

DE-FOA-0002682: Request for Information on Community-scale Resource and Energy Recovery from Waste Solutions

DATE: 2/1/2022

SUBJECT: Request for Information (RFI)

Description

The U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy (EERE) Bioenergy Technologies Office (BETO) is requesting information and feedback on priority areas relating to activities in the Conversion Research and Development (R&D) Program. Specifically, this RFI is focused on enabling community-scale resource and energy strategies from organic waste streams.

Background

Rural and urban communities face unique challenges when considering resource and energy opportunities. In many rural communities, animal manure and food waste represent the largest fractions (by mass and volume) of organic wastes that are generated. Some fraction of these streams can be used within the community as sources of fertilizer or compost. Conversely, in urban communities, municipal wastewater residuals, fats/oils/greases, and food waste are the dominant waste streams that require management. In most communities, regardless of community size, treatment, transportation, and disposal costs for these waste streams are increasing for a variety of reasons. Moreover, organic waste streams are known to cause a variety of economic, environmental, and social sustainability impacts.

Since 2015, BETO has invested in technologies that are capable of converting these organic waste streams into biofuels, bioproducts, and biopower. In recent years, emphasis has been placed on the development of technologies that are more economically viable at smaller scales (especially less than 5 dry tons of waste/day). BETO has also funded analysis efforts to quantify the availability and net resource potential for these streams and consider the economic tradeoffs for various approaches. In 2021, in conjunction with the National Renewable Energy Laboratory, a technical assistance program was launched to support communities in local decision making and to provide access to technical subject matter experts.

This is a Request for Information (RFI) only. EERE will not pay for information provided under this RFI and no project will be supported as a result of this RFI. This RFI is not accepting applications for financial assistance or financial incentives. EERE may or may not issue a Funding Opportunity Announcement (FOA) based on consideration of the input received from this RFI.

Purpose

The purpose of this RFI is to solicit feedback from industry, academia, research laboratories, government agencies, and other stakeholders on issues related to Community Programs for Organic Waste.

EERE is seeking to understand which of these economic, environmental, and social impacts are of highest priority to communities. EERE is also seeking additional information about how to make this program more effective and identify additional technical assistance needs that are most in demand by rural communities.

Responses to this RFI may address one or more of the following questions. Note that for the purposes of this RFI, BETO is particularly interested in the following organic waste streams:

- dairy manure
- swine manure
- food waste
- municipal wastewater residuals
- fats/oils/greases

This is solely a request for information and not a Funding Opportunity Announcement (FOA). EERE is not accepting applications.

Disclaimer and Important Notes

This RFI is not a Funding Opportunity Announcement (FOA); therefore, EERE is not accepting applications at this time. EERE may issue a FOA in the future based on or related to the content and responses to this RFI; however, EERE may also elect not to issue a FOA. There is no guarantee that a FOA will be issued as a result of this RFI. Responding to this RFI does not provide any advantage or disadvantage to potential applicants if EERE chooses to issue a FOA regarding the subject matter. Final details, including the anticipated award size, quantity, and timing of EERE funded awards, will be subject to Congressional appropriations and direction.

Any information obtained as a result of this RFI is intended to be used by the Government on a non-attribution basis for planning and strategy development; this RFI does not constitute a formal solicitation for proposals or abstracts. Your response to this notice will be treated as information only. EERE will review and consider all responses in its formulation of program strategies for the identified materials of interest that are the subject of this request. EERE will not provide reimbursement for costs incurred in responding to this RFI. Respondents are advised that EERE is under no obligation to acknowledge receipt of the information received or

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provide feedback to respondents with respect to any information submitted under this RFI. Responses to this RFI do not bind EERE to any further actions related to this topic.

Confidential Business Information

Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email, postal mail, or hand delivery two well-marked copies: one copy of the document marked "confidential" including all the information believed to be confidential, and one copy of the document marked "non-confidential" with the information believed to be confidential deleted. Submit these documents via email or on a CD, if feasible. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

Evaluation and Administration by Federal and Non-Federal Personnel

Federal employees are subject to the non-disclosure requirements of a criminal statute, the Trade Secrets Act, 18 USC 1905. The Government may seek the advice of qualified non-Federal personnel. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The respondents, by submitting their response, consent to EERE providing their response to non-Federal parties. Non-Federal parties given access to responses must be subject to an appropriate obligation of confidentiality prior to being given the access. Submissions may be reviewed by support contractors and private consultants.

Request for Information Questions

Priorities in Organic Waste Management

- 1. According to the <u>USDA's Rural-Urban Continuum Codes</u>, what Code (1-9) would best characterize your community? (See USDA Rural Energy Atlas Dataset)
- 2. What are the biggest problems your community faces in dealing with organic wastes (of all kinds)?
- 3. What are the priority organic waste streams that are most environmentally and economically challenging to manage in your community?
- 4. What are the current practices for handling the organic waste streams mentioned above? (e.g., landfilling, composting, anaerobic digestion)
- 5. What changes would you like to see in terms of organic waste management in your community?

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Impacts Associated with Organic Waste Streams in your Community

- 6. What are the priority environmental considerations associated with the wastes mentioned above? (e.g., methane emissions, nitrous oxide emissions, odors, pathogens, nitrogen runoff, disposal volumes, water impairments, land contamination)
 - a. What kinds of measures or metrics would be appropriate to track progress in these areas?
 - b. Are these environmental or health impacts measurable directly or are they more commonly modeled?
- 7. What are the priority social considerations associated with the wastes mentioned above? (e.g., facility siting, community ownership, social license, social acceptability, education/outreach)
- 8. Are there other impacts of particular concern associated with how organic wastes are handled in your community? If so, what are they?

Opportunities for BETO-funded Programs to Partner with Rural Communities

- 9. What type of BETO-funded assistance would be most impactful for dealing with the wastes mentioned above? Please provide specific examples if possible (e.g., financial assistance for_____, partnerships between____).
- 10. For those interested in financial or technical assistance regarding organic waste in your community, what stage of project development would best characterize your community status? (e.g., funding for detailed engineering/design, funding to perform testing of the equipment on existing waste streams, evaluating technology options)

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Request for Information Response Guidelines

Responses to this RFI must be submitted electronically to CommunityWasteRFI@ee.doe.gov no later than 5:00pm (ET) on March 11, 2022. Responses must be provided as attachments to an email. It is recommended that attachments with file sizes exceeding 25MB be compressed (i.e., zipped) to ensure message delivery. Responses must be provided as a Microsoft Word (.docx) attachment to the email, and no more than 6 pages in length, 12 point font, 1 inch margins. Only electronic responses will be accepted.

Please identify your answers by responding to a specific question or topic if applicable. Respondents may answer as many or as few questions as they wish.

EERE will not respond to individual submissions or publish publicly a compendium of responses. A response to this RFI will not be viewed as a binding commitment to develop or pursue the project or ideas discussed.

In addition to providing written responses to this RFI, respondents may request a 30-minute individual discussion with a BETO staff member regarding the content of their written responses to the RFI questions. Similarly, if a respondent is unable to submit written responses, or would otherwise prefer to do so, he/she may request a 30-minute individual discussion with a BETO staff member to verbally provide responses to the RFI questions. If a respondent wishes to participate in an individual discussion for either of these reasons, please submit your request to CommunityWasteRFI@ee.doe.gov and you will be contacted by a BETO staff member to schedule a time for the discussion. Requests for an individual discussion must be requested no later than 5:00pm (ET) on March 11, 2022.

Respondents are requested to provide the following information at the start of their response to this RFI:

- Company / institution name;
- Company / institution contact;
- Contact's address, phone number, and e-mail address.

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