

PMC-FF2a

(2.04.02)

**U.S. DEPARTMENT OF ENERGY  
EERE PROJECT MANAGEMENT CENTER  
NEPA DETERMINATION**



RECIPIENT: University of Maine

STATE: ME

**PROJECT TITLE :** Feasibility of Thermoplastic Composite Blades

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-EE0003275	DE-EE0003275	GFO-10-406	0

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:

- B3.6** Siting, construction (or modification), operation, and decommissioning of facilities for indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis); small-scale research and development projects; and small-scale pilot projects (generally less than two years) conducted to verify a concept before demonstration actions. Construction (or modification) will be within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible).
- A9** Information gathering (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.

## Rational for determination:

The University of Maine proposes to use federal funds to determine the feasibility of using thermoplastic polymer composites to manufacture wind turbine blades. Current practices for manufacturing wind turbine blades use thermoset matrices that are time consuming and labor intensive.

This project will involve laboratory characterization of different thermoplastic composite systems for wind turbines; evaluate potential manufacturing methods for thermoplastic composite blades; evaluate potential automation technologies to be used in the manufacturing of thermoplastic composite blades; project management and reporting.

This project will take place indoors in a research laboratory. An R & D questionnaire has been submitted as well as a safety plan that thoroughly addresses chemical and safety handling protocols.

This project consists of laboratory characterization and research and development within existing facilities; therefore a CX A9 & B3.6 will apply.

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

None Given.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature:

  
NEPA Compliance Officer

Date:

5/25/10

**FIELD OFFICE MANAGER DETERMINATION**