

PMC-EF2a

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



(204.02)

RECIPIENT:RIOER

STATE: RI

**PROJECT TITLE :** Town of Glocester

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0000013	DE-EE0000946	GFO-0000946-001	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 \$307,265 in EECBG funding to the Town of Glocester, Rhode Island, for the analysis, design and installation of a closed loop, ground source heat pump (GSHP), which will serve the heating and cooling needs of the Glocester Town Hall, located at 1145 Putnam Pike, Chapachet, RI 02814 (41.912275, -71.668232).

The area surrounding the proposed project site location is grassy, previously disturbed, urban development. All excavation would occur on level ground. Soil erosion controls would include staked hay bales and, if necessary, silt fencing. The disturbed areas would be revegetated and maintained, by the contractor, until the area is stabilized.

The proposed GSHP system would include 1) the installation of geexchange heat pumps in location of existing air conditioning units and 2) the installation of new console units in the areas where central air has not been installed. The system is a total of forty tons and would include:

- 6 Versatech Ultra 60; five tones each.
- 6 Envision 09; ¾ ton each.
- 1 Envision 12; one ton each.
- 3 Envision 18; 1 ½ ton each.

The proposed project would require drilling fourteen, six-inch diameter vertical bore holes around the perimeter of the building: eight, 200 feet borings and six, 600 feet borings. A trench would be installed prior to drilling. Trenches would be dug from each bore hole to the buildings at a maximum depth of five feet below grade to connect piping from the wells to the building. The proposed project would use a non-toxic, food-grade propylene glycol as the refrigerant. The area of estimated disturbance would be less than 10,000 square-feet.

The Glocester Town Hall is located over an area identified as a groundwater aquifer area by USGS. According to the recipient, the proposed project would not be drilling into the aquifer as it is located deeper than the depth of the bore holes.

The State certified license driller would follow IGSHA and NGWA regulations during installation. The system would use high density polyethylene (HDPE) piping with heat fusion welds. No solvents would be used. The grout requirements would follow the recommendations of the IGSHA.

Waste Materials – The current air handlers and AC condensing units would be set aside for the town to reuse if an appropriate site is identified. The ground bedrock would be transported to the Glocester Highway Department for use during applicable projects.



Natural Resources - According to the US Fish and Wildlife website, threatened and endangered species are known to exist in Providence County. Species include: the hawksbill sea turtle (*Eretmochelys imbricata*), the leatherback sea turtle (*Dermochelys coriacea*), the green sea turtle (*Chelonia mydas*) and the loggerhead sea turtle (*Caretta caretta*). All of these species live in the ocean, leaving the water only to nest. Therefore, DOE has determined that because the proposed project is located at least twenty-five miles from the coast, there would be no adverse affect to threatened and endangered species.

Threatened and endangered plant species include two species of plants: the small-whorled pogonia (*Isotria medeoloides*) and the sandplain gerardia (*Agalinis acuta*). Level sites, similar to the proposed site, do not support small-whorled pogonia (NatureServe 2003). According to the USFWS website, the sandplain gerardia grows within ten miles of the coast. Therefore, DOE has determined that there would be no adverse affect to threatened and endangered species because neither species are known to occur at the proposed site.

Wetland/Floodplain – According to the USFWS Wetland Mapper and FEMA Flood Map 44007C0145G, the proposed project is not located on a wetland or a floodplain.

Cultural Resources – The Gloucester Town Hall is a contributing property within the Chepachet Village Historic District, which is listed in the National Register of Historic Places. After review of the project, in a letter dated June 6, 2011, the Rhode Island SHPO, Edward Sanderson, determined the proposed project would have no adverse effect on the historic building or district.

Permit – A mechanical permit would be required to disconnect the existing air conditioning system and connect the geothermal heating to the building. In addition, an electrical permit would be needed to connect the electrical circuit connections to the building electrical systems.

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 affects 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.

Resource – NatureServe. 2005. Guiding Conservation Action. <http://www.natureserve.org/>.

#### NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

Cristina Tyler 6.30.2011

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

NEPA Compliance Officer Signature: \_\_\_\_\_

NEPA Compliance Officer

Date: \_\_\_\_\_

#### 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: \_\_\_\_\_