

PMC-ND
 (1/08/09/13)

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



RECIPIENT: United Technologies Research Center

STATE: CT

PROJECT TITLE : High Thermal Conductivity Polymer Composites for Low Cost Plastic Heat Exchangers

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000560	DE-EE0005775	GFO-0005775-001	G05775

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 United Technologies Research Center (UTRC) to develop a robust review of materials for the advanced manufacturing of industrial and commercial, non-metallic heat exchangers.

Activities associated with the proposed project would include survey of published literature and expert opinions on high-thermal-conductivity, composite, polymer materials; development, fabrication and testing of polymer composite samples; and modeling and design activities. Development, fabrication and testing activities would take place at the University of Massachusetts (UMass) in Lowell, MA and at UTRC's research and development facility in East Hartford, CT. All other associated activities would be conducted solely at UTRC's facility in CT. All research and development activities would take place in existing facilities designed for this type of research; therefore, no modifications, new permits, additional licenses and/or authorizations would be necessary.

The project will involve the use and handling of industrial solvents in the material preparation. All such handling would occur in dedicated labs under well-ventilated conditions and with the use of appropriate personal protection equipment. All hazardous materials would be managed in accordance with federal, state, and local environmental regulations. The project could potentially generate small amounts of hazardous waste that would be disposed of according to UTRC's and UMass's disposal protocols and existing licenses and authorizations. No siting, construction or major expansion of waste storage, disposal, recovery, or treatment actions/facilities would be required.

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 that this project is consistent with actions outlined 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 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.
Review completed by Rebecca McCord, 01/15/2015

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By Lori Gray *Lori Gray* Date: 1/15/2015
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 :

Field Office Manager's Signature: _____ Date: _____
Field Office Manager