

PMC-ND

(1.08.09.13)

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



RECIPIENT: Board of Trustees of Southern Illinois University/ Southern Illinois University -
 Carbondale

STATE: IL

PROJECT TITLE: Southern Illinois University Solar + Storage

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
SEP ALRD PY19	DE-EE0007472	GFO-0007472-001	

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.)
- B1.31 Installation or relocation of machinery and equipment** Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that uses of the installed or relocated items are consistent with the general missions of the receiving structure. Covered actions include modifications to an existing building, within or contiguous to a previously disturbed or developed area, that are necessary for equipment installation and relocation. Such modifications would not appreciably increase the footprint or height of the existing building or have the potential to cause significant changes to the type and magnitude of environmental impacts.
- 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 provide funding to Southern Illinois University-Carbondale (SIUC) to install 470 solar photovoltaic (PV) panels and battery storage at SIUC's campus in Carbondale, IL. A number of communication modules would also be installed to provide backup cellular communication for first responders. Installation work would take approximately one year to complete, from the start of activities.

The PV panels would have a total installed generation capacity of 151.7 kW. They would be mounted on the rooftop of the SIU Engineering Complex. The battery storage unit would have a total storage capacity of 310 kWh. It would also be installed within the SIU Engineering Complex. These systems would be supported by a dedicated 3-phase 480V electricity breaker panel, which would use electricity generated by the PV system to power a communication, computing and control room in Engineering Building E, where it would be installed. The panel would also enable the PV system to supply electricity to the existing, campus electrical grid.

The control room itself would monitor and optimize the operation of the installed PV panels, energy storage units, and LTE (Long Term Evolution) communication modules (discussed below). Customized software would be installed in a control unit to monitor and administer all other components installed as part of this project. Point-to-point wireless communication links would be used to enable the transfer of data between the control room and the connected hardware components. Transmission nodes would be installed at the Engineering Complex, the Morris Library, and the Health Services Building

Several LTE communication modules would be installed on the rooftops of the Engineering Complex, the Morris Library, and the Student Health Services Building. The LTE communication modules would be used to provide backup cellular communication to first responders, including the SIU police department, the Carbondale police department, and the Carbondale fire department. Each communication module would consist of a micro LTE base station and a satellite internet access system. Additionally, the LTE base station at the Engineering Complex would include 10 solar PV panels and a 10 kWh energy storage unit. An LTE wireless sensor platform would also be developed, which could connect to the LTE communication network and be used to connect to various sensors installed in buildings across the campus to report on variables such as temperature, humidity, etc.

All project activities would be coordinated by SIUC. Off-the-shelf equipment would be procured from commercial providers. Installation work would be performed by qualified, third-party installation companies. No construction of new facilities, ground disturbing activities, or changes to the use, mission, or operation of existing facilities would be required for this project. Likewise, no additional permits, licenses, or authorizations would be required.

All installation work would be performed by qualified personnel, in compliance with established university health and safety policies. SIUC would observe all applicable Federal, state, and local health, safety, and environmental regulations.

National Register of Historic Places' (NRHP) data indicates that none of the buildings where equipment would be installed are near any listed historical buildings or places, or any places with the potential to be listed.

The U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database indicates that there are a number of listed species with the potential to be in the region of the project area. These include the Gray Bat, the Indiana Bat, the Northern Long-eared Bat, the Least Tern, and the Pallid Sturgeon. In all cases, the site location is either outside of the designated critical habitat of the species, or there is no critical habitat designated. Furthermore, due to the nature of the project activities (i.e. outdoor installation of equipment in previously disturbed urban areas currently in use by human populations), it is highly unlikely that any of these species would be affected. Consequently, DOE has determined there would be no effect to listed species under the Endangered Species Act, resulting from this project.

The Carbondale Hospital Heliport is approximately 1.24 miles north of the Engineering Complex, where the solar PV panels would be installed. Based on distance from the heliport and orientation of the solar PV panels, DOE determined that a solar glare analysis would not be required.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Weatherization & Intergovernmental Program – State Energy Program
This NEPA determination does not require a tailored NEPA Provision.
NEPA review completed by Jonathan Hartman, 01/31/2020

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: Casey Strickland** Date: **2/3/2020**
NEPA Compliance Officer

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: _____ Date: _____
Field Office Manager