

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](#)

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
<a href="#">DE-FOA-0001981</a>	<a href="#">DE-EE0008787</a>	<a href="#">GFO-0008787-001</a>	

**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** (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 BP2 and BP3. This NEPA Determination will only review BP1 activities, which would include the development of a concept model of the generator. Final design, prototype fabrication, and testing would all occur in BP2 and 3. These activities would be fully defined upon completion of the concept modeling to be completed in BP1 and would be dependent on BP1 task completion. Because BP2 and BP3 tasks are not fully defined, there is not enough information available to meaningfully complete NEPA review on these follow-on activities. Accordingly, all BP2 and BP3 tasks are restricted until further NEPA review is completed. Additional NEPA review will be completed once all relevant information has been provided by the Recipient.

In BP1 GER would develop a preliminary conceptual design for the SCG as well as a preliminary conceptual design of a permanent magnet generator that could be used as a comparison to the SCG. Work would include identification of product requirements, computer analysis and simulation, project management and economic analysis. All design and modeling work would be conducted by GER at their offices. Economic analysis work would be conducted by the National Renewable Energy Lab in Golden, CO.

All work in BP1 would be limited to information gathering, computer modeling, conceptual design, and data analysis.

**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](#)**

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

Budget Period 2

Budget Period 3

Include the following condition in the financial assistance agreement:

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.

Notes:

This NEPA determination does require a tailored NEPA provision.  
Please include the standard DOE laboratory language in the award.  
Water Power Program NEPA review completed by Roak Parker 8.13.19

**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:



Casey Strickland

NEPA Compliance Officer

Date:

8/14/2019

**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: