PMC-ND
(1.08.09.13)

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

RECIPIENT: General Electric Company **STATE:** NY

PROJECT TITLE: Blade Shipping Joint for Simple Assembly

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001214	DE-EE0007259	GFO-0007259-001	

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), 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 (DOE) is proposing to provide federal funding to General Electric Co. (GE) to develop a jointed wind turbine blade that can be transported to projects across the U.S. and assembled at lower cost than a comparable single-piece wind turbine blade.

The proposed project activities would include cost-value analyses, market evaluation, and stakeholder identification as well as the design, fabrication, and in-lab testing of various components of the jointed turbine blade. Project management would be overseen by GE from their offices in Schenectady, NY. Data analysis would also be completed by GE from their offices in Greenville, SC.

Component design, tooling, and fabrication would be completed by TPI Composites at their industrial manufacturing facility in Warren, Rhode Island. Additional fabrication and lab testing of the components would be undertaken by GE at their Manufacturing facility in Greenville, SC and the National Renewable Energy Lab (NREL) in Golden, CO. The facilities in which work would occur are purpose-built for the type of activities being proposed; therefore, no adverse impacts to sensitive resources are expected as a result of the proposed project. No change in the use, mission or operation of existing facilities would arise out of this effort. The facilities have all applicable permits in place, and would not need additional permits for the proposed activities.

In-lab fabrication and testing would involve mock-ups aimed at demonstrating and assessing the manufacturability of design concepts and the feasibility of handling, transporting, and assembling the two blade pieces. A 21.5m blade mock-up would be used as a vehicle for testing various modified sub-articles including the lightning protection system, fabrication materials, connection architecture, and joint split-line sub-articles for wear, shear, clashing, rubbing, erosion and lightning attachment. All sub-articles will be tested with extreme and cyclic loading profiles to confirm structural integrity without premature failure.

The proposed project would involve the use and handling of PVC foam cores, Balsa wood, Biax cloth, two-part polyester resins, isopropyl alcohol and acetone. All such handling would occur in-lab, and personnel would use proper handling and disposal practices. All hazardous materials would be managed in accordance with federal, state, and

local environmental regulations. Existing health and safety policies and procedures would be followed including employee training, personal protective equipment, controls and monitoring, and internal assessments.

Activities associated with the proposed project would generate rags, brushes and other resin and epoxy application hardware as both non-hazardous and hazardous waste. Components or hardware with cured resins, epoxies and adhesives would be treated as non-hazardous waste while components or hardware with uncured resin, epoxy and adhesive components or with solvent contamination would be treated as hazardous waste. Both non-hazardous and hazardous wastes would be transported and disposed of or recycled through only state- and federal-approved, third-party vendors. No siting, construction or major expansion of waste storage, disposal, recovery, or treatment actions/facilities would be required.

Any work proposed to be conducted at a DOE laboratory may be subject to additional NEPA review by the cognizant DOE NEPA Compliance Officer for the specific DOE laboratory prior to initiating such work. Further, any work conducted at a DOE laboratory must meet the laboratory's health and safety requirements.

Based on review of the project information and the above analysis, DOE has determined the proposed project would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with actions contained in DOE categorical exclusion A9 "information gathering, analysis and dissemination," and B3.6 "small-scale research and development, laboratory operations and pilot projects" and is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If the Recipient intends to make changes to the scope or objective of this project, the Recipient is required to contact the Project Officer, identified in Block 15 of the Assistance Agreement before proceeding. The Recipient must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved. If the Recipient moves forward with activities that are not authorized for Federal funding by the DOE Contracting Officer in advance of a final NEPA decision, the Recipient is doing so at risk of not receiving Federal funding and such costs may not be recognized as allowable cost share.

Insert the following language in the award:

You are required to:
Any work proposed to be conducted at a DOE laboratory may be subject to additional NEPA review by the cognizant DOE NEPA Compliance Officer for the specific DOE laboratory prior to initiating such work. Further, any work conducted at a DOE laboratory must meet the laboratory's health and safety requirements.

Note to Specialist :

Wind power
This NEPA determination requires a tailored NEPA provision.
Review completed by Rebecca McCord on 1/28/2016

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By: Kristin Kerwin Date: 2/2/2016

NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :