

PMC-ND

(1.08.09.13)

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



RECIPIENT: Boeing Research and Technology

STATE: WA

PROJECT TITLE: Energy Efficient Thermoplastic Composite Manufacturing

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000560	DE-EE0005780	GFO-0005780-001	GO5780

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.)
- B5.1 Actions to conserve energy or water** (a) Actions to conserve energy or water, demonstrate potential energy or water conservation, and promote energy efficiency that would not have the potential to cause significant changes in the indoor or outdoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, manufacturers, and designers), organizations (such as utilities), and governments (such as state, local, and tribal). Covered actions include, but are not limited to weatherization (such as insulation and replacing windows and doors); programmed lowering of thermostat settings; placement of timers on hot water heaters; installation or replacement of energy efficient lighting, low-flow plumbing fixtures (such as faucets, toilets, and showerheads), heating, ventilation, and air conditioning systems, and appliances; installation of drip-irrigation systems; improvements in generator efficiency and appliance efficiency ratings; efficiency improvements for vehicles and transportation (such as fleet changeout); power storage (such as flywheels and batteries, generally less than 10 megawatt equivalent); transportation management systems (such as traffic signal control systems, car navigation, speed cameras, and automatic plate number recognition); development of energy-efficient manufacturing, industrial, or building practices; and small-scale energy efficiency and conservation research and development and small-scale pilot projects. Covered actions include building renovations or new structures, provided that they occur in a previously disturbed or developed area. Covered actions could involve commercial, residential, agricultural, academic, institutional, or industrial sectors. Covered actions do not include rulemakings, standard-settings, or proposed DOE legislation, except for those actions listed in B5.1(b) of this appendix. (b) Covered actions include rulemakings that establish energy conservation standards for consumer products and industrial equipment, provided that the actions would not: (1) have the potential to cause a significant change in manufacturing infrastructure (such as construction of new manufacturing plants with considerable associated ground disturbance); (2) involve significant unresolved conflicts concerning alternative uses of available resources (such as rare or limited raw materials); (3) have the potential to result in a significant increase in the disposal of materials posing significant risks to human health and the environment (such as RCRA hazardous wastes); or (4) have the potential to cause a significant increase in energy consumption in a state or region.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Boeing Research and Technology to demonstrate and document the energy efficiency plus the technical and economic viability of induction consolidation and joining of full-scale integrated thermoplastic composite structures for aerospace application.

Proposed project activities include design, development, fabrication and testing of tooling and demonstration of the lay-up and consolidation of large integrated thermoplastic composite aerospace structures. The thermoplastic composite lay-up activities would take place at the Boeing Development Center in Seattle, WA. The subsequent consolidation of these lay-

ups would be performed at the AjaxTOCCOMagnethermic (ATM) Developmental Center in Sterling Heights, MI and at the Temper, Inc. Manufacturing Facility in Cedar Springs, MI. Equipment testing would be conducted in factory settings at all locations. All proposed activities consist of design, data analysis, and demonstration-scale industrial manufacturing processes and would take place at existing facilities. Potential hazards include exposure to lasers and induction heating coils which produce magnetic fields and loud noise. Existing corporate health and safety policies and procedures would be followed including employee training, proper protective equipment, engineering controls, monitoring, and internal assessments. No hazardous waste would be produced and emissions would consist of water vapor from cooling towers. All facilities are designed for this type of work; therefore, no modifications or new permits, additional licenses and/or authorizations would be necessary.

Based on a review of the project information and the above analysis, DOE has determined that the proposed project would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined that this project is consistent with actions outlined in DOE categorical exclusion A9 "Information gathering" and B5.1 "development of energy-efficient manufacturing, industrial, or building practices" and is therefore 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 you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

Advanced Manufacturing Office
This NEPA Determination does NOT require a tailored NEPA provision.
NEPA review completed by Logan Sholar, 4/30/15

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:

Kristin Ker
NEPA Compliance Officer

Date:

5/1/2015

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 :

Field Office Manager's Signature:

Field Office Manager

Date:
