

## Request for Information: Offshore Wind Social Science Research Needs DE-FOA-0002695

DATE: February 9, 2022  
SUBJECT: Request for Information (RFI)

### Description

The United States Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) Wind Energy Technologies Office (WETO) requests information on knowledge gaps and research needs related to community effects from offshore wind energy development. DOE will use responses to this Request for Information (RFI) to inform future activities and guide its research agenda. As a funder of United States research and development, DOE's interest in offshore wind social science research includes: (a) research topics that are unique to the United States and particular regions of the United States; and (b) research that could inform and significantly affect offshore wind siting and development, with an emphasis on activities through 2027. The topic areas, or response categories, in this RFI are: (1) priority social science research questions; (2) social and socioeconomic data needs; and (3) communication, data uses and access, and community planning tools research needs.

### Background

The Biden Administration aims to deploy 30 gigawatts of offshore wind energy by 2030 in an effort to promote the climate and economic benefits of offshore wind energy. As part of the broader clean energy transition, the Administration has also committed to delivering environmental quality union jobs, health, socioeconomic, and other benefits of clean energy throughout all communities, including historically disadvantaged communities. The growth of a domestic offshore wind industry including the development of a domestic supply chain, has the potential to support a just clean energy transition and promote job growth and infrastructure, but also has the potential to affect use of ocean space, viewsheds, sense of place and more. WETO seeks to better understand the potentially positive and negative effects of expanded offshore wind development on affected communities and workers, their economies, the marine environment, and other resources. Improved data, information and understanding will assist WETO in developing tools, processes, and siting solutions aimed at maximizing co-benefits across multiple dimensions from offshore wind energy development.

With only 42 megawatts (MW) of offshore wind currently deployed in the United States, but with tens of thousands more MW planned, there is a significant need to understand the social effects of this scale of development, and whether such effects are distributed in equitable ways. Peer-reviewed social science literature on the relationships between coastal communities and offshore wind development in the United States is relatively sparse due to the limited

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scope of development to date. That which does exist largely focuses on perceptions and concerns along the Eastern Seaboard and impacts of the Block Island Wind Farm off the coast of Rhode Island.<sup>1</sup> The limited scope of the literature, contrasted with the dramatic expansion of planned development, suggests a compelling need to expand foundational knowledge and social science research related to the effects of offshore wind energy development and supply chain expansion on affected communities. This RFI seeks input to help identify and prioritize key investment areas for such research.

WETO invests in research to address siting challenges and inform solutions as part of its research and development (R&D) portfolio. The goal is to facilitate responsible and sustainable clean energy deployment. Its R&D activities can spur innovation, lower wind energy costs and impacts, maximize the use of available wind resources, accelerate reliable and safe energy production, improve the number and quality of jobs, address social and economic effects of wind energy deployment, and provide data and technical assistance. DOE does not implement regulatory processes for wind energy. RFI responses should reflect this scope. DOE partners with Federal and state entities in the execution of its wind energy research program. The responses to this RFI may provide opportunities for partnership with other agencies to address topics beyond WETO's portfolio.

## **Purpose**

The purpose of this RFI is to solicit feedback from academia and researchers, state and local governments, labor unions, non-profits, industry, environmental justice organizations, community-based organizations, and others on research needs relating to the effects of offshore wind development and supply chain expansion on communities, in the context of a clean and just energy transition. WETO is specifically interested in information on priority research needs of offshore wind social science and socioeconomic research related to community effects of offshore wind energy development and supply chain expansion. This RFI will inform the identification of priority areas for future research investments, including tools, data, and research that spans different geographic and cultural scales, and across different timescales. WETO is also interested in how effects are distributed across communities, by spatial, cultural, economic, and other factors. The RFI also aims to expand knowledge of offshore wind social science research that may be needed to support tribes, workers, and disadvantaged groups, in alignment with the Justice40 Initiative, Executive Order 14008 committing to union jobs, and Executive Order 14005 supporting the expansion of domestic supply chains.

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<sup>1</sup> See Dwyer and Bidwell (2019) and Smythe, Bidwell and Tyler (2021) as examples of existing social science research that address these topics.

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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 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, 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

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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 Categories and Questions**

This RFI is composed of three categories: (1) Priority Social Science Research Questions; (2) Social and Socioeconomic Data Needs; and (3) Data Communication, Access, and Use in Community Planning Research Needs. WETO recognizes that these categories are closely related. They are divided in this RFI to ensure responses across perspectives on priority research needs, the identification of data types necessary to address research needs, and research that can inform technical assistance programing. Each category begins with a definition of the area of interest, followed by questions specific to the category. Respondents are encouraged to indicate the type and scale of community referenced in comments and contributions. Communities are understood to be social groups with shared identities such as fisheries communities or communities of poverty that may exist within larger communities— i.e., municipality, tribe, state. You may respond to as many or as few categories and questions within each category as you like.

### **Category 1: Priority Social Science Research Questions**

This category is broad in scope and requests information on the highest priority questions that social science research should address and try to answer between now and 2027 that are most relevant to United States offshore wind supply chain expansion and development. Respondents should frame responses in the form of actual *questions* believed to be most crucial to furthering the goal of responsible, sustainable deployment of wind energy offshore. Examples of potential research areas include: What development practices address ocean co-benefit concerns in relation to offshore wind, including non-monetary ones? What are some of the hidden impacts of offshore wind development that are critical to monitor? Include explanation of why these questions and research areas are high priority.

1. What are the highest priority social science research needs or specific research questions to be addressed by 2027?
2. What research is needed to understand the distribution and variation of effects across communities, and in relation to historically disadvantaged communities? Responses may articulate how community characteristics influence the distribution of these effects.
3. What research is needed to understand the connections between development practices and specific effects of offshore wind development on communities?

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- a. What effects of offshore wind development on communities should DOE seek to track over time? At what spatial or cultural scales should DOE focus its limited resources?
  - b. What research is needed to understand developer best practices and the extent of impacts they have on public perceptions and attitudes around development projects?
  - c. What research is needed to understand who within communities are most impacted by development practices, and how we identify who in the community could be an indicator of public opinion?
4. What research is needed on job quality and accessibility, workforce and unionization, diversity, and Science, Technology, Engineering, and Math (STEM) related to offshore wind energy, including the economic benefits or tradeoff considerations for a community?
  5. What research is needed to understand community, economic, and employment effects of associated infrastructure such as ports and cable landings, manufacturing, and supply chain development and the potential role of community planning in addressing these effects? Responses may articulate how community or geographic characteristics influence the distribution of these costs and benefits.
  6. How do you envision this research as being responsive to the President's Justice40 Initiative—a plan to deliver 40 percent of the overall benefits of climate investments to disadvantaged communities and inform equitable research, development, and deployment within DOE? Please provide specific actions and the type of benefits (e.g., employment, educational opportunities, etc.) that could be most useful to the targeted communities in response to the Justice40 Initiative.
  7. What relevant literature exists related to other coastal and ocean development that may help to address key gaps in foundational knowledge related to the effects of offshore wind energy development on communities? Please provide information on this research as part of your response. Literature should be specific to the United States but may include research focus areas with relevance for offshore wind, including coastal resilience, offshore oil and gas, aquaculture, national security, or marine spatial planning.

## **Category 2: Social and Socioeconomic Data Needs**

This category focuses on community and socioeconomic data and variables related to offshore wind development. This topic focuses on the need for better understanding of the kinds of data and variable types that are relevant to and informative of impact areas such as community perceptions of offshore wind. Responses may provide insights into data types critical for addressing priority research questions, as identified in Category 1. WETO is interested in

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foundational or baseline data and knowledge needed to support more informed development outcomes for communities and evaluate change in communities as a result of offshore wind development. Data types may come from empirical data, knowledge from lived experience that may be described as stories, or traditional and indigenous knowledge bases. Data types may include but are not limited to economy sector employment over time and tribal cultural resources.

1. What types of socioeconomic data and assessment are highest priority to inform future methods/practices of offshore wind development?
  - a. What research is needed to address data and information gaps related to the distribution of offshore wind development effects across communities?
2. What types of foundational data are needed to understand immediate and cumulative benefits and/or effects over time and/or variations in geography, culture, and scale?
  - a. What data types, including demographics, require further work to inform our understanding of the distribution and variation of effects across communities? Responses may articulate how community characteristics influence the distribution of these effects.
3. What data, approaches, or tools would be most impactful to inform social science research on co-location of ocean and coastal use, military activities, s and socioeconomic activities?
4. What data, tools, or modeling practices have previously been applied to understanding offshore wind social effects, and are critical to future offshore wind social science research? Are there existing data relevant to offshore wind that have not yet been used in this context?

### **Category 3: Communication, Data Uses and Access, and Community Planning Tools Research Needs**

This category requests information on social science research related to better understanding the means of effective communication and information sharing; high-priority data uses and access; and ways to improve community planning tools and public participation in decision-making processes. Responses will guide research that will inform and improve future technical assistance activities. This category includes but is not limited to responses related to offshore wind energy literacy, local and state level economic development planning, and consideration of the effects of offshore wind development on current and potential future users of coastal and ocean space.

1. What research on the effective communication of data and information would be most impactful for future technical assistance and communication opportunities?

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- a. What research is needed to understand the most important foundational information or data resource gaps, and their scale and impact, in communities regarding offshore wind and related supply chain development?
  - b. What research is needed to understand the communities most impacted by these knowledge and resource gaps, especially in consideration of historically disadvantaged communities? Please note as it relates to specific types of communities such as states, local governments, tribes, and/or public participants in your response.
  - c. What research is needed to understand the trusted sources for communities and what relationships are crucial for effective communication? For example, who may be most effective in sharing resources or information?
  - d. What research is needed to understand barriers to and enabling factors of local job creation, sustainable career-track opportunities, and higher unionization in the offshore wind industry and related supply chain?
2. What research is needed to increase use of data and information in ways that meet communities where they are for offshore wind development?
    - a. What research is needed to understand approaches or tools that are most impactful to improve the utility of information for community planning?
    - b. How may these approaches or tools increase engagement with, address, or neglect the interests and equities of different groups in offshore wind energy development? What specific community and workforce interests and equities could be addressed with increased data utility?
  3. What research is most important to understand the tools required, improve tool functionality, and increase access to tools for community planning for offshore wind energy, especially in consideration of historically disadvantaged groups?
    - a. What research is most critical to understand the impact of community offshore wind energy planning on perceptions and attitudes towards offshore wind development?
    - b. What research is needed to inform participatory community planning processes, (including knowledge sharing, community agreements, or other approaches)? What institutions, such as historically black colleges and universities, should be engaged in planning to reach diverse communities? Responses may address barriers to effective and diverse participation.
    - c. What are the most United States applicable innovative approaches for the offshore wind industry, potentially already used in other industries or internationally, for generating community benefits from offshore wind energy and supply chain development, beyond traditional financial compensation methods? If applicable, who needs to be involved in these community benefit

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approaches for it to be successful and how did it change public perceptions and attitudes around the project?

4. Recognizing the opportunity for research to inform future improvements in offshore wind energy technical assistance, what models, tools, and communication methods are most important to consider for improving current technical assistance programs or significant technical assistance gaps? How can these activities support the goals of Justice40?

## **Request for Information Response Guidelines**

Responses to this RFI must be submitted electronically to [weto\\_rfi2022@ee.doe.gov](mailto:weto_rfi2022@ee.doe.gov) no later than 5:00 pm (ET) on Friday, 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 10 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.

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

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

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