. They can do so by clicking the certification links next to their names near the bottom of sign-off sheet. It is the PI’s responsibility to add the appropriate approvers to the proposal, notify them when the proposal is ready and provide them with the information they need to access and submit the proposal in Webnibus.
5. **Proposal Summary:** Provide a short (200 words maximum) summary. This non-technical abstract will be read by a general audience and used in public descriptions of the Sun Grant research portfolio. The proposal summary will be broken down into sections including: key words, objectives, methodology, rationale and expected outcomes.

6. **Pre-Proposal Narrative:** The pre-proposal narrative, submitted previously, will automatically be added to your full application by the Webnibus system for your convenience to use as reference in completing your full proposal.
7. **Full Proposal Narrative:** *Maximum page limit for the Full Proposal Narrative is 20 pages for Integrated Projects and 12 pages for Seed Grants.* The page count includes graphics and tables, but excludes references. Applicants must use Word or Word Perfect to write the narrative, and then upload the file into Webnibus when finished. To format the document, use double-spaced line spacing, 12-point Times New Roman font, and 1-inch margins. Narratives must address all of the following.
  - a. *Introduction and discussion of problem or opportunity:* A clear statement of the long-term goal(s) and supporting objectives or research questions of the proposed project should be included. Summarize the body of knowledge or other past activities that substantiate the need for the proposed project. Describe on-going or recently completed significant activities related to the proposed project including the work of key personnel. Preliminary data/information pertinent to the proposed research should be included in this section. All works cited should be referenced.
  - b. *Goals and project period objectives:* Concisely present the rationale behind the proposed research including the specific relationship of the project's objectives to one or more of the Sun Grant's goals. Any novel ideas or contributions that the proposed project offers should also be discussed in this section.
  - c. *Methodology:* Activities proposed or problems being addressed must be clearly stated and the approaches being applied clearly described. Specifically, this section must include methods to be used in carrying out the proposed project and the feasibility of the methods. In addition, identify any limitations to the proposed methodology.
  - d. *Work plan and benchmarks including timeline:* A description of the proposed activities, their sequence, and time frames for completion.
  - e. *Project Outcomes and broader impacts anticipated and when expected:* Expected outcomes of project including how results or products will be used and the pitfalls that may be encountered. **Each proposal should include an economic justification and analysis.** Include a list of project deliverables.
  - f. *Proposed outreach strategies and activities:* It is important to disseminate information from SGI-SC funded projects. At least one product of significance is required for all funded projects, such as an experiment station report, extension bulletin, or white paper. Ideally, at least one peer-reviewed

article would result from SGI-SC funded research. Investigators must acknowledge USDOT and SGI-SC in all publications and presentations. PIs will be invited to present research findings during the South Central Center's Regional Conference.

- g. *Project management and evaluation*: Clearly describe the project team and their roles and responsibilities in the project. Describe the facilities, equipment and resources that are on hand and available to support the needs of the project. The equipment and facilities needed by the project will be documented in the budget justification. Discuss the means by which results will be analyzed, assessed, or interpreted.
  - h. *List of collaborators and/or contributors and their roles in the project*: If it will be necessary to enter into formal consulting or collaborative arrangements with others, such arrangements should be fully explained and justified. If the consultant(s) or collaborator(s) are known at the time of application, a vitae or resume should be provided in the senior personnel section. In addition, evidence (e.g., letter of support, signed by the collaborating institution's authorized official) should be provided that the collaborators involved have agreed to render these services. These supporting documents are to be submitted as attached files in the Webnibus online proposal system and will not count toward the page limit. The applicant will also be required to provide additional information on consultants and collaborators in the budget justification portion of the application, as well as a signed detailed budget from the collaborating institution's authorized official. (For more information, see Question #15 on the Sign-Off Sheet).
  - i. *References*: All work cited should be referenced in this section of the application. All references to works cited should be complete, and should conform to an acceptable journal format. References should be listed in numerical order corresponding to their appearance in the text. References will be submitted in the system as a separate attachment. **The reference section does not count toward the page limit.**
8. **Budget**: The requested budget for the project must be entered into the budget form provided by the online Webnibus system. Note that the budget estimate is carried over from the pre-proposal stage. The budget form includes the line items listed below:
- a. Salaries and wages for all senior personnel, post-doctoral research associates, graduate students, secretarial and technical workers, etc.
  - b. Costs of fringe benefits
  - c. Permanent Equipment over \$5k. Include an itemized list and cost in the budget justification
  - d. Expendable Supplies and Equipment (equipment under \$5k)
  - e. Travel – Domestic or International, please specify
  - f. Publication costs

- g. Other direct costs. Include an itemized list and cost in the budget justification, i.e. graduate student tuition, sub recipients, etc.
  - h. Total Direct Costs A-G
  - i. Facilities and Administrative costs (F&A). List percentage used, either institution's federally negotiated rate based on MTDC or 25% TDC, whichever is the lesser. Provide an explanation in your budget justification.
  - j. Grand Total Request
  - k. Cost share/Matching allocation must be shown in Grantee Share Column.
9. **Budget Justification:** All budget categories for which support is requested must be individually listed (with costs) in the same order as the budget. If consulting, collaborative, or sub recipient arrangements are included in the application, the arrangements should be fully explained and justified. The rate of pay for any consultant must be included, if known at the time of application. Please include a cost breakdown for the consultant. Letters of consent or collaboration or other evidence should be provided to show that collaborators have agreed to participate. In multi-institutional applications, a budget and budget narrative must be included for each institution involved. The lead institution and each participating institution must be identified.

**Important:** Budget Justification must include a description of the matching funds provided, including sources. Matching Funds must be non-Federal. Any waived F&A on the Federal funds cannot be used as part of the required match. Institutional waived F&A on the matching direct costs can be used. Institutions are required to provide 20% of Total Project match. (*For more information, see the cost sharing/matching requirements and example on Page 5.*)

**Facilities and Administrative (F&A) Costs** - Institutions are allowed to charge F&A costs at their full federally approved rate based on MTDC (modified total direct costs) or 25% of TDC (total direct costs), whichever is the lesser.

10. **Suggested Reviewers:** Suggest at least three (but no more than six) potential reviewers that are not affiliated with your institution or proposed project.
11. **File Attachments:** Include supporting documentation, such as cooperative agreements and letters of commitment signed by an institutional authorized official.

**Remember to provide access rights for your proposal to all persons at your institution(s) who must review and approve your documentation prior to submission! Some institutions only allow authorized officials to submit proposals rather than the PIs. In this case, access rights must be given to your institution's authorizing official.**

***Confidentiality/Proprietary Information***

Confidentiality will be maintained in the application review process. Applications will not be used for any purpose other than evaluation of merit for funding. **If the proposal includes any proprietary, confidential information, it must be clearly marked as such.**

***Where to Submit***

Pre-proposals and Applications must be submitted using the online proposal submission system, Webnibus. No other submission type will be accepted. The online system can be entered and exited as many times as needed. Information saved on the system will be available upon re-entry into the system, and project team members may review materials online. Project team members should log onto the system several days ahead of the due date to register with the system and to review the proposal forms and process. The system can be accessed at <http://sungrant.okstate.edu> under the funding opportunities tab.

**Pre-proposals must be submitted online, using Webnibus, no later than 5:00 p.m. CST on February 28, 2009.**

**Full applications must be submitted online, using Webnibus, no later than 5:00 p.m. CST on March 31, 2009.**

Projects are anticipated to begin July 1, 2009. Projects will be reviewed annually to ensure satisfactory progress up to the maximum period allowed. Incremental funding shall be awarded, based on availability of funds and satisfactory project progress.

***Contact Information***

For more information on proposal development and submission, please contact:

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## REVIEW PROCESS AND CRITERIA

### *Full Application*

1. All applications will undergo a rigorous review process, which will include technical peer review by scientists working in the appropriate fields. Proposals will also undergo review by a Technical Review Panel and the Sun Grant Oversight Team. Decisions will be made on the basis of the following factors:
  - Investigators eligibility
  - Qualifications of the investigator(s) and the adequacy of the facilities for carrying out the proposed research
  - Uniqueness or duplication of work
  - Technical merit
  - Proposed project relevance to Sun Grant's mission
  - Potential significance of the anticipated results to the South Central region or the nation
  - Reasonable probability that meaningful progress can be made toward addressing the problem or opportunity within the permitted time frame
  - Innovativeness of the approach
  - Reasonable budget
  - Degree of non-federal funding
2. Each application is peer reviewed by scientists who are not associated directly with the program. They will evaluate the proposals and submit their individual ranking of the proposals as well as review comments to the Center.
3. A panel of experts will be assembled to evaluate reviewer assessments. A lead panelist in each of the subfields will be identified and tasked with leading the discussion on that set of proposals. A secondary reviewer will also be identified to present additional information.
4. The ranking of the outside reviewers and the individual rankings of the Technical Review Panel/Oversight Team will be used to construct the final rank order of the proposals.
5. The recommendations made by Technical Review Panel/Oversight Team will be reviewed by DOT for final approval. The Center will seek to achieve a portfolio balance of research and education projects to address the bioenergy priorities of the region. Therefore, relevance to meeting these regional priorities may form the basis for selection among projects deemed of equivalent merit and quality.

### *Technical Reviews*

Masked reviews will be provided. After initial approval, specific grant terms may be negotiated with investigators by Sun Grant personnel.