

Request for Applications

Sun Grant Program Northeast Region

2016

Competitive Grants Program (U.S. Department of Agriculture)

Deadlines:

Preproposal (required):

Monday February 8, 2016 (5 pm Eastern)

Full Application:

Monday, March 30, 2016 (5 pm Eastern)

Sun Grant Program – Northeast Region
2016 Request for Applications - - Executive Summary
U.S. Department of Agriculture (USDA funds)

The Sun Grant Program – Northeast Regional Center (NE Sun Grant Center) announces the availability of competitive funds and seeks proposals from qualified institutions and investigators that address the following regional strategic program areas:

- A. Decentralized and distributed feedstock, bioenergy, and bioproduct systems. Efforts will support deployment of commercial scale biofuels, bioproducts, and biomass electrical generation and co-generation efforts; strategies that incorporate multiple feedstocks to exploit the economic benefits of complementary aggregation are particularly encouraged;
- B. Regionally relevant feedstocks for bioenergy, bioproducts, and biofuels including perennial crops, winter crops, and agricultural, forestry, industrial and urban residues; and
- C. Life cycle analysis, air and water quality impacts, carbon mitigation and sequestration, and other ecosystem service, socioeconomic, and sustainability indicators.

The NE Sun Grant Center has identified the above named regional priorities from within USDA strategic areas, based upon prior regional priority setting workshops and consultation with regional experts. NE Sun Grant Center seeks proposals with an emphasis on these strategic regional program areas. All proposals should address at least 2 of these 3 strategic program areas.

In addition to requesting Sun Grant funds, all proposals that are not classified as fundamental research must include an additional auditable 25% of Total Federal Funds in project cost-share (20% of total project costs). Indirect is limited by USDA to 30% of Total Federal Funds (equivalent to 42.857% of total direct costs. Integration, economics, marketing, policy, education or a combination of these overarching activities may be incorporated in any proposal. Two types of applications are being sought:

Collaborative Proposals: Multi-institutional and multi-functional (research, education and outreach) proposals are sought that address Sun Grant goals and regional priorities. Collaborative proposals may request up to \$150,000 in federal funds per year for up to two years. All multi-year awards will be subject to appropriation of funds, and no more than 50% of available funds will be awarded in Year 1.

Single Institution Proposals: Individual investigators, or small teams from a single institution, that address the Sun Grant mission and regional priorities may submit proposals requesting up to \$75,000 per year for one to two years. All multi-year awards will be subject to appropriation of funds, and no more than 50% of available funds will be awarded in Year 1.

The mission of the Sun Grant Program is to focus the abilities of the nation's colleges and universities in partnership with the private sector and federal laboratories to enhance national energy security and independence through the development, distribution and implementation of bio-based energy technologies, to promote bio-based diversification and environmental sustainability of the region's agriculture, and to promote opportunities for bio-based economic diversification in rural communities. The Sun Grant Program is led by five land grant universities in designated multi-state regions across the United States.

From 2004 to 2014 the Northeast Sun Grant Institute of Excellence was founded and directed by Professor Larry P. Walker, who retired from Cornell University in 2015. Under Professor Walker's leadership the Northeast Center had an extraordinary impact advancing biofuels, bioenergy and biomaterials in the region. As the new host of the Northeast Sun Grant Center, Penn State aspires to continue the legacy of excellence established by Professor Walker and his staff.

A Preproposal is required for this funding opportunity, and must be submitted by February 8, 2016. Those Preproposals invited to submit full applications will be notified by February 28, and full applications are due by March 30, 2016. All application materials must be submitted through an online proposal system, which can be found at <https://webnibus.org/sungrant/northeast> .

The remainder of this document contains details on submission guidelines, timetables, and other application information. For more information or to view previously selected projects please go to: <http://agsci.psu.edu/research/sungrant>.

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1. FUNDING OPPORTUNITY DESCRIPTION

THE SUN GRANT PROGRAM

Authorized by Congress in 2004, the Sun Grant Program 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 independent farmers, rural communities, and public at large.

The Sun Grant Program was initially conceived to leverage the national network of land-grant universities and federal laboratories to aid in building a biobased economy that would reduce reliance on fossil fuels and enhance economic diversification in rural areas of the United States. The Program has now been expanded to other colleges, universities and research organizations to more broadly tap regional expertise on biomass energy and biobased industries. Potential biobased products include: biofuels such as ethanol and biodiesel, electrical power, lubricants, plastics, solvents, adhesives, specialty chemicals, and building materials. Developing biobased businesses, based on locally available feedstocks, will also enhance development of rural communities.

The mission of the Sun Grant Program 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, other federal and state departments and agencies, colleges, universities, and other research organizations including the private sector.

The Sun Grant Program 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 The Pennsylvania State University (Northeastern).

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

In summary, the Sun Grant mission is reflected in the following four goals:

- a. To enhance national energy security through the development, distribution, and implementation of biobased energy technologies;
- b. To promote diversification in, and the environmental sustainability of, agricultural production in the United States through biobased energy and product technologies;
- c. To promote economic diversification in rural areas of the United States through biobased energy and product technologies; and
- d. To enhance the efficiency of bioenergy and biomass research and development programs through improved coordination and collaboration among
 - i. federal and state agencies and laboratories
 - ii. colleges, universities and other research organizations, and
 - iii. the private sector

SUN GRANT PROGRAM - NORTHEASTERN REGION

The Northeast Regional Sun Grant Center (NE Sun Grant Center), located at the The Pennsylvania State University (also referenced as Penn State University or PSU), carries out administrative functions for the northeastern region of the United States, composed of Connecticut, Delaware, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont and West Virginia, as well as the District of Columbia.

SCOPE OF THE SOLICITATION

The NE Sun Grant Center has received funding from the U.S. Department of Agriculture (USDA), National Institute of Food and Agriculture for competitively-selected projects that will further the Sun Grant and USDA missions. Projects will be expected to develop viable, alternative, biobased fuel and energy sources and products, while enhancing economic opportunities in rural areas. Projects should be research focused, but are encouraged to support education and engagement as appropriate. Northeast regional research priorities for the 2016 grant cycle address priority program areas identified by USDA and Northeast regional roadmaps (see <http://agsci.psu.edu/research/sungrant/about/research-priorities>), including regionally appropriate biomass and bioenergy feedstock, technology, and sustainability research.

To make biobased economic diversification a reality, the region also needs research, education and outreach about the benefits and impacts of biobased industries and renewable energy as well as regional socioeconomic and policy analysis and stakeholder engagement. The NE Sun Grant Center thus encourages proposals that include social, economic, marketing, and/or policy research; that provide support education and outreach activities; and/or that effectively engage

with commercial ventures, economic development organizations and other stakeholders. Integration of a combination of these overarching activities are encouraged in all proposals.

Competitive funds will be released through an application process (described below). Funding of proposals is subject to availability/receipt of federal funds. Additionally, continuation of funding beyond 2016 (i.e., for 2017-2020) depends upon receipt of funds by NE Sun Grant Center from the funding agency. Two types of applications are being sought:

Collaborative Proposals: Multi-institutional and multi-functional (research, education and outreach) proposals are sought that address Sun Grant goals and regional priorities. Collaborative proposals may request up to \$150,000 in federal funds per year for up to two years. All multi-year awards will be subject to appropriation of funds, and no more than 50% of available funds will be awarded in Year 1.

Single Institution Proposals: Individual investigators, or small teams from a single institution, that address the Sun Grant mission and regional priorities may submit proposals requesting up to \$75,000 per year for one to two years. All multi-year awards will be subject to appropriation of funds, and no more than 50% of available funds will be awarded in Year 1.

INDIRECT COST LIMITATION

Indirect costs are limited by USDA to the lesser of the applicant's official negotiated indirect cost rate or 30% of Total Federal Funds provided (TFF). 30% of TFF is equivalent to 42.857% of Total Direct Costs (TDC). Thus, if the project is requesting \$150,000 TFF, the indirect request is limited to \$45,000 and direct costs would be \$105,000. The NE Sun Grant Center asks that the calculation using 30% TFF be used for consistency among proposals.

REQUIRED COST SHARE

USDA requires successful applicants to provide a minimum of 25% cost share on a TFF basis. 25% of TFF is equivalent to 20% of the total project cost. For example, if the total project cost is \$125,000, then the NE Sun Grant Center will provide \$100,000 and \$25,000 must be provided as cost share. Grantees may provide auditable cost-share funds through in-kind contributions including salaries, facilities, and waived indirect, or from state, local, non-profit or private funds. No federal funds may be used as cost share.

The matching requirement does not apply to *fundamental research*. Fundamental research refers to systematic research that increases knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. Any proposal that wishes to be exempted from this match requirement will have its request for classification as fundamental research reviewed by USDA prior to any award.

Up to 100% match is strongly recommended for demonstration or pilot projects. The amount of non-federal funding will be considered in the review process.

PROGRAM PREFERENCES

Applications must meet the minimum requirements of eligibility and must either provide 20% of total project costs in non-federal cost-share or request classification as fundamental research to be considered for this solicitation. Applications with multi-state partnerships and a cost-share commitment greater than the required 20% are highly encouraged. The application ranking process will allocate points based on these factors. Scientific merit and regional relevance, however, will have a greater influence on ranking.

Full Proposals are expected to include a Project Logic Model (a generic logic model is available on the Sun Grant website). This description of the project illustrates the sequence of actions that describe what the project is and will do – how investments link to results. There are 6 core components in this depiction of the project:

1. **INPUTS:** resources, contributions, investments that go into the program
2. **ACTIVITIES:** things that are done
3. **OUTPUTS:** activities, services, events and products that reach people who participate or who are targeted
4. **OUTCOMES:** results or changes (in knowledge, application, behavior)for individuals, groups, communities, organizations, communities, or systems
5. **Assumptions:** the beliefs we have about the program, the people involved, and the context and the way we think the program will work
6. **External Factors:** the environment in which the program exists includes a variety of external factors that interact with and influence the program action.

PROGRAM PRIORITIES

Proposals should clearly state how the project objectives address the following priority program areas:

- A. Decentralized and distributed feedstock, bioenergy, and bioproduct systems. Efforts will support deployment of commercial scale biofuels, bioproducts, and biomass electrical generation and co-generation efforts; strategies that incorporate multiple feedstocks to exploit the economic benefits of complementary aggregation are particularly encouraged;
- B. Regionally relevant feedstocks for bioenergy, bioproducts, and biofuels including perennial crops, winter crops, and agricultural, forestry, industrial and urban residues; and
- C. Life cycle analysis, air and water quality impacts, carbon mitigation and sequestration, and other ecosystem service, socioeconomic, and sustainability indicators.

The NE Sun Grant Center has identified the above named regional priorities from within USDA strategic areas, based upon prior regional priority setting workshops and consultation with regional experts. All proposals should address at least 2 of these 3 strategic program areas.

In addition to the stated programmatic priorities, greater weight will be given to projects which also demonstrate effort to:

- a. enhance national energy security through the development, distribution, and implementation of biobased energy technologies;
- b. promote diversification in, and the environmental sustainability of, agricultural production in the United States through biobased energy and product technologies;
- c. promote economic diversification in rural areas of the United States through biobased energy and product technologies; and
- d. enhance the efficiency of bioenergy and biomass research and development programs through improved coordination and collaboration among:
 - i. federal and state agencies and laboratories
 - ii. colleges, universities and other research organizations, and
 - iii. the private sector

Please note that proposals need not meet all of the objectives for any given program area to be considered for funding. Proposals must show displacement of petroleum through the enhancement of the bio-based economy.

If you have questions regarding acceptability of a project topic, contact the NE Sun Grant Center staff to discuss prior to submitting the Preproposal.

A. Decentralized and distributed feedstock, bioenergy, and bioproduct systems

Efforts will support deployment of commercial scale biofuels, bioproducts, and biomass electrical generation and co-generation efforts. Strategies that incorporate multiple feedstocks to exploit the economic benefits of complementary aggregation are particularly encouraged;

Goal:

To develop or improve smaller scale, decentralized or mobile conversion or processing technologies that address feedstock pre-processing, and produce efficient separations of biomass components parts, intermediate building block, separation efficiencies and process streams, and quantification of processing yields and efficiencies.

Objectives

1. To develop efficient, economical and environmentally sound, decentralized or mobile conversion processes for renewable crops, biomass residues or waste streams. Activities could include logistics strategies for aggregation, preprocessing and densification, improvements in conversion efficiency, cost of production, enzymatic or thermo-chemical conversion.

2. To develop integrated hub and spoke systems for the conversion of feedstocks into intermediate building blocks for biofuels, biochemical, bioelectricity, biomaterials and other bio products.
3. To mitigate environmental and social impacts associated with decentralized or distributed biomass production and conversion using sustainable practices.

Benchmarks/Desired Outcomes:

Short term

1. Identify and develop improved logistics and processing technologies for feedstock decentralized or distributed biomass aggregation, conversion, and/or marketing.
2. Develop proof of concept.
3. Emission or discharge reduction or mitigation.
4. Intellectual products and technology transfer.

Long Term

1. Prioritize best choices for the region.
1. Increase number of businesses established.
2. Make bioenergy and bioproduct production economically feasible.

Evaluation/Metrics

- Strong scientific and technical merit
- Demonstrated expertise and facilities
- Strong project management and appropriate budget
- Potential for rural and/or economic development
- Enhances social and environmental benefits
- Integration of research, extension and education efforts
- Transferability of results

B. Regionally relevant feedstocks for bioenergy, bioproducts, and biofuels including perennial crops, winter crops, and agricultural, forestry, industrial and urban residues

Biomass feedstock research is needed to provide reliable and affordable biomass from organic wastes, marginal lands or in rotation with existing crops across the Northeast United States. Included in these feedstocks are new crops and new approaches to utilizing residues from existing agricultural and forestry practices, industrial and urban residues. Approaches are encouraged that can integrate new energy crops or waste streams into existing land use practices that create new opportunities for economic diversification for producers, enhance ecosystem services, and increase commercial opportunities for producers of bioenergy and bioproducts.

Goal:

To develop biomass feedstocks that can be produced under existing land use, cropping systems, or natural resource production, harvesting, processing and consumption systems without displacing existing food, fiber, and forage resources.

Objectives:

1. Develop and evaluate feedstocks that can serve as economically efficient and sustainable biomass sources under existing cropping and rotation systems or evaluate crops that can be produced on marginal lands with reduced inputs of nutrients and water.
2. Evaluate existing waste streams from agriculture, forestry, industry and urban systems that can provide a sustainable and economically efficient source of biomass for bioproduct production. These proposals should include an evaluation of conversion processes that can utilize these feedstocks.
3. Restoration and improvement of marginal and degraded agricultural and forest lands may involve the removal of unwanted or invasive species, the establishment of perennial crops, and increased biodiversity in space and/or time. Develop processes and economic models for incorporating these biomass sources into an integrated process for producing revenue streams from restoration efforts by converting the biomass into bioproducts.

Benchmarks/Desired Outcomes:

Short-term

1. Identify useful feedstocks that complement existing land use.
2. Characterize production and process economics.
3. Create economic incentives for landscape improvement and restoration.

Long-term

1. Describe new opportunities for biomass production within the region that are economically and environmentally compatible with existing land use.
2. Widen the portfolio of potential biomass feedstocks for the region.

Evaluation/Metrics

- Strong scientific and technical merit
- Demonstrated expertise and facilities
- Strong project management and appropriate budget
- Potential for rural and/or economic development
- Enhances social and environmental benefits
- Integration of research, extension and education efforts
- Transferability of results

C. Life cycle analysis, air and water quality impacts, carbon mitigation and sequestration, and other ecosystem service, socioeconomic and sustainability indicators

The public, ranging from local citizens to the international community, has expressed concern that production of bioenergy feedstocks will displace commodities that would otherwise be dedicated to food. Also, there are debates regarding indirect land use issues. Farming systems that will preserve food production needs, enhance stewardship of natural resources, and improve local social and economic indicators are highly desirable, as is field research that provides standardized measurements of feedstock production impacts on the environment. Expert and

multidisciplinary teams are needed to develop standardized measures that will in turn benefit other teams involved in modeling, life-cycle analysis and sustainability studies.

Goal

To develop life cycle analysis and sustainability information systems to address carbon mitigation and sequestration, air, water, social, economic and other sustainability indicators, including modeling and analysis of ecosystem service impacts and benefits that can be used to improve economics and feasibility of biomass and bioenergy production.

Objectives

1. To analyze systems such as biomass production, harvest, transport and delivery, biofuel and bioproduct distribution infrastructure to improve their economics and feasibility and to evaluate or manage the environmental footprint of such systems. Systems modeling frameworks and tools from the fields of forest ecology, agroecology and industrial ecology can be useful for such analysis.
2. To assess and mitigate health and safety concerns in such systems throughout the value chain.
3. To devise strategies to mitigate negative environmental impacts and enhance positive benefits associated with production of biomass, bioenergy and bioproducts, such as water quality, greenhouse gas emissions, carbon, energy balance, particulate and NOX emissions, among others.
4. To mitigate environmental and social impacts associated with decentralized or distributed biofuel production using sustainable practices.
5. To enhance existing supply chain, techno-economic, and life-cycle assessment models.

Benchmarks/Desired Outcomes

Short-term

1. Resources and input characterization.
2. Database and model improvements
3. Increased engagement of public and private stakeholders
4. Intellectual products and technology transfer.

Long-term

2. Policies and practices that value and monetize ecosystem services
3. Measures of impacts on land use, air and water quality

Evaluation/Metrics

- Strong scientific and technical merit
- Demonstrated expertise and facilities
- Strong project management and appropriate budget
- Potential for rural and/or economic development
- Enhances social and environmental benefits
- Integration of research, extension and education efforts
- Transferability of results

2. ELIGIBILITY INFORMATION

ELIGIBLE APPLICANTS

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. Principal investigators may be employed by a variety of institutions and organizations (see below).

ELIGIBLE INSTITUTIONS

The lead institution may be state agricultural experiment stations; colleges and universities; university research foundations; other research institutions and organizations; Federal agencies; national laboratories; private organizations or corporations; individuals; or group consisting of 2 or more of the entities described in this paragraph from within the Northeast region. The Northeast region is composed of Connecticut, Delaware, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont and West Virginia, as well as the District of Columbia. It is not required that all members of the project team be affiliated be located within the Northeast region, only the lead principal investigator and their organization. There may be a limit on the number of projects in which one organization can be the lead over a three year period in order to encourage broader participation across the region.

Partnership among Northeast Region land grant institutions, public and private colleges and universities, small businesses, not-for-profit organizations, or other regional stakeholders is encouraged.

COST-SHARE REQUIREMENTS

USDA requires successful applicants to demonstrate 25% auditable cost-share based on Total Federal Funds requested (i.e., a minimum of 20% cost share of the total project cost) unless the proposal is classified as fundamental research (see definition below). For example, if the total project cost is \$125,000, then \$100,000 may be requested and \$25,000 must be provided as cost share. Grantees may provide cost-share through in-kind contributions, including salaries, facilities or from state, local, non-profit or private matching funds. No federal funds may be used as matching funds.

Unrecovered indirect charges: Unrecovered indirect charges (i.e., the difference between an organization's negotiated federal indirect rate and the 30% Total Federal Funding rate) may be used as part of the cost-share.

The matching requirement does not apply to *fundamental research*. Fundamental research refers to systematic research that increases knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. Any proposal that requests a fundamental research exemption from the match requirement will have this classification determined by USDA prior to any award.

Up to 100% match is strongly recommended for demonstration or pilot projects. The amount of non-federal funding will be considered in the review process.

REPORTING REQUIREMENTS

Quarterly reports (2-pages) and annual reports are required from all successful applicants and must be submitted in writing to the NE Sun Grant Center. For multi-year projects, in addition to quarterly reports, an acceptable annual report is required for continuation of funds

Annual reports also must be presented at a yearly NE Sun Grant Center Principal Investigator's symposium or National Sun Grant Conference (NSGC).

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

TRAVEL REQUIREMENTS

Each proposal must include a budget item for PI travel to an annual regional symposium (or a national Sun Grant Program conference) for presentation of results. The participation of at least one PI in an annual meeting event is required. The meeting locations are not yet defined for 2016 or 2017 but the symposium would be within the Northeast Region. In years of a national conference that event may or may not be held in the region. We recommend budgeting between \$1,250 and \$1,500 annually per person attending.

USDA APPROVAL AND APPLICATION OF PRIME AWARD TERMS AND CONDITIONS

USDA must approve the NE Sun Grant Center's selections/recommendations for funding. The terms and conditions of PSU's prime agreement from USDA will be provided to applicants selected to submit full applications.

3. PROPOSAL SUBMISSION INFORMATION

Initial Registration for Webnibus online submission: New NE Sun Grant Center applicants must register online for a user account to access the Webnibus preproposal and proposal submission system. Type the following address into your web browser's address box of follow the link from the NE Sun Grant Center website to:

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

Once at the Webnibus site, use the "Sign up" link under **New to Webnibus?** 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 you.

Creating an application account: The PI must create an account for the Preproposal. Upon entering Webnibus, select '**2016 Northeast USDA**' from the pull down menu. Enter the proposal title, as well as estimated start and end dates. Most projects are expected to begin around September 1, 2016.

Note, the PI may allow other team members to edit the proposal by specifying editing permissions. To access the proposal, click on the proposal title.

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-PIs must certify agreement with the proposal package content. In addition, if appropriate for your institution – Department Heads, Deans/Directors, Department/College Accountants, and other Authorized Representatives must also certify agreement with the proposal package content. Clicking the **Certify Approval** link will substitute for signatures on the application package sign-off sheet.

CONTENT AND FORMAT OF APPLICATION

It is recommended that PIs review the application elements and create a Submission Checklist to avoid delays in completion or submission of the application.

Preproposal

Applicants must submit a Preproposal) (deadline of 5 pm EST Monday, February 8, 2016) prior to submitting a full proposal for review and consideration. These will be used to evaluate topics for alignment with eligibility and alignment with program objectives. Pre-proposals will also be used to secure appropriate reviewers. Full proposals will be invited or discouraged from Preproposals based on this review.

The Preproposal narrative is limited to 4000 characters (approximately two pages, double-spaces) and should provide adequate information to allow the NE Sun Grant Center to evaluate

eligibility and alignment, encourage or discourage submission of full proposals, and select reviewers to expedite the 2016 peer review and selection process.

The Preproposal information is to be entered into Webnibus. 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.

The Preproposal should contain:

1. Cover page information:
 - a. Descriptive Title for the proposed project (please indicate if this is a new or a re-submission of a previously submitted proposal)
 - b. Names and contact information of Principal and Co-Investigators
 - c. Estimated request for funds
 - d. Amount and Sources of match for the project

2. The narrative of the Preproposal (no more than 4000 characters of at least 12 point font) must address the following questions:
 - a. What problem or opportunity is to be addressed?
 - b. Why is this project important?
 - c. List the proposed project objectives.
 - d. Provide a brief and general description of the project approach.
 - e. Identify potential collaborators and beneficiaries.
 - f. List up to 3 suggested reviewers/affiliations with no potential conflict of interest.

3. Please indicate which priority program area(s) is emphasized in your project.

When you are finished with all elements listed on the Preproposal menu, click on the SUBMIT button.

After February 28, 2016 you may return to Webnibus to begin submission of your full proposal information.

Full Application

The full proposal application is to be entered into Webnibus. 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.

Upon entering Webnibus, click on the title of your proposal. You will be directed to the full proposal menu:

1. PI Biosketch
2. Senior Personnel
3. Title Page
4. Proposal Sign-Off Sheet
5. Proposal Summary
6. Pre-Proposal Narrative (contains the LOI previously submitted)
7. Full Proposal Narrative
8. Budget Forms
9. Budget Justification
10. Suggested Reviewers
11. File Attachments
12. Certify Proposal
13. Print

Full proposal applications should include the elements listed below. Submissions omitting any of these items will be considered non-responsive. The components are to be entered into the online proposal system as directed. The proposal narrative should be completed in a word processing software and then uploaded into the system as a single pdf file.

Elements of the proposal include

1. PI BIOSKETCH

The biosketch is essentially a 2-page resume or curriculum vitae.

2. SENIOR PERSONNEL

Senior personnel are the key members of your project, i.e., co-PIs.

3. TITLE PAGE

Note that funds requested and cost-share amounts are automatically filled in by the system from the information in the budget pages.

4. PROPOSAL SIGN-OFF SHEET

Sign-off sheets are required for all proposals. This form identifies basic proposal/investigator information as well as provides a summary of basic compliance issues relative to the project.

NOTE: A copy of the **institutional negotiated rate agreements** for non-Penn State University institutions) should be attached as a single pdf file to the proposal system when the proposals are submitted online.

5. PROPOSAL SUMMARY (200 words or less)

The proposal summary is broken down into key words, objectives, methodology, rationale, and expected outcomes. You can prepare your information and then copy and paste into the form boxes as appropriate.

6. PRE-PROPOSAL NARRATIVE (i.e., Preproposal)

You will not need to or be able to edit your Preproposal. It is included here for your convenience and reference.

7. FULL PROPOSAL NARRATIVE

The page limit is 15 pages, double spaced, including graphics and tables, but excluding references, using a 12-point font, with at least 1-inch margins.

The narrative must include the following:

- a) Statement of project goals and objectives
- b) Statement of project's relevance to Sun Grant mission
- c) Significance of the work in its specific field and in the broader context of achieving the goals of the NE Sun Grant Center and USDA. Please include descriptions of how the proposed work relates to other ongoing or completed work by the principal or other investigators and the implications of the work for public policy issues.
- d) Description of the project approach and activity (research, education, or extension). Describe the techniques and approaches to be taken to achieve the goals outlined above, including methods for analyzing and interpreting data.
- e) List of specific tasks to be performed, as an itemized list, and a timetable for completing those tasks
- f) Role of each member of the project team, including collaborators

References should follow the proposal narrative but these pages are not included in the page limitation.

8. BUDGET WORKSHEETS

Create a separate budget worksheet for each year of the proposed work. Applicants must provide a 25% cost-share and limit indirect to 30% (these cost share and indirect percentages are both based on the Total Federal Funds requested). Cost-share must be fully auditable and are to be monitored by the applicant's institution, and confirmed to Penn State University.

Subawards to other institutions:

- Work plans, budgets and justifications for subawards should be compiled and attached as a single pdf file to the proposal system.

- Indirect and cost-share instructions apply to sub-awards as well.

9. BUDGET JUSTIFICATION/NARRATIVE

Include a detailed budget narrative through the provided online text boxes. The justification is used to fully explain your expenses and is broken down into the primary budget categories: Personnel, Equipment (>\$5,000), Expendable supplies and minor equipment; Travel; Other (subcontracts, consultants, computer time, publications, Graduate Research Assistant tuition, etc.); Facilities and Administration (F&A) charges.

Contributing organizations (please use the format: “Organization: contribution type and amount”). It is recommended that contributors or collaborators provide a Letter of Support that describes the role of the collaborators and that they have agreed to render services or funds.

10. SUGGESTED REVIEWERS

Provide names and contact information for up to three possible reviewers of your proposal. These may be the same ones listed in your Preproposal.

11. FILE ATTACHMENTS (REQUIRED)

- a. **Logic Model (diagram or narrative)** (see generic model on the NE Sun Grant Center website)
- b. **Current and Pending Research** (form provided on the NE Sun Grant Center website) - Include the project title, agency or foundation sponsoring the research, period of support, time commitment, and amount of award.
- c. **Potential Conflicts of Interest** (form provided on the NE Sun Grant Center website)
- d. **Negotiated Institutional Rate Agreement for non-Penn State University institutions**

Combine like items before converting into a pdf document and attaching

12. FILE ATTACHMENTS (OPTIONAL, AS NEEDED)

You may want to attach supporting documentation such as letters of support or subaward information (scope of work, budgets and budget narratives). Similar types of information should be compiled together, e.g., all subawards, all support letters, and it is recommended that you use PDF files. Such formats and consolidation facilitates the work of the reviewers.

4. PROPOSAL REVIEW INFORMATION

PEER REVIEW PROCESS and CRITERIA

1. All applications will undergo a rigorous review process, which will include a technical peer review by scientists working in the appropriate fields. Proposals will also undergo review by the Sun Grant Advisory Committee (AC) before being accepted for funding and forwarding to USDA for final funding approval. Decisions will be made on the basis of the following factors:
 - **Scientific and Technical Merit (50%)**
 - Originality and innovativeness of the concept and approach
 - Conceptual adequacy of research, as applicable
 - Clarity of objectives and presentation of information
 - Adequacy of methodology proposed
 - Feasibility of methodology to achieve objectives
 - Likelihood of success as proposed
 - **Qualifications of the Investigator(s), Adequacy of Facilities, Project Management, and Costs (25%)**
 - Awareness of previous work or strategies
 - Appropriate expertise or collaborators included
 - Level to which stakeholders were involved in project planning and implementation
 - Planning and implementation strategies
 - Adequate outreach program and strategies
 - **Project Relevance (25%)**
 - Appropriateness of the proposal in addressing Sun Grant's mission and the research priorities of the region
 - Relevance to USDA strategic areas of interest
 - Degree to which there is potential for project implementation, adoption and impact
2. A panel of experts will be assembled for the technical peer review. A lead panelist in each of the subfields is identified and tasked with leading the discussion on that set of proposals. A secondary reviewer is also identified to present additional information. The full panel will provide input on the technical merits of the proposal. The full list of prioritized proposals is submitted to the NE Sun Grant Center Advisory Committee or their designee(s) for a programmatic review.

PROGRAMMATIC REVIEW

The Advisory Committee or their designee(s) will review the list of recommended projects and evaluate them against their relevance to the priority needs of the region. The NE Sun Grant Center will seek to achieve a portfolio of research projects to address the bioeconomy development priorities of the region. Therefore, relevance to meeting the priority needs of the region may form the basis for selection among projects deemed of equivalent merit and quality. The Advisory Committee will recommend a short list of priority projects to the NE Sun Grant Center directors and USDA for their funding consideration.

5. AWARD ADMINISTRATION

PROGRAM MANAGEMENT

Program management will be handled by the NE Sun Grant Center. Contracts and payments for the awards will be written and distributed from Penn State University. Reports and reviews will be collected and maintained by Penn State University. Composite reports will be provided to USDA quarterly and annually. The latter will be submitted in narrative form and in the USDA Current Information System.

The NE Sun Grant Center staff will be responsible for reviewing reports and providing feedback to investigators. The Advisory Committee will review final reports for potential impacts throughout the region and for adjustment of program priorities.

AWARD NOTIFICATION

NE Sun Grant Center plan to notify applicants in writing of grant decisions by June 30, 2016. As part of the grant decision, NE Sun Grant Center may negotiate specific grant terms with investigators. Masked reviews will be provided to the principal investigator.

CONFIDENTIALITY/PROPRIETARY INFORMATION

Confidentiality will be maintained in the proposal review process, and proposals will not be used for any purpose other than evaluation of merit for funding. Applicants are encouraged to draw attention to confidential or proprietary information contained in the proposal or submitted reports.

REPORTING REQUIREMENTS

Quarterly and annual reports of progress must be submitted by each funded project to it to be considered for continuation of funding. A reporting template will be distributed along with a reporting schedule. Each project should include a budget item for PI travel to an annual Sun Grant symposium or conference to report project results. PI participation in this meeting is mandatory.

CONTINUATION OF FUNDING

Continuation of funding will be determined by previous year's performance, as well as continued funding from the funding agency.

6. 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 30% Total Federal Funds (TFF)?

The indirect cost rate is limited to the institution’s federally negotiated indirect cost rate OR 30% Total Federal Funds (TFF), whichever is less. The indirect cost rate was set by the original funding source. For use with your Office of Sponsored Programs or grant preparation office, the following funding opportunity citations are offered:

USDA negotiated rate or 30.00% of TDC, whichever is less. The indirect cost rate was set as identified in section 7526 of the Food, Conservation, and Energy Act of 2008 (FCEA) (Pub. L. 110-246) (7 U.S.C. 8114) as amended in 2014.

Q. I logged in and created a new proposal. However, I am in the Pre-proposal menu. How do I get to the Full Proposal Menu?

A. Once your pre-proposal 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, call us at (814) 863-0291 or send an email to L-AG-NESUNGRANT@LISTS.PSU.EDU.

Q. Where is the annual Sun Grant PI conference being held in 2016 or 2017? 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. You have the option of attending the National Sun Grant Conference in alternate years. We recommend budgeting between \$1,250 and \$1,500 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 Northeast region. Others outside the region can participate as a collaborator/co-investigator on your proposal.

Q. We would like to use Sun Grant funds to purchase items such as equipment (greater than \$5000) 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. May we submit our budget using an Excel sheet or word processing software document sheet?

A. In order to streamline the review process, we are asking that all applicants use the online Webnibus budget forms for the 2016 application. If you are having difficulty filling in the form feel free to call us for help. (Kay Fetzer 814-865-5419 or Patty Hickman 814-863-0291).

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 negotiated indirect cost rate OR 30% TFF, whichever is less). In most cases this will be "0.30". The indirect charges will be automatically calculated from this value.

Q When 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.

CONTACT INFORMATION:

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Webpage: <http://agsci.psu.edu/research/sungrant>

FOR QUESTIONS regarding topics or content:

Tom Richard, Director
trichard@psu.edu

Phone: (814) 863-0291

FOR QUESTIONS regarding formats or forms:

Patty Hickman, Operations Manager
L-AG-NESUNGRANT@LISTS.PSU.EDU

Phone: (814) 863-0291

FOR QUESTIONS regarding budget elements or forms:

Kaye Fetzer, Grants & Contracts Office
kxz2@psu.edu

Phone: (814) 865-5419

