

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** NREL**STATE:** CO

PROJECT TITLE: NREL-21-007 PEGI Platform - Flatirons Campus

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	NREL-21-007	GO28308

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's (DOE) National Renewable Energy Laboratory (NREL) is proposing to build the research capabilities needed to evaluate the integration, operation, control, protection, stability, and general requirements of power grids containing large shares of power electronics-based generators such as wind, solar photovoltaic (PV), and energy storage systems. The proposed project would include the design, procurement, and installation of the Power Electronic Grid Interface (PEGI) Platform infrastructure.

Proposed equipment and infrastructure installation activities include the following:

2MW synchronous generator and switch gear: The generator would be installed inside the 2.5MW dynamometer, along with an electrical connection located in aboveground conduit/raceway on the north side of the building. Switch gear would be installed on a new precast concrete pad.

Medium Voltage Impedance network: This equipment would be installed on a new concrete pad (approximately 42' long by 10' wide by 1' deep), located in the new CGI-2 yard. Trenches with conduits would be installed running between pieces of equipment.

2MVA inverter: The inverter would initially be placed adjacent to Grid Integration Research Pad 5 on a new precast concrete slab sitting on new, additional compacted road base. Conduits and/or raceways would be installed to connect to hardware already installed on Pad 5.

Device under test: Future test devices (advanced PV inverter technologies) would be installed on Grid Integration Research Pad 2.

Excavation would be done using a backhoe or excavator. Precast pads would be installed using a crane or forklift. A new pad would be poured for the Medium Voltage Impedance Network. Waste concrete and dirt/aggregate would be

recycled or reused offsite. Concrete washout would occur offsite or EcoPans would be used to collect and remove concrete washout material from the site.

Construction laydown and temporary materials storage would be located adjacent to the project area. Any vegetated areas disturbed during construction would be restored (grading, seeding, and mulching, as needed). Total disturbance would be less than one acre. Should one acre be exceeded, coverage under the EPA construction stormwater general permit would be obtained.

Construction would likely start in July 2021, and delivery and installation of equipment would likely occur during Fall of 2021. Should work be conducted from March 15 – September 15, nesting bird surveys would be conducted prior to starting work.

Workers could potentially be exposed to physical and electrical hazards during the course of the project. Activities with potential physical hazards could include exposure to silica dust, heavy lifting, and use of hand and power tools, vehicles, and other equipment. Activities with potential electrical hazards would include making required electrical connections. Existing subcontractor corporate health and safety policies and procedures would be followed including employee training, proper protective equipment, engineering controls, and monitoring. All work would be conducted in accordance with established written procedures or authorized in a Safe Work Permit.

Potential direct impacts of the installation include ground disturbance, erosion/stormwater impacts, and air emissions. A de minimis amount of criteria air pollutants and greenhouse gas emissions would be generated from construction equipment and work trucks as a result of the project. Work would meet the laboratory's construction stormwater program requirements and appropriate erosion control measures would be deployed and maintained during and after the project, as needed. The contractor would follow NREL's specifications to limit air emissions from the construction site.

There are no anticipated indirect impacts of installation or operation activities.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

NREL

Should work be conducted from March 15 – September 15, nesting bird surveys would be conducted prior to starting work.

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** _____ Date: 4/5/2021
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