
Request for Applications

NORTHEAST SUN GRANT INITIATIVE

2010

COMPETITIVE GRANTS PROGRAM

DEADLINES

Letter of Intent (required): Friday, November 13, 2009
(5 pm Eastern)

Full Application: Wednesday, February 3, 2010
(5 pm Eastern)

Request for Applications

The Northeast Sun Grant Initiative (NESGI) Competitive Grants Program announces the availability of funds and seeks proposals from qualified institutions that address the three strategic areas elucidated in the 2004 NE-SGI Roadmap, i.e., BioFuels, BioPower and BioProducts. **In 2010, Northeast Sun Grant Initiative expects to award \$1,050,000 and will seek proposals with emphasis on northeast region biofuels systems modeling, industrial ecology and environmental impact, and distributed scalable technologies. In all proposals, applicants must describe how their new product, crop, technique or technology, if successful, will be integrated into a production system (identifying economic, certification, logistical and other barriers) toward full implementation.**

The Sun Grant mission is to focus the intellectual capacity of the region's land grant universities in partnership with the private sector to enhance national energy security through the development, distribution and implementation of bio-based energy technologies, promote bio-based diversification and environmental sustainability of the region's agriculture, and promote opportunities for bio-based economic diversification in rural communities in assisting the region and the nation move toward greater energy independence. For more information and to review the NE-SGI Roadmap or to view previously (2007-09) selected projects, please go to: <http://www.nesungrant.cornell.edu>

In addition to requesting Sun Grant funds, all proposals must include an additional 25% (auditable) matching funds. Two types of applications are being sought:

Research Proposals: Grants that address the Northeast Sun Grant priorities will be provided to single investigators or small teams for up to \$150,000 (total Sun Grant dollars) (1-3 years in duration). Single or multi-component (research and/or education and/or outreach) proposals are appropriate. (15 page proposal narrative limit.)

Cooperative Extension, Education, and Rural Economic Development Mini-Grant Proposals: Education, outreach, and/or rural economic development proposals may seek up to \$30,000 (total Sun Grant dollars over the duration of the project) (1-3 years in duration possible) in support of graduate students, cooperative extension educator training, outreach programs, or economic development projects. (10 page proposal narrative limit).

Previously-submitted proposals remain on record through 2011. Resubmitted or revised proposals from past NESGI competitions must include an explanation, not to exceed one page, describing how the reviewers' comments have been addressed. Resubmission or invitation for resubmission do not preclude or guarantee selection for funding.

Letters of Intent are required for administrative purposes. Letters of Intent will NOT be reviewed. Submission of a Letter of Intent by the deadline (November 13, 2009) automatically allows the Principal Investigator to submit a full proposal. Letters of intent (2 page limit) and full proposals (15 page limit) should be submitted through the online Webnibus System through a link on the Northeast Sun Grant Website at: <http://www.nesungrant.cornell.edu>. Letters of intent to apply are required by November 13, 2009. Full proposals are due by 5 pm Eastern, February 3, 2010. For full application guidelines, see section 4 of this RFA.

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FUNDING OPPORTUNITY DESCRIPTION

Legislative Authority Background

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

The Sun Grant Initiative is organized as a national network of land grant institutions in five regions. Serving as the five regional Sun Grant Centers are: Cornell University (Northeastern (NE)), The University of Tennessee –Knoxville (Southeastern (SE)), South Dakota State University (North Central (NC)), Oklahoma State University (South Central (SC)), and Oregon State University (Western (W)).

Authorization for creation of the Sun Grant Initiative Centers of Excellence competitive grants program was provided by the Sun Grant Research Initiative Act of 2003(1), introduced to the United States Congress by Senator Daschle and Senator Frist and authorized under Title IX, Sec. 9011 of the Farm Security and Rural Investment Act of 2002.

Federal funding for this competitive grants program was authorized in the Department of Transportation Federal Highway Bill (2005). The relevant language on page 18 of the bill states:

BIOBASED TRANSPORTATION RESEARCH- Funds will be made available through section 5101(a) (1) of the Biobased Transportation Research Act for each fiscal year 2006 through 2009, equally divided and available to carry out biobased research of national importance at the National Biodiesel Board and at research centers identified in section 9011 of the Farm Security and Rural Investment Act of 2002 (7 U.S.C. 8109).

Purpose and Priorities Background

The Northeast Sun Grant Initiative (NE-SGI) will support projects that address the region's need to increase the use of biologically-based resources for meeting the nation's fuel, energy and industrial chemical needs, and to catalyze the transition toward a bio-based economy.

Federal funding for the 2010 competitive grants program is from the U.S. Department of Transportation (DOT). All grant applications must explain how the proposed work contributes to the displacement of foreign oil through enhancement of the biobased economy.

Program Priorities: Only proposals that explicitly address the needs identified by the roadmap and steering committee (composed of regional scientists, engineers, economists, university administrators and stakeholders) will be considered for funding. Proposals must demonstrate value to the region and to stakeholders. Factors relevant to the priorities might address the following: 1) the potential quantity of fossil fuels replaced; 2) number of NE Sun Grant States to be potentially impacted by the project results; 3) number of farms or rural communities impacted; 4) number of acres of land involved in the project; 5) the potential for commercializing the technology.

The purposes of the Sun Grant Program are to:

- 1) Enhance national energy security through the development, distribution, and implementation of biobased energy technologies;
- 2) Promote diversification and environmental sustainability of agricultural production in the United States through biobased energy and product 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 and the Department of Energy, and the land-grant colleges and universities.

Definition of the specific priorities for the Northeastern Region Sun Grant States evolved through critical and intensive dialogue between the land-grant colleges and universities and other stakeholders in the Northeast Region including industry and government representatives. A regional workshop was held on April 25-27, 2004, in Buffalo, New York. Meeting participants at the Northeast Sun Grant Regional Workshop represented each of the 14 states and the District of Columbia in the Northeast Sun Grant region. In

addition to hearing presentations from leaders of the region's biobased industries, nine working group sessions enabled participants to meet, discuss and define specific research, education and outreach priorities for the region's competitive grants program. Moderators for the nine working group sessions presented each group's conclusions, comments and recommendations for the region's program priorities. The recommendations of the meeting participants were compiled in a Roadmap, which was reviewed and approved by the Region and is available in its entirety as a downloadable .pdf file at:

<http://www.nesungrant.cornell.edu/cals/sungrant/education/upload/NESGI-Roadmap.pdf>

Northeast Region Strategic Areas of Interest

Building upon the 2004 Northeast Sun Grant Roadmap, the Northeast Sun Grant Steering Committee has particular interest with intent to focus on 3 topics that are not being specifically covered in the northeast by other funding programs. They are: 1) a rigorous inventory of potential biomass resources in the Northeast Region, including waste streams from food processing, municipal solid wastes, animal wastes, and source-separated solid wastes. 2) This inventory should be integrated using a systems approach and systems modeling to assess the environmental impacts, (including carbon footprint, carbon flows, nitrogen flows, material flows, energy flows, and monetary flows). 3) The inventory and system model should also consider scalable technologies and an analysis of distributed versus centralized systems for processing biomass energy, fuels and industrial products in the northeast region.

Partnership Proposals

It would not be possible for a single proposal to address all of the topics of interest listed above at the current program funding levels. Multiple (but separate) proposal teams might collaborate to achieve a coordinated approach to the topics of particular interest or other cross-cutting areas. Multiple proposal teams should clearly identify Partnership Proposals and clearly describe their role in the research partnership.

US Department of Transportation Strategic Areas of Interest

To further guide the applicant, the Department of Transportation has recommended specific areas of interest as priorities for research, education and outreach. The US Department of Transportation Secretary, Raymond LaHood has identified four strategic focus areas for DOT: *Safety, Livability, Environmental Sustainability, Economic Competitiveness*. The Department of Transportation has identified the following topic areas as priorities:

Feedstock Development

- Plant breeding and selection
- Agronomic practices for optimal sustainable yields

- Equipment technologies for sustainable harvests
- -Multiple land use issues/impacts for biofuel feedstock production (e.g., Agricultural production, Wildlife habitat, Soil and water conservation, Air quality, Global climate change)
- Regional feedstock assessment including US-regional mapping (lines of demarcation) for optimal fuel blending (e.g., Soy and canola freeze at different temperatures and present different challenges for winter-season fuel blending. Are there regions where one crop makes more sense than the other from a fuel-blending standpoint?)

Conversion Processes

- Conversion efficiency
- Cost of production
- Enzymatic conversion
- Thermo-chemical conversion
- Policy analysis of Federal and State and Local regulation barriers for new fuels or fuel mixes, (e.g., certification and testing regulations, ASTM Standards for cellulosic ethanol (E20 and higher) , biodiesel (B10 and higher), What are the USDA, EPA, and other air, water and soil amendment regulations, Fire Marshall regulations (flammability at pump) that would need to be satisfied before a new fuel source could reach Northeast Region markets.

Systems Integration and Environmental Impact

- Feedstock transport, delivery and storage including impacts and costs of increased traffic movement on and use of rural roads
- Biomass feedstock densification approaches and transportation options at different levels of densification

- Biofuels transport and delivery infrastructure including assessment of best modes of transportation, identification of specific technological or economic barriers of using one mode versus another (eg., pipeline issues, barge, rail and truck issues).
- Environmental Impact
 - Life cycle emissions
 - Greenhouse gas emissions
 - NOX emissions
 - Carbon flow models
 - Energy input and output
- Systems modeling analysis to assist and evaluate scale alternatives for biorefineries
- Transportation infrastructure and logistics analysis modeling (local vs. centralized)

Life Cycle Analysis, Economics and Policy Issues

- Economics and policy analyses
- Impacts on food, feed and fiber markets

Education and Outreach

- e-Extension (eXtension) activities (see <http://about.extension.org/>)
- Rural development outreach
- Rural economic development assessments, plan development including full economic assessment, cash flow plan, competing markets, etc. and logistical assessment (material flows, methods).
- Collaborative projects with DOT University Training Centers (UTC) (for listing of DOT UTC themes see http://utc.dot.gov/utc_themes.html)

Northeast Priorities Matrix

To assist grant applicants in incorporating proposed research, education and outreach activities into the collective vision represented by the Northeast Regions Priorities, a matrix of “strategic areas” and their “enabling activities” is presented. A typical project application may cover one box of the matrix, or multiple boxes, combined into a single project. Lead projects should propose integrated research, education and outreach activities. Lead Projects will likely encompass multiple boxes, or all boxes within an enabling activity (row) or strategic area (column) in an integrated (research, education and outreach) application. Seed projects may be limited to a single box but could benefit from additional aspects being investigated. **To assist reviewers, it is recommended applicants identify within their proposal how their proposed project fits within this matrix.**

Northeast Region Priorities Matrix for planning proposed research, education and outreach.

	Strategic Areas		
Enabling Activities	BioFuels	BioPower**	BioProducts**
Feedstock Development			
Feedstock Logistics			
Conversion Processes			
Systems Integration, Environmental Impact Analysis			
Scalable technologies			
Life Cycle Analysis, Economics and Policy Issues			

For a complete listing of the research, education and outreach priorities envisioned by the region, refer to the Northeast Region Sun Grant Initiative Roadmap available in its entirety at:
<http://www.nesungrant.cornell.edu/cals/sungrant/education/upload/NESGI-Roadmap.pdf>

In 2010, the source of Federal funding for Sun Grant is from the US Department of Transportation (DOT). In 2010, NE-SGI will seek proposals with emphasis on Biofuels that show the potential for displacement of imported petroleum. **Proposals in the emphasis areas of BioPower or BioProducts also are appropriate if they show a strong potential for displacement of imported transportation-petroleum-fuels or support a part of the industrial process to make production of a biofuels more economically feasible. That is, BioProducts (or BioPower) research is a relevant research area if, for example, the specific bioproduct (or biopower) is a biofuel production waste stream making the economics of producing the biofuels more feasible.

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ELIGIBILITY INFORMATION

Eligible Applicants

Principal investigators must be employed by an eligible institution (see below). Principal investigators 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

Only land-grant (1862) institutions and 1890 and 1994 institutions in the Northeast Region Sun Grant States are eligible to submit an application. The 19 Land Grant Institutions in the Northeast Sun Grant States are: University of Connecticut, Connecticut Agricultural Experiment Station (at New Haven), Delaware State College, University of Delaware, University of the District of Columbia, University of Maine, University of Maryland Eastern Shore, University of Maryland College Park, University of Massachusetts, Massachusetts Institute of Technology, Michigan State University, Bay Mills Community College - Michigan, University of New Hampshire, Rutgers The State University of New Jersey, Cornell University, The Ohio State University, Pennsylvania State University, University of Rhode Island, University of Vermont, West Virginia University, and West Virginia State College.

Individuals, businesses, non-profit entities, or educational institutions may participate through partnership with a land grant or 1890 or 1994 institution. Partnership between Northeast Region land grant institutions and small businesses, not-for-profit organizations, or other colleges and universities is encouraged.

Matching Funds Requirement

Successful Northeast Sun Grant Initiative Program Applicants must demonstrate 25% auditable matching-funds. Grantees may provide matching funds through in-kind

contributions, including faculty salaries, facilities, or from state, local, not-for-profit or private matching funds. In-kind as well as un-recovered indirect charges (i.e., the difference between the negotiated federal rate and the 25% TDC rate) may be used as part of the matching funds. No federal funds may be used as matching funds. Preference will be given to grants demonstrating commercialization efforts and matching funds originating from businesses and industry. Funds requested for technology development/implementation projects with industry or business partnerships will be given further preference during the selection process if a match greater than 25% is provided.

Cost match calculation example

For example, an institution requesting grant of \$150,000 in NE-SGI funds must provide a 25% auditable cost match, or \$37,500. The total budget of the proposal will be \$187,500 (i.e., \$150,000 in requested funds plus \$37,500 cost-match funds).

Reporting Requirements

Quarterly reports (1-page) and annual reports are required from all successful applicants and must be submitted in writing to the Northeast Sun Grant Institute of Excellence. Annual reports also must be presented to the NE-SGI Steering Committee, other investigators, and interested parties (from government and industry) at a yearly NE-SGI Principal Investigators symposium.

It is important to disseminate information from NE-SGI funded projects. At least one product of significance, i.e. Experiment Station report, Extension bulletin or white paper is required for all funded projects. Ideally, at least one peer-reviewed article would result from NE-SGI funded research. Investigators must acknowledge USDOT and NE-SGI in all publications and presentations.

Travel Requirements

Each proposal should include a budget item for PI travel to the annual symposium for presentation of results. PI participation in this annual meeting is required. The annual meeting location is not yet defined for 2010 but would be within the Northeast Sun Grant region. We recommend budgeting between \$1,000 and \$1,250 per person attending. PI attendance is required.

For multi-year projects, an acceptable annual report is required for continuation of funds.



AWARD INFORMATION

Available Funding

The amount of funding available for the Northeast Sun Grant Initiative Competitive Grants Program FY-2010 is estimated to be \$1,050,000. Funds from the Department of Transportation (DOT) have been authorized through FY 2011 and are appropriated from Congress annually. Continuation of funding beyond 2010 (i.e., for 2011 – 2014) depends upon receipt of funds by NE-SGI from DOT. The 25% matching funds requirement for all 2010 projects leverages an additional \$262,500 for the competitive grants program in 2010.

Research Grant Projects (\$150,000 limit)

Northeast Sun Grant 2010 Research Grant Projects will be typically single investigator or small team proposals that seek to build individual or institutional capacity. The proposed projects may address one (or more) category/box in the NESGI matrix (page 9). NE Sun Grant 2010 projects will be considered up to \$150,000 (total NE-SGI dollars for the duration of the project) (1 to 3 years in duration possible). **Please keep in mind that using Federal dollars to purchase items that could subsequently be sold will create reporting and permission requirements for the applicant's institution.**

Cooperative Extension, Educational and Rural Economic Development Grant Projects (\$30,000 limit)

Education, outreach and/or rural economic development grants are intended to build graduate student capacity, regional outreach capacity and rural economic development capacity in the area of biofuels. Applications to this category of funding will be considered up to \$30,000 (total NE SGI dollars for the duration of the project) (1 to 3 years in duration possible). **Please keep in mind that using Federal dollars to purchase items that could subsequently be sold will create reporting and permission requirements for the applicant's institution.**

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APPLICATION AND SUBMISSION

Submission Dates and Times

Letter of Intent (required) due: **Friday, November 13, 2009**

Grant Application proposals are due: Wednesday, **February 3, 2010 (5 pm Eastern)**

Method for Submitting an Application

All Letters of Intent and Full Applications must be submitted electronically via the online Sun Grant Webnibus Proposal Management System (an online proposal application and review system). 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 reentry into the system and project team members may review materials online. Project team members should log onto the system well in advance of the due date to register with the system and to become familiar with the proposal forms and process.

Online certification – Proposal sign-off sheet: The PI must make the application package available to approvers at his/her institution and all approvers must be able to log into the online system. Prior to proposal submission all PI's and CO-I's must certify agreement with the proposal package content. In addition, if appropriate for your institution - Department Heads, Deans, Directors, Department Accountants, College business accountant, and other Authorized Representatives (as appropriate for your institution) also must certify agreement with the proposal package content. Clicking the **Certify Approval** link will substitute for signatures on the application package sign-off sheet.

Registration for Webnibus online submission

Northeast region applicants must register online for an account to access the Northeast Sun Grant Webnibus application system. Type the following address into your web browser's address box or follow the link from the NE Sun Grant website to:

https://webnibus.org/sungrant/northeast/logn/login_login.php

At the Northeast Sun Grant Webnibus site you will be asked to input your email address and contact information. A password will be randomly generated and emailed to the email address you provide. You can change your password after you log-in with the password sent to your email address.

Content and Format of Application

Letter of Intent

Applicants must submit a Letter of Intent (LOI) (Deadline Friday, November 13, 2009) prior to submitting a full proposal. The Letter of Intent is limited to 4000 characters (approximately two pages, double-spaced) and should provide adequate information to allow the Steering Committee to select reviewers to expedite the 2010 selection process. The LOI should contain:

- 1) Descriptive title for the proposed project; **(Previously submitted proposals are kept on file through 2011. State whether this is a new proposal or a re-submission of a previously-submitted proposal.)**
- 2) Names of key personnel and their institutions;
- 3) Brief statement of the proposed project objectives;
- 4) Identify the project category/research area for your project from the following
Project category is best described as:

<input type="checkbox"/> Feedstock development	<input type="checkbox"/> Feedstock logistics
<input type="checkbox"/> Conversion Processes	<input type="checkbox"/> Systems Integration
<input type="checkbox"/> Scalable technologies	<input type="checkbox"/> Life cycle analysis
<input type="checkbox"/> Environmental Impact Analysis	<input type="checkbox"/> Educational
<input type="checkbox"/> Economics and Policy issues	<input type="checkbox"/> Extension Education
<input type="checkbox"/> Other (describe) _____	
- 5) Estimated amount of requested funds
- 6) List of 3 suggested reviewers

The letter of intent will be used only as an administrative tool for receipt, processing, review of applications, and efficient selection of the technical review panel. However, **there will be no prescreening of the Letters of Intent and no feedback provided to applicants based on the letters of intent to apply. Everyone who submits a letter of intent by the deadline (November 13, 2009) is permitted to submit a full proposal.**

Letters of Intent to apply should be addressed to Dr. Larry P. Walker, Director of the Northeast Sun Grant Institute of Excellence, and should be submitted through the online Webnibus system link https://webnibus.org/sungrant/northeast/logn/logn_login.php Also available through link at <http://www.nesungrant.cornell.edu>

Creating an online editable letter of intent/proposal file

The Project PI must create a file for the Letter of Intent/Project Proposal that can be edited by other team members that the PI specifically identifies through the online Northeast Sun Grant Webnibus system.

To create an editable Letter of Intent/Proposal File, the PI should sign onto Webnibus, then click on “Create New Proposal/Letter of Intent” from the Main Menu. Follow the online instructions to create the file.

CREATING A NEW EDITABLE LETTER OF INTENT/PROPOSAL FILE

Title: Input a brief, descriptive title for your project.

Call: Select: FY 2010 Northeast Sun Grant Initiative from the pull down menu.

Start Date: Input an estimated start date for your proposed project. Most projects are expected to begin around July 1, 2010.

End Date: Input the estimated end data for your proposed project (1 to 3 y).

Click on the “Create Proposal/Letter of Intent” button to access the Letter of Intent.

Next, you will be directed to a Letter of Intent confirmation page. Click on the title of your project title at the bottom of the screen to reach the Letter of Intent GUIDE page. Complete each of the following sections online:

1. [PI Biosketch](#)
2. [Senior Personnel](#)
3. [Title Page](#)
4. [Narrative](#) (See list on page 17)

You may exit Webnibus and return to complete these forms at any time before the deadline (October 30, 2010, 5 pm Eastern). When you are finished with all 4 sections,

click on the SUBMIT button. At any time after October 30, you may begin submission of your full proposal information.

Full Proposal – Grant Application

The components of the full proposal are to be entered into the online Webnibus proposal submission system. It is recommended to prepare your proposal sections using word processing software and then follow the online directions. Many elements can be copied and pasted to the online boxes.

To begin preparation of the full proposal, anytime after November 16, 2009 you may log into the Webnibus system https://webnibus.org/sungrant/northeast/logn/logn_login.php

Click on the title of your proposal and you will be directed to the full proposal application menu.

Online Full Proposal menu:

1. [PI Biosketch](#)
2. [Senior Personnel](#)
3. [Title Page](#)
4. [Proposal Sign-Off Sheet](#)
5. [Proposal Summary](#)
6. [Pre Proposal Narrative](#)
7. [Full Proposal Narrative](#)
8. [Budget Forms](#)
9. [Budget Justification](#)
10. [Suggested Reviewers](#)
11. [File Attachments](#)
12. [Certify Proposal](#)

1. PI BIOSKETCH

The biosketch is essentially a two-page curriculum vitae. The buttons next to the headings allow you to add or edit each biosketch section.

- Please don't copy and paste your entire curriculum vitae. Each section has a character limitation, indicated in the edit mode, which includes spaces and punctuation. Copying your entire CV will only cause problems.
- You may want to focus on present research support and provide a publication history with only the most current and most pertinent information relating to your proposal.
- Please be sure to list all graduate students and post-docs supervised.

2. SENIOR PERSONNEL

Senior personnel are the members of your project, *i.e.* co-PIs, associate PIs, or "other senior personnel." When you add a new member they will automatically be sent an email informing them that they have been added to your proposal. The email will instruct them to contact you confirming that they have received the notice and agree to it. If the new member is a co-PI the email will also instruct them how to sign on, and to enter their biosketch in Webnibus.

3. TITLE PAGE

You can edit the components of the title page by clicking on the appropriate buttons. Please don't forget to enter the sources of cost share and collaborators at the bottom of the page. Note that the funds requested and cost-match amounts are automatically filled in by the budget pages.

4. PROPOSAL SIGN-OFF SHEET

Sign-off sheets are required for all proposals. This form identifies basic proposal and investigator information, endorsement signatures from the department, college, center or institute, and research compliance or other commitments from the university. This is essentially a disclaimer sheet where the PI reports basic compliance issues relative to the project.

It is the PI's responsibility to add the appropriate approvers to the proposal, notify them when the proposal is ready for their approval, and provide them with the information they need to access the proposal in Webnibus. The PI can add approvers through the "Manage Approvers" link at the bottom of the sign-off sheet.

5. PROPOSAL SUMMARY

The proposal summary is broken down into key words, objectives, methodology, rationale, and expected outcomes. It is recommended you prepare your proposal narrative first, then copy and paste into these boxes as appropriate.

6. PRE-PREPROPOSAL NARRATIVE (i.e, LETTER OF INTENT)

You will not need to or be able to edit your letter of intent (labeled here as pre-proposal narrative). It is included here for your convenience and reference.

7. FULL PROPOSAL NARRATIVE (The Page limit for a Research Grant proposal is 15 pages. The page limit for a Cooperative Extension, Education, Economic Development Mini-Grant proposal is 10 pages)

Full Proposal Narrative – The proposal narrative can be completed in a word processing software and then uploaded into the Webnibus system under this button as a single pdf or word document file. All pages in the project narrative should be numbered, and should be single spaced, with at least

one-inch margins. The PI name should appear at the top of each page. **Proposal narrative section is not to exceed 15 pages for Research Grants and not to exceed 10 pages for Cooperative Extension, Education or Economic Development Mini-grants.** Text of the proposal narrative should be prepared using Times Roman or similar type face and using a font no smaller than 12 pt. Proposals not conforming to this format will be returned without review.

- A. ABSTRACT SENTENCE:** On the first page of the project narrative, list the full project title followed by a one to two sentence description of the proposed work.
- B. EXECUTIVE SUMMARY (1 page maximum):** Provide a brief description of the problem to be addressed, project objectives, expected deliverables and a description of the effort to be undertaken in terms that can be understood by a diverse audience including the general public, university personnel, stakeholders and various public and private organizations.
- C. RESUBMISSIONS ONLY (1 page maximum)** *This page is NOT counted in the narrative page limit.* Previously submitted proposals remain on file through the end of the current DOT funding cycle (2011). If this is a re-submission or revision of a proposal submitted but not funded in a previous Sun Grant application, please provide a detailed (one page limit) explanation of how the current submission has been changed to address the technical review panel's comments and suggestions. Invitation for resubmission does not preclude or guarantee selection for funding. Changing the proposal title or PI but keeping the same general content/approach does not alleviate the applicant from this requirement to address the technical review panel's comments.
- D. PROBLEM STATEMENT:** Each proposal should fully state the need for the activity and the approach to be used. Project teams should include faculty with interests in research, technology development and outreach. Describe why current technologies and practices are inadequate and how the proposed approach will assist in the region's efforts to develop bioenergy and bioproducts capacity. Review all ongoing or completed work (local/regional/national) that is relevant. Provide adequate references to describe the current status of the area of research and/or educational effort and justification for the proposed project. Address the specific needs identified in this solicitation,

identify the relative importance of the strategies being proposed, and describe the potential applicability of the proposed approach to other regions. **Your proposal will be much stronger if preliminary data are shown**, demonstrating your expertise in the subject matter.

- E. OUTCOME BASED OBJECTIVES AND ANTICIPATED ACCOMPLISHMENTS:** Describe how the project fits into the Northeast Priorities matrix on page 9. Provide clear, concise, complete, and logically arranged statements of the specific research, education or outreach aims of the proposed effort along with details of the anticipated accomplishments. In all proposals, the objectives should delineate both the proposed aims, projected outcomes, and any results anticipated.
- F. APPROACH/PROCEDURES:** Describe *IN DETAIL* how each of the stated objectives will be reached. List the proposed treatments, include a clear description of your experimental design and experimental units, reference methods to be used, appropriate statistical analysis, and estimated length of time required for the analyses. For all proposals, describe how the project will be managed (for example, how coordination between the research and outreach components will be achieved and maintained if applicable).
- G. IMPLEMENTATION AND EVALUATION PLAN:** Provide detailed plans for the evaluation of the project and how successful impacts and outcomes will be measured, including economic assessments if appropriate. Where possible include evaluation objectives with specific impact indicators that will be used to measure the success of the effort. Proposals should describe how the technologies (should they be successful) will be implemented and utilized. In addition, and where appropriate, each proposal should include a plan on evaluation of the technologies developed and interactions with the private sector in increasing utilization.
- H. TIMETABLE:** All Proposals must include a timetable or spreadsheet that demonstrates the step by step progression of the research, education or outreach effort proposed, with appropriate milestone dates including submission of quarterly reports and annual reports.
- I. LITERATURE CITED:** As appropriate.

J. KEY PERSONNEL AND PROJECT MANAGEMENT PLAN:

Identify all key personnel in the proposed project, their specific roles and the percentage of time that will be committed to the effort.

After preparing your narrative in a word processing program, upload the full proposal narrative as a pdf file or word document by clicking on the Webnibus “Full Proposal Narrative” link and follow directions to upload your document.

8. BUDGET WORKSHEETS

Working through the Webnibus online forms, complete a proposal budget. Create a separate budget worksheet for each year of the proposed work. Successful applicants must provide a 25% cost-match. Northeast Sun Grant encourages projects to partner with businesses and industry in obtaining the required cost match. Other possible sources of cost-match are described in section 2. For example, an institution requesting \$150,000 in funds from NE-SGI must provide a 25% cost-match or \$37,500. The total budget of the proposal will be \$187,500 (\$150,000 requested plus \$37,500 matching funds).

NOTE ON INDIRECT COSTS. Institutions may charge indirect costs at their institution's federally negotiated rate on Total Direct Costs, or 25% of Total Direct Costs (TDC), whichever is less. Another way to calculate the allowed indirect costs and obtain the same value would be 20% of the total requested amount (before matching funds). In-kind as well as unrecovered indirect charges (i.e., the difference between the negotiated federal rate and the 25% TDC rate) may be used as part of the matching funds.

An example is provided below.

For example, for an institution requesting \$150,000 from NE Sun Grant:

FUNDED BY NE SUN GRANT	
Total Direct Costs (TDC) =	\$ 120,000
Indirect Costs (limited to 25% of TDC) =	\$ 30,000
Total of NE-SGI funds =	\$150,000
MATCHING FUNDS (20%)*=	\$ 37,500
TOTAL PROJECT BUDGET =	\$187,500

*Matching funds fully auditable and are to be monitored by applicant's institution, and confirmed to Cornell.

9. BUDGET JUSTIFICATION/ BUDGET NARRATIVE:

Include a detailed budget narrative through the provided online text boxes. The budget justification is used to fully explain your expenses and is broken down into personnel, permanent equipment, expendable supplies and minor equipment, travel, other, and contributing organizations. Each section is limited to 1,000 characters including spaces and punctuation. If consulting or collaborative arrangements are included in the proposal, these arrangements should be carefully explained and justified. Letters of intent or other evidence should be provided (through online upload, #11 File Attachments) that collaborators involved have agreed to render these services. Please provide a justification (brief description and explanation of need) for the following budget sections:

- 1) Personnel;
- 2) Equipment (items \geq \$5000);
- 3) Expendable supplies and minor equipment;
- 4) Travel;
- 5) Other (subcontracts, consultants, computer time, publications, GRA tuition, F&A charges, etc.);
- 6) Contributing organizations (Please use the format: "Organization: contribution type and amount").

Please keep in mind that using Federal dollars to purchase items that could subsequently be sold will create reporting and permission requirements for the applicant's institution.

10. SUGGESTED REVIEWERS

Please provide names and contact information for 3 possible reviewers of your proposal. If you wish to use the same reviewers listed in your Letter of Intent you may copy and paste that information from #6 (Letter of Intent) Pre-proposal Narrative.

11. FILE ATTACHMENTS (OPTIONAL, AS NEEDED)

You may want to attach supporting documentation such as letters of support or articles of industry recognition to your proposal. Any type of file may be attached but be aware that if you use an uncommon format others may have problems viewing the file (e.g. Sun Grant, reviewers). Files larger than 16 megabytes are not allowed.

12. CERTIFY PROPOSAL (Online Assurance Forms and Signature Pages)

Online certification of the proposal package is completed through the online PROPOSAL SIGN-OFF SHEET. The Proposal sign-off sheet must be completed by each PI, Co-I, and the Authorized Organizational Representative. If there is an assurance issue, your assurance officer will need to sign-off and upload the necessary assurance document(s) as attachments to the proposal system. Each person listed as Senior Personnel, the PI, co-PIs, and departmental/institutional approvers must all certify the proposal before it can be submitted. (They can do so by clicking the certification links next to their names near the bottom of the sign-off sheet).

When and Where to Submit Application

Full Proposals are DUE by 5 pm Eastern, February 3, 2010

All proposals must be submitted electronically. Instructions for online submission are available in this request for applications, on the Sun Grant Webnibus System website, and through the Northeast Sun Grant Website. <http://www.nesungrant.cornell.edu>

Contact Persons

Dr. Thomas A. Fretz
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REVIEW PROCESS AND CRITERIA

General review process description

Successful applications must demonstrate strength in technical merit, feasibility, compliance with DOT requirements for 25% matching funds, and balance of Sun Grant research, education and outreach priorities portfolio. The proposal review is a 4-step process.

The **NE-SGI Institute of Excellence** will review all proposals for compliance with DOT 25% matching funds requirement. All proposals that meet this requirement will be forwarded to the Technical Review Panel.

The **Technical Review Panel** will consist of scientists, engineers, economists, stakeholders and educators from the region (and beyond) to review relevance to the stated goals of the NE-SGI, fit, technical merit, feasibility and ability to achieve the proposed outcomes. Proposal applicants will have the opportunity to suggest reviewers through the Webnibus on-line proposal management system. The Technical Review Panel will meet and make a recommendation to the Steering Committee.

The NE-SGI **Steering Committee** will meet following the Technical Review and DOT-Compliance Verification, to review the final selection of proposals for funding.

The list of proposals selected by the Steering Committee for funding will be forwarded to the **US Department of Transportation** and all other Sun Grant regions for review.

The Steering Committee Chair/Grants Process Manager will present the results with a recommendation to the full Steering Committee, for final review and approval. The Steering Committee will notify the Northeast Sun Grant Institute of Excellence of its recommendations for funding, including the level and duration of awards, in order that subcontracts can be prepared through Cornell University.

Evaluation Criteria

The following evaluation criteria will be utilized in reviewing grant proposal submissions.

Program priorities addressed: The proposed work should a) address issues of importance and value to the northeast region, b) show feasibility and cost/benefit, and discuss the ability to contribute to the displacement of petroleum.

Appropriate objectives, design and methodology: The proposed work should clearly explain the project objectives. In addition, design and methodology should be described. **Inclusion of preliminary data is strongly encouraged.**

Evaluation plan. The proposed work should include a clear plan for evaluating the project and the outcome of the work. Describe the project's metrics for success.

Professional competence of the project team: The project team should demonstrate experience in the proposal focus area and ability to carry out the project to completion.

Appropriateness of the implementation plan: The team's overall approach and plan for implementing the project should be clearly described and demonstrate a well organized project management approach.

Appropriateness of budget: The cost of the proposed work should be appropriate and reasonable for the amount and complexity of described tasks for the proposed project.

The NE-SGI will seek to fund a portfolio of research, education and outreach projects to address the bioenergy development priorities of the region. Projects deemed of equivalent merit and quality may be selected on the basis of their relevance to meeting the priority needs of the region.



AWARD ADMINISTRATION

Administrative Program Management

The Administrative program management will be handled by the Northeast Sun Grant Institute of Excellence. Contracts and payments for the awards will be written and distributed from Cornell University. Reports and reviews will be collected and maintained by Cornell University. The Steering Committee alone is responsible for selection of the awards and determination of funding priorities for the region.

Award Notice

Notification of awards will come from Cornell Northeast Sun Grant Institute of Excellence. Notification is expected to be made by April 30, 2010.

Access to Proposal Reviews

Written reviews will be provided to the Institute of Excellence for each proposal. The review forms will be maintained by the Institute of Excellence at Cornell University for the benefit of PI's that may request feedback on their proposal. The proposal reviews for a project will be returned to the Principal Investigator for the project.

Quarterly and Annual Investigator Reporting Requirements

Four quarterly and an annual report of progress must be submitted by each funded project PI to be considered for continuation of funding. In addition, each proposal should include a budget item for PI travel to an annual symposium for presentation of results. PI participation in this meeting is mandatory. The annual regional symposium will be organized by a land grant institution in the Northeast Sun Grant Region.

Continuation of Funding

Continuation of funding beyond the first year will be determined by first year performance (as reported in written reports and presented at the annual symposium) and will be dependent upon appropriation of funds by Congress for 2009-2011 and receipt of funds from DOT by NE-SGI.

PROPOSAL SUBMISSION CHECKLIST

The following must be completed/verified by close of business (5 pm Eastern) Feb 3, 2010:

- PI is from an eligible institution (see page 11)
- PI has an updated BIOSKETCH and account on the Northeast Sun Grant Webnibus proposal submission website:
<https://webnibus.org/sungrant/northeast/logn/login.php>
- All senior personnel have updated their online biosketch and account contact information.
- PI has submitted letter of intent by November 13, 2009
- Completed online Title Page
- PI, Senior Personnel and Authorized Representatives have completed the Proposal Sign-off/Certification online form.
- Completed Proposal Summary Sections (online text boxes)
- Full Proposal Narrative: A single narrative document (pdf or word doc) has been compiled (pages numbered, PI name on top of each page) with the following sections in the following order:
 - Abstract Sentence page
 - *Executive Summary (1 page maximum)
 - Resubmissions only: 1 page response to comments
 - *Problem Statement
 - *Outcome based objectives and anticipated accomplishments
 - *Approach/Procedures
 - *Implementation and Evaluation Plan
 - *Timetable figure showing milestone dates
 - Literature cited
 - *Key Personnel and Project Management Plan
 - Sections above marked with asterisk (*) do not total more than 15 pages for Research Grant applications and not more than 10 pages for Cooperative Extension, Educational and Economic Development grant applications.
- The above single document (word doc or pdf format) has been uploaded to the Northeast Sun Grant Webnibus proposal submission website.
- Online budget forms are completed for each year of the proposed work
- Budget includes 25% cost match (required)
- Budget includes PI Travel to the NE Sun Grant annual conference (required)
- Online Budget Justification is complete
- Suggested Reviewers form is complete (3 potential reviewers)
- Senior Personnel have completed proposal SIGN OFF SHEET (online)
- Authorized Organizational Representative has completed proposal SIGN OFF SHEET online.
- The Project PI (not the Authorized Representative) has verified all above steps are complete and **pressed the SUBMIT Button.**

FREQUENTLY ASKED QUESTIONS

Q. I lost my Webnibus password. How can I reset it?

A. From the login page, select “Reset my password” and follow the directions.

Q. How can I change my random password?

A. Sign into the Webnibus site using the random password. Then, go to MAIN MENU, YOUR ACCOUNT and you will be able to reset your password.

Q. I was editing my proposal and I accidentally hit the “Certify” button. Can you un-certify?

A. You can continue to edit your proposal even after it is certified. We are not able to Un-certify, but it will not prevent you from making further edits.

Q. I am trying to input the budget fringe benefit rate category but it is calculating an incorrect number.

A. All rates (fringe benefits and indirect cost rates) need to be inputted as 0.XXX. For example, 27.5% benefit rate needs to be expressed as 0.275.

Q. Why is the indirect cost rate limited to 25% Total Direct Costs (TDC)?

A. The indirect cost rate is limited to the institution’s DOT negotiated indirect cost rate OR 25% Total Direct Costs, whichever is less. The indirect cost rate was set by the original funding source, The US Department of Transportation (DOT), as identified in “The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU, Public Law 109-59, Section 5201(m).”
Opportunity Name: Biobased R&D, Opportunity Number: RITA1-BIO, CFDA 20.761.

Q. I logged in and created a new proposal however I am in the Preproposal/Letter of Intent menu. How do I get to the Full Proposal Menu?

A. If you do not see the full proposal menu, call us at 607-255-5544 or send an email to nesungrant@cornell.edu. Once your preproposal/letter of intent has been submitted, you will be able to see the full proposal menu with your preproposal information. If you do not see the full proposal menu with budget forms, etc., call 607-255-5544 or email nesungrant@cornell.edu.

Q. Where is the annual Northeast Sun Grant PI conference being held. We need to include travel for attendance in our budget.

A. The annual meeting locations are not yet defined but would be within the Northeast region. We recommend budgeting between \$1,000 and \$1,250 per person for each project year.

Q. Can Approvers make changes to the Proposal and/or Budget?

A. No. Approvers can only view the proposal, not edit it. Approvers can **submit comments** to the proposal and **CERTIFY** it.

Q. Do the other institutions involved in our project need to be within the same SUNGRANT region? We have several potential collaborators in mind - some are within region others are in other SUNGRANT regions.

A. The lead institution that submits the application must be from the NE region. Others outside the region or outside the Land Grant system can participate as a collaborator on your proposal.

Q. We would like to collaborate with a Federal employee or organization on our proposal. Is this permitted?

A. Yes. Anyone can participate. However no funding may be transferred from Sun Grant DOT to other Federal institutions under our current DOT contract. The collaboration could not result in Sun Grant funding (for travel, as an example) for the Federal employee or institution.

Q. We would like to use Sun Grant funds to purchase items such as equipment (greater than \$5000) or livestock or other items that we would like to re-sell during or after the project. Is this permitted?

A. Please keep in mind that using Federal dollars to purchase items that could subsequently be sold will create significant Federal reporting and permission requirements for the applicant's institution.

Q. In previous years we have submitted our budget using an Excel sheet or word processing software document sheet. May we do this again for the 2010 application?

A. In order to streamline the review process, we are asking that all applicants use the online Webnibus budget forms for the 2010 application. If you are having difficulty filling in the form feel free to call us for help. (Sue 607-255-5544 or Corinne 607-342-1264).

Q. How do I add my institution's indirect charges (Facilities and Administrative)?

A. Input your institution's allowable indirect charge rate (limited to the institution's DOT negotiated indirect cost rate OR 25% Total Direct Costs, whichever is less). In most cases this will be "0.0250". The indirect charges will be automatically calculated from this value.

Q In filling out the budget worksheet, indirect charges are automatically calculated on most budget lines. Where do I place OTHER cost items that do not require indirect charges?

A. Below item "J" there is a line called "OTHER COSTS NOT REQUIRING INDIRECT". Click on "[\(Input Other Cost No Indirect\)](#)". Indirect charges are not calculated for these items.



NORTHEAST SUN GRANT INSTITUTE OF EXCELLENCE

**2010 COMPETITIVE GRANTS PROGRAM
REQUEST FOR APPLICATIONS**

WEBSITE: <http://www.nesungrant.cornell.edu>

EMAIL: nesungrant@cornell.edu

PHONE: 607-255-5544

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