

PMC-ND

(1.08.09.13)

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



RECIPIENT: GE Research

STATE: NY

PROJECT TITLE: High Efficiency Ultra-Light Superconducting Generator (SCG) for Offshore Wind

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001981	DE-EE0008787	GFO-0008787-002	GO8787

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.)

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to GE Research (GER) to design, fabricate, and test a high efficiency ultra-light superconducting generator (SCG) for use in offshore wind applications.

The project would be completed over three Budget Periods (BPs), with a Go/No-Go Decision Point in between each BP. DOE completed one previous NEPA determination covering BP1. (GFO-0008787.001; CX A9, 08/14/2019) BP 1 was limited to initial design work.

This NEPA Determination will only review BP2 activities, which would include final design and feasibility of the proposed generator, as well as procurement of some long lead time items. In BP2 GER would develop a detailed design of the SCG, develop manufacturing, assembly, and risk reduction plans, and would analyze and document the benefits of utilization of a SCG versus the traditional permanent magnet generator. GER would complete a supply chain evaluation and purchase long lead time items necessary for prototype fabrication. Purchase of these items would be required in order to not delay the completion of BP3 if the project moves forward. No testing, fabrication, or assembly will be conducted with the purchased long lead time items. All design work would be conducted by GER at their offices. Economic analysis work would be conducted by the National Renewable Energy Laboratory in Golden, CO.

All work conducted in BP2 would be limited to procurement, as well as information gathering and analysis. BP 3 work would include procurement, fabrication, assembly, and testing of the proposed SCG, including potential field testing at an unidentified location. There is not enough information available at this time to meaningfully evaluate BP3 and thus it is restricted pending further NEPA review.

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 conditional NEPA determination.

The NEPA Determination applies to the following Topic Areas, Budget Periods, and/or tasks:

Budget Period 1
Budget Period 2

The NEPA Determination does not apply to the following Topic Area, Budget Periods, and/or tasks:

Budget Period 3

Notes:

Wind Energy Technology Office

This NEPA determination does require a tailored NEPA provision.

Review completed by Roak Parker, 07/13/2021

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.

A portion of the proposed action is categorically excluded from further NEPA review. The NEPA Provision identifies Topic Areas, Budget Periods, tasks, and/or subtasks that are subject to additional NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:



NEPA Compliance Officer

Date: 7/14/2021

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: