

Solar Impacts on Wildlife and Ecosystems Request for Information

DATE: 9/13/2021
SUBJECT: Request for Information (RFI)

Description

The U.S. Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy (EERE) Solar Energy Technologies Office (SETO) is requesting information on the current practices related to siting large-scale solar energy plants and how stakeholders evaluate the impacts these plants may have on the surrounding environment, especially on wildlife.

Background

Solar energy is growing rapidly, largely due to falling costs: the levelized cost of energy from utility-scale solar fell [82%](#) between 2010 and 2020. According to the U.S. [Energy Information Agency](#), solar will make up 39% of new capacity installed in 2021, with an estimated 15.4 GW_{AC} of new installations. The Biden Administration has set a goal of a 100 percent decarbonized electricity sector by 2035. One pathway to meet this goal, as presented in the *Solar Futures Study*, would be to increase solar capacity from 76 GW_{AC} of installed capacity in 2020 to 1 TW_{AC} of installed capacity by 2035, which would require about 5.7 million acres of land. Although the land requirements are less than 0.3% of the contiguous U.S., minimizing impacts on wildlife and wildlife habitat – as well as maximizing the benefits – will be critical to meeting these climate goals.

Purpose

The purpose of this RFI is to solicit feedback from industry, academia, research laboratories, government agencies, and other stakeholders on issues related to siting strategies; measuring wildlife impacts and benefits; avoidance and mitigation measures; and data and other stakeholder needs. EERE is specifically interested in information on current practices and trends as well as identifying what data or resources would enable greater confidence in solar energy impact assessments. 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

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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 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 Categories and Questions

Category 1: Solar PV Trends and Siting

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1. What impacts and benefits of solar energy development on wildlife are well-understood? What impacts and benefits are not well-understood? How do poorly understood impacts and benefits affect solar project development?
2. Are there effective processes for encouraging or discouraging solar siting in certain locations on the basis of wildlife impacts?
3. Can non-traditional siting strategies (e.g., agrivoltaics) or sites (floating PV or contaminated lands) help reduce impacts or increase benefits for wildlife or habitat?
4. What questions related to wildlife at non-traditional sites still need further research?

Category 2: Species and Habitat Impacts

1. What species of concern, taxa, or significant natural communities are the most impacted by solar PV development in your geographic areas of interest? Why?
2. What types of data are being collected on the impact of solar development on particular species, taxa, or habitat? By whom?
3. Do you have access to data you would be willing to share on solar development impacts and benefits?
4. What species and habitat benefits can solar PV development provide?
 - a. What research is needed to better understand these benefits?
 - b. Do regulators take these benefits into account in the permitting processes? If so, how? If not, why not?
 - c. How should ecosystem services, like pollination, biological diversity, carbon sequestration, or erosion control, be considered in solar development?

Category 3: Avoidance, Mitigation, and Monitoring

1. What approaches or tools are used to avoid impacts on wildlife before a site is selected for solar development?
2. What mitigation measures can be employed to minimize impacts of solar PV development to species and natural communities in the states or regions in which you work?
3. How much onsite monitoring of species is conducted prior to construction? Post-construction? Is this monitoring voluntary or required? To what degree does before-after-control-impact (BACI) study data exist for solar energy sites?

Category 4: Resources Needed

1. What resources, such as best practices, guidelines, or tools, would make it easier to select and encourage lower-impact sites for solar development? What are the limits, if any, of existing tools, and how could they be improved or modified?

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2. What are the most important unanswered questions about the impacts on and benefits to wildlife from solar development?

Request for Information Response Guidelines

Responses to this RFI must be submitted electronically to saissolar@ee.doe.gov no later than 5:00pm (ET) on 9/30/2021. 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 20 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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