

# **AFRI Sustainable Bioenergy Challenge Area Frequently Asked Questions (FAQ)**

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## **General**

Q: How may stakeholders comment on the current Request for Application (RFA) and make suggestions for future RFAs?

A: NIFA strongly encourages stakeholder input and is required by law to solicit and consider input from stakeholders on current RFAs to use in formulating future RFAs. Stakeholders are encouraged to provide their comments and recommendations through the process outlined in each RFA. Using this process provides a formal record of stakeholder input that can be reviewed and analyzed by the agency as we develop future RFAs. Written comments should be sent to the email address indicated in the RFA ([RFP-OEP@nifa.usda.gov](mailto:RFP-OEP@nifa.usda.gov)).

Q: Who is eligible? What about federal scientists?

A: From the RFA:

### **Research, Education, or Extension Projects**

Eligible applicants for the program implemented under this subpart include: (1) State Agricultural Experiment Stations; (2) colleges and universities (including junior colleges offering associate degrees or higher); (3) university research foundations; (4) other research institutions and organizations; (5) **Federal agencies**, (6) national laboratories; (7) private organizations or corporations; (8) individuals who are U.S. citizens, nationals, or permanent residents; and (9) any group consisting of 2 or more entities identified in (1) through (8). Eligible institutions do not include foreign and international organizations.

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### **Integrated Projects**

Eligible applicants for Integrated Projects include: (1) colleges and universities; (2) 1994 Land-Grant Institutions; and (3) Hispanic-serving agricultural colleges and universities.

What does this mean for federal scientists who want to apply to AFRI? The short answer is that any AFRI program can fund the work of federal scientists but, not all will allow the federal scientist to serve as Project Director. For programs making single-function (research or education or extension) grants federal scientists can serve as Project Director. This includes all programs in the AFRI Foundational Program RFA and some programs in the other AFRI RFAs. For Integrated Projects that seek to solve problems by combining at least two of the three functions, the PD must be from an eligible college or university. The federal scientist may NOT use a university faculty appointment to apply as PD through the university. However, it has been very common to have federal scientists as Co-PDs on large Integrated Programs and have their work funded by subcontracts. This has been the case in our Coordinated Agricultural Project (CAP) grants. ARS scientists are, or have been, involved in the Wheat CAP, Rice CAP, Barley CAP, and others. Forest Service scientists are involved in the Conifer CAP. Using research, education, and extension to solve problems of the scale taken on by programs making CAP grants typically involves a multi-institutional team. We anticipate that federal scientist will continue to be members of successful CAP teams.

### **Regional Approaches to Sustainable Bioenergy** – Coordinated Agricultural Project (CAP)

Q: May the project include work on grain or cellulosic ethanol?

A: AFRI is not supporting R&D on ethanol projects. The Rural Development Agency and Department of Energy have supported development of ethanol capacity with programs they administer. NIFA research is focusing on regional feedstock development, sustainable production, logistics, flexible and scalable conversion to drop-in biofuels, bioenergy, and biobased products, marketing and distributions systems, and data management and analysis, including environmental, economic, and social impacts.

NIFA's focus on advanced biofuels stemmed from careful consideration of current trends in technology development and a determination of how we could best use our modest investments to have an impact given what other agencies were supporting.

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Q: What is the intent of funding regional sustainable bioenergy systems?

A: The Regional Approaches to Sustainable Bioenergy CAP are intended to facilitate the systems approach needed to get beyond individual projects by supporting consortia of academic, industry, government, and non-government institutions to integrate research, education, and extension/tech transfer to lead to real-world outcomes. The guidance in the AFRI Request for Applications (RFA) is just that and not intended to be prescriptive beyond expecting a regional systems approach.

Q: How is a regional bioenergy system defined?

A: From our perspective a region will be defined geographically by feedstock availability (e.g., woody biomass) or feedstock production potential (establishment of new crops/production systems). Institutions participating in the regional Coordinated Agricultural Project however do not necessarily need to be within this geographic region but must be justified by making a clear contribution to the overall CAP. NIFA is taking an outcome-driven systems approach to solve real-world problems. The development and sustainable production of biomass, the logistics from harvest to biorefinery storage and pretreatment, to processing and conversion to biofuels and biobased products, and the ultimate marketing and distribution of these products are roughly the components of the regionally-appropriate systems that we are trying to facilitate. Consequently, NIFA investments in research should be able to describe linkages to these regional systems whether the project be related to biomass feedstock genetic improvement or the conversion of biomass to value-added products that are petroleum substitutes. Please refer to the AFRI RFA for more detail.

Q: How are regions defined?

A: From our perspective a region will be defined geographically by feedstock availability (e.g., woody biomass) or feedstock production potential (establishment of new crops/production systems). Institutions participating in the regional CAP do not necessarily need to be within this geographic region but must be justified by making a clear contribution to the overall CAP. Regions are not limited in the RFA, but should include at least one of the feedstock types as a primary focus to meet the requirements of the RFA and be more or less contiguous.

Q: Is there a map showing the states that are included in each region?

A: NIFA does not have a map defining the regions or a feedstock-state matrix. Proposals should focus on feedstocks that are most appropriate for each region. For example, some regions will have a higher net primary productivity and lower input demand for specific feedstocks.

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Q: Can a single CAP project include projects and activities in the southeast, northeast, and Pacific northwest?

A: NIFA does not believe that this approach meets the spirit of the RFA. It is our hope that a CAP will develop regionally specific bioenergy and biobased product systems in a more or less contiguous geographic region that address the specific inputs, outcomes, and externalities of a defined region through the integration of research, education, and extension. Many regions will have significantly different environmental, economic, and social pressures and opportunities. A region-specific proposal would compete much better with regards to these factors during the merit review compared to a national or multi-regional proposal. Hawaii and Alaska may make a case that they be included in a feedstock production region proposal centered on the mainland based on climatic similarities.

Q: May we work on feedstocks other than those listed in the RFA?

A: USDA research has identified five types of feedstocks with potential to provide enough biomass to have significant regional impacts. That said, we are not excluding proposals that include additional regionally-appropriate feedstock in conjunction to one or more of the five groups to build an optimal regional system.

Q: Can one element of the supply chain be emphasized over the others?

A: We are facilitating the development of regional systems that will materially contribute to public benefit through the production of biofuels, bioenergy, and biobased products. This is a systems approach. Certainly one or more aspects of the system may have emphasis over the course of five years, but all segments of the chain must be addressed to be competitive. Similarly, research, education, and extension/tech transfer must all be addressed through relevant and significant activities. Identify the regional outcome you are trying to create and build the regional system needed to achieve that outcome. Collaboration with industry and federal agencies like USFS and USDA ARS are encouraged.

Q: Is it a problem or a negative if an institution participates in several applications? Either for the same region or different regions?

A: Participating in several projects within or outside a region is acceptable, provided there are sufficient resources within the institution to optimally handle two projects of this magnitude simultaneously on top of a current portfolio of activities. Certainly, support could not be given if the work to be performed in one region was identical to the work to be performed in the second region (same experimental plan, same genotypes).

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Q: Could more than one proposal be funded for a region (such as the Southeast region)?

A: Yes, more than one proposal may be funded in a region.

Q: If a proposal includes woody biomass, would it be strengthened if it included other energy crops mentioned for the southeast such as energy cane, grasses, or sorghum?

A: We are looking for a regional bioenergy system with real world outcomes. A competitive proposal could be drafted for a single feedstock or for a mix of feedstocks. Regardless one or more of the targeted feedstock types must be the primary focus of the proposal.

Q: Is it expected that multiple universities will be involved in a single proposal or is it possible that a single university focusing on one type of energy crop could be a successful proposal?

A: USDA research is focusing on regional feedstock development, sustainable production, logistics, flexible and scalable conversion to drop-in biofuels, bioenergy, and biobased products, marketing and distributions systems, and data management and analysis, including environmental, economic, and social impacts. Consequently we would expect a CAP to be multi-institutional with industry participation. A single university approach is possible, but a strong case for single university/industry collaboration will need to be made for the proposal to be competitive.

Q: What are the required or desirable characteristics for a PD/PI of a Regional Bioenergy CAP?

A: While the PD must be active in research, education, or extension, they should have the experience of being at the hub of a wheel of significant and diverse activity. In addition to having the big picture technically, they should be cognizant of how research, education, and extension/tech transfer can be integrated during the course of the project to create significant real world outcomes. The PD should be comfortable working in a multi-institutional framework that includes academic, government, non-government, and private sector institutions, e.g., knowledgeable, an excellent manager, an excellent communicator.

Q: Do Co-PDs and collaborators need to be from the same geographic “region” that is the focus of the proposal.

A: No.

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Q: Is it acceptable for a proposal to span two or more regions?

A: No. With the limited funding we have available to invest, we are not looking for direct national impacts. We have had similar questions from woody biomass folks and have said no to combining Northeast, Southeast, and Pacific Northwest woody biomass projects. The President's FY2011 budget request includes increased funding for more work in sustainable bioenergy.

From our perspective a region should be based on the best net primary productivity of one or more of the five feedstock groups and should be more or less contiguous. Where states fall geographically is secondary. Researchers from outside the region would be able to participate in the CAP. We are expecting that there will be cross regional benefits and synergies coming out of a Regional Bioenergy CAP, but we would discourage casting too wide a net (i.e., bi-regional). The reviewing community may view cross-regional benefits as positive.

Q: The RFA states on page 23 that "5. Submission of more than one Letter of Intent to a program is discouraged". Does this mean that applicants should not be a partner in more than one proposal?

A: An institution may be a partner in more than one application providing that they are separate bodies of work and that different investigators and extension and education specialists will be involved. Individual PDs are strongly discouraged from partnering on two regional CAPs. Should both CAPs be recommended the work load of the PD will be highly scrutinized to determine whether their proposed time commitment is realistic. Individuals or institutions should try to avoid applying to receive funding in two separate CAP proposals for identical bodies of work. Co-PDs may participate in two or more CAP proposals, but must list these proposed activities on the Current and Pending Support forms.

Q: May crop residues or animal waste be part of a regional bioenergy system proposal?

A: These may be included as part of a systems approach that include the targeted feed stocks as the primary emphasis.

Q: Must we work on the feedstocks given as examples for our region?

A: No.

Q: Must we include research, education, and extension/outreach/tech transfer in our regional proposal?

A: Yes. Part 1, B states that all CAP applications under Program Area Code A6101 must include all three functions of the agricultural knowledge system.

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Q: Will the Letter of Intent be utilized for pre-screening/rejection for full proposal or just to prepare for reviewers/panels needed?

A: Letters of Intent will be used for preparing panels; however, if the letter does not appear to meet the intent of the RFA, we will inform the applicant.

Q: Is collaboration with a private company allowed? Can some resources be sub-contracted to a private U.S. company to pursue part of the project as a Co-PD?

A: Yes.

Q: How do we identify consortia that are forming in our region?

A: We encourage applicants to take initiative in networking with other institutions in the public and private sector to identify opportunities for collaboration.

Q: What is the eligibility to participate in a regional bioenergy CAP as a: 1) Co-PD or 2) Collaborator?

A: The Co-PDs (we refer to them as Project Director and not Principle Investigator) are those listed on the proposal cover page (424a) and specifically identified as Co-PDs. Cooperators and Collaborators are those involved in the project but who are not Co-PDs. Cooperator and collaborator are not defined in the RFAs, but there is a long history in NRI/AFRI for including them in proposals. These are people associated with a proposal whose participation in the project is necessary for success. Typically, a cooperator may be someone allowing access to research sites, facilities or materials. A collaborator historically has been someone who may perform service (sample analysis), but who is not involved in data interpretation or program delivery. The willingness of collaborators and cooperators to participate in projects is documented by letters from them attached to the proposal.

Q: Will proposals that do not focus on liquid transportation fuels be accepted?

A: Yes, but it will be important to clearly identify the outcomes (products and markets) you are targeting. Wood pellets and electricity, while appropriate, may not be competitive against other regional proposals focusing on liquid transportation fuels, as well as other biobased products. These products or co-products could, however, complement liquid biofuels and make a regional approach more competitive.

Q: What other sources of competitive grant funding may be available?

A: Federal agencies such as the Department of Energy (DOE) and the National Science Foundation (NSF) may provide competitive grant programs for biomass, bioenergy and biobased products. Support for commercialization efforts may be found in grant and

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loan guarantee programs at the USDA Rural Development Agency. Other NIFA competitive programs to consider are the Biomass Research and Development Initiative, a joint USDA/DOE program, and the Small Business Innovation Research (SBIR) Program.

### **Regional Approaches to Sustainable Bioenergy: Planning**

Q: Is it guaranteed that there will be new (in addition to the three anticipated for 2010) regional bioenergy CAPs funded in 2011 and 2012?

A: The President's FY2011 budget request includes additional funding for this program. The request is subject to Congressional action.

### **Sustainable Bioenergy Research**

Q: Does the Sustainable Bioenergy Research Program replace the Biobased Products and Bioenergy Production Research Program (PBRP, previously managed by Dr. Chavonda Jacobs-Young)?

A: NIFA has concentrated its work on sustainable bioenergy in this AFRI RFA. However, there are opportunities within the Sustainable Bioenergy Challenge area for scientists, educators, and extension specialists to find support, either as part of Integrated Coordinated Agricultural Project (CAP) teams (Regional Approaches to Sustainable Bioenergy); through addressing priorities listed for Standard Grants (Sustainable Bioenergy Research); and AFRI Foundational Programs. There may be additional opportunities in non-AFRI NIFA programs such as the Biomass Research and Development Initiative (BRDI) and the Small Business Innovation Research (SBIR) Program.

Q: What is meant by "sustainable bioenergy research projects must link to regional bioenergy systems"?

A: NIFA is taking an outcome-driven, systems approach to solve real-world problems. The development and sustainable production of biomass, the logistics from harvest to biorefinery storage and pretreatment, to processing and conversion to biofuels and biobased products, and the ultimate marketing and distribution of these products are roughly the components of the regionally-appropriate systems that we are trying to facilitate. Consequently, NIFA investments in research should be able to describe linkages to these regional systems whether the project be related to biomass feedstock



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genetic improvement or the conversion of biomass to value-added products that are petroleum substitutes.

Q: For Standard Grants, the priorities support research with high relevance to the development of sustainable regional systems for the production of bioenergy and biobased products. What does “high relevance” mean? Is collaboration required?

A: We are facilitating the development, growth, and success of regional bioenergy systems. While collaboration on Standard Grants is not required, there must be a clear benefit of the standard research grant area of research to one or more regional bioenergy systems.

Q: Are co-products from ethanol production facilities eligible for funding?

A: No.

Q: Does co-product research have to be focused on co-products from the conversion of one or more of the five targeted feedstock types?

A: Yes.

Q: Will the new priorities for sustainable bioenergy research be funded in 2011 and 2012?

A: The President’s FY2011 budget request includes funding to continue this program. Congress will be deliberating on this. Anticipated future priorities for 2011 and 2012 are described under the Program Area Descriptions Section of Part I.

Q: What is the intent of the carbon sequestration priority?

A: Carbon sequestration from our perspective relates to feedstock development and production, not the entire value chain.

## **Investing in America’s Scientific Corps: Stimulating a New Era of Students and Faculty in Bioenergy**

Q: Can we use funding for research supplies for student research projects to make it more attractive for faculty to mentor the students?

A: Yes

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Q: Can we use funding to pay part salaries for a director and an adviser (needed in order to help students find projects in appropriate labs, etc.)?

A: Yes. The requested salary must be in proportion to the effort devoted to the project.

Q: Can we use funding for student scholarships to attract the best students?

A: Yes, these kinds of scholarships are part of the supported education program and are distinctly different from the fellowships that are directly awarded to individual students in the AFRI Fellowships Grant Program.

Q: Can we use funding for scholarships specifically targeted at multicultural and first-generation students?

A: No. However, you may include outreach to these potential students.

Q: Can we use funding for recruiting students?

A: Yes

Q: Can we use funding for student professional development, including sending students to national meetings and conferences, such as scientific conferences and the MANRRS (Minorities in Agriculture, Natural Resources and Related Sciences) national conference?

A: Yes

Q: What else can funding be used for?

A: Funds can be used to achieve the program goals. It is up to applicants to design the most effective and creative approach to achieving the outcomes identified for the program. This could include any number of activities and approaches. Successful proposals will include a clear justification and linkage between all aspects of what funding is used for.

## **National Loblolly Pine Genome Sequencing**

Q: Is NIFA expecting a single, unified proposal from the forestry community?

A: No. We don't expect very many proposals but we certainly anticipate that there will be more than one submission that would each incorporate the forestry community as appropriate in its planning and implementation.

## **AFRI Sustainable Bioenergy Challenge Area Frequently Asked Questions (FAQ)**

Q: May a foreign institution lead or participate in the proposal?

A: The lead institution submitting the proposal must be U.S. based. A foreign institution is not eligible to receive an award directly but is eligible for a subaward. It is hoped that sequencing capacity at U.S. institutions would be considered in the development and implementation of the proposal and if it can't be found or achieved then going offshore makes sense. Alternatively, a combination of U.S and foreign groups working together would be feasible too. Either way, develop a sound rationale for the approach that is convincing to the review panel.