

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** Electric Power Research Institute, Inc.**STATE:** TN

**PROJECT TITLE:** Enable BTM DER-provided Grid Services that Maximize Customer and Grid Benefits (ENGAGE)

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0002064	DE-EE0009021	GFO-0009021-001	GO9021

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 Electric Power Research Institute (EPRI) to develop and test an end-to-end aggregation and control architecture for Distributed Energy Resources (DER). The architecture would be designed to enable behind-the-meter (BTM) solar photovoltaic (PV) systems to be co-located with other DERs to provide both bulk power and distribution grid services. The project would be completed over three Budget Periods (BPs), with a Go/No-Go Decision Point in between each BP.

The project would seek to address a number of barriers that prevent BTM DERs from being used in the provisioning of grid services. Among them, the project would seek to address technological barriers through the development of a control strategy, performance reliability questions through power system simulations of control architectures, and economic barriers, through techno-economic simulations. Proposed project activities would include industry engagement (e.g. meetings, working groups, etc.), sector analysis/research, control architecture development (e.g. design of the architecture that coordinates the components of a distribution/transmission system that includes DERs), computer simulations (e.g. use case scenarios, transmission/distribution simulations), techno-economic analysis, hardware-in-the-loop (HIL) testing, and field testing of aggregator and local controller architecture.

All activities would be coordinated by EPRI. Laboratory/research activities would be performed at existing, purpose-built facilities. Computer modeling/simulations and data analysis would be performed by EPRI (Charlotte, NC), New York Power Authority ('NYPA' – White Plains, NY), University of Kentucky ('UK' – Lexington, KY) and Customized Energy Solutions (Endicott, NY). HIL testing would be performed at Gridscape Solutions using existing equipment at its laboratory facility in Fremont, CA.

Field testing would be performed at three existing fire stations in Fremont, CA. All three stations are currently equipped with solar PV emergency microgrid systems, energy storage systems, and microgrid controllers which would be utilized for simulation testing. The systems' local controllers (e.g. user interfaces) would be modified or replaced for testing and other sensor devices may be installed onto the equipment. Any hardware installations

occurring as part of this project would be small-scale, passive instrumentation (e.g. meters/monitoring equipment) meant to collect test data/information. The equipment would be installed onto preexisting equipment.

No physical modifications to existing facilities, construction of new facilities, ground disturbing activities, or changes to the use, mission, or operation of existing facilities would be required for any of the above activities. No additional permits, licenses, or authorizations would be required.

Project activities would largely be limited to computer analysis/modeling, with some minor hardware installations onto existing equipment. Gridsape Solutions regularly performs HIL testing, similar in nature to that included in the scope of this project. Established corporate health and safety policies and procedures would be adhered to when performing this testing, installation work, or any other project activities. EPRI and its project partners would observe all applicable Federal, state, and local health, safety, and environmental regulations.

## NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Solar Energy Technologies Office

This NEPA determination does not require a tailored NEPA Provision.

NEPA review completed by Jonathan Hartman, 02/13/2020

## 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:



Casey Strickland

NEPA Compliance Officer

Date: 2/14/2020

## 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: \_\_\_\_\_