

PMC-ND

(1.08.09.13)

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



RECIPIENT: The Research Foundation for the State University of New York at Binghamton University **STATE:** NY

PROJECT TITLE: Asynchronous Distributed and Adaptive Parameter Tuning (ADAPT) for Hybrid PV Plants

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002243	DE-EE0009341	GFO-0009341-001	GO9341

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 funding to the Research Foundation for the State University of New York at Binghamton University (SUNY Binghamton) in support of a project that would develop a two-stage hybrid PV plant control framework that would enable the coordination of multiple hybrid photovoltaic (PV) plants with generation uncertainty and enhance grid stability through grid-forming inverter controls.

Project activities would include software development (Tasks 1-3), real-time simulations focused on validating scalability (Task 4), and a field validation effort (Task 5). SUNY Binghamton, SUNY Stony Brook and the National Renewable Energy Laboratory would perform design and computer simulation activities. The New York Power Authority would perform the real-time simulation will focus on validating the scalability of the proposed technology with multiple hybrid PV plants at their Advanced Grid Innovation Laboratory for Energy. And, the field validation effort would be completed at the 1 MW hybrid PV facility at the Northeast Solar Energy Research Center in Brookhaven National Laboratory (BNL).

The field validation task would involve retrofitting a solar facility at the Northeast Solar Energy Research Center in BNL. Grid-forming inverters embedded with the proposed controls will be installed to validate the hybrid PV plant functions. This would require the modification and operation of high voltage power devices. BNL operations and safety committees would be engaged in the process to ensure that existing safety policies and procedures would be followed, including safety training, proper protective equipment, engineering controls, and monitoring.

All activities would occur in dedicated, purpose built facilities. There would be no changes in the use, mission, or overall operation of existing facilities as part of this project. DOE does not anticipate that adverse impacts to any resources of concern would result from this project.

This NEPA determination applies to DOE's proposed action of providing financial assistance in support of this

research and development project. 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.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Solar Energy Technologies Office

This NEPA determination does not require a tailored NEPA provision.

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:



Kristin Kerwin

NEPA Compliance Officer

Date: 3/4/2021

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: