

PMC-EF2a

(20102)

**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 R

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000052	DE-EE0000133	GFO-0000133-042	GO0

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 (ODC), who is proposing to fund the Oklahoma Comfort Program (OCP) through their sub-grantee the Oklahoma Municipal Power Authority (OMPA).

The proposed projects would be located in Edmond, Oklahoma, which includes the land area within the following boundaries: 1) the southern boundary is East Memorial Road, 2) the eastern boundary is North Anderson Road, 3) the northern boundary is Waterloo Road and 4) the western boundary is North Pennsylvania Ave. This land area includes three zip codes: 73003, 73013 and 73034.

All proposed sites would be located in urban, residential and/or developed environments. The geothermal well fields would be placed in the backyard of residences. The areas surrounding the project site locations consist of developed residential areas.

The total estimated tonnage covered under this application would be between 500 and 700 tons. Each individual project would be twelve tons in size or smaller. Vertical boreholes, six inches in diameter and 200 to 400 feet in depth, would be drilled and grouted with bentonite. The boreholes would be placed at least ten feet apart. Each system would have at most twelve boreholes. 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.

The Arcadia Lake Riparian Area is the only identified wetland in the proposed area. No project would be sited closer than one-half mile of the Arcadia Lake.

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 ground source heat pump 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

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

Cristina Tyler 7.13.2011

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: 
NEPA Compliance Officer

Date: 7/13/11

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: _____