

Request for Information:
Distributed Energy Resource Interconnection Roadmap Draft

DATE: September 6, 2024
SUBJECT: Request for Information (RFI)

Description

This request for information (RFI) solicits public feedback on the draft Distributed Energy Resource Interconnection Roadmap prepared by the U.S. Department of Energy's Interconnection Innovation e-Xchange (i2X) program. This roadmap covers interconnection solutions for distributed energy resources (DERs) that interconnect with the distribution and sub-transmission systems only. A companion roadmap on [transmission interconnection](#) was published in April 2024. Feedback from the interconnection community of interest regarding the roadmap's content (e.g., challenges, solution sets, and key actions) will ensure the final version provides a comprehensive set of strategies to improve interconnection processes. The interconnection community of interest is diverse. It includes, but is not limited to, utilities, grid operators, regulators, state and local governments, interconnection customers, energy justice groups, nonprofits, clean energy developers, public interest groups, Tribes, and trade associations. Read the draft i2X Distributed Energy Resource Interconnection Roadmap.

Background

The U.S. electricity system is changing rapidly. An important driver of this change is the growing deployment of distributed energy resources (DERs). DERs include a diverse and evolving set of technologies that connect to the distribution or sub-transmission systems, such as distributed solar photovoltaics (PV), wind, and battery energy storage. To date, distributed PV growth has been the most dramatic. For example, between 2010 and 2023, the number of residential PV systems grew from 89,000 to 4.7 million, and the capacity of community solar installations grew from 1 gigawatt alternating current (GW_{ac}) to 7 GW_{ac}. The rapid growth in DERs has stressed interconnection processes at the distribution and sub-transmission system levels. Interconnection has emerged as a barrier to DER deployment. In some areas queue times to interconnect clean energy projects have been rising, delaying the deployment of new resources and jeopardizing state and local government renewable generation and electric vehicle (EV) charging infrastructure goals.

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.

To address these challenges, the U.S. Department of Energy (DOE) launched the [i2X program](#) in June 2022 to enable simpler, faster, and fairer interconnection of clean energy resources while enhancing the reliability, resilience, and security of the electric grid. One of the core activities of i2X is to develop a practical roadmap for interconnection based on input from the interconnection community. i2X convened diverse members of the interconnection community through a [series](#) of virtual public meetings that covered key issues, including cost allocation, queue management, data transparency, equity and energy justice, workforce, grid engineering practices, and EV charging. During these meetings, the i2X team facilitated open discussions to identify challenges, knowledge gaps, and practical short and long-term solutions to improve U.S. interconnection processes. This roadmap is, in part, informed by these meetings, and is a guide to key actions that the interconnection community can take within the next 5 years and beyond to implement solutions designed to address current DER interconnection challenges.

Purpose

The purpose of this RFI is to solicit feedback from the diverse interconnection community on the challenges and solutions outlined in the draft Distributed Energy Resource Interconnection Roadmap. This roadmap identifies solutions that can be implemented based on local, state, or regional needs and priorities. Given the significant variation in DER deployment levels, policies, regulatory structures, market conditions, and other factors nationwide, some solutions may work better in some electric service territories, states or regions than others. Some electric service territories have already adopted a subset of these solutions.

To address this variation of needs, the roadmap assigns a deployment level and a timeframe for which each interconnection solution is most appropriate. The roadmap is intended to serve as a guide to DER interconnection stakeholders and Tribes to evaluate and implement solutions for current and emerging interconnection challenges. The i2X team is especially interested in feedback on the feasibility of implementing these solutions in the proposed timelines.

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

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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 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.

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Request for Information Categories and Questions

Part 1: Respondent Type

1. What type of entity do you represent (e.g., utility, grid operator, interconnection customers, energy project developer, state or local government, energy justice advocacy group, trade association, regulator)?
2. What is your organization's involvement and interest in interconnection to the electricity distribution or sub-transmission systems, or both?

Part 2: Feedback on the Draft DER Interconnection Roadmap

1. Please provide feedback on the purpose of the roadmap. Is it missing any concepts?
2. Please provide feedback on the four goals of the roadmap. Are there any missing goals?
3. Please provide feedback on the proposed solutions and key actions in the roadmap. Are there any missing solutions or key actions? Are the timelines for implementing solutions correctly categorized (e.g., short-term, medium-term)?
4. What potential barriers do you foresee in executing the solutions, and how significant are they? Do you foresee any barriers specific to distributed storage, EV charging infrastructure, distributed wind, or other emerging DER technologies?
5. Are the measurable success targets in the draft roadmap sufficiently ambitious and attainable? Are there other important measurable success targets that should be tracked?
6. Are the activities, roles, and challenges of different actors sufficiently represented?
7. Does the roadmap adequately address the diversity, equity, and inclusion (DEI) aspects of DER interconnection? Please share which aspects, if any, of DEI are not adequately highlighted.
8. Which aspects of the interconnection process could benefit from artificial intelligence and machine learning (AI/ML) solutions, and what is the likely timeline for their implementation?
9. Does the roadmap include innovative ideas that could inspire fundamental changes to current DER interconnection processes? If not, what additional ideas do you recommend?
10. Please provide other feedback on the roadmap not addressed by the above questions.

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Request for Information Response Guidelines

Responses to this RFI must be submitted electronically to i2x@ee.doe.gov no later than 11:59pm (ET) on October 10, 2024. 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 15 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 name;
- Company / institution contact;
- Contact's address, phone number, and e-mail address.

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