

PMC-ND

(1.08.09.13)

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



RECIPIENT: Industrial Science & Technology Network, Inc.

STATE: PA

PROJECT**TITLE :**

A new generation of building insulation by foaming polymer blend materials with CO2

Funding Opportunity Announcement Number
DE-FOA-0000823

Procurement Instrument Number
DE-EE0006349

NEPA Control Number
GFO-0006349-001

CID Number
GO6349

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 Industrial Science & Technology Network, Inc. (ISTN) to research and develop an environmentally friendlier building insulation material with superior performance (R-9~10 per inch) and cost competitiveness on a per R-value basis. ISTN technology would include utilization of CO2 in place of HFC as the blowing agent, incorporate polymer blends and new composites in place of traditional polystyrene, and introduce secondary nanocomposites to further boost insulation value.

All research and development activities would be small-scale and occur within laboratory environments. Activities would include material and process design, computer modeling, laboratory-scale research and development and product testing. ISTN would subcontract some testing and analysis work to an industry-related insulation manufacturing vendor. ISTN, an advanced innovation company specializing in the development of nanotechnology-enabled products, has an existing advance research and development laboratory facility which is located at 1200 Corporate Blvd., Lancaster, Pennsylvania. ISTN would work with nanoscale materials (polymer-clay nanocomposites) during this project. ISTN has strict guidelines, practices and protocols in place for facility and laboratory safety, risk management, chemical handling and waste disposal and complies with standard laboratory environmental, health and safety procedures. All handling and disposal of gases, chemicals, effluents and hazardous wastes comply with appropriate regulations. All standard safety equipment and procedures are in place. The facility operates under all applicable permits to conduct laboratory research and development and would not need additional permits for the proposed activities.

Based on review of the project information and the above analysis, DOE has determined the proposed laboratory based research and development activities 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 exclusions 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 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 :

This NEPA Determination does not require a tailored NEPA provision.

Obadiah Broughton 8/28/2013

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By: Lori Gray *Lori Gray* Date: 8/29/2013
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