

PMC-EF2a

(2.04.02)

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



RECIPIENT:Oklahoma Municipal Power Authority

STATE: OK

PROJECT TITLE : OKLAHOMA SEP ARRA - OMPA Large System Request T

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000052	DE-EE0000133	GFO-0000133-041	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:

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:

DOE is proposing to provide \$750,000 in SEP funding to the Oklahoma Department of Commerce, who is proposing to fund the Oklahoma Comfort Program through their sub-grantee the Oklahoma Municipal Power Authority.

The following NEPA review is for three vertical, closed loop ground source heat pumps (GSHP) at three separate residences including: 1) the Veazey Home located at 2304 Summerhaven, Edmond, OK 730304, 2) the Barker Home located at 2606 Homestead, Ponca City, OK 74604 and 3) and the Anderson Home located at 1120 Holly Court, Walters, OK 73572. The total tonnage of each system would be 10.8 tons, 8.2 tons and 6.3 tons, respectively. The geothermal well fields would be placed in the backyard of residences.

Each proposed systems would consist of at most ten, vertical boreholes, six inches in diameter and 200 feet in depth. The holes would be drilled and grouted with bentonite. The boreholes would be placed at least ten feet apart. Loops made of HDPE pipes would be inserted into the boreholes. Manifolds would connect the loops to the heat pumps.

The state certified and licensed driller would follow IGSHA and NGWA regulations during installation. The system would use HDPE piping that is heat fused and all wells would be fully grouted with a thermally enhanced bentonite grout. The refrigerant used in the system would be a non-toxic, food grade 15% propylene glycol and water mixture. All loops would be pressure tested before and after installation.

Two of the three proposed locations are located near surface water. The Veazy Home is located 1/5 mile west of Lake Arcadia. The Barker Home is located 1/3 mile west of West Ponca Lake. The Anderson Home is located 5 miles west of Waurika Lake. The proposed projects would not impact these water bodies because each system would be installed using techniques, which protect the surrounding environment. Minimal land disturbance of less than 1,500 square feet would occur at each project site. Approximately one yard of uncontaminated sandstone spoils would be created during the drilling of the boreholes. The spoils would be properly disposed of at a sanitary landfill.

The proposed systems would not impact groundwater. The nearest groundwater table is within 400 feet of the surface. Even if a system were to reach an aquifer, the system would be installed using techniques, which protect the groundwater and the loop fluids from contaminating one another.

Areas containing karst topography and related federally listed species in Oklahoma have been identified, and the proposed projects would not occur in proximity to those resources; therefore, there would not be any adverse effects to those resources as a result of the proposed GSHP projects.

As required by the OK SEO, installation of ground source heat pumps cannot commence at any proposed OCP

installation site until State Historical Preservation Office (SHPO) approval has been received. OMPA must submit information about all prospective GHP installation sites to the Oklahoma State Energy Office (SEO) for review by SHPO. Under a Programmatic Agreement with SHPO, OK SEO can approve sites with buildings that are less than 45 years old. For buildings 45 years old or older, SEO must submit details to SHPO for review.

In view of the information provided by the recipient, DOE has determined that the impacts related to the proposed project are anticipated to have negligible effects on the human and natural environment. The proposed project is consistent with actions outlined in B5.1, "actions to conserve energy," and is, therefore, categorically excluded from further NEPA review.

NEPA PROVISION

Note to Specialist :

Cristina Tyler 7.15.2011

DOE Share: \$25,300

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  Date: 7/15/11
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