

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** San Diego Gas & Electric Company**STATE:** CA**PROJECT TITLE:** Grid Resiliency with a 100% Renewable Microgrid

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002064	DE-EE0009027	GFO-0009027-001	

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.)

B5.15 Small-scale

renewable energy research and development and pilot projects Small-scale renewable energy research and development projects and small-scale pilot projects, provided that the projects are located 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 is proposing to provide federal funding to San Diego Gas & Electric Company (SDG&E) for the addition of advanced grid-forming inverters and other control features to the Borrego Springs Microgrid (San Diego County, CA) in order to field validate new microgrid technologies. Specifically, the project would be focused on developing and deploying algorithms that enable distributed energy resources (DERs) to contribute to grid stability and resilience by establishing frequency and maintaining voltage magnitude during transient conditions, especially during microgrid islanding.

The types of activities associated with the proposed project would include data analysis, computer modeling, preliminary engineering/design, laboratory research (consisting of hardware-in-loop performance simulations), and field testing of software and equipment. Project activities would also include the retrofitting and deployment of solar photovoltaic inverters, a grid-forming battery inverter, and an advanced grid-forming battery energy storage system at SDG&E facilities. The final field test would utilize the retrofitted equipment in conjunction with the developed algorithms in an attempt to temporarily "island" the Borrego Springs Microgrid with 100% renewable resources and demonstrate back-up without fossil fuel generators.

Modeling and simulation of microgrid controls using data from Borrego Springs would be conducted by the Recipient at their dedicated Integrated Test Facility (Escondido, CA) as well as the National Renewable Energy Laboratory (NREL; Golden, CO). All field tests and equipment retrofits would be performed at the previously developed SDG&E Distribution Substation and adjacent microgrid yard located in Borrego Springs. This site is currently a functional part of SDG&E's grid and incorporates all of SDG&E's existing electrical utility assets in the town of Borrego Springs. Because the facility was purpose-built for the type of activities being proposed, which would not require or produce any new materials or equipment beyond updated hardware, no adverse impacts to sensitive resources are expected as a result of project work. No change in the use or mission of existing facilities would arise out of this effort. SDG&E has all applicable permits in place, and would not need additional permits for the proposed activities.

Any work proposed to be conducted at a DOE laboratory may be subject to additional NEPA review by the cognizant DOE NEPA Compliance Officer for the specific DOE laboratory prior to initiating such work. Further, any work conducted at a DOE laboratory must meet the laboratory's health and safety requirements.

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 Whitney Doss Donoghue, 3/9/2020

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: Kristin Kerwin

NEPA Compliance Officer

Date: 3/10/2020

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: