

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



RECIPIENT: The University of Vermont

STATE: VT

PROJECT TITLE : Expanding Solar Research and Generation for a Brighter Energy Future

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-EE0010141	GFO-0010141-001	

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:

- | | |
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| 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.) |
| B5.16 Solar photovoltaic systems | The installation, modification, operation, and removal of commercially available solar photovoltaic systems located on a building or other structure (such as rooftop, parking lot or facility, and mounted to signage, lighting, gates, or fences), or if located on land, generally comprising less than 10 acres within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices. |

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to administer Congressionally Directed Spending to The University of Vermont (UVM) to support the construction of a solar research core facility for UVM researchers. DOE would fund the installation of re-purposed solar photovoltaic (PV) equipment that was originally owned by Sandia National Laboratories (SNL) and has been donated to UVM. The proposed project is in partnership with the Burlington Electric Department (BED) and the PV facility would be sited at the BED McNeill Generating Station in Burlington, VT, roughly a mile from the UVM campus.

The project period of performance would consist of a single budget period of one year. The scope of the proposed project is limited to the installation of the donated SNL panels and would be part of a larger independent effort, which is already underway at UVM, to build a new solar research core facility that will allow multiple UVM faculty researchers, graduate students, and undergraduate students to undertake year-round solar research. The rebuilt SNL array would be part of this overall facility. Once constructed, UVM Physics and Materials Science programs research will focus on novel materials and processing for solar cells at the laboratory scale.

The end result of work performed under this project would be a functioning portion of the core facility solar array. The installation would only include the donated SNL panels at a rated capacity of 18 kW located along the southern and eastern-most edge of the previously developed BED facility. A remaining 32 kW permitted and racking capacity to be established in parallel along the north and west end of the BED facility is intended to be utilized under a different project and considered outside the scope of the proposed project because it would proceed independently of this DOE contribution. UVM and the BED would share in the cost and effort to decommission and appropriately re-use or recycle all SNL equipment upon conclusion of the useful life of the asset.

The overall effort has been in the preliminary research/permitting phase since fall of 2021. The technical scope of the DOE-funded project would start upon completion of the permitting phase and involve the design, procurement, and installation of the SNL panels and associated hardware at the UVM site, adding up to 18kW capacity to the planned 50 kW facility. The facility would be owned by UVM on land leased to them by BED. All relevant agreements between UVM and BED are in place. UVM has applied for and received their requisite Certificate of Public Good and Floodplain Permits from the State of Vermont. The disassembled existing SNL panel fleet (approximately 20 solar arrays) is currently being stored at the proposed construction site (111 Intervale Avenue, Burlington VT). No other materials would be required beyond commercially available wiring and racking, which would be purchased as needed for the proposed installation.

As part of the project's permitting terms and conditions, an archaeological survey is required to be performed prior to the installation. The site of the proposed installation is currently used for wood storage and the dimensions of the planned project are approximately 80 feet (ft) by 80 ft. BED would be moving a large brush pile to create space for the array, and once the brush pile is moved, the archeological survey would take place. At such time that the archeological survey is completed and approved, BED would erect a fence around the site. The proposed installation would consist of the fenced-in area with ballasted solar arrays. Shallow trenches would be dug for the array wiring and connection to the Burlington Electric grid. It is estimated that once the material and supplies (racking and wiring) are procured and delivered, construction would take about 6-8 weeks.

According to the U.S. Fish and Wildlife Service Endangered Species Program website (IPaC), there are no federally listed plant species expected to occur at the project area. IPaC identifies two endangered wildlife species (Northern Long-eared Bat and Monarch Butterfly) that are believed to occur in the region of the BED McNeill Generating Station; however, due to the siting elements, lack of critical habitat, restricted footprint on previously disturbed land, and short-term duration of the proposed installation, DOE has determined the proposed activities would have no effect on listed species. A migratory bird nesting survey shall be completed if project activities involving ground disturbance occur between March 15 and September 15. If nests or eggs are found, the area would be cordoned off with a proper buffer until nestlings fledge. DOE does not anticipate requiring additional cultural resource surveys beyond that already planned before the proposed installation in accordance with local regulations. Nonetheless, if during project work cultural or archaeological artifacts are encountered, the recipient would stop the site installation immediately and inform the DOE Project Officer of the finding.

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

A migratory bird nesting survey shall be completed if project activities involving ground disturbance occur between March 15 and September 15.

If during project work cultural or archaeological artifacts are encountered, the recipient shall stop the site installation 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)

This NEPA determination requires legal review of the tailored NEPA provision.

Review completed by Whitney Donoghue on 01/06/2023

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: 1/9/2023

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: _____