PMC-EF2a
(2.04.02)

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

RECIPIENT: EESI **STATE:** TN

PROJECT TITLE : Tennessee Energy Efficient Schools Initiative Ground Source Heat Pump

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-EE0000116	DE-EE0003007	GFO-0003007-003	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:

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.

B5.1 Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

Tennessee Energy Efficient Schools Initiative GSHP Program proposes to install a series of Ground Source Heat Pumps which would service up to five schools. Originally, four schools were selected for participation (Brainerd High School, South Lawrence Elementary, Lawrence Public High School, and Bolivar High School). A fifth school (Middleton High School) has been selected for participation in the project. Phase 1 for Brainerd, South Lawrence, Lawrence Public, and Bolivar was approved by GFO-10-294 on March 23, 2010. Phase 2 and 3 for two of the five schools (South Lawrence and Lawrence Public) were approved by GFO-0003007-002 on June 28, 2011. This NEPA Determination is specific to Phase 1 for Middleton High School and to Phase 2 and 3 for Bolivar Central High School only.

Middleton High School
Phase 1 for Middleton High School would consist of feasibility studies and conceptual engineering design work.

Bolivar Central High School
Phase 2 of the project includes the installation of boreholes for the closed-loop vertical geothermal system, cooling tower, boiler, direct digital controls, interior loop piping and other mechanical equipment required for a complete GSHP operating system The closed-loop system would utilize municipal water with propylene glycol added as an antifreeze solution (10% ratio).

Drilling of the borefield (50 boreholes to a depth of 250 feet) would occur on an existing football and band practice field. Installation of the boreholes would be in accordance with IGSHPA and National Ground Water Association recommendations for closed-loop systems. The site is not located in or near a floodplain or wetland. The site would be restored to previous grade and the area would be resodded after construction. Silt fencing and/or other protective devices would be used as needed and would comply with state guidelines.

Phase 3 consists of data collection and project reporting.

Funds associated with Phase 2 and Phase 3:
Task 2.1/2.2, Installation & Equipment:
- Bolivar: $740,092 (DOE), $459,050 (Cost Share)
Task 2.3, Commissioning:
- Bolivar: $345,850 (Cost Share)
Phase 3: $93,000

This project is comprised of information gathering, data analysis, and document preparation; and actions to conserve energy through small-scale renewable energy research and development; therefore the DOE has categorized this proposal into Categorical Exclusions A9 and B5.1.

NEPA PROVISION

DOE has made a conditional NEPA determination for this award, and funding for certain tasks under this award is contingent upon the final NEPA determination.

Insert the following language in the award:

You are restricted from taking any action using federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding the project.

Prohibited actions include:
Phase 2 and Phase 3 for Brainerd High School and Middleton High School
This restriction does not preclude you from:
Phase 1 for Middleton High School
Phase 2 and Phase 3 for Bolivar High School
If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

EF2a prepared by Casey Strickland

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 9/21/2011
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