

**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION**



RECIPIENT: Great Plains Institute

STATE: MN

PROJECT TITLE: Designing & Deploying Solar for Community Ecosystem Benefits

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002605	DE-EE0010385	GFO-0010385-001	

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

A9 Information gathering, analysis, and dissemination

Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)

A11 Technical advice and assistance to organizations

Technical advice and planning assistance to international, national, state, and local organizations.

B3.1 Site characterization and environmental monitoring

Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources); (i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to the Great Plains Institute to conduct scientific field testing and modeling of ecosystem services at established solar sites, developing solar sites, and potential future solar sites.

The proposed project would consist of two Budget Periods (BPs). Between five and ten sites would be selected from a list of fourteen for sampling (as described below). In addition to sampling, a Stakeholder Advisory Committee (SAC) would be created, a website would be created, outreach activities would be carried out, Tribal representatives would be recruited, stakeholders would be identified and interviewed, and community questionnaires would be handed out.

The project team would carry out field sampling during BP1. A suite of well-established field sampling techniques would be used in order to collect data and are amenable to large-scale deployment across multiple sites simultaneously. Proposed sampling methods would include the following:

Soil moisture sampling:

- Soil sampling sensors (9.4 cm long) would be installed at two locations at each site at a depth of 15 to 30 cm beneath the solar array drip edge and in full sun areas between the arrays
- There would be a total of 12 sensors per site
- Sensors would be connected by insulated cables buried at a depth of 10 cm
- Data loggers connected to sensor cables would be mounted on 1 m high plastic masts located a meter downslope of the arrays
- The mast would be buried to a depth of no more than 15 cm

Precipitation measurements:

- Rain gauges would be mounted on the mast at a height of 1 m

Soil sample collection:

- 18 soil samples of about 100 grams of soil would be collected each year at depths of 15 and 30 cm from no more than four locations at each site
- Soil samples would be analyzed in the laboratory

After the completion of soil sampling, soil analyses would take place at University of Minnesota (Minneapolis, MN).

Due to the nature of the sampling and its negligible ground disturbance, DOE has determined that no adverse impacts to species of concern are to be expected as a result of the proposed activities at these locations.

The site locations are as follows:

- Solar Garden (Fort Collins, CO) – Ground mount solar installation controlled by Solarize Energy
- Eagle Point Power Plant (Medford, OR) – Community-scale solar installation controlled by Pine Gate Renewables
- Carter Farms (Plains, GA) – Community-scale solar installation controlled by Sol America
- Cascadilla Community Solar Farm (East Ithaca, NY) – Community-scale solar installation controlled by Distributed Asset Solutions
- Connexus Solar Farm (Ramsey, MN) – Community-scale solar installation controlled by Engie and Connexus Energy
- Sherco Solar Farm (Becker, MN) – Solar farm in development controlled by Xcel Energy
- Point Beach Solar Center (Two Rivers, WI) – Utility-scale solar installation controlled by NextEra Energy Resources
- Prairie Wolf (Kansas, IL) – Utility-scale solar installation controlled by National Grid Renewables
- Unnamed agricultural site (Beaver Township, MI) – Proposed solar farm currently in use as an agricultural field – controlled by National Grid Renewables
- Unnamed agricultural site (Lodi Township, MN) – Proposed solar farm currently in use as an agricultural field – controlled by National Grid Renewables
- Project Denn (Monticello, MN) – Community-scale solar installation controlled by U.S. Solar
- Project White Oak (Cohasset, MN) – Proposed utility-scale project currently a mix of forest and cleared areas – controlled by U.S. Solar
- Project Goodrich (Pilot Township, IL) – Community-scale solar installation controlled by U.S. Solar
- Duane Arnold Solar (Phase 1) (Linn County, IA) – Utility-scale solar installation under construction – controlled by NextEra Energy Resources

The proposed project would not involve the permanent modification of existing/planned facilities or any change in the use, mission, or operation of these facilities. There are no critical habitats, wetlands, or floodplains within the project areas. DOE also conducted a review of potential issues related to other resources of concern such as prime farmland and found no effects that would be expected to result from the proposed project activities.

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

If during project work cultural or archaeological artifacts are encountered, the recipient shall stop the site-based activities immediately and inform the DOE Project Officer of the finding. A Class III: Intensive Cultural Resources Inventory shall be required prior to re-commencing project work.

Notes:

Solar Energy Technologies Office (SETO)
NEPA review completed by Alex Colling on 3/27/2023.

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____



Electronically Signed By: **Andrew Montano**

NEPA Compliance Officer

Date: 3/29/2023

FIELD OFFICE MANAGER DETERMINATION

- ☒ Field Office Manager review not required
☐ Field Office Manager review required

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____

Field Office Manager

Date: _____