Good afternoon, everyone and welcome to our webinar. Thank you for your interest in the U.S. Department of Energy’s efforts on renewable energy and energy efficiency. You are joining us for the Informational Webinar for Applicants and other Interested parties for the Biological and Chemical Upgrading for Advanced Biofuels and Products Funding Opportunity Announcement (or FOA), which was issued on April 15th. The FOA number is DE-FOA-0001085. My name is Bryna Berendzen and I am a technology manager in the Bioenergy Technologies Office within the DOE’s Office of Energy Efficiency and Renewable Energy. We hope to cover the basic aspects of this Funding Opportunity Announcement during this webinar.

Before we begin, I’d like to draw your attention to the email address on the left hand side of this cover page. This is the official mailbox to direct all of your questions during the entire FOA process, including any questions that arise from today’s webinar. All questions received at this mailbox are posted publicly at the Q&A section of the FOA page on EERE Exchange in an anonymous way. The official answers to your questions will typically also be posted within 3 business days. Please be careful not to submit any language that might be business sensitive, proprietary or confidential.

Also, just to be clear, there are no particular advantages or disadvantages to the application evaluation process with respect to participating on the webinar today. Your participation is
completely voluntary.

Let’s get started!
Notice

- All applicants are strongly encouraged to carefully read the Funding Opportunity Announcement DE- FOA-0001085 (“Biological and Chemical Upgrading for Advanced Biofuels and Products FOA”) and adhere to the stated submission requirements.

- This presentation summarizes the contents of FOA. If there are any inconsistencies between the FOA and this presentation or statements from DOE personnel, the FOA is the controlling document and applicants should rely on the FOA language and seek clarification from EERE.

- If you believe there is an inconsistency, please contact BCUFOA@go.doe.gov

- A digital copy of the slides will be posted on EERE Exchange following today’s webinar

READ SLIDE
The agenda for this presentation is as follows: READ SLIDE

We encourage you to have a copy of the FOA in front of you for reference as we go through the presentation.
Bioconversion Platform Background

- The mission of the Bioenergy Technologies Office (BETO) within EERE is to develop and transform biomass resources into commercially viable, high performance biofuels, as well as bioproducts, and biopower that enable biofuels production through targeted research, development, demonstration, and deployment supported through public-private partnerships.

- EERE focuses the majority of its resources on a limited number of "highest probability of success" pathways/approaches to ensure that the program initiatives are supported at a critical mass (both in terms of dollars and time) for maximum impact.

- Goal of the FOA is to diversify the Bioenergy Technologies Office (BETO) Biochemical Technology Area’s portfolio to include a variety of chemical and biological upgrading technologies for the production of a suite of hydrocarbon fuels, fuel intermediates and chemicals (beyond ethanol).
Bioconversion Platform Background

- FOAs conducted by BETO since 2007 have funded research on biochemical conversion to develop improved cellulases and fermentative organisms for ethanol production from cellulosic feedstocks.
- BETO’s emphasis on advanced biofuels is intended to encourage industry to invest in traditionally high-risk advanced biofuels production technologies.
- This research will move BETO forward toward meeting the 2022 cost target of $3/gge (gallons gasoline equivalent) for the production of hydrocarbon fuels.
- The advancement and eventual commercialization of these and similar technologies will expand the suite of cost competitive biofuels which is necessary to meet the Energy Independence and Security Act of 2007 (EISA) Renewable Fuel Standards 2 (RFS2), and to ensure that all transportation sectors may take advantage of the benefits of renewable and sustainable advanced biofuels.
Pertaining to topic area 2, if R&D on a separation process is proposed, the total project funding available for capital equipment requirements will be limited to 50% of the total project costs.
Areas Specifically Not of Interest

The following represent areas not of interest and applications that propose this scope of work will be deemed non-responsive and not be reviewed or considered:

• Applications that fail to include appropriate data as outlined in Appendix G
• Applications that propose upgrading of pyrolysis oil or syngas
• Applications that propose processes outside of upgrading or separations operations
• Applications that propose the production of C1 or C2 molecules (i.e. ethanol, biogas) and biodiesel produced from transesterification or hydrotreated or hydrocracking of agronomic, natural plant oils
• Applications that use pure sugar feeds and/or “model” intermediate feeds
• Applications that propose aquatic species (i.e. algae, seaweed) as any or all of the feedstocks

Full details on areas not of interest are highlighted in the FOA, in Section 1C (pgs. 5-6) and Appendix F
EERE expects to make approximately $10 million of Federal funding available for new awards under this FOA subject to the availability of appropriated funds. The average award amount is anticipated to range from $1 million to $3.5 million. We expect the period of performance to take up to 36 months. The cost share requirement must be greater than or equal to 20% of the total project costs.

EERE intends to fund mostly cooperative agreements under this FOA, but may also fund Work Authorizations, and Interagency Agreements. Cooperative Agreements include Substantial Involvement, which we will discuss later in the webinar.
This slide shows the anticipated schedule for the FOA. The FOA has already been posted, and we are conducting the FOA Informational Webinar now. Please note that there are a few requirements that we will go over in the presentation that are different than in past FOAs, such as Replies to Reviewer Comments – we will cover all requirements for this FOA later in the presentation.
EERE’s Evaluation and Selection Process is shown in blue here. EERE will review Concept Papers, Full Applications, and Replies to Reviewer Comments (which we will cover later in the presentation). The gray boxes represent the actions that apply to applicants throughout the FOA process. The dates that are specific to this FOA have been populated for each action.
Concept Papers

- Applicants must submit a Concept Paper
  - Each Concept Paper must be limited to a single concept or technology
- The Concept Paper must include a technology description (See Section IV.C of the FOA)
  - The technology description is limited to 3 pages, with 2 page addendum
- Concept Papers must be submitted by May 1, 2014, 5pm Eastern through EERE Exchange, and must meet the content and form requirements (See Section IV.C of the FOA).
- EERE provides applicants with: (1) an “encouraged” or “discouraged” notification, and (2) the reviewer comments
- A "discouraged" notification conveys EERE's lack of programmatic interest in the proposed project. An Applicant who receives a "discouraged" notification may still submit a Full Application.

Concept Papers are required for this FOA. Concept Papers are brief descriptions of the proposed project. It allows applicants to submit their ideas with minimal time and expense. EERE will provide feedback on the proposed project so the Applicant can make an informed decision whether to expend additional resources to prepare a full application.

If an applicants fails to submit an eligible Concept Paper, the applicant is not eligible to submit a Full Application.

Concept Papers must be submitted by May 1st at 5 pm Eastern, through EERE Exchange. Concept papers submitted through other Federal agency websites, including Grants.gov, will not be considered.

EERE will provide applicants with either an encouraged or discouraged notification. A “discouraged” notification conveys EERE’s lack of programmatic interest in the proposed project. An applicant who receives a “discouraged” notification may still submit a Full Application.
Concept Paper Criteria (Section V.A.1)

EERE will evaluate Concept Papers based on the following technical review criteria:

• **Criterion 1: Impact of the Proposed Technology Relative to State of the Art (50%)**
  – Method used to identify current state of the art technology
  – If technical success is achieved, the proposed idea would significantly improve technical and economic performance relative to the state of the art.

• **Criterion 2: Overall Technical Merit (50%)**
  – The proposed technology is unique and innovative; and
  – The proposed approach is without major technical flaws.
The Full Application includes the following key documents:

**Technical Volume:** The key technical submission - info relating to the technical content, project team members, etc.

**SF-424 Application for Federal Assistance:** The formal application signed by the authorized representative of the applicant.

**Budget & Budget Justification (EERE 159):** A detailed budget and spend plan for the project. Additional budget justifications are necessary for subawardees.

**Summary/Abstract for Public Release**

**Summary Slide**

**Technical and Economic Data Tables (Appendix G):** See IV.D.14

**Administrative Documents:** E.g., U.S. Manufacturing Plan, FFRDC Authorization (if applicable), Disclosure of Lobbying Activities, etc.

**Validation Participation Acknowledgement:** Must include the applicant’s acknowledgement to participate in the independent third party validations required under this FOA.

See Section IV.D of the FOA for complete details.

The Full Application includes the following key documents:

**Technical Volume:** The key technical submission. This is the document within which the applicants will submit information pertaining to the technical content, the work plan and the project team members, etc.

**SF-424 Application for Federal Assistance:** The formal application signed by the authorized representative of the applicant. This document includes cost share amounts and Federal certifications and assurances.

**SF-424A Budget & Budget Justification (EERE 159):** These documents are the main budget documents that applicants provide that summarizes the major expected costs associated with the project and spend plan.

**Summary or Abstract for Public Release:** Applicants must provide a 1 page summary of their technology appropriate for public release.

**Summary Slide:** This is document generated in Powerpoint slide that provides quick facts about the technology. The slide content requirements are provided in the FOA under Section Roman Numeral “4” D.6.

**Technical and Economic Data Tables:** There are 5 technical tables found in Appendix G that are specific to this FOA. It is expected that all relevant data will be provided where possible and appropriate.

**Administrative Documents:** E.g., U.S. Manufacturing Plan, FFRDC Authorization (if applicable), Disclosure of Lobbying Activities, etc.
The key technical component of the full application is the Technical Volume, which helps applicants frame the technical information that the application will be evaluated on. The Technical Volume provides information regarding what the project is, how the project tasks will be accomplished, what are the key technical milestones, and the project timetable.

The Technical Volume is comprised of a cover page, project overview, technical description, innovation, and impact, workplan, technical qualifications and resources and the Technology Validation. Please note that the percentages listed here are suggested and are not mandatory.
• The Cover Page will be a one page document and provides basic information on their project, such as title, topic area, points of contact, etc.

• The Project Overview constitutes approximately 10% of the Technical Volume and provides information on project background, goals, impact of EERE funding

• The Technical Description, Innovation, and Impact section is approximately 25% of the Technical Volume. It provides information on project relevance and outcomes, feasibility, and innovation/impacts. This ultimately provides the justification as to why EERE should fund the project.

• The Workplan is the key element to the Technical Volume, and constitutes approximately 50% of the Technical Volume. It details the proposed milestones and project schedule. If selected for award negotiations, the Workplan serves as the starting point when negotiating the Statement of Project Objectives.

• The Technical Qualifications and Resources section is approximately 15% of the Technical Volume. It provides applicants an opportunity to provide information about the proposed project team and demonstrate how the applicant will facilitate the successful completion of the proposed project.
As we previously pointed out, applicants must submit full applications by 5pm Eastern on June 13, 2014. EERE will conduct an eligibility review, and full application will be deemed eligible if [READ SLIDE]
Who’s Eligible to Apply?

Eligible applicants for this FOA include:
1. Individuals
2. Domestic Entities
3. Foreign Entities
4. Incorporated Consortia
5. Unincorporated Consortia

For more detail about each eligible applicant, please see Section III.A of the FOA for eligibility requirements

Who is Eligible to Apply? Eligible applicants for this FOA include [Read List]

Please note that nonprofit organizations described in Section 501(c)(3) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995, are not eligible to apply for funding.

Also, note that all Prime Recipients receiving funding under this FOA must be incorporated (or otherwise formed) under the laws of a State or territory of the United States. If a foreign entity applies for funding as a Prime Recipient, it must designate in the Full Application a subsidiary or affiliate incorporated (or otherwise formed) under the laws of a State or territory of the United States to be the Prime Recipient. The Full Application must state the nature of the corporate relationship between the foreign entity and domestic subsidiary or affiliate.
Multiple Applications

Applicants may submit only one concept paper and one full application per topic area under this FOA as the Prime Recipient. (Section III.F)

This limitation does not prohibit an applicant from collaborating on other applications (e.g., as a potential Subrecipient or partner) so long as the entity is only listed as the Prime Applicant on one Concept Paper and Full Application per topic area submitted under this FOA.
**Merit Review and Selection Process (Full Applications)**

- The Merit Review process consists of multiple phases that each include an initial eligibility review and a thorough technical review.

- Rigorous technical reviews are conducted by reviewers that are experts in the subject matter of the FOA.

- Ultimately, the Selection Official considers the recommendations of the reviewers, along with other considerations such as program policy factors, to make the selection decisions.
Applications will be evaluated against the three following merit review criteria:

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Weighting</th>
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</thead>
<tbody>
<tr>
<td>Technical Merit, Innovation, and Impact</td>
<td>50%</td>
</tr>
<tr>
<td>Project Research and Commercialization Plan</td>
<td>30%</td>
</tr>
<tr>
<td>Qualifications, Experience, Capabilities, and Soundness of Management Plan for the Proposed Project Team</td>
<td>20%</td>
</tr>
</tbody>
</table>
Applications will be evaluated against the three following merit review criteria:

[READ SLIDE]
Applications will be evaluated against the three following merit review criteria:

[READ SLIDE]
Applications will be evaluated against the three following merit review criteria:

[READ SLIDE]
The Full Application are reviewed by experts in the FOA topic area(s). After those experts review the applications, EERE provides those reviewer comments to the applicants and provides the applicants with a brief opportunity to respond.

Comments will be provided to applicants in Exchange following the evaluation of eligible full applications. Applicants will then be able to respond to the comments through the Reply to Reviewer Comments process. Applicants will have until 7/28/2014 at 5 PM Eastern to respond. Applicants should anticipate receiving the independent reviewer comments approximately three business days before this due date.
Selection Factors

The Selection Official may consider the merit review recommendation, program policy factors, and the amount of funds available in arriving at selections for this FOA.
After the Merit Review process, the Selection Official may consider the following program policy factors in making his/her selection decisions:

- The degree to which the proposed project, including proposed cost share, optimizes the use of available EERE funding to achieve programmatic objectives
- The level of industry involvement and demonstrated ability to commercialize energy or related technologies
- Technical, market, organizational, and environmental risks associated with the project
- Whether the proposed project is likely to lead to increased employment and manufacturing in the United States
- Whether the proposed project will accelerate transformational technological advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty
- The degree to which the proposed project directly addresses EERE’s statutory mission and strategic goals

The list of the ONLY program policy factors that may be considered by the Selection Official for this FOA is printed on this slide. I will not read these out loud in the interest of time but you may find this information in Section Roman Numeral “5” C.1 of the FOA.
There are several one-time actions before submitting an application in response to this FOA, and it is VITAL that applicants address these items as soon as possible. Some may take several weeks, and failure to complete them could interfere with an applicant’s ability to apply to this FOA, or to meet the negotiation deadlines and receive an award if the application is selected.

**DUNS Number**

Obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number.

**System for Award Management**

Register with the System for Award Management (SAM). 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.

**FedConnect**

Register in FedConnect. To create an organization account, your organization’s SAM MPIN is required. For more information about the SAM MPIN or other registration requirements, review the FedConnect Ready, Set, Go! Guide at https://www.fedconnect.net/FedConnect/PublicPages/FedConnect_Ready_Set_Go.pdf.
Grants.gov
Register in Grants.gov to receive automatic updates when Amendments to this FOA are posted. However, please note that [Delete if Letters of Intent are not applicable] Letters of Intent, Concept Papers, and Full Applications will not be accepted through Grants.gov.
All required submissions must come through EERE Exchange. EERE will not review or consider applications submitted through any other means.
**Key Submission Points**

- Check entries in EERE Exchange
  - Submissions could be deemed ineligible due to an incorrect entry
- EERE strongly encourages Applicants to submit 1-2 days prior to the deadline to allow for full upload of application documents and to avoid any potential technical glitches with EERE Exchange
- Make sure you hit the submit button
  - Any changes made after you hit submit will un-submit your application and you will need to hit the submit button again
- For your records, print out the EERE Exchange Confirmation page at each step, which contains the application’s Control Number
Applicant Points-of-Contact

- Applicants must designate primary and backup points-of-contact in EERE Exchange with whom EERE will communicate to conduct award negotiations.
- It is imperative that the Applicant/Selectee be responsive during award negotiations and meet negotiation deadlines, expected to take place between 08/15/2014 through 09/30/2014.
  - Failure to do so may result in cancelation of further award negotiations and rescission of the Selection.
Under cooperative agreements, there will be what is known as “substantial involvement” between EERE and the Recipient during the performance of the project [READ SLIDE]
5. EERE promotes and facilitates technology transfer activities, including disseminating Technology Office results through presentations and publications.

6. EERE may redirect or discontinue funding projects that fail to fully and satisfactorily complete the work described in the Statement of Project Objectives as evaluated at the Go/No-Go decision points.

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

8. EERE may use an independent third party consultant to verify the technical and economic baseline(s) for the project.

9. EERE may use an independent third party consultant to assess the progress made prior to the state gate against the intermediate targets and at the completion of the project.

- Under cooperative agreements, there will be what is known as “substantial involvement” between EERE and the Recipient during the performance of the project [READ SLIDE]
<table>
<thead>
<tr>
<th>Cost Share Contributions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Applicants must contribute a minimum of 20% of the total project costs for R&amp;D projects.</td>
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<tr>
<td>• Contributions must be:</td>
</tr>
<tr>
<td>o Specified in the project budget</td>
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<tr>
<td>o Verifiable from the Prime Recipient’s records</td>
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<tr>
<td>o Necessary and reasonable for proper and efficient accomplishment of the project</td>
</tr>
<tr>
<td>• Every cost share contribution must be reviewed and approved in advance by the Contracting Officer and incorporated into the project budget before the expenditures are incurred</td>
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</table>

The total budget presented in the application must include both Federal (DOE), and Non-Federal (cost share) portions, thereby reflecting the TOTAL PROJECT COSTS proposed. All costs must be verifiable from the Recipient’s records and be necessary and reasonable for the accomplishment of the project.

Note that every cost share contribution must be reviewed and approved in advance by the Contracting Officer and incorporated into the project budget before expenditures are incurred.
Cost share must be allowable and must be verifiable upon submission of the Full Application. Please refer to this chart for your entity’s applicable cost principles. It is imperative that you follow the applicable cost principles when creating your budget for the full application.

<table>
<thead>
<tr>
<th>Entity</th>
<th>Cost Principles</th>
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<tbody>
<tr>
<td>Educational Institutions</td>
<td>2 CFR Part 220</td>
</tr>
<tr>
<td>State, Local, and Indian Tribal</td>
<td>2 CFR Part 225</td>
</tr>
<tr>
<td>Governments</td>
<td></td>
</tr>
<tr>
<td>Non-profit Organizations</td>
<td>2 CFR Part 230</td>
</tr>
<tr>
<td>For-profit Organizations</td>
<td>FAR Part 31</td>
</tr>
</tbody>
</table>
## Allowable Cost Share

- **Cash Contributions**
  - May be provided by the Prime Recipient, Subrecipients, or a Third Party

- **In-Kind Contributions**
  - Can include, but are not limited to: personnel costs, indirect costs, facilities and administrative costs, rental value of buildings or equipment, and the value of a service, other resource, or third party in-kind contribution

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Cost share can provided in cash and/or in-kind. It can be provided by the Prime Recipient, subs, or a third party.

In-kind cost share is the donation of personnel time, equipment, facilities, or other items that an organization will contribute to the project. It can take many forms, each of which must be assigned a dollar value to be included in the budget.
Be aware that there are items that are considered unallowable cost share. If a cost is considered unallowable, it cannot be counted as cost share. This slide provides some examples of cost share that is unallowable such as royalties that are expected from the prospective operation of an activity beyond the project period, or cash that originated from DOE or another federal agency.
Cost Share Payment

- Recipients must provide documentation of the cost share contribution, incrementally over the life of the award.

- The cumulative cost share percentage provided on each billing period must reflect the cost sharing percentage negotiated.

- In limited circumstances, and where it is in the government’s interest, the EERE Contracting Officer may approve a request by the Prime Recipient to meet its cost share requirements on a less frequent basis, such as monthly or quarterly. See Section III.B.6 of the FOA.

Cost Share must be provided on an invoice basis, unless a waiver is requested and approved by the DOE Contracting Officer. For more information, please refer to Section Roman Numeral “3” B.6 of the FOA.
Questions

- Questions about this FOA? Email BCUFOA@go.doe.gov
  - All Q&As related to this FOA will be posted on EERE Exchange
    - You must select this specific FOA Number in order to view the Q&As
    - EERE will attempt to respond to a question within 3 business days, unless a similar Q&A has already been posted on the website
- Problems logging into EERE Exchange or uploading and submitting application documents with EERE Exchange? Email: EERE-ExchangeSupport@hq.doe.gov.
  - Include FOA name and number in subject line
- A digital copy of the slides will be posted on EERE Exchange following today’s webinar

READ SLIDE