

PMC-EF2a

(20102)

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



RECIPIENT: Oklahoma Department of Commerce

STATE: OK

**PROJECT TITLE :** EECBG: City of Langston Retrofit Enhancement of 15 T geothermal HVAC system

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000013	DE-EE0000922		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:

The City of Langston, OK plans to use funds to install a 15 ton closed loop vertical ground source heat pump system serving the Langston City Hall, the building is 3,500 square foot. The system will consist of 15 boreholes drilled to a depth of 250 feet and spaced 20 feet apart in three rows of five covering a total area of 3,200 square feet. The piping to be used is ¾" HDPE uncoil. All pipe joints and fittings installed and buried shall be socket, butt or thermally fused according to the pipe manufacturer's specifications. The borehole will be completely encased with thermal bentonite grout from top to bottom per IGSHA recommendations. Geopac BH-20 thermally enhanced grout will be used. The fluid used inside the closed-loop assembly will be nontoxic, food grade quality and approved for use by the U.S. Environmental Protection Agency and a release of the fluid to the groundwater must not violate Oklahoma Water Quality Standards. The system will use a 22% solution of propylene glycol to water. An Oklahoma Water Resources Board & International Ground Source Heat Pump Accredited Installer will be used to install the geothermal system. The borefield will be located on the City Hall's lawn, although the system will be installed previously disturbed land, neither de-vegetation nor deforestation is required. During construction, the recipient states that erosion control and run-off abatement fence and silt fence will be installed and the disturbed area will be restored to its pre-construction condition. According to NEPA Assist, the project area is classified as "developed, low intensity" (National Land Cover 2001) and is not in a coastal zone or floodplain; there are no wetlands or streams. The aquifer the system will be penetrating is not used for drinking water, the area is serviced by municipal water. DOE has determined that this project has no significant impact to human health and/or environment. This project is hereby Categorically Excluded under A9 "Information Gathering" and B5.1 "Actions to Conserve Energy".

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

NEPA review conducted by John Jediny

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature:   
NEPA Compliance Officer

Date: 5/13/10

**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: \_\_\_\_\_