FINANCIAL ASSISTANCE
FUNDING OPPORTUNITY ANNOUNCEMENT

U.S. Department of Energy
Energy Efficiency and Renewable Energy
Golden Field Office, Bioenergy Technologies Office

IN PARTNERSHIP WITH

U.S. Department of Agriculture
National Institute of Food and Agriculture

Fiscal Year 2015 BIOMASS RESEARCH AND DEVELOPMENT INITIATIVE (BRDI)
Funding Opportunity Announcement Number: USDA-NIFA-9008-004957
CFDA Number: 10.312

Issue Date:	**02/26/2015**
Concept Paper Due Date:	**03/27/2015, 5:00 PM Eastern Time**
Full Application Due Date:	**7/27/2015, 5:00 PM Eastern Time**

REGISTRATION AND APPLICATION SUBMISSION REQUIREMENTS

Registration Requirements: Allow at least 21 days to complete registrations.
To submit an application under this announcement, complete the following registrations:

A. Obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, at http://fedgov.dnb.com/webform.

B. Register with the System for Award Management (SAM) at https://www.sam.gov. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in SAM registration. Please update your SAM registration annually.

C. Register in Grants.gov at http://www.grants.gov/.
The Applicant User Guide is at
http://www.grants.gov/documents/19/18243/GrantsgovApplicantUserGuide.pdf/ae502877-0fcc-4214-811a-9565b21e7b14

Where to Download the Application Package:
Download the Application Package for this announcement at http://www.grants.gov/. Click on the "Apply for Grants" link; then, click on the "Download a Grant Application Package" link and follow the instructions. Insert the announcement number to download the Application Package.

Where to Submit the Application Package:
APPLICATIONS MUST BE SUBMITTED THROUGH GRANTS.GOV TO BE CONSIDERED FOR AWARD. Follow instructions in the User's Guide for application submissions. Applicants are responsible for verifying successful transmission, prior to the application due date and time.

Where to Ask Questions About the Funding Opportunity Announcement Content:
Questions about the Funding Opportunity Announcement should be submitted to BRDI@nifa.usda.gov.

Where to Submit Questions About the Registrations or Systems:

DUNS & Bradstreet: govt@dnb.com

System for Award Management (SAM): www.sam.gov
For SAM Customer Service, contact:
Federal Service Desk URL: www.fsd.gov
By Phone (8am - 8pm, Eastern Time):
US Calls: 866-606-8220
International Calls: 334-206-7828
DSN: 866-606-8220

Grants.gov: support@grants.gov
By phone: 1-800-518-4726 (7:00 a.m. to 9:00 p.m., Eastern)

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SECTION I – FUNDING OPPORTUNITY DESCRIPTION

A. Description

This section of the Funding Opportunity Announcement (FOA) contains information on the Department of Energy (DOE) and United States Department of Agriculture (USDA) programmatic objectives, administrative roles, and areas of interest addressed by this FOA.

Section 9001(a) of the Food, Conservation, and Energy Act of 2008 (FCEA) (Pub. L. 110-246), re-authorized the Biomass Research and Development Initiative (BRDI) financial assistance program by amending section 9008 of the Farm Security and Rural Investment Act of 2002 (FSRIA), as amended, (Pub. L. 107-171) (7 U.S.C. 8108). Collaboration between DOE and USDA on BRDI is directed under section 9008(e)(1) of FSRIA, as amended. Additionally, DOE provides funds guided by certain administrative provisions of the Energy Independence and Security Act of 2007 and the Energy Policy Act of 2005. Section 9008(e)(3) of FSRIA provides direction and guidance on the technical areas as described in BRDI. The technical areas are: (A) Feedstocks development, (B) Biofuels and biobased products development, and (C) Biofuels development analysis. These areas are described further below.

For fiscal year (FY) 2015, the BRDI FOA requires that funded projects address only one of the three legislatively mandated technical areas identified above. Applicants can only apply for one technical area. Applications that address more than one of the three technical areas will not be reviewed. See Section II for details on Expected Number of Awards.

For FY 2015 DOE-Energy Efficiency and Renewable Energy (EERE) anticipates funding one (1) to six (6) awards, and USDA-National Institute of Food and Agriculture (NIFA) anticipates funding from three (3) to fourteen (14) awards. Anticipated award size ranges from $500,000 to $2 million per award. All DOE-EERE funding is subject to the availability of annual Congressional appropriations.

B. Legislated Program Objectives

Both DOE and USDA have been given responsibility to support the development of a biomass-based industry in the United States. The objectives of this responsibility are specified in Section 9008(e) of FSRIA, as amended, which requires the development of:

> *(A) technologies and processes necessary for abundant commercial production of biofuels at prices competitive with fossil fuels;*
> *(B) high-value biobased products –*
> *(i) to enhance the economic viability of biofuels and biopower;*
> *(ii) to serve as substitutes for petroleum-based feedstocks and products; and*
> *(iii) to enhance the value of coproducts produced using the technologies and processes; and*
> *(C) a diversity of economically and environmentally sustainable domestic sources of renewable biomass for conversion to biofuels, bioenergy, and biobased products.*

DOE and USDA both support Federal initiatives and Agency programmatic goals pertaining to

the development of a biomass-based industry; however, DOE and USDA support for these goals should not be construed by applicants as BRDI priorities for the peer review process. BRDI applications will be evaluated using the criteria in Section V.A. of this FOA. These initiatives and programmatic goals include the following:

- The Twenty-in-Ten Plan, established in the Clean Air Act of 1990 (42 U.S.C. 7545), as amended by section 202 of the Energy Independence and Security Act 2007 (EISA 2007), requiring 36 billion gallons of biofuels by 2022 under the Renewable Fuel Standard;
- The Advanced Energy Initiative of 2006, calling for cost competitive cellulosic ethanol by 2012;
- USDA-NIFA's vision of agriculture and natural resource-based energy that enhance stewardship of our environment, sustainable and secure renewable energy resources, and vibrant and energy-efficient rural communities;
- DOE-EERE's strategic goals of reducing dependence on imported oil and enabling a domestic bioindustry;
- USDA's Biopreferred Program that creates a market pull for new products and technologies (http://www.biopreferred.gov/); and
- DOE-EERE's Biomass Program Multi-Year Program Plan (http://www.energy.gov/eere/bioenergy/downloads/bioenergy-technologies-office-multi-year-program-plan-july-2014-update);
- USDA's Strategic Goal 1.3 "Contribute to the expansion of the bioeconomy by supporting development, production, and consumption of renewable energy and biobased products" and;
- USDA NIFA's Strategic Goal 1.4 "Contribute to the U.S. energy independence and enhance other agricultural systems through the development of regional systems for the sustainable production of optimal biomass for the production of bioenergy and value-added biobased industrial products.

Background resource material, including the complete text of the BRDI legislation, can be found at the following websites:

- Section 9008 of the Farm Security and Rural Investment Act of 2002 (FSRIA), as amended, (Pub. L. 107-171) (7 U.S.C. 8108).
- *Roadmap for Biomass Technologies in the United States* prepared by the Biomass Technical Advisory Committee. http://www.biomassboard.gov/pdfs/final_biomass_roadmap_2002kw.pdf
- *National Biofuels Action Plan*, developed by the Biomass Research and Development Board. http://www1.eere.energy.gov/biomass/pdfs/nbap.pdf

C. Approach

Collaboration between DOE and USDA on BRDI is directed under Section 9008(e)(1) of FSRIA, as amended, (7 U.S.C. 8108(e)(1)). Applicants should be aware that DOE is administering the Concept Paper process (i.e., DOE will receive the Concept Papers and convene the Merit Review Committee meeting to evaluate the quality of the Concept Papers). Based on the results of the review, DOE and USDA will jointly identify projects that will be encouraged or discouraged to submit Full Applications. USDA will administer the Full Application process (i.e., USDA will receive the Full Applications, and convene the USDA Scientific Peer Review to evaluate the quality of the Full Applications). The result of the USDA Scientific Peer Review

will be a ranked list of Full Applications, starting with the project that is most qualified and ending with the project that is least qualified. DOE and USDA will then apply any special or program policy factors to projects at the top of the list and will select projects for funding. Additional information regarding administration of this FOA is included in Sections III through VII.

D. Project Description

Concept Papers are being solicited that address only one of the three technical topic areas described below and on the following pages. **Applications that address more than one of the three technical areas will not be reviewed.**

A. **Feedstocks Development –** Research, development, and demonstration activities regarding feedstocks and feedstock logistics (including harvest, handling, transport, preprocessing, and storage) relevant to production of raw materials for conversion to biofuels and biobased products. The BRDI program is designed to support near-term commercial systems. Projects should emphasize development and optimization of existing feedstocks that will be available for testing and demonstration during the life of the project. Proposals that include breeding or genetic improvement of feedstocks should reconcile this work with the Program's emphasis on near-term impacts.

The lack of logistics systems capable of handling and delivering a sufficiently high tonnage of feedstocks year-round to support the rapid escalation of cellulosic biofuels production has been identified as a significant barrier to the expansion of a sustainable domestic biofuels industry. Feedstocks or combinations of feedstocks that will be considered include: agricultural residues, energy crops (switchgrass, miscanthus, energycane, sorghum, poplar, willow, etc.), forest resources (forest thinnings, wood chips, wood wastes, small diameter trees, etc.), urban wood wastes, oilseed crops, algae, animal waste, other waste streams that are byproducts of alternative energy processes. Additional information on acceptable feedstocks may be found in the definitions for "Advanced Biofuel" and "Renewable Biomass" which are presented in Appendix A – Definitions. Projects should include the use or development of the following:

- Dedicated biofuel or industrial product crops with desired features, including enhanced productivity, broader site range, low requirements for chemical inputs, and enhanced processing characteristics;
- Advanced crop production methods and management technologies and systems to achieve optimal yields while conserving soil and water resources;
- Innovative equipment designs and systems for harvest, handling, preprocessing, transport, and storage that will be compatible with the biomass conversion technology;
- Innovative uses of alternative waste streams that decrease the cost, environmental impacts, greenhouse gas footprint or complexity of renewable energy systems for small commercial applications;
- Compatibility of the selected feedstock with potential conversion systems;
- Strategies for integrating feedstock production into existing managed land; and
- Generation of data that can contribute to a best management practices database.

B. **<u>Biofuels and Biobased Products Development</u> -** Research, development, and demonstration (RD&D) activities to support:

(i) Development of diverse cost-effective technologies for the use of cellulosic biomass in the production of biofuels, bioenergy, and biobased products; and
(ii) Product diversification through technologies relevant to the production of a range of biobased products (including chemicals, animal feeds, and cogeneration power) that potentially can increase the feasibility of fuel production in a biorefinery.

The DOE-EERE Bioenergy Technologies Office (BETO) has been focused on developing, demonstrating, and deploying cellulosic ethanol to enable its goal of making cellulosic ethanol cost-competitive with corn-based ethanol. Over the last two decades, research and development have led to significant progress in the biochemical processes used to convert cellulosic biomass to ethanol. First-generation technology for cellulosic ethanol production is now in the demonstration phase. In addition to cellulosic ethanol and biodiesel, USDA-NIFA and DOE-EERE will support other advanced biofuels and/or biobased products, such as biobutanol, hydrocarbons, and Fischer-Tropsch gasoline and diesel, which are still in the early stages of investigation in terms of production technologies, cost-effectiveness, and performance characteristics. Additional information on acceptable biofuels and biobased products may be found in the definitions for "Advanced Biofuel" and "Biobased Product" which are presented in Appendix A – Definitions.

For FY 2015, DOE-EERE and USDA-NIFA have identified areas of particular interest for BRDI. These areas of interest will not be given a priority over applications that address other technologies and are not intended to deter submission of applications that address other technologies. Research, development, and demonstration projects of particular interest include, but are not limited to, technologies that would address:

- Small scale biomass densification (e.g. gasification, pyrolysis, pellets) R,D&D to address issues of local and regional production of biofuels from cellulosic feedstocks;
- Research and development of local-scale woody biomass-to-energy conversion with a major thrust focusing on the simultaneous generation of electricity and useful heat;
- Conversion, via biological, thermal, catalytic or chemical means, of acceptable feedstocks into advanced biofuels and/or biobased products including intermediate and end-use products;
- Improvement of chemical and physical biomass separation that reduces capital expenses, operating costs, and energy inputs;
- Improvement of the production and performance or commercial viability of biobased products and co-products;
- Improvement of the potential for developing rural based processing and manufacturing of biofuels and/or biobased products;
- Demonstration of commercial relevance of the technology, its expected marketability, and its potential commercial viability for processing and manufacturing biobased products; and,
- Demonstration of biobased products to evaluate functional and environmental performance and to facilitate amending or developing industry standards and specifications.

Areas of particular interest for Biochemical, Thermochemical, and Chemical conversions, based

on known barriers to successful commercialization, include, but are not limited to, research, development, and demonstration of technologies that would address:

Biochemical Conversion:
- Pretreatment technologies
- Hydrolysis and saccharification technologies that enhance advanced biofuels production
- Fermentation technologies for advanced biofuels
- Advanced bioprocessing technologies

Thermochemical Conversion:
- Gasification
- Pyrolysis

Chemical Conversion:
- Tolerance to inhibitory compounds
- Exothermic reactions for waste heat
- Reduction of cellulosic components at mild conditions with recycle of reactants
- Selective dehydrations without side reactions
- Catalyst development for cleaving C-O and C-C bonds
- Cleavage of C-N bonds while preserving molecular structure

C. **Biofuels and Biobased Products Development Analysis –** The intent of this section is to apply systems evaluation methods that can be used to optimize system performance and market potential and to quantify the project's impact on sustainability; therefore, successful applications will consider the life-cycle (cradle-to-grave) impacts including environmental, social, and economic implications that are attributable to the project. Successful projects should include these sustainability data in engineering process models and be used over the life of the project to improve the system and quantify sustainability impacts. As appropriate, the proposed project should include additional aspects of the following:

A. Strategic guidance – The development of analysis that provides strategic guidance for the application of renewable biomass technologies to improve sustainability and environmental quality, cost effectiveness, security, and rural economic development.

B. Energy and Environmental Impact – Development of systematic evaluations of the impact of expanded biofuel production on the environment (including forest land) and on the food supply for humans and animals, including the improvement and development of tools for life cycle analysis of current and potential biofuels.

C. Assessment of Federal land – Assessments of the potential of Federal land resources to increase the production of feedstocks for biofuels and biobased products, consistent with the integrity of soil and water resources and with other environmental considerations.

The proposed project should consider the full life-cycle of the technology, which can be characterized by the following stages and, where appropriate, should generate geographically specific social, economic, and environmental data that can be made publicly available to be used

in local, state, regional, and national analytical tools and models. The tools and models should utilize primary data generated by the project's efforts.

- Biomass feedstock development and cultivation;
- Feedstock harvesting and preparation;
- Feedstock logistics (handling, storage, and transportation);
- Waste stream logistics (handling, storage, and transportation);
- Biomass pre-processing (as appropriate);
- Biomass conversion;
- Production of biofuels/bioenergy/biobased products;
- Product logistics and distribution;
- Product consumption; and
- End of useful life.

E. Notice of NEPA Applicability

Environmental Review and Approval: Federal agencies are responsible for conducting the environmental review process required by the National Environmental Policy Act (NEPA) and related environmental statutes, regulations, permits, and approvals. NEPA applies to all Federal grant programs and requires Federal agencies to integrate environmental values into their decision-making processes by considering the environmental impacts of their proposed actions. While NEPA compliance is a Federal agency responsibility and the ultimate decisions remain with the Federal agency, Applicants will be required to assist in the timely and effective completion of the NEPA process in the manner most pertinent to the applicant's proposed project.

If a project is selected for negotiation of award by DOE, and the recipient moves forward with activities that are not authorized for Federal funding by the DOE Contracting Officer in advance of the NEPA determination, the recipient is doing so at risk of not receiving Federal funding and such costs may not be recognized as allowable cost match. DOE does not guarantee or assume any obligation to reimburse any costs incurred prior to receiving written authorization from the DOE Contracting Officer.

SECTION II – AWARD INFORMATION

During the Concept Paper and Full Application phase, Full Applications that meet the eligibility requirements will be considered for funding by either DOE-EERE or USDA-NIFA; however, Applicants *may not* request to be funded by a particular organization and must prepare their Concept Paper in accordance with this FOA.

A. Type of Award Instrument

Grants

- USDA anticipates awarding grants and DOE anticipates awarding Cooperative Agreements under this funding opportunity announcement. All DOE-EERE funding is subject to the availability of annual Congressional appropriations.

Cooperative Agreements

- DOE-EERE generally uses Cooperative Agreements to provide financial and other support to Prime Recipients.
- Through Cooperative Agreements, EERE provides financial or other support to accomplish a public purpose of support or stimulation authorized by Federal statute. Under Cooperative Agreements, the Government and Prime Recipients share responsibility for the direction of projects.

EERE has substantial involvement in work performed under awards made following this FOA. EERE does not limit its involvement to the administrative requirements of the award. Instead, EERE has substantial involvement in the direction and redirection of the technical aspects of the project as a whole. Substantial involvement includes, but is not limited to, the following:

1. EERE shares responsibility with the recipient for the management, control, direction, and performance of the project.

2. EERE may intervene in the conduct or performance of work under this Award for programmatic reasons. Intervention includes the interruption or modification of the conduct or performance of project activities.

3. EERE may redirect or discontinue funding the project based on the outcome of EERE's evaluation of the Project at that the Go/No Go decision point.

4. EERE participates in major project decision-making processes.

B. Estimated Funding

- All DOE-EERE funding is subject to the availability of annual Congressional appropriations. BRDI funding made available to USDA-NIFA is mandatory through FY 2017 pursuant to 7 U.S.C. 8108 (h)(1).

- All figures below should be treated as estimates.

Anticipated Federal Funding:	Up to $8.7 million
FY 2014 & 15 USDA-NIFA Federal Funding Amount: FY 2015 DOE-EERE Federal Funding Amount*:	$5.7 million Up to $3 million

* DOE-EERE reserves the right to fund, in whole or in part, any, all, or none of the Full Applications submitted in response to this announcement and will award the number of financial instruments that serves the public purpose and is in the best interests of the Government. All DOE-EERE funding is subject to the availability of annual Congressional appropriations.

C. Maximum and Minimum Award Size

The proposed Federal funding must fall between the ceiling and floor stated below. **Applications and Concept Papers that include proposed Federal funding outside the stated ceiling and floor will not be reviewed or considered for award.** The ceiling and floor amounts are Federal funding amounts only.

- Ceiling (i.e., the maximum amount for an individual award made under this announcement): $2,000,000 (total, not per year)
- Floor (i.e., the minimum amount for an individual award made under this announcement): $500,000 (total, not per year)

All DOE-EERE funding is subject to the availability of annual Congressional appropriations.

D. Expected Number of Awards

- Based on the award size and estimated total funding available, DOE-EERE anticipates making approximately 1 to 6 awards in FY 2015 under this announcement, subject to the availability of annual Congressional appropriations.
- Based on the award size and estimated total funding available, USDA-NIFA anticipates making approximately 3 to 14 awards in FY 2015 under this announcement.

E. Anticipated Award Size

Average Award Size

- The average award size for this program in FY 2012 was $ 6.5 million. DOE and USDA expect the average award size to be smaller under this announcement. All DOE-EERE funding is subject to the availability of annual Congressional appropriations.

F. Period of Performance

Number of Years

- DOE-EERE and USDA-NIFA anticipate making awards with project periods of up to 3 (three) years.

G. Type of Application

New Applications Only

- DOE-EERE and USDA-NIFA will accept **only new applications** under this announcement (i.e., applications for renewals of existing DOE-EERE/USDA-NIFA funded projects will not be considered).

H. Technology Readiness Levels (TRL)

- **Anticipated TRL at Commencement of Project: 2-4**
- **Anticipated TRL at Completion of Project: 4-6**

Technology Readiness Levels (TRL) are a type of measurement system used to assess the maturity level of a particular technology. Each technology project is evaluated against the parameters for each technology level and is then assigned a TRL rating based on the projects progress. There are nine technology readiness levels. TRL 1 is the lowest and TRL 9 is the highest.

Source: NASA SCaN Program

SECTION III - ELIGIBILITY INFORMATION

A. Eligible Applicants

All entities listed under Section 9008(e)(5) of FSRIA, as amended (7 U.S.C. 8108(e)(5)), are eligible to apply. Eligible entities are:
(A) An institution of higher education;
(B) A National Laboratory;
(C) A Federal research agency;
(D) A State research agency;
(E) A private sector entity;
(F) A nonprofit organization; or
(G) A consortium of 2 or more entities described in (A) through (F) above.

Applicants are encouraged to form consortia so that a range of capabilities is available to address all aspects of the three technical areas. Institutions of higher education include colleges and universities beyond the secondary education level. Private sector entities include companies, corporations, farms, ranches, cooperatives, and others that compete in the marketplace. DOE specific restrictions on consortia, explained below, do not apply to USDA awards.

Foreign entities are not eligible to participate as Prime recipients, sub-recipients or other teaming arrangement.

If an application proposes a consortium, DOE will require that the consortium structure consist of a Consortium Lead Organization (with associated Director and other key personnel) and technical partners who will conduct the technical scope of work described by the consortium in collaboration with the Lead Organization. All participants must be clearly identified. The Consortium Lead should be focused on the coordination and management of the overall technical effort in addition to the strategy, approach, and expected outcomes. The Consortium Lead must describe how it will effectively maintain cohesiveness in a group of organizations having different corporate or operating cultures. DOE will expect this information to be included in the full application. It is anticipated that the award(s) will be made to the Lead Organization within the selected consortium, with the technical partners as sub-recipients to the Lead Organization. DOE does not anticipate making awards to a joint venture or other special entity formed specifically for the purpose of carrying out a project under this FOA. See Criteria 4 “Extent the roles and responsibilities of key personnel for details on NIFA.

B. Cost Sharing

Cost Share: 20% and 50%

Recipient cost share must be at least 20% of the total allowable costs for research and development (R&D) projects, and 50% of the total allowable costs for demonstration and commercial application projects, and must come from non-Federal sources unless otherwise allowed by law. The sum of the Government share, including Federally Funded Research and Development Center (FFRDC) contractor costs if applicable, and the recipient share of allowable costs equals the total allowable cost of the project. (See Section 9008(e)(6)(B) of FSRIA (7 U.S.C. 8108(e)(6)(B)) for the applicable USDA-NIFA cost sharing requirements and 10 CFR

Part 600 for the applicable DOE-EERE cost sharing requirements. See Appendix C. for examples). These percentages are currently required by both USDA and DOE. Recipients of DOE-EERE awards will be required to meet their cost share requirement on an invoice basis.

- To ensure proper cost share determinations for Concept Papers, Applicants will be required to identify whether the Full Application is proposing a research and development, demonstration or deployment, or commercial-scale project. See Appendix A for relevant definitions.

C. Centers of Excellence

Pursuant to Section 7214 of the Agricultural Act of 2014 (Pub. L. 113-79), beginning in Fiscal Year 2015, for applicable competitive research and extension programs, NIFA will be recognizing and providing priority in the receipt of funding to applications from "centers of excellence" that have been established for purposes of carrying out research, extension, and education activities relating to the food and agricultural sciences. In July of 2014, NIFA held listening sessions and accepted written comments from stakeholders to inform NIFA's implementation of the centers of excellence provision. Information from the webinars and a summary of the input gathered are available on NIFA's website at http://www.nifa.usda.gov/about/offices/legis/cntr_ex_webinar_documents.html

A center of excellence is composed of 1 or more of the following entities that provide financial or in-kind support to the center of excellence. Therefore, an eligible applicant who wishes to be considered as a center of excellence must be one of the following entities that provides financial or in-kind support to the Center being proposed, as described in the grant application.

(A) State agricultural experiment stations;

(B) colleges and universities;

(C) university research foundations;

(D) other research institutions and organizations;

(E) Federal agencies;

(F) national laboratories;

(G) private organizations, foundations, or corporations;

(H) individuals; or

(I) any group consisting of 2 or more of the entities described in (A) through (H).

See Section IV, D. of this FOA for additional requirements that eligible applicants must meet to be considered a center of excellence.

D. Other Eligibility Requirements

- **DOE National Laboratory Contractors and Other Federally Funded Research and Development Center (FFRDC) Contractors**.

A DOE National Laboratory Contractor is eligible to apply for funding under this announcement if its cognizant Contracting Officer provides written authorization and this authorization is submitted with the application. If a DOE National Laboratory Contractor is selected for award, the proposed work will be authorized under the DOE work authorization process and performed under the laboratory's Management and Operating (M&O) contract.

The following wording is acceptable for the authorization:

> "Authorization is granted for the _____ Laboratory to participate in the proposed project. The work proposed for the laboratory is consistent with or complementary to the missions of the laboratory, will not adversely impact execution of the DOE assigned programs at the laboratory, and will not place the laboratory in direct competition with the domestic private sector."

FFRDC contractors may be proposed as team members on another entity's application, subject to the following guidelines:

Authorization for non-DOE FFRDCs. The Federal agency sponsoring the FFRDC contractor must authorize in writing the use of the FFRDC contractor on the proposed project and this authorization must be submitted with the application. The use of a FFRDC contractor must be consistent with the contractor's authority under its award.

Authorization for DOE FFRDCs. The cognizant Contracting Officer for the FFRDC must authorize in writing the use of a DOE FFRDC contractor on the proposed project and this authorization must be submitted with the application. The following wording is acceptable for this authorization:

> "Authorization is granted for the _____ Laboratory to participate in the proposed project. The work proposed for the laboratory is consistent with or complementary to the missions of the laboratory, will not adversely impact execution of the DOE assigned programs at the laboratory, and will not place the laboratory in direct competition with the domestic private sector."

Value/Funding. The value of, and funding for, the FFRDC contractor portion of the work will not normally be included in the award to a successful applicant. Usually, DOE will fund a DOE FFRDC contractor through the DOE field work proposal system and other FFRDC contractors through an interagency agreement with the sponsoring agency.

Cost Share. The applicant's cost share requirement will be based on the total cost of the project, including the applicant's and the FFRDC contractor's portions of the effort.

- FFRDC Contractor Effort: The FFRDC contractor effort, in aggregate, may be up to 100% of the total estimated cost of the project, including the applicant's and the FFRDC contractor's portions of the effort.

Responsibility. The applicant, if successful, will be the responsible authority regarding the settlement and satisfaction of all contractual and administrative issues, including but not

limited to, disputes and claims arising out of any agreement between the applicant and the FFRDC contractor.

E. Multiple Principal Investigators

The assignment and use of multiple Principal Investigators (PIs) for projects submitted to this FOA is allowed. Additionally, PIs may collaborate on multiple projects, although a PI can be the lead/primary PI on only one Concept Paper and Full Application (see Section III.E. below). The applicant must indicate in the Concept Paper if the project will include multiple PIs. The decision to use multiple PIs for a project is the sole responsibility of the Applicant. If multiple PIs will be designated, the Applicant must identify in the application the Lead /Primary PI. Each PI's roles and administrative, technical, and scientific responsibilities for the project should be described in the concept paper(see Section IV.C.3.a.).

F. Multiple Submissions

Eligible entities may submit multiple Concept Papers and Full Applications under this FOA; however, each Concept Paper/Full Application must describe a unique project. Because of the broad and comprehensive nature of this competition, the PI can be the lead/primary PI on only one Full Application. If more than one Full Application is submitted with the same lead/primary PI, only the last submitted Full Application with the listed PI will be considered for review.

To be considered for substantive evaluation, an applicant submission must meet the Compliance criteria set forth below. **Concept Papers and Full Applications must meet all Compliance criteria listed below or they will be considered noncompliant. DOE- EERE and USDA-NIFA will not review or consider noncompliant submissions**, including Concept Papers and Full Applications that were: submitted through means other than mentioned above; submitted after the applicable deadline; and/or submitted incomplete. DOE-EERE and USDA-NIFA will not extend the submission deadline for Applicants that fail to submit required information due to server/connection congestion.

i. COMPLIANCE CRITERIA

1. *Concept Papers*

   Concept Papers are deemed compliant if:

   - The Applicant successfully submitted all required documents and e-mailed them to BRDI@nifa.usda.gov by the deadline stated in this FOA.

2. *Full Applications*

   Full Applications are deemed compliant if:

   - The Applicant submitted a compliant and responsive Concept Paper;
   - The Full Application complies with the content and form requirements in Section IV.D of the FOA; and,
   - The Applicant entered successfully uploaded all required documents and clicked the "Submit" button in Grants.gov by the deadline stated in the FOA.

b. RESPONSIVENESS CRITERIA

USDA-NIFA performs a preliminary technical review of Full Applications. Any application deemed nonresponsive to the technical criterion will not be reviewed or considered.

SECTION IV – APPLICATION AND SUBMISSION INFORMATION

A. Address to Request Concept Paper/Full Application Forms

Concept Paper and Full Application forms and instructions are available at Grants.gov. To access these materials, go to http://www.grants.gov, select "Apply for Grants," and then select "Download Application Package." Enter the CFDA and/or the funding opportunity number located on the cover of this announcement and then follow the prompts to download the application package. (Also see Section I of this Part below.)

B. Concept Papers

A Concept Paper is required. You must complete the Concept Paper document and submit electronically to USDA NIFA at **BRDI@nifa.usda.gov**. Files must be in Adobe Portable Document Format (PDF) unless otherwise specified in this announcement.

As described in Section I.D – Project Description, all proposed projects submitted under this FOA must address one of the three technical areas and only one of the three technical areas. Concept Papers and Full Applications that do not address one of these three technical areas, or address more than one of the three technical areas, will not be reviewed.

C. Content and Form of Concept Paper

To be eligible to submit a Full Application, Applicants must submit a Concept Paper by the specified due date and time. Each Concept Paper must be limited to a single concept or technology. Unrelated concepts and technologies should not be consolidated into a single Concept Paper.

1. CONCEPT PAPER CONTENT REQUIREMENTS

The Concept Paper must conform to the following content requirements:

SECTION	PAGE LIMIT	DESCRIPTION
Technology Description	2 pages maximum	Applicants are required to describe succinctly: • The proposed technology, including its basic operating principles and how it is unique and innovative; • The proposed technology's target level of performance (Applicants should provide technical data or other support to show how the proposed target could be met);

		• The current state-of-the-art in the relevant field and application, including key shortcomings, limitations, and challenges; • How the proposed technology will overcome the shortcomings, limitations, and challenges in the relevant field and application; • The potential impact that the proposed project would have on the relevant field and application; • The key technical risks/issues associated with the proposed technology development plan; and • The impact that Federal funding would have on the proposed project.
Addendum	1 page maximum	Applicants may provide graphs, charts, or other data to supplement their Technology Description. Applicants are required to describe succinctly the qualifications, experience, and capabilities of the proposed Project Team, (see Criteria 4 for NIFA's evaluation) including: • Whether the Principal Investigator (PI) and Project Team have the skill and expertise needed to successfully execute the project plan; • Whether the Applicant has prior experience which demonstrates an ability to perform tasks of similar risk and complexity; • Whether the Applicant has worked together with its teaming partners on prior projects or programs; and • Whether the Applicant has adequate access to equipment and facilities necessary to accomplish the effort and/or clearly explain how it intends to obtain access to the necessary equipment and facilities.

Non-compliant Concept Papers will not be reviewed or considered (see Section III & IV. of the FOA).

An independent assessment of each Concept Paper will be made based on the criteria in Section V.A.1 of this FOA. A subset of Applicants will be encouraged to submit Full Applications. Other Applicants will be discouraged from submitting a Full Application. An applicant who receives a "discouraged" notification may still submit a Full Application. However, by discouraging the submission of a Full Application, USDA-NIFA and DOE-EERE intend to convey their lack of programmatic interest in the proposed project in an effort to save the Applicant the time and expense of preparing an application that is unlikely to be selected for award negotiations.

In order to provide Applicants with feedback on their Concept Papers, general comments provided from reviewers on an Applicant's Concept Paper will be included in the encourage/discourage notification sent to Applicants at the close of that phase.

D. Content and Form of Full Applications

Applicants must submit a Full Application by the specified due date and time to be considered for funding under this RFA.

Applicants will have approximately 30 days from receipt of the Concept Paper Encourage/Discourage notification to prepare and submit a Full Application. Regardless of the date the Applicant receives the Encourage/Discourage notification, the submission deadline for the Full Application remains the date and time stated on the RFA cover page.

Non-compliant Full Applications will not be reviewed or considered (see Section III of the RFA).

Each Full Application should be limited to a single concept or technology. Unrelated concepts and technologies should not be consolidated in a single Full Application.

Minimum requirements for Full Applications are included below. All Applicants are encouraged to review this information to make themselves aware of the expected content of a Full Application.

These are:

- **Content and Form of Application Submission**
- **Full Application Review Requirements**
- **General Award Administration Information**
- **Use of Funds; Changes**

Content and Form of Application Submission

For USDA-NIFA, this program will be listed in the Catalog of Federal Domestic Assistance (CFDA) under 10.312. When it is made available on Grants.gov, the announcement for full applications will be associated with this CFDA number. Only electronic applications may be submitted via Grants.gov to USDA-NIFA in response to this RFA. When the announcement for full applications is made available, invited Applicants will be able to download and submit the following required forms via Grants.gov:

- **SF 424 R&R Cover Sheet**
- **SF 424 R&R Project/Performance Site Location(s)**
- **R & R Other Project Information Form**
- **R & R Senior/Key Person Profile (Expanded)**
- **R & R Personal Data**
- **SF 424 (R & R) Budget Fed & Non-Fed**
- **Supplemental Information Form**

General requirements of the submission will include:

Project Summary/Abstract.

The project summary must contain a summary of the proposed activity suitable for dissemination to the public. It must include:

- Name of Applicant Organization – enter the single entity that will be the primary recipient.
- Collaborating and/or Partner Organizations – if more than one organization or entity is participating in the project, list the other organizations here.
- Contact PI/Project Director – the PI who will serve as the single point of contact for the project. See Section III.D.
- Other Principal Investigator(s) – if multiple PIs are included in the project, list the other PIs here.
- Project Title – enter the project title.
- City, state, and zip code where the project will be managed – use the location that best describes where the project will be managed/coordinated.
- Federal Funds Requested – enter the dollar amount being requested.
- Cost Share Provided – enter the dollar amount being contributed by the applicant(s). (Please Note: USDA does not consider the cost share provided during the peer review process).
- Total Project Cost – enter the total project cost. This should be the sum of the Federal Funds and the Cost Share.
- Which Technical Area does this project address?
- TA 1 – Feedstocks Development: List the Proposed Feedstock(s) and Advanced Crop Production Method – this refers to Technical Area 1. Please provide a list of proposed feedstock(s) and method(s) that will be used by the project.
- TA 2 – Biofuels and Biobased Products development: List the Proposed Conversion Technology(s) – this refers to Technical Area 2. Please provide a list of technologies that will be used by the project.
- TA 3 – Biofuels Development Analysis: State the Proposed Sustainability Approach – this refers to Technical Area 3. Please state very briefly.
- Provide an Abstract.

Project Narrative Requirements

The Project Narrative portion of the full application shall not exceed **<u>20 pages</u>** of written text regardless of whether it is single or double spaced including charts, graphs, maps, photographs, and other pictorial presentations. This maximum (20 pages) has been established to ensure fair and equitable competition.

The Project Narrative must include all of the following:

1. Title Page. Cover page should include the name and type of organization, the FOA title, the project title (Note this page does not count against the narrative's specified page limit.)

2. Table of Contents. Table of contents should include page numbers corresponding to the elements outlined in these guidelines. (Note the table of contents does not count against the narrative's specified page limit.)
3. Project Objectives. This section should provide a clear, concise statement of the specific objectives/aims of the proposed project.

4. Merit Review Criterion Discussion. This section should be formatted to address each merit review criterion and sub-criterion listed below. Provide sufficient information so that reviewers will be able to evaluate the application in accordance with these merit review criteria (this information is repeated in Part V.B.) DOE and USDA will evaluate and consider only those applications that address separately each merit review criterion and sub-criterion below:

5. Relevance and Outcomes/Impacts. This section should explain the relevance of the effort to the objectives in Part I., B. and the expected outcomes and impacts. Outcomes are observed changes in knowledge, adoption of new and more efficient technologies, change of practice, or behaviors. Impacts are the measurable results of outcomes such as increased biofuel production, improved cost effectiveness, or adoption of new feedstocks and advanced manufacturing technologies.

6. Project Timetable. This section should outline as a function of time, year by year, all of the important activities or phases of the project, including any activities planned beyond the project period. Successful Applicants must use this project timetable to report progress.

7. Evaluation Phase. This section must include a plan and quantifiable measures to be used to assess the success of the project.

8. Center of Excellence Justification

In addition to meeting the other requirements detailed in Section IV, D., of this Funding Opportunity Announcement (FOA) eligible applicants who wish to be considered as centers of excellence must provide a brief justification statement, as part of their Project Narratives and within the page limits provided, describing how they meet the standards of a center of excellence, based on the following criteria:

(A) the ability of the center of excellence to ensure coordination and cost effectiveness by reducing unnecessarily duplicative efforts regarding research, teaching, and extension in the implementation of the proposed research and/or extension activity outlined in this application;

(B) in addition to any applicable matching requirements, the ability of the center of excellence to leverage available resources by using public-private partnerships among agricultural industry groups, institutions of higher education, and the Federal Government in the implementation of the proposed research and/or extension activity outlined in this application. Resources leveraged should be commensurate with the size of the award;

(C) the planned scope and capability of the center of excellence to implement teaching initiatives to increase awareness and effectively disseminate solutions to target audiences through extension activities in the implementation of the proposed research and/or extension activity outlined in this application; and

(D) the ability or capacity of the center of excellence to increase the economic returns to rural communities by identifying, attracting, and directing funds to high-priority agricultural issues in support of and as a result of the implementation of the proposed research and/or extension activity outlined in this application.

Additionally, where practicable (not required), center of excellence applicants should describe proposed efforts to improve teaching capacity and infrastructure at colleges and universities (including land-grant colleges and universities, cooperating forestry schools, certified Non-Land Grant Colleges of Agriculture (NLGCA) (list of certified NLGCA is available at http://www.nifa.usda.gov/funding/pdfs/nlgca_colleges.pdf), and schools of veterinary medicine).

General Award Administration Information

Within the limit of funds available for such purpose, the awarding official of USDA-NIFA shall make grants to those responsible, eligible Applicants whose applications are judged most meritorious under the procedures set forth in the FOA. The date specified by the awarding official of USDA-NIFA as of the effective date of the grant shall be no later than September 30th of the Federal fiscal year in which the project is approved for support and funds are appropriated for such purpose, unless otherwise permitted by law. It should be noted that the project need not be initiated on the grant effective date, but as soon thereafter as practical so that project goals may be attained within the funded project period. All funds granted by USDA-NIFA under this RFA shall be expended solely for the purpose for which the funds are granted in accordance with the approved application and budget, the regulations, the terms and conditions of the award, the applicable Federal cost principles, and the Department's assistance regulations. USDA-NIFA awards made under this FOA will be made in FY 2015.

To view Standard Award Terms and Conditions USDA-NIFA intends to utilize for Biomass Research and Development Awards issued in FY 2015: see http://www.nifa.usda.gov/business/awards/awardterms.html.

Use of Funds; Changes

1. Delegation of Fiscal Responsibility

Unless the terms and conditions of the award state otherwise, the awardee may not in whole or in part delegate or transfer to another person, institution, or organization the responsibility for use or expenditure of award funds.

2. Changes in Project Plans

a. The permissible changes by the awardee, PD(s), or other key project personnel in the approved project shall be limited to changes in methodology, techniques, or other similar aspects of the project to expedite achievement of the project's approved goals. If the awardee or the PD(s) is uncertain as to whether a change complies with this provision, the question must be referred to the Authorized Departmental Officer (ADO) for a final determination. The ADO is the signatory

of the award document, not the program contact.

b. Changes in approved goals or objectives must be requested by the awardee and approved in writing by the ADO prior to effecting such changes. In no event will requests for such changes be approved which are outside the scope of the original approved project.

c. Changes in approved project leadership or the replacement or reassignment of other key project personnel must be requested by the awardee and approved in writing by the ADO prior to effecting such changes.

d. Transfers of actual performance of the substantive programmatic work in whole or in part and provisions for payment of funds, whether or not Federal funds are involved, must be requested by the awardee and approved in writing by the ADO prior to effecting such transfers, unless prescribed otherwise in the terms and conditions of the award.

e. The project period may be extended by USDA-NIFA without additional financial support, for such additional period(s) as the ADO determines may be necessary to complete or fulfill the purposes of an approved project, but in no case shall the total project period exceed five years. Any extension of time shall be conditioned upon prior request by the awardee and approval in writing by the ADO, unless prescribed otherwise in the terms and conditions of award.

f. Changes in Approved Budget: Unless stated otherwise in the terms and conditions of award, changes in an approved budget must be requested by the awardee and approved in writing by the ADO prior to instituting such changes if the revision will involve transfers or expenditures of amounts requiring prior approval as set forth in the applicable Federal cost principles, Departmental regulations, or award.

E. Post-Selection

If selected for negotiation of award, DOE-EERE/USDA-NIFA reserve the right to request additional or clarifying information for any reason deemed necessary, including, but not limited to:

- Indirect cost information
- Other budget information
- Commitment Letter from Third Parties Contributing to Cost Share, if applicable
- Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5)
- Representation of Limited Rights Data and Restricted Software, if applicable
- Environmental Questionnaire

F. Submission Dates and Times

1. Concept Paper Due Date

- Concept papers must be received by **March 27th, 2015**, not later than 5:00 PM Eastern Time. (See Section IV.B)
- Concept papers received after the deadline will **not** be reviewed.

Anticipated Notice of Encouragement/Discouragement to Submit Full Applications

After the Concept Paper review, a subset Applicants will be encouraged to submit Full Applications. Other Applicants will be discouraged from submitting a Full Application. An applicant who receives a "discouraged" notification may still submit a Full Application. However, by discouraging the submission of a Full Application, USDA-NIFA and DOE-EERE intend to convey their lack of programmatic interest in the proposed project in an effort to save the Applicant the time and expense of preparing an application that is unlikely to be selected for award negotiations. DOE-EERE anticipates issuing encouragement/discouragement notifications by early April 2015.

2. Full Application Due Date – July 27th, 2015, 5:00 PM Eastern Time

At this time, USDA-NIFA anticipates Full Applications will be due by July 27, 2015, not later than 5:00 PM Eastern Time. Applicants are encouraged to transmit their Full Applications well before the deadline. **APPLICATIONS RECEIVED AFTER THE DEADLINE WILL NOT BE REVIEWED OR CONSIDERED FOR AWARD.**

G. Intergovernmental Review

Program Not Subject to Executive Order 12372

- This program is not subject to Executive Order 12372 – Intergovernmental Review of Federal Programs.

H. Funding Restrictions

Projects may be funded by either USDA-NIFA or DOE-EERE, depending on the outcome of the review process and the interests of each agency; therefore, Applicants should not attempt to tailor their applications toward one agency over the other. The following information is provided so that Applicants will be aware of the requirements associated with each agency.

For Applications selected for funding by DOE-EERE:

All DOE funding is subject to the availability of annual Congressional appropriations.

Cost Principles: All expenditures must be allowable, allocable, and reasonable in accordance with the applicable Federal cost principles. Refer to the following applicable Federal cost principles for more information:

- 2 CFR 220 for Educational Institutions;
- 2 CFR 225 for State, Local, and Indian Tribal Governments;
- 2 CFR 230 for Non Profit Organizations; and
- FAR Part 31 for For-Profit entities.

Pre-award Costs Selectees may charge pre-award costs incurred on R&D awards within the

90-day period immediately preceding the effective date of the award. If the Selectee is a for-profit, non-profit, or University, prior approval by the CO to incur pre-award costs is not required unless the costs are more than $25,000. If the Selectee is a governmental entity, it must request prior approval from the CO to incur pre-award costs, regardless of the amount.

Pre-award costs cannot be incurred prior to the Selection Official signing the Selection Statement and Analysis. Pre-award costs can only be incurred if such costs would be reimbursable under the agreement if incurred after award.

Pre-Award expenditures are made at the Selectee's risk; EERE is not obligated to reimburse costs: (1) in the absence of appropriations; (2) if an award is not made; or (3) if an award is made for a lesser amount than the Selectee anticipated.

i. Pre-Award Costs Related to National Environmental Policy Act (NEPA) Requirements
EERE's decision whether and how to distribute federal funds under this FOA is subject to NEPA. Applicants should carefully consider and should seek legal counsel or other expert advice before taking any action related to the proposed project that would have an adverse effect on the environment or limit the choice of reasonable alternatives prior to EERE completing the NEPA review process.

EERE does not guarantee or assume any obligation to reimburse costs where the Prime Recipient incurred the costs prior to receiving written authorization from the Contracting Officer. If the Applicant elects to undertake activities that may have an adverse effect on the environment or limit the choice of reasonable alternatives prior to receiving such written authorization from the Contracting Officer, the Applicant is doing so at risk of not receiving Federal funding and such costs may not be recognized as allowable cost share. Likewise, if a project is selected for negotiation of award, and the Prime Recipient elects to undertake activities that are not authorized for Federal funding by the Contracting Officer in advance of EERE completing a NEPA review, the Prime Recipient is doing so at risk of not receiving Federal Funding and such costs may not be recognized as allowable cost share. Nothing contained in the pre-award cost reimbursement regulations or any pre-award costs approval letter from the Contracting Officer override these NEPA requirements to obtain the written authorization from the Contracting Officer prior to taking any action that may have an adverse effect on the environment or limit the choice of reasonable alternatives.

For Applications selected for funding by USDA-NIFA:

Pursuant to section 1462(a) of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3310(a)), **indirect costs are limited to the *lesser* of the total amount of project indirect costs calculated with the institution or organization's Federally negotiated indirect cost rate, including FFRDC and other Federal Agencies, or 22 percent** of requested Federal funds. Costs that are a part of an institution's indirect cost pool may not be reclassified as direct costs for the purpose of making them allowable. Unrecoverable indirect costs above the 22% cannot be used for cost share.

USDA-NIFA has determined that grant funds awarded under this authority may not be used for the renovation or refurbishment of research, education, or extension space; the purchase

or installation of fixed equipment in such space; or the planning, repair, rehabilitation, acquisition, or construction of buildings or facilities.

Pre-award Costs. Recipients may charge pre-award costs that were incurred within the ninety (90) calendar day period immediately preceding the effective date of the award, if the costs are allowable in accordance with the applicable Federal cost principles referenced in Section VI. B.2. of this announcement. Recipients must obtain the prior approval of the USDA-NIFA Authorized Departmental Officer (ADO) for any pre-award.

Pre-award costs are incurred at the applicant's risk. USDA-NIFA is under no obligation to reimburse such costs if for any reason the applicant does not receive an award or if the award is made for a lesser amount than the applicant expected.

I. Submission and Registration Requirements

1. Where to Submit

Concept Papers must be submitted to USDA NIFA at BRDI@nifa.usda.gov to be considered for review under this announcement.

NIFA will only accept Concept Papers in the portable document format (PDF). Attach the PDF paper to an e-mail for submission. In the email subject line write: Concept Paper BRDI_Applicant's last name. An acknowledgement receipt will be sent to the applicant within five business days.

2. Registration Process Requirements

To submit a Concept Paper in response to this RFA, Applicants must be registered with Grants.gov. Register in Grants.gov at http://www.grants.gov/.

The Applicant User Guide is at
http://www.grants.gov/documents/19/18243/GrantsgovApplicantUserGuide.pdf/ae502877-0fcc-4214-811a-9565b21e7b14
Allow at least 21 days to complete all registration requirements.

SECTION V –CONCEPT PAPER REVIEW INFORMATION

A. Criteria

1. Initial Review Criteria

Concept Papers are deemed compliant in the initial review if:

- The Applicant successfully uploaded all required documents by the deadline stated in this FOA.

2. Concept Paper Technical Review Criteria

Concept Papers that pass the initial review will be subjected to a technical review in accordance. **It is very important that those documents that will be used during the Concept Paper Review Process do not contain any Personally Identifiable Information as described in Appendix B.**

Concept Papers will be evaluated against the review criteria shown below.

Criterion 1: Technical Relevance and Merit (Weight: 40%)
Specific considerations are:

- Relevance and alignment of the project objectives to the Technical Area goals;
- Novelty, innovation, uniqueness, and originality of the project objective or the extent to which the project objectives move the industry forward. Applications should articulate how this project will advance the industry against the relevant baseline that the system, technology, or product is building upon or competing against.

Criterion 2: Technical Approach/Work Plan (Weight: 40%)
Specific considerations are:

- Clarity, reasonableness, and feasibility of the technical approach to achieve project goals;
- Viability, adequacy, and relevance of the proposed task structure
- Likelihood that a Research and Development project will be ready to be demonstrated or scaled-up upon completion;
- Likelihood that a Demonstration project will generate adequate performance data and business planning to secure additional funding or financing; and
- Adequacy and viability of the tools and management capabilities to mitigate project uncertainty and risks.

Criterion 3: Technical, Management, and Facility Capabilities (Weight: 20%)
Specific considerations are:

- Credentials, capabilities, experience (technical and managerial), availability, and performance record of key personnel;
- Type, quality, availability, and appropriateness of facilities, equipment, and supplies; and
- Extent the roles and responsibilities of key personnel are clearly defined.

3. Other Selection Factors

No other selection factors will be applied to Concept Papers.

4. Notification of Encouragement or Discouragement

DOE-EERE and USDA-NIFA will make an independent assessment of each Concept Paper based on the criteria in Section V.A.1 of the FOA and will encourage a subset of Applicants to submit Full Applications. Other Applicants will be discouraged from submitting a Full Application. An applicant who receives a "discouraged" notification may still submit a Full Application; however, by discouraging the submission of a Full Application, EERE and NIFA intends to convey its lack of programmatic interest in the proposed project in an effort to save the Applicant the time and expense of preparing an application that is unlikely to be selected for award negotiations.

In order to provide Applicants with feedback on their Concept Papers, general comments provided from reviewers on an Applicant's Concept Paper in the encourage/discourage notification will be sent to the Applicants at the close of that phase.

B. Anticipated Notice of Encouragement or Discouragement

USDA-NIFA and DOE-EERE anticipate notifying Applicants whether they have been encouraged or discouraged to submit Full Applications by early May 2015.

SECTION VI –FULL APPLICATION REVIEW INFORMATION

Full Application Merit Review Criteria
The following criteria will be used to evaluate Full Applications. Weight percentages for each area are as follows:

Criterion 1: Technical Relevance and Merit (Weight: 35 percent)
Specific considerations are:

- Relevance and alignment of the project objectives to the Technical Area goal; and
- Novelty, innovation, uniqueness, and originality of the project objective or the extent to which the project objectives move the industry forward. Applications should articulate how this project will advance the industry against the relevant baseline that the system, technology, or product is building upon or competing against.

Criterion 2: Technical Approach/Work Plan (Weight: 25 percent)
Specific considerations are:

- Clarity, reasonableness, and feasibility of the technical approach to achieve project goals;
- Viability, adequacy, and relevance of the proposed task structure, milestones, schedule, and performance measures and deliverables;
- Likelihood that a Research and Development project will be ready to be demonstrated or scaled-up upon completion;
- Likelihood that a Demonstration project will generate adequate performance data and business planning to secure additional funding or financing;
- Adequacy and viability of the tools and management capabilities to mitigate project uncertainty and risks; and
- Status of environmental permitting.

Criterion 3: Rural Economic Development & Sustainability (Weight: 25 percent)
Extent to which the proposed project demonstrates the following criteria based on preliminary data specific to this proposal:

- Promotion of enterprise and community self-sufficiency, rural economic development, job creation; inclusion of community stakeholders;
- Quantification of life-cycle economic and environmental benefits, e.g. impacts and benefits to public safety, the environment, and land sustainability in rural areas. In particular, collection of data that can be used to gauge improvements in key sustainability areas, specifically soil quality, water quality/water use, generation/reduction of hazardous/toxic substances, air emissions; wastewater discharges; reductions in use of pesticides, herbicides and fertilizer, and other data necessary to quantify the sustainability of the project. Quantification of projected energy efficiency and/or petroleum displacement benefits and include any assumptions used;
- Demonstrate the integration of system evaluation methods to optimize the economic, environmental, and social performance of the system; and
- For advanced hydrocarbon-based biofuels, compatibility of the proposed technology or product with existing infrastructure and end use applications.

Criterion 4: Technical, Management, and Facility Capabilities (Weight: 15 percent)
Specific considerations for this criterion are:

- Credentials, capabilities, experience (technical and managerial), availability and performance record of key personnel;
- Type, quality, availability, and appropriateness of facilities, equipment, and supplies; and
- Extent the roles and responsibilities of key personnel are clearly defined.

Other Selection Factors
In accordance with guidelines provided by the BRDI Board, established in section 9008(c) of FSRIA, as amended (7 U.S.C. 8108 (c)), for full applications, DOE and USDA-NIFA will conduct independent program policy factor reviews. DOE's program policy factor review will be conducted by DOE Headquarters (HQ) for consideration by the DOE Selection Official.

For applications selected for award by DOE, additional program policy factors will include:

- Balance of the overall portfolio of DOE investments in biomass research and development and relevance to the specific DOE barriers and pathways as outlined in the Program Multi-year Program Plan:(http://www.energy.gov/eere/bioenergy/downloads/bioenergy-technologies-office-multi-year-program-plan-july-2014-update
- Projects that best leverage DOE resources.

For applications selected for award by USDA-NIFA, additional program policy factors will include:

- Encourage the integration of disciplines and application of the best technical resources;
- Diversity of funded feedstocks and conversion technologies;
- Geographic diversity of research and/or development projects, as well as demonstration projects; and
- Balance among the value chain components (e.g., feedstock development and growth; feedstock harvesting and preparation; feedstock logistics and transportation; feedstock storage and handling; biomass pre-processing (as appropriate); biomass conversion; production of biofuels/bioenergy/biobased products; product logistics and handling; product delivery and distribution); and
- Involve a consortium of experts from multiple institutions

Center of Excellence status (applies to NIFA only)

- All eligible applicants will be competitively peer reviewed (as described in Section V, A. and B. of this FOA), and ranked in accordance with the evaluation criteria. Those that rank highly meritorious and requested to be considered as a center of excellence will be further evaluated by the peer panel to determine whether they have met the standards to be centers of excellence (Section III C. and Section IV D.). In instances where they are found to be equally meritorious with the application of a non-center of excellence, based on peer review, selection for funding will be weighed in favor of applicants meeting the center of excellence criteria. NIFA will effectively use the center of excellence prioritization as a "tie breaker". Applicants that rank highly meritorious but who did not request consideration as a center of excellence or who are not deemed to have met the centers of excellence standards may still receive funding.
- In addition, the applicant's Notice of Award will reflect that, for the particular grant program, the applicant meets all of the requirements of a center of excellence. Entities recognized as centers of excellence will maintain that distinction for the duration of their period of performance or as identified in the terms and conditions of that award.

SECTION VII - AWARD ADMINISTRATION INFORMATION

A. Notice of Selection

1. Notice of Selection

Selected Applicants Notification

DOE-EERE and USDA-NIFA will notify Applicants selected for an award. This notice of selection is not an authorization to begin performance. (See Section IV.H with respect to the allowability of pre-award costs.)

Non-selected Notification
Organizations whose applications have not been selected will be advised as promptly as possible. This notice will explain why the application was not selected.

2. Notice of Award

Notice of Award – DOE
A Financial Assistance Award or Assistance Agreement issued by the Contracting Officer is the authorizing award document. It normally includes, either as an attachment or by reference:
(1) Special Terms and Conditions;
(2) Applicable program regulations, if any;
(3) Application as approved by DOE;
(4) DOE assistance regulations at 10 CFR part 600;
(5) National Policy Assurances To Be Incorporated As Award Terms;
(6) Budget Summary; and
(7) Federal Assistance Reporting Checklist, which identifies the reporting requirements.

For grants and cooperative agreements made to universities, non-profits and other entities subject to OMB Circular A-110, the Award also includes the Research Terms and Conditions and the DOE Agency Specific Requirements located at: http://www.nsf.gov/bfa/dias/policy/rtc/index.jsp.

Notice of Award - USDA
The award document will provide pertinent instructions and information including, at a minimum, the following:
(1) Legal name and address of performing organization or institution to whom the Director has issued an award under the terms of this request for applications;
(2) Title of project;
(3) Name(s) and institution(s) of Project Directors chosen to direct and control approved activities;
(4) Identifying award number assigned by the Department;
(5) Project period, specifying the amount of time the Department intends to support the project without requiring recompetition for funds;
(6) Total amount of Departmental financial assistance approved by the Director during the project period;
(7) Legal authority(ies) under which the award is issued;
(8) Appropriate Catalog of Federal Domestic Assistance (CFDA) number;
(9) Applicable award terms and conditions (see http://www.nifa.usda.gov/business/awards/awardterms.html to view USDA-NIFA award terms and conditions);
(10) Approved budget plan for categorizing allocable project funds to accomplish the stated purpose of the award; and

(11) Other information or provisions deemed necessary by USDA-NIFA to carry out its respective awarding activities or to accomplish the purpose of a particular award.

B. Administrative and National Policy Requirements

DOE Administrative Requirements
The administrative requirements for DOE grants and cooperative agreements are contained in 10 CFR Part 600, or for awards issued on or after 12/26/2014, the Financial Assistance regulations contained in 2 CFR Part 200, which will be codified by Chapter IX of 2 CFR (DOE's new financial assistance regulations).

DUNS and SAM Requirements

Additional administrative requirements for DOE grants and cooperative agreements are contained in 2 CFR, Part 25 (See: http://ecfr.gpoaccess.gov). Subawardees at all tiers must obtain DUNS numbers and provide the DUNS to the prime awardee before the subaward can be issued.

i. DUNS Number

Obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number (including the plus 4 extension, if applicable) at http://fedgov.dnb.com/webform.

ii. System for Award Management

Register with the System for Award Management (SAM) at https://www.sam.gov. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in SAM registration. Please update your SAM registration annually.

Subaward and Executive Reporting

Additional administrative requirements necessary for DOE grants and cooperative agreements to comply with the Federal Funding and Transparency Act of 2006 (FFATA) are contained in 2 CFR, Part 170. (See: http://ecfr.gpoaccess.gov). Prime awardees must register with the new FSRS database and report the required data on their first tier subawardees. Prime awardees must report the executive compensation for their own executives as part of their registration profile in SAM.

Special Terms and Conditions and National Policy Requirements
The DOE Special Terms and Conditions for Use in Most Grants and Cooperative Agreements are located at:

http://energy.gov/management/downloads/special-terms-and-conditions-use-most-grants-and-cooperative-agreements

The National Policy Assurances To Be Incorporated As Award Terms are located at

http://energy.gov/management/downloads/national-policy-assurances-be-incorporated-

award-terms

By submitting an application in response to this RFA the Applicant certifies that:

(1) It is **not** a corporation that has been convicted (or had an officer or agent of such corporation acting on behalf of the corporation convicted) of a felony criminal violation under any Federal law within the preceding 24 months,

(2) It is **not** a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability,

(3) If the Applicant's financial assistance application is chosen for award and the award is in excess of $1,000,000, the applicant will, by the end of the fiscal year, upgrade the efficiency of their facilities by replacing any lighting that does not meet or exceed the energy efficiency standard for incandescent light bulbs set forth in Section 325 of the Energy Policy and Conservation Act (42 U.S.C. 6295).

Intellectual Property Provisions

The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at:
http://energy.gov/gc/standard-intellectual-property-ip-provisions-financial-assistance-awards

Reporting

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to the award agreement.

U.S. Manufacturing Plan

DOE-EERE requires subject inventions (i.e., inventions conceived or first actually reduced to practice under EERE awards) to be substantially manufactured in the United States by Project Teams and their licensees, as described below. The Applicant may request a modification or waiver of the U.S. Manufacturing Requirement. These pages do not count as part of the page limit for the full applications. Instructions for each entity type are given below.

i. Domestic Small Businesses, Educational Institutions and Nonprofits

Domestic Small businesses (including Small Business concerns), domestic educational institutions, and nonprofits that are Recipients or Subrecipients under EERE funding agreements must require their exclusive licensees to substantially manufacture the following products in the United States for any use or sale in the United States: (1) articles embodying subject inventions, and (2) articles produced

through the use of subject inventions. This requirement does not apply to articles that are manufactured for use or sale overseas.

Domestic small businesses, domestic educational institutions and nonprofits must require their assignees to apply the same U.S. Manufacturing requirements to their exclusive licensees.

These U.S. Manufacturing requirements do not apply to nonexclusive licensees.

ii. Large Businesses, Foreign Entities, and State and Local Government Entities

Large businesses and foreign entities that are Recipients or Subrecipients under EERE funding agreements that take title to subject inventions through a patent waiver are required to substantially manufacture the following products in the United States: (1) products embodying subject inventions, and (2) products produced through the use of subject invention(s). This requirement applies to products that are manufactured for use or sale in the United States or overseas.

Large businesses and foreign entities must apply the same U.S. Manufacturing requirements to their assignees, licensees, and entities acquiring a controlling interest in the large business or foreign entity. Large businesses and foreign entities must require their assignees and entities acquiring a controlling interest in the large business or foreign entity to apply the same U.S. Manufacturing requirements to their licensees.

iii. FFRDCs

DOE FFRDCs are subject to the U.S. Manufacturing requirements set forth in their Management and Operating Contracts. All other FFRDCs are subject to the U.S. Manufacturing requirements as set forth above, based on their size and for-profit status.

Data Management Plan

Applicants whose Full Applications are selected for award negotiations by DOE-EERE will be required to submit a Data Management Plan during the award negotiations phase. The Data Management Plan is a document that outlines the proposed plan for data sharing or preservation. Submission of this plan is required, and failure to submit the plan may result in the termination of award negotiations.

1. USDA-NIFA Administrative Requirements

Several federal statutes and regulations apply to grant applications considered for review and to project grants awarded under this program. These include, but are not limited to the ones listed below.

2 CFR Part 200 – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards.

2 CFR Part 400 —USDA implementation of 2 CFR Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards.

2 CFR Part 415 – USDA General Program Administrative Regulations.

7 CFR Part 1, subpart A—USDA implementation of the Freedom of Information Act.

7 CFR Part 3—USDA implementation of OMB Circular No. A-129 regarding debt collection.

7 CFR Part 15, subpart A—USDA implementation of Title VI of the Civil Rights Act of 1964, as amended.

2 CFR Part 180 and Part 417--OMB Guidelines to Agencies on Government-Wide Debarment and Suspension (Nonprocurement) and USDA Nonprocurement Debarment and Suspension.

7 CFR Part 331 and 9 CFR Part 121—USDA implementation of the Agricultural Bioterrorism Protection Act of 2002.

2 CFR Part 416—USDA General Program Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.

2 CFR Part 418—USDA implementation of Restrictions on Lobbying. Imposes prohibitions and requirements for disclosure and certification related to lobbying on recipients of federal contracts, grants, cooperative agreements, and loans.

2 CFR Part 421—USDA Implementation of Governmentwide Requirements for Drug-Free Workplace (Grants).

2 CFR Part 422—Research Institutions Conducting USDA-Funded Extramural Research; Research Misconduct.

7 CFR Part 3407—USDA procedures to implement the National Environmental Policy Act of 1969, as amended.

7 CFR 3430—Competitive and Noncompetitive Non-formula Financial Assistance Programs--General Award Administrative Provisions.

29 U.S.C. 794 (section 504, Rehabilitation Act of 1973) and 7 CFR Part 15b (USDA implementation of statute) —prohibiting discrimination based upon physical or mental handicap in federally-assisted programs.

35 U.S.C. 200 et seq. —Bayh Dole Act, controlling allocation of rights to inventions made by employees of small business firms and domestic nonprofit organizations, including universities, in federally-assisted programs (implementing regulations are contained in 37 CFR Part 401).

44 U.S.C. 3541 et seq. (Pub. L. 107-347) - Federal Information System Security Management Act of 2002 (FISMA), to improve computer and network security within the Federal Government. Applies to awardees if it will collect, store, process, transmit, or use information on behalf of NIFA.

Grantees are to use REEport, NIFA's electronic, web-based inventory system to submit an initial project initiation which documents expected products and outcomes of the project. Additionally, annual progress report documenting realized project outcomes must be submitted to the electronic system. The web-based system facilitates an electronic workflow between grantees and NIFA for project accomplishments to be easily searchable and allows for public access to information on Federally-funded projects. The details of these reporting requirements, including those specific to the annual and final technical reports, are included in the award terms and conditions.

SECTION VII - QUESTIONS/AGENCY CONTACTS

A. Questions

Questions regarding the content of the announcement must be submitted through email to the USDA National Program Leader. These questions and answers will be posted at: http://www.csrees.usda.gov/fo/biomassresearchanddevelopmentinitiative.cfm. NIFA will try to respond to a question within 3 business days, unless a similar question and answer have already been posted on the website.

Questions and comments concerning this RFA shall be submitted not later than three (3) calendar days prior to the application due date. Questions submitted after that date may not allow the Government sufficient time to respond.

Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov. The Grants.gov Helpdesk is available 7:00 a.m. to 9:00 p.m. Eastern Time. DOE and USDA cannot answer these questions.

For any questions related to the preparation of an application, review the NIFA Grants.gov Application Guide and the applicable RFA. If assistance is still needed for preparing application forms content, contact:

- Email: electronic@nifa.usda.gov
- Phone: 202-401-5048
- Business hours: Monday through Friday, 7 a.m. – 5 p.m. ET, excluding federal holidays.

SECTION VIII - OTHER INFORMATION

A. Amendments

Notices of any amendments to this announcement will be posted on Grants.gov. When you download the application at Grants.gov, you can register to receive notifications of changes through Grants.gov.

B. Government Right to Reject or Negotiate

DOE-EERE and USDA-NIFA reserve the right, without qualification, to reject any or all applications received in response to this announcement and to select any application, in whole or in part, as a basis for negotiation and/or award.

C. Commitment of Public Funds

For awards made by DOE-EERE, the Contracting Officer is the only individual who can make awards or commit the Government to the expenditure of public funds. A commitment by other than the Contracting Officer, either explicit or implied, is invalid.

For awards made by USDA-NIFA, the Authorized Departmental Officer (ADO) is the only individual who can make awards or commit the Government to the expenditure of public funds. A commitment by other than the ADO, either explicit or implied, is invalid.

D. Proprietary Application Information

DOE will use data and other information contained in applications strictly for evaluation purposes. Applicants should not include confidential, proprietary, or privileged information in their applications unless such information is necessary to convey an understanding of the proposed project.

Applications containing confidential, proprietary, or privileged information must be marked as described below. Failure to comply with these marking requirements may result in the disclosure of the unmarked information under the Freedom of Information Act or otherwise. The U.S. Government is not liable for the disclosure or use of unmarked information, and may use or disclose such information for any purpose.

The cover sheet of the application must be marked as follows and identify the specific pages containing confidential, proprietary, or privileged information:

Notice of Restriction on Disclosure and Use of Data:
Pages *[list applicable pages]* of this document may contain confidential, proprietary, or privileged information that is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes or in accordance with a financial assistance or loan agreement between the submitter and the Government. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source.

The header and footer of every page that contains confidential, proprietary, or privileged information must be marked as follows: "Contains Confidential, Proprietary, or Privileged Information Exempt from Public Disclosure."

In addition, every line and paragraph containing proprietary, privileged, or trade secret information must be clearly marked with double brackets or highlighting.

E. Evaluation and Administration by Non-Federal Personnel

In conducting the merit review evaluation, the Government may seek the advice of qualified non-Federal personnel as reviewers. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The applicant, by submitting its application, consents to the use of non-Federal reviewers/administrators. Non-Federal reviewers must sign conflict of interest and non-disclosure agreements prior to reviewing an application. Non-Federal personnel conducting administrative activities must sign a non-disclosure agreement.

F. Intellectual Property Developed under this Program

Patent Rights. The government will have certain statutory rights in an invention that is conceived or first actually reduced to practice under a DOE-EERE or USDA-NIFA award. Specific regulations of each agency will be identified in the award documents for each project.

For DOE-EERE:

Title to subject inventions:

Ownership of subject inventions is governed pursuant to the authorities listed below.

- Domestic Small Businesses, Educational Institutions, and Nonprofits: Under the Bayh-Dole Act (35 U.S.C. § 200 et seq.), domestic small businesses, educational institutions, and nonprofits may elect to retain title to their subject inventions.

- All other parties: The Federal Non-Nuclear Energy Act of 1974, 42. U.S.C. 5908, provides that the Government obtains title to new inventions unless a waiver is granted (see below).

- **Class Patent Waiver**:

  DOE has issued a class waiver that applies to this FOA. Under this class waiver, domestic large businesses may elect title to their subject inventions similar to the right provided to the domestic small businesses, educational institutions, and nonprofits by law. In order to avail itself of the class waiver, a domestic large business must agree that any products embodying or produced through the use of a subject invention first created

or reduced to practice under this program will be substantially manufactured in the United States, unless DOE agrees that the commitments proposed in the U.S. Manufacturing Plan are sufficient.

- Advance and Identified Waivers: Applicants may request a patent waiver that will cover subject inventions that may be invented under the award, in advance of or within 30 days after the effective date of the award. Even if an advance waiver is not requested or the request is denied, the recipient will have a continuing right under the award to request a waiver for identified inventions, i.e., individual subject inventions that are disclosed to EERE within the timeframes set forth in the award's intellectual property terms and conditions. Any patent waiver that may be granted is subject to certain terms and conditions in 10 CFR 784.

- Determination of Exceptional Circumstances (DEC): Each applicant is required to submit a U.S. Manufacturing Plan as part of its application. If selected, the U.S. Manufacturing Plan shall be incorporated into the award terms and conditions. DOE has determined that exceptional circumstances exist that warrants the modification of the standard patent rights clause for small businesses and non-profit awardees under Bayh-Dole to the extent necessary to implement and enforce the U.S. Manufacturing Plan. For example, the commitments and enforcement of a U.S. Manufacturing Plan may be tied to subject inventions. Any Bayh-Dole entity (domestic small business or nonprofit organization) affected by this DEC has the right to appeal it.

Rights in Technical Data. Normally, the government has unlimited rights in technical data created under a DOE agreement. Delivery or third party licensing of proprietary software or data developed solely at private expense will not normally be required except as specifically negotiated in a particular agreement to satisfy DOE's own needs or to insure the commercialization of technology developed under a DOE agreement.

Special Protected Data Statutes. This DOE program is covered by a special protected data statute. The provisions of the statute provide for the protection from public disclosure, for a period of up to 5 years from the date of its development, of first-produced data that would be trade secret, or commercial or financial information that is privileged or confidential, if the information had been obtained from a non-Federal party. Generally, the provision entitled, Rights in Data – Programs Covered Under Special Protected Data Statutes, (10 CFR 600 Appendix A to Subpart D), will apply to a DOE award made under this announcement. This provision will identify data or categories of data first produced in the performance of the award that will be made available to the public, notwithstanding the statutory authority to withhold data from public dissemination, and may also identify data that will be recognized by the parties as protected data. For National Laboratories and FFRDCs, the data rights clause in Applicant's Management and Operating (M&O) Contract will apply.

Intellectual Property Management Plan

Within 30 days of selection, Applicants must submit an executed IP Management Plan between the members of the consortia or team.

The award will set forth the treatment of and obligations related to intellectual property rights between EERE and the individual members. The IP Management Plan should describe how the members will handle intellectual property rights and issues between themselves while ensuring compliance with Federal IP laws, regulations, and policies (see Sections VIII.L-VIII.O of this FOA for more details on applicable Federal IP laws and regulations).

The following is a non-exhaustive list of examples of items that the IP Management Plan may cover:

- The treatment of confidential information between members (e.g., the use of non-disclosure agreements);
- The treatment of background IP (e.g., any requirements for identifying it or making it available);
- The treatment of inventions made under the project (e.g., any requirements for disclosing to the other members, filing patent applications, paying for patent prosecution, and cross-licensing or other licensing arrangements between the members);
- The treatment of data produced, including software, under the project (e.g., any publication process or other dissemination strategies, copyrighting strategy or arrangement between members);
- Any technology transfer and commercialization requirements or arrangements between the members;
- The treatment of any intellectual property issues that may arise due to a change in membership of the consortia or team; and
- The handling of disputes related to intellectual property between the members.

Subject Invention Utilization Reporting

To ensure that Prime Recipients and Subrecipients holding title to subject inventions are taking the appropriate steps to commercialize subject inventions, EERE requires that each Recipient holding title to a subject invention submit annual reports for 10 years from the date the subject invention was disclosed to EERE on the utilization of the subject invention and efforts made by Recipient or their licensees or assignees to stimulate such utilization. The reports must include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Prime Recipient, and such other data and information as EERE may specify.

For USDA-NIFA: 37 CFR Part 401—Rights to Inventions Made by Nonprofit Organizations and Small Business Firms under Government Grants, Contracts, and Co-

operative Agreements and 2 CFR 200.315 - Intangible Property section of Uniform Administrative Requirements For Grants And Agreements With Institutions Of Higher Education, Hospitals, And Other Nonprofit Organizations (which pertains to copyrights, patents, and inventions) provide guidance under this section. These regulations apply to all USDA-NIFA recipients (excluding Federal agencies and National Laboratories). For more information, please refer to the following links:
http://www.NIFA.usda.gov/business/awards/intellprop.html
http://www.NIFA.usda.gov/business/pdfs/patents_copyrights.pdf

H. Notice Regarding Eligible/Ineligible Activities

Eligible activities under this program include those which describe and promote the understanding of scientific and technical aspects of specific energy technologies, but not those which encourage or support political activities such as the collection and dissemination of information related to potential, planned or pending legislation.

I. Notice of Right to Conduct a Review of Financial Capability

DOE-EERE and USDA-NIFA reserve the right to conduct an independent third party review of financial capability for Applicants that are selected for negotiation of award (including personal credit information of principal(s) of a small business if there is insufficient information to determine financial capability of the organization).

J. Notice of Potential Disclosure under Freedom of Information Act

Applicants should be advised that identifying information regarding all Applicants, including applicant names and/or points of contact, may be subject to public disclosure under the Freedom of Information Act, whether or not such Applicants are selected for negotiation of award.

K. Stakeholder Input

The National Institute of Food and Agriculture (NIFA) seeks your comments about this FOA. We will consider the comments when we develop the next FOA for the program, if applicable, and we'll use them to meet the requirements of Section 103(c)(2) of the Agricultural Research, Extension, and Education Reform Act of 1998 (7 U.S.C. 7613(c)(2)). Submit written stakeholder comments by the deadline set forth in the DATES portion of this Notice to: Policy and Oversight Division; Office of Grants and Financial Management; National Institute of Food and Agriculture; USDA; STOP 2299; 1400 Independence Avenue, SW; Washington, DC 20250-2299; or via e-mail to: Policy@nifa.usda.gov. (This e-mail address is intended only for receiving comments regarding this FOA and not requesting information or forms.) In your comments, please state that you are responding to the Biomass Research and Development Initiative program.

As part of the National Institute of Food and Agriculture's (NIFA) strategy to successfully implement the 2014 Farm Bill, NIFA is soliciting stakeholder input on NIFA's centers of excellence strategy. Between January and March 2015 NIFA will hold webinars to collect

stakeholder input about the centers of excellence strategy in fiscal year (FY) 2015. Upcoming dates for the informational outreach webinars are February 26, 2015 and March 5, 2015, they will also be announced on the NIFA website. The full transcript of the webinars will also be available on the NIFA website. NIFA will also request to receive input through an advertised call-in number, fax and email. All comments and suggestions for the FY 2015 centers of excellence should be received by March 30, 2015.

REFERENCE MATERIAL

Appendix A – Definitions

"**Advanced Biofuel**" means fuel derived from renewable biomass other than corn kernel starch, including:

(i) biofuel derived from cellulose, hemicellulose, or lignin;
(ii) biofuel derived from sugar and starch (other than ethanol derived from corn kernel starch);
(iii) biofuel derived from waste material, including crop residue, other vegetative waste material, animal waste (including manure), food waste, food processing waste, and yard waste;
(iv) diesel-equivalent fuel derived from renewable biomass, including algae oils, oil seed crops, re-claimed vegetable oils and animal fat;
(v) biogas (including landfill gas and sewage waste treatment gas) produced through the conversion of organic matter from renewable biomass;
(vi) butanol or other alcohols produced through the conversion of organic matter from renewable biomass; and
(vii) other fuel derived from cellulosic biomass.

"**Amendment**" means a revision to a Funding Opportunity Announcement.

"**Applicant**" means the legal entity or individual signing the Application. This entity or individual may be one organization or a single entity representing a group of organizations (such as a Consortium) that has chosen to submit a single Application in response to a Funding Opportunity Announcement.

"**Application**" means the documentation submitted in response to a Funding Opportunity Announcement.

"**Authorized Departmental Officer or ADO**" means the Secretary of Agriculture or any employee of the Department with delegated authority to issue or modify award instruments on behalf of the Secretary.

"**Authorized Organization Representative (AOR)**" is the person with assigned privileges who is authorized to submit grant applications through Grants.gov on behalf of an organization. The privileges are assigned by the organization's E-Business Point of Contact designated in the CCR.

"**Award**" means the written documentation executed by a DOE Contracting Officer, after an Applicant is selected, which contains the negotiated terms and conditions for providing Financial Assistance to the Applicant. A Financial Assistance Award may be either a Grant or a Cooperative Agreement.

"**Biofuel**" means a fuel derived from renewable biomass.

"**Biobased Product**" means:

(A) an industrial product (including chemicals, materials, and polymers) produced from biomass; or

(B) a commercial or industrial product (including animal feed and electric power) derived in connection with the conversion of biomass to fuel.

"**Bioenergy**" means power generated in the form of electricity or heat using biomass as a feedstock.

"**Biomass Conversion Facility**" means a facility that converts or proposes to convert renewable biomass into:

(A) heat;

(B) power;

(C) biobased products; or

(D) advanced biofuels.

"**Biorefinery**" means a facility (including equipment and processes) that:

(A) converts renewable biomass into biofuels and biobased products; and

(B) may produce electricity.

"**Budget**" means the cost expenditure plan submitted in the Application, including both the federal contribution and the Applicant Cost Share.

"**Cellulosic Biofuel**" means renewable fuel derived from any cellulose, hemicellulose, or lignin that is derived from renewable biomass and that has lifecycle greenhouse gas emissions, as determined by the Administrator of the Environmental Protection Agency (EPA), that are at least 60 percent less than the baseline lifecycle greenhouse gas emissions.

"**Commercial**" means, for the purposes of this program, a project that is commercially viable, but the technology is implemented in a new or novel way.

"**Consortium (plural consortia)**" means the group of organizations or individuals that have chosen to submit a single Application in response to a Funding Opportunity Announcement.

"**Contracting Officer**" means the federal official authorized to execute Awards on behalf of the federal government and who is responsible for the business management and non-Technology Office aspects of the Financial Assistance process.

"**Cooperative Agreement**" means a Financial Assistance instrument used by EERE to transfer money or property when the principal purpose of the transaction is to accomplish a public purpose of support or stimulation authorized by Federal statute, and Substantial Involvement (see definition below) is anticipated between EERE and the Applicant during the performance of the contemplated activity. Refer to 10 CFR 600.5 for additional information regarding cooperative agreements.

"**Cost Sharing**" means that portion of the project or program's costs not borne by the Federal Government. The percentage of Applicant Cost Share is to be applied to the Total Project Cost

(i.e., the sum of Applicant plus federal Cost Shares) rather than to the federal contribution alone. Cost sharing information can be found in the Code of Federal Regulations at 2 CFR part 200, 10 CFR 600.123 (non-profit and university), 600.224 (State and Local Governments), and 600.313 (for profit entities).

"**Data Universal Numbering System (DUNS) Number**" is a unique nine-character identification number issued by Dun and Bradstreet (D&B). Organizations must have a DUNS number prior to registering in the SAM. Call 1-866-705-5711 to receive one free of charge.

"**Demonstration**" means demonstration of technology in a pilot plant or semi-works scale facility, including a plant or facility located on a farm.

"**E-Find**" is a Grants.gov webpage where you can search for Federal Funding Opportunities in FedGrants. It can be found at www.grants.gov/web/grants/search-grants.html.

"**Financial Assistance**" means the transfer of money or property to an Applicant or Participant to accomplish a public purpose of support authorized by Federal statute through Grants or Cooperative Agreements and sub-awards. For DOE, it does not include direct loans, loan guarantees, price guarantees, purchase agreements, Cooperative Research and Development Agreements (CRADAs), or any other type of financial incentive instrument.

"**FedConnect**" is where federal agencies make awards via the web. It can be found at https://www.fedconnect.net/FedConnect/.

"**Federally Funded Research and Development Center (FFRDC)**" means a government-sponsored operation that exists for the purpose of carrying out various functions related to both basic and applied research and development on behalf of the Government. Typically, most or all of the facilities utilized in an FFRDC are owned by the Government, but the operations are not always managed by the Government; an FFRDC may be managed by a University or consortium of Universities, other not-for-profit or nonprofit organization, or a for-profit organization, with the Government performing an oversight function.

"**Funding Opportunity Announcement (FOA)**" is a publicly available document by which a Federal agency makes known its intentions to award discretionary grants or cooperative agreements, usually as a result of competition for funds. FOAs may be known as FOAs, notices of funding availability, solicitations, or other names depending on the agency and type of program. See 10 CFR 600.8 for more information.

"**Grant**" means a Financial Assistance instrument to transfer money or property when the principal purpose of the transaction is to accomplish a public purpose of support or stimulation authorized by Federal statute, and no Substantial Involvement is anticipated between the federal government and the Applicant during the performance of the contemplated activity.

"**Grants.gov**" is the "storefront" web portal which allows organizations to electronically find grant opportunities from all Federal grant-making agencies. Grants.gov is THE single access

point for over 900 grant programs offered by the 26 Federal grant-making agencies. http://www.grants.gov

"**Indian Tribe**" means any Indian tribe, band, nation, or other organized group or community, including Alaska Native village or regional or village corporation, as defined in or established pursuant to the Alaska Native Claims Settlement Act (85 Stat. 688)[43 U.S.C. § 1601 et seq.], which are recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

"**Institutions of higher education**" has the meaning given the term in section 102 of the Higher Education Act of 1965 (20 U.S.C. 1002(a)).

"**Integration of technical areas**" means a continuum or linking of activities or objectives that are within the scope of feedstocks development, biofuels and biobased products development, and biofuels development analysis as defined in the Project Description section of this document.

"**Intermediate Ingredient or Feedstock**" means a material or compound made in whole or in significant part from biological products, including renewable agricultural materials (including plant, animal, and marine materials) or forestry materials, that are subsequently used to make a more complex compound or product.

"**Key Personnel**" mean the individuals who will have significant roles in planning and implementing the proposed Project on the part of the Applicant and Participants, including FFRDCs.

"**Life cycle assessment**" means the comprehensive examination of a product's environmental and economic aspects and potential impacts throughout its lifetime, including raw material extraction, transportation, and manufacturing, use, and disposal.

"**Life cycle cost**" means the amortized annual cost of a product, including capital costs, installation costs, operating costs, maintenance costs, and disposal costs discounted over the lifetime of the product.

"**Modification**" means a revision to a FOA.

"**Participant**" for purposes of this Funding Opportunity Announcement only, means any entity, except the Applicant substantially involved in a Consortium, or other business arrangement (including all parties to the Application at any tier), responding to the Funding Opportunity Announcement.

"**Pilot Plant**" means an integrated chemical processing system that includes the processing units necessary to convert biomass feedstock into biofuels/bioenergy/biobased products at a minimum feed rate of 1 ton/day of biomass feedstock.

"**Preliminary data**" means data and results generated by prior research, development, and demonstration and/or unstructured and structured interviews and literature reviews.

"**Primary data**" means data observed or collected directly from research, development, and demonstration activities.

"**Principal Investigator**" refers to the technical point of contact/Project Manager for a specific project award.

"**Private sector entities**" include companies, corporations, farms, ranches, cooperatives, and others that compete in the marketplace.

"**Project**" means the set of activities described in an Application, State plan, or other document that is approved by the federal government for Financial Assistance (whether such Financial Assistance represents all or only a portion of the support necessary to carry out those activities).

"**Project Team**" means the team which consists of the Prime Recipient, Subrecipients, and others performing or otherwise supporting work under an EERE funding agreement.

"**Proposal**" is the term used to describe the documentation submitted in response to a Funding Opportunity Announcement. Also see Application.

"**Prime Recipient**" means the organization, individual, or other entity that receives a Financial Assistance Award from the federal government, is financially accountable for the use of any federal government funds or property provided for the performance of the Project, and is legally responsible for carrying out the terms and condition of the award.

"**Recovered materials**" means waste materials and by-products that have been recovered or diverted from solid waste, but such term does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process (42 U.S.C. 6903(19)).

"**Recycling**" means the series of activities, including collection separation, and processing, by which products or other materials are recovered from the solid waste stream for use in the form of raw materials in the manufacture of new products other than fuel for producing heat or power by combustion.

"**Renewable Biomass**" means
(1) Materials, pre-commercial thinnings, or invasive species from National Forest System land (as defined in section 11(a) of the Forest and Rangeland Renewable Resources Planning Act of 1974 (16 U.S.C. 1609(a)) and public lands (as defined in section 103 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1702)) that—

(i) are byproducts of preventive treatments that are removed to reduce hazardous fuels; to reduce or contain disease or insect infestation; or to restore ecosystem health;
(ii) would not otherwise be used for higher-value products; and
(iii) are harvested in accordance with—

(I) applicable law and land management plans; and the requirements for (A) old-growth maintenance, restoration, and management direction of paragraphs (2), (3), and (4) of subsection (e) of section 102 of the Healthy Forests Restoration Act of 2003 (16 U.S.C. 6512); and

(B) large-tree retention of subsection (f) of section 102 of the Healthy forests Restoration Act of 2003 (10 U.S.C. 6512); or

(2) any organic matter that is available on a renewable or recurring basis from non-Federal land or land belonging to an Indian or Indian tribe that is held in trust by the United States or subject to a restriction against alienation imposed by the United States, including—

(i) renewable plant material, including feed grains; other agricultural commodities; other plants and trees; algae; and

(ii) waste material, including crop residue; other vegetative waste material (including wood waste and wood residues); animal waste and byproducts (including fats, oils, greases, and manure); and food waste and yard waste.

"**Request for Application (RFA)**" is a document by which a Federal agency makes known its intentions to award discretionary grants or cooperative agreements. RFAs, Funding Opportunity Announcements (FOAs), Program Announcements (PAs), or other solicitation instruments used with similar intent are developed in accordance with the Office of Management and Budget (OMB) policy directive, 68 FR 37370–37379 (June 23, 2003), which establishes a standard format for Federal agency announcements (i.e., program solicitations or RFAs) of funding opportunities under programs that award discretionary grants or cooperative agreements.

"**Research**" means any systematic study directed toward new or fuller knowledge and understanding of the subject studied.

"**Research and Development (R&D)**" means any activity which is: a systematic study directed at applying new knowledge to meet a recognized need; or a systematic application of knowledge toward the production of useful materials, devices and systems or methods, including design, development and improvement of prototypes, and new processes to meet specific requirements.

"**Responsiveness**" is an eligibility determination that refers to the objective technical requirements (not goals or targets) outlined in a FOA, such as a technology type or technical parameters. For example, submission of a photovoltaic solar panel design in response to a FOA calling for innovative geothermal drilling technologies should be found nonresponsive. Likewise, an application with a design that incorporates rare earth materials to a FOA that prohibits the use of rare earth materials should be found nonresponsive. Conversely, the belief that a technology will not achieve the technical targets of the FOA will never be used as a proper basis for a rejection as nonresponsive.

"**Rural**" means any area other than; (1) a city or town that has a population of greater than 50,000 inhabitants, or (2) the urbanized areas contiguous and adjacent to such a city or town.

"**Selection**" means the determination by the Federal Selection Official that negotiations take place for certain Projects with the intent of awarding a Financial Assistance instrument.

"**Selection Official**" means the federal official designated to select Applications for negotiation toward Award under a subject Funding Opportunity Announcement.

"**Semi-works**" means a combination of chemical processing units that constitute a subset of the fully integrated system and are used to develop process flow diagrams and mass and energy balances for the purposes of scaling up to a demonstration scale facility.

"**Substantial Involvement**" means involvement on the part of the Government. EERE's involvement may include shared responsibility for the performance of the Project; providing technical assistance or guidance which the Applicant is to follow; and the right to intervene in the conduct or performance of the Project. Such involvement will be negotiated with each Applicant prior to signing any agreement.

"**System for Award Management (SAM)**" is the primary database which collects, validates, stores and disseminates data in support of agency missions. It can be accessed at https://www.sam.gov.

"**Total Project Cost**" means all the funds to complete the effort proposed by the Applicant, including federal funds (including direct funding of any FFRDC) plus all other funds that will be committed by the Applicant as Cost Sharing.

"**Tribal Energy Resource Development Organization or Group**" means an "organization" of two or more entities, at least one of which is an Indian Tribe (see "Indian Tribe" above) that has the written consent of the governing bodies of all Indian Tribes participating in the organization to apply for a grant or loan, or other assistance under 25 U.S.C. § 3503.

"**Transportation fuel**" means fuel for use in motor vehicles, motor vehicle engines, nonroad vehicles, or nonroad engines (except for ocean-going vessels).

Appendix B – Personally Identifiable Information

In responding to this Announcement, Applicants must ensure that Protected Personally Identifiable Information (PII) is not included in the following documents: Project Abstract, Project Narrative, Biographical Sketches, Budget or Budget Justification. These documents will be used by the Merit Review Committee in the review process to evaluate each application. PII is defined by the Office of Management and Budget (OMB) and DOE as:

> Any information about an individual maintained by an agency, including but not limited to, education, financial transactions, medical history, and criminal or employment history and information that can be used to distinguish or trace an individual's identity, such as their name, social security number, date and place of birth, mother's maiden name, biometric records, etc., including any other personal information that is linked or linkable to an individual.

This definition of PII can be further defined as: (1) Public PII and (2) Protected PII.

a. **Public PII:** PII found in public sources such as telephone books, public websites, business cards, university listing, etc. Public PII includes first and last name, address, work telephone number, email address, home telephone number, and general education credentials.

b. **Protected PII:** PII that requires enhanced protection. This information includes data that if compromised could cause harm to an individual such as identity theft.

Listed below are examples of Protected PII that Applicants must not include in the files listed above to be evaluated by the Merit Review Committee.

- Social Security Numbers in any form
- Place of Birth associated with an individual
- Date of Birth associated with an individual
- Mother's maiden name associated with an individual
- Biometric record associated with an individual
- Fingerprint
- Iris scan
- DNA
- Medical history information associated with an individual
- Medical conditions, including history of disease
- Metric information, e.g. weight, height, blood pressure
- Criminal history associated with an individual
- Employment history and other employment information associated with an individual
- Ratings
- Disciplinary actions

- Performance elements and standards (or work expectations) are PII when they are so intertwined with performance appraisals that their disclosure would reveal an individual's performance appraisal
- Financial information associated with an individual
- Credit card numbers
- Bank account numbers
- Security clearance history or related information (not including actual clearances held)

Listed below are examples of Public PII that Applicants may include in the files listed above to be evaluated by the Merit Review Committee:

- Phone numbers (work, home, cell)
- Street addresses (work and personal)
- Email addresses (work and personal)
- Digital pictures
- Medical information included in a health or safety report
- Employment information that is not PII even when associated with a name
- Resumes, unless they include a Social Security Number
- Present and past position titles and occupational series
- Present and past grades
- Present and past annual salary rates (including performance awards or bonuses, incentive awards, merit pay amount, Meritorious or Distinguished Executive Ranks, and allowances and differentials)
- Present and past duty stations and organization of assignment (includes room and phone numbers, organization designations, work email address, or other identifying information regarding buildings, room numbers, or places of employment)
- Position descriptions, identification of job elements, and those performance standards (but not actual performance appraisals) that the release of which would not interfere with law enforcement programs or severely inhibit agency effectiveness
- Security clearances held
- Written biographies (e.g. to be used in a program describing a speaker)
- Academic credentials
- Schools attended
- Major or area of study
- Personal information stored by individuals about themselves on their assigned workstation or laptop unless it contains a Social Security Number

Appendix C – Cost Share Information

Cost Sharing or Cost Matching

The terms "cost sharing" and "cost matching" are often used synonymously. Even the DOE Financial Assistance Regulations, 10 CFR Part 600, use both of the terms in the titles specific to regulations applicable to cost sharing. DOE almost always uses the term "cost sharing," as it conveys the concept that **non-federal share is calculated as a percentage of the Total Project Cost.** An exception is the State Energy Program Regulation, 10 CFR Part 420.12, State Matching Contribution. Here "cost matching" for the non-federal share is calculated as a percentage of the federal funds only, rather than the Total Project Cost.

How Cost Sharing Is Calculated

As stated above, cost sharing is calculated as a percentage of the Total Project Cost. Following is an example of how to calculate cost sharing amounts for a project with $1,000,000 in federal funds with a minimum 20% non-federal cost sharing requirement:

Formula: Federal share ($) divided by Federal share (%) = Total Project Cost
Example: $1,000,000 divided by 80% = $1,250,000

Formula: Total Project Cost ($) minus Federal share ($) = Non-federal share ($)
Example: $1,250,000 minus $1,000,000 = $250,000

Formula: Non-federal share ($) divided by Total Project Cost ($) = Non-federal share (%)
Example: $250,000 divided by $1,250,000 = 20%

See the sample cost share calculation for a blended cost share percentage below. **Keep in mind that FFRDC funding is DOE funding.**

What Qualifies For Cost Sharing

While it is not possible to explain what specifically qualifies for cost sharing in one or even a couple of sentences, in general, if a cost is allowable under the cost principles applicable to the organization incurring the cost and is eligible for reimbursement under a DOE grant or cooperative agreement, then it is allowable as cost share. Conversely, if the cost is not allowable under the cost principles and not eligible for reimbursement, then it is not allowable as cost share. In addition, costs may not be counted as cost share if they are paid by the Federal Government under another award unless authorized by Federal statute to be used for cost sharing.

The rules associated with what is allowable as cost share are specific to the type of organization that is receiving funds under the grant or cooperative agreement, though are generally the same for all types of entities. The specific rules applicable to:

- Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations are found at

10 CFR600.123;

- State and Local Governments are found at 10 CFR600.224;
- For-profit Organizations are found at 10 CFR600.313.

In addition to the regulations referenced above, other factors may also come into play such as timing of donations and length of the project period. For example, the value of ten years of donated maintenance on a project that has a project period of five years would not be fully allowable as cost share. Only the value for the five years of donated maintenance that corresponds to the project period is allowable and may be counted as cost share.

Additionally, DOE generally does not allow pre-award costs for either cost share or reimbursement when these costs precede the signing of the appropriation bill that funds the award. In the case of a competitive award, DOE generally does not allow pre-award costs prior to the signing of the Selection Statement by the DOE Selection Official.

Following is a link to the DOE Financial Assistance Regulations. You can click on the specific section for each Code of Federal Regulations reference mentioned above.

USDA Cost Sharing

The non-Federal share of the cost of a research or development project under BRDI shall be not less than 20 percent of the total allowable cost. The non-Federal share of the cost of a demonstration project under BRDI shall be not less than 50 percent of the total allowable cost. The total project cost is equal to the sum of Federal funds requested and non-Federal matching funds. Cost share should be calculated as illustrated above. Applicant cost share must come from non-Federal sources unless otherwise allowed by law. Refer to Section III.B.2 for costs allowable on NIFA grants. **USDA-NIFA DOES NOT PERMIT BLENDING OF RESEARCH AND DEVELOPMENT WITH DEMONSTRATION COST SHARE.**

Applications shall include written verification of commitments of matching support (including both cash and fair market value of in-kind contributions) from third parties (non-Federal sources) in an amount not less than 20 percent of costs for R&D projects, not less than 50 percent of costs for demonstration/commercial projects. Written verification means:

For any third party cash contributions, a separate pledge agreement for each donation, signed by the authorized representative of the donor organization and the applicant organization, which must include: (1) the name, address, and telephone number of the donor; (2) the name of the applicant organization; (3) the title of the project for which the donation is made; (4) the dollar amount of the cash donation or the fair market value of in-kind contribution; and (5) a statement that the donor will provide the cash or in-kind contribution during the grant period.

The sources and the amount of all matching support from the applicant organization and outside the applicant organization shall be summarized on a separate page and placed in the application as a part of the Budget Justification attachment (see Field K on the Form SF 424 (R&R) Budget Fed & Non-Fed). Include the matching amount, the budget category for the match, and detail how the matching support, *from each source*, will be used (e.g., salary and position supported). Additionally, all pledge agreements must be included as a PDF attachment in Field K as well.

The value of applicant contributions to the project shall be established in accordance with the applicable cost principles. Applicants should refer to OMB Circulars A-21, Cost Principles for Educational Institutions; A-87, Cost Principles for State, Local, and Tribal Governments; A-122, Cost Principles for Non-Profit Organizations relocated to 2 CFR Parts 220, 225, and 230; 2 CFR Part 215, Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations (OMB Circular A–110); and the cost principles in the Federal Acquisition Regulation at 48 CFR 31.2 for further guidance and other requirements relating to matching and allowable costs.

This form (accompanied by the required Budget Justification attachment) contains the itemized listing and description of your project's budget. Complete all applicable fields. Information related to the questions on this form is dealt with in detail in Part V. 7 of the NIFA Grants.gov Application Guide.

DOE Financial Assistance Regulations:
http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=98a996164312e8dcf0df9c22912852b0&rgn=div5&view=text&node=10:4.0.1.3.9&idno=10

As stated above, the rules associated with what is allowable cost share are generally the same for all types of organizations. Following are the rules found to be common, but again, the specifics are contained in the regulations and cost principles specific to the type of entity:

(a) Under Federal research proposals, voluntary committed cost sharing is not expected. It cannot be used as a factor during the merit review of applications or proposals, but may be considered if it is both in accordance with Federal awarding agency regulations and specified in a notice of funding opportunity. Criteria for considering voluntary committed cost sharing and any other program policy factors that may be used to determine who may receive a Federal award must be explicitly described in the notice of funding opportunity. See also §§200.414 Indirect (F&A) costs, 200.203 Notices of funding opportunities, and Appendix I to Part 200—Full Text of Notice of Funding Opportunity.

(b) For all Federal awards, any shared costs or matching funds and all contributions, including cash and third party in-kind contributions, must be accepted as part of the non-Federal entity's cost sharing or matching when such contributions meet all of the following criteria:
(1) Are verifiable from the non-Federal entity's records;
(2) Are not included as contributions for any other Federal award;
(3) Are necessary and reasonable for accomplishment of project or program objectives;
(4) Are allowable under Subpart E—Cost Principles of this part;
(5) Are not paid by the Federal Government under another Federal award, except where the Federal statute authorizing a program specifically provides that Federal funds made available for such program can be applied to matching or cost sharing requirements of other Federal programs;
(6) Are provided for in the approved budget when required by the Federal awarding agency; and
(7) Conform to other provisions of this part, as applicable.

(c) Unrecovered indirect costs, including indirect costs on cost sharing or matching may be included as part of cost sharing or matching only with the prior approval of the Federal awarding agency. Unrecovered indirect cost means the difference between the amount charged to the Federal award and the amount which could have been charged to the Federal award under the non-Federal entity's approved negotiated indirect cost rate.

(d) Values for non-Federal entity contributions of services and property must be established in accordance with the cost principles in Subpart E—Cost Principles. If a Federal awarding agency authorizes the non-Federal entity to donate buildings or land for construction/facilities acquisition projects or long-term use, the value of the donated property for cost sharing or matching must be the lesser of paragraphs (d)(1) or (2) of this section.
(1) The value of the remaining life of the property recorded in the non-Federal entity's accounting records at the time of donation.
(2) The current fair market value. However, when there is sufficient justification, the Federal awarding agency may approve the use of the current fair market value of the donated property, even if it exceeds the value described in (1) above at the time of donation.

(e) Volunteer services furnished by third-party professional and technical personnel, consultants, and other skilled and unskilled labor may be counted as cost sharing or matching if the service is an integral and necessary part of an approved project or program. Rates for third-party volunteer services must be consistent with those paid for similar work by the non-Federal entity. In those instances in which the required skills are not found in the non-Federal entity, rates must be consistent with those paid for similar work in the labor market in which the non-Federal entity competes for the kind of services involved. In either case, paid fringe benefits that are reasonable, necessary, allocable, and otherwise allowable may be included in the valuation.

(f) When a third-party organization furnishes the services of an employee, these services must be valued at the employee's regular rate of pay plus an amount of fringe benefits that is reasonable, necessary, allocable, and otherwise allowable, and indirect costs at either the third-party organization's approved federally negotiated indirect cost rate or, a rate in accordance with §200.414 Indirect (F&A) costs, paragraph (d), provided these services employ the same skill(s) for which the employee is normally paid. Where donated services are treated as indirect costs, indirect cost rates will separate the value of the donated services so that reimbursement for the donated services will not be made.

(g) Donated property from third parties may include such items as equipment, office supplies, laboratory supplies, or workshop and classroom supplies. Value assessed to donated property included in the cost sharing or matching share must not exceed the fair market value of the property at the time of the donation.

(h) The method used for determining cost sharing or matching for third-party-donated equipment, buildings and land for which title passes to the non-Federal entity may differ according to the purpose of the Federal award, if paragraph (h)(1) or (2) of this section applies.
(1) If the purpose of the Federal award is to assist the non-Federal entity in the acquisition of equipment, buildings or land, the aggregate value of the donated property may be claimed as cost sharing or matching.
(2) If the purpose of the Federal award is to support activities that require the use of equipment,

buildings or land, normally only depreciation charges for equipment and buildings may be made. However, the fair market value of equipment or other capital assets and fair rental charges for land may be allowed, provided that the Federal awarding agency has approved the charges. See also §200.420 Considerations for selected items of cost.

(i) The value of donated property must be determined in accordance with the usual accounting policies of the non-Federal entity, with the following qualifications:
(1) The value of donated land and buildings must not exceed its fair market value at the time of donation to the non-Federal entity as established by an independent appraiser (e.g., certified real property appraiser or General Services Administration representative) and certified by a responsible official of the non-Federal entity as required by the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, (42 U.S.C. 4601-4655) (Uniform Act) except as provided in the implementing regulations at 49 CFR part 24.
(2) The value of donated equipment must not exceed the fair market value of equipment of the same age and condition at the time of donation.
(3) The value of donated space must not exceed the fair rental value of comparable space as established by an independent appraisal of comparable space and facilities in a privately-owned building in the same locality.
(4) The value of loaned equipment must not exceed its fair rental value.

(j) For third-party in-kind contributions, the fair market value of goods and services must be documented and to the extent feasible supported by the same methods used internally by the non-Federal entity.

(k) For IHEs, see also OMB memorandum M-01-06, dated January 5, 2001, Clarification of OMB A-21 Treatment of Voluntary Uncommitted Cost Sharing and Tuition Remission Costs.

SAMPLE COST SHARE CALCULATION
FOR BLENDED COST SHARE PERCENTAGE (*FOR DOE PROJECTS ONLY*)

The following example shows the math for calculating required cost share for a project with $2,000,000 in Federal funds with four tasks requiring different Non-federal cost share percentages:

Task	Proposed Federal Share	Required Federal Share %	Non-federal Cost Share %
Task 1 (R&D)	$1,000,000	80%	20%
Task 2 (R&D)	500,000	80%	20%
Task 3 (Demonstration)	400,000	50%	50%
Task 4 (Outreach)	100,000	100%	0%
	$2,000,000		

Federal share ($) divided by Federal share (%) = Task Cost

Each task must be calculated individually as follows:

Task 1
$1,000,000 divided by 80% = $1,250,000 (Task 1 Cost)

Task 1 Cost minus federal share = Non-federal share
$1,250,000 - $1,000,000 = **$250,000 (Non-federal share)**

Task 2
$500,000 divided 80% = $625,000 (Task 2 Cost)
Task 2 Cost minus federal share = Non-federal share
$625,000 - $500,000 = **$125,000 (Non-federal share)**

Task 3
$400,000 / 50% = $800,000 (Task 3 Cost)
Task 3 Cost minus federal share = Non-federal share
$800,000 - $400,000 = **$400,000 (Non-federal share)**

Task 4
Federal share = $100,000
Non-federal cost share is not mandated for outreach = **$0 (Non-federal share)**

The calculation may then be completed as follows:

Task	Proposed Federal Share	Federal Share %	Required Non-federal Cost Share $	Required Non-federal Cost Share %	Total Project Cost
Task 1	$1,000,000	80%	$250,000	20%	$1,250,000
Task 2	500,000	80%	125,000	20%	625,000
Task 3	400,000	50%	400,000	50%	800,000
Task 4	100,000	100%	0	0%	100,000
	$2,000,000		$775,000		$2,775,000

Blended Cost Share %
Non-federal share ($775,000) divided by Total Project Cost ($2,775,000) = 27.9% (Non-federal)
Federal share ($2,000,000) divided by Total Project Cost ($2,775,000) = 72.1% (Federal)