

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** University of Utah**STATE:** UT**PROJECT****TITLE:**

SolarSTARTS: Solar-Assisted State-Aware and Resilient Infrastructure System

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001987	DE-EE0008775	GFO-0008775-001	GO8775

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.)

B3.6 Small-scale research and development, laboratory operations, and pilot projects Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide funding to University of Utah (UofU) to develop and demonstrate a novel automated resilience management system (ARMS) intended to enhance the situational awareness and flexibility of solar PV systems. The project would include the installation of multiple communication-based faulted circuit indicator (CFCI) devices on distribution circuits within PacifiCorp's service territory in the state of Utah.

Five integrated software platforms would be developed as part of the project:

- 1) a real time communication, control and outage data collection system,
- 2) a cyber physical outage data management (CP ODM) system,
- 3) a State Awareness for Resilience (StAR) System,
- 4) a Cyber Secure Resilient Control (CSRS) System, and
- 5) visualization engines for situational awareness and resilience.

The project would be completed over three Budget Periods (BPs), with a Go/No-Go Decision Point in between each BP. BP1 activities would focus largely on software development and project planning. Proposed activities would include the development of a user interface, resilience engines, and an outage data management system. Threat scenarios would also be developed, distributed energy resources (DER) performance potential would be analyzed, and implementation planning (e.g. planning for equipment installation) would be carried out. During BP2, all of the systems developed under BP1 would be optimized, a distribution resilience controller (DRC) would be developed (e.g. algorithm development), and testbeds for ARMS solution testing would be assembled. During BP2, an initial deployment of sensors and associated devices (e.g. CFCI devices) would also be carried out at predetermined locations on PacifiCorp's distribution system. In BP3, ARMS solution components would be tested/integrated and sensor deployment on PacifiCorp's distribution system would be completed.

All project activities would be overseen by UofU. Research and laboratory testing would be performed at existing,

purpose-built laboratory facilities operated by UofU and its project partners. These would include facilities at the campuses of UofU (Salt Lake City, UT) and Washington State University ('WSU' – Pullman, WA), as well as at the Idaho National Laboratory ('INL' – Idaho Falls, ID) and research facilities operated by Rocky Mountain Power (Salt Lake City, UT), a PacifiCorp business unit. Existing testbeds would be used for testing at UofU, INL, and WSU. Testing would require minor modifications to the testbeds (e.g. component modifications and software modifications). However, these would not require any modifications to the facilities housing the testbeds. Likewise, no ground disturbing activities or changes to the use, mission, or operation of existing facilities would be required for the completion of project activities. No additional permits or authorizations would be required.

All laboratory activities, including testbed operation would be performed in controlled settings, adhering to established university/laboratory health and safety policies and procedures. Protocols would include personnel training, the use of personal protective equipment, monitoring, and engineering controls. UofU and its project partners would adhere to all applicable Federal, state, and local health, safety, and environmental regulations.

In total, CFCI devices would be installed at fifty (50) different locations throughout PacifiCorp's distribution system. Installations would be limited to locations in Utah. All devices would be passive in nature (e.g. the devices would not generate power). Devices would be installed on existing distribution power lines operated by PacifiCorp. Device installation would not require any modifications to PacifiCorp's existing transmission equipment or ground disturbing events. All installation activities would be performed by qualified PacifiCorp personnel, who've undergone specialized training.

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

Any work proposed to be conducted at a federal facility may be subject to additional NEPA review by the cognizant federal official and must meet the applicable health and safety requirements of the facility.

Notes:

Solar Energy Technologies Office

This NEPA determination does not require a tailored NEPA Provision. Include the standard DOE laboratory language in the award.

NEPA review completed by Jonathan Hartman, 06/27/2019

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:  _____
NEPA Compliance Officer

Date: 7/1/2019

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: _____