

PMC-ND
(1.08.09.13)

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

**RECIPIENT:** WEG Electric Corp**STATE:** VT

PROJECT TITLE: ADVANCED NEXT GENERATION HIGH EFFICIENCY LIGHTWEIGHT WIND TURBINE GENERATOR

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE FOA 0001981	DE-EE0008785	GFO-0008785-001	

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.)

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide funding to WEG Electric Corporation (WEC) to design, fabricate, and test a novel generator for incorporation into an existing WEC wind turbine technology. The generator would be developed in such a way as to reduce system costs and improve performance efficiency, compared to existing technologies. 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 focus on 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.

Proposed BP1 activities would be limited to literature review, data analysis, computer modeling, conceptual design, and paper studies. Specific tasks would include the following:

Task 1: Project Management -- Project management work would be performed throughout the life of the project. At the outset of BP1 a project management plan, project schedule, and data management plan would all be developed.

Task 2: System Engineering BP1 – Preliminary design work would be performed as part of this task. This would include initial design modeling for two generator concepts, the completion of a risk assessment, down-selection to a single generator configuration, and performance of a levelized cost of energy analysis.

Task 3: Generator Preliminary Design – Once a generator concept has been down-selected, a preliminary design of the generator model would be completed. Task work would include development of component specifications, drawings, active materials summary, and systems designs.

All activities would be performed at existing, purpose-built office facilities operated by WEC in Duluth, GA and by its project partners United Technologies Research Center (UTRC) in East Hartford, CT.

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](#)

Notes:

[Wind Energy Technologies Office](#)

[This NEPA determination requires a tailored NEPA Provision.](#)

[NEPA review completed by Jonathan Hartman, 07/10/2019](#)

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: 7/12/2019

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: _____