PMC-EF2a

(2.04.02)

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

**RECIPIENT:** State of North Carolina, Subrecipient Town of Duck **STATE:** NC

**PROJECT TITLE :** Town of Duck Town Hall

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|---|---|---|
| | DE-EE0000771 | gfo-0000771-018 | 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:

The Town of Duck is proposing to use EECBG ARRA funding to install a ground source heat pump system that will serve the heating and cooling needs for two, new municipal buildings totaling 8,000 square feet. The ground source heat pump system will be a vertical, closed loop system with a capacity of 23 tons. There will be 18 boreholes needed, drilled to a depth of 250ft. Ground disturbance of approximately 1,800 square feet will occur to install the wells and the condenser water pipes. The state certified and licensed driller will follow IGSHPA and NGWA regulations during installation. The system will use HDPE piping that is heat fused and all wells will be fully grouted with a thermally enhanced bentonite grout. The refrigerant used in the system will be a non-toxic, food grade propylene glycol and water mixture. Drilling spoils are the only expected waste from the project and will be re-used on-site when possible or taken to the appropriate landfill. An erosion and sedimentation plan has been approved by the North Carolina Division of Land Quality and all required erosion control measures will be implemented. Final stabilization of the well field area will be achieved through installation of the parking area since wells will be installed beneath this area.

The geothermal well field portion of the installation will occur in a large, open area that will be paved for a parking lot. All ground will have been previously disturbed due to the construction of the new municipal buildings and associated parking lot. The area surrounding the proposed project site is developed commercial and residential. All of the pertinent federal and state agencies have reviewed the proposed project by way of the North Carolina State Clearinghouse (documentation attached). DOE concurs with their determinations that there are not expected to be any adverse effects to threatened and endangered species, wetlands, floodplains, coastal zones or cultural resources as a result of the proposed project.

After a thorough review of the information submitted for the proposed project, it has been determined that the actions involved will not have a significant impact to human health and /or the environment. The proposed project will result in a reduction in the use of conventional fossil fuels; therefore it is hereby Categorically Excluded B5.1 "actions to conserve energy," 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 :

EF2a completed by Logan Sholar

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

NEPA Compliance Officer Signature: _____ Date: 2/8/11
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