

**U.S. DEPARTMENT OF ENERGY**  
**OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY**  
**NEPA DETERMINATION**



**RECIPIENT:** Community Geothermal Heating and Cooling Design and Deployment

**STATE:** OK

**PROJECT TITLE :** Demonstration of a Solar-Geothermal District Heating and Cooling System with a Single Pipe Loop in Citizen Potawatomi Nation

**Notice of Funding Opportunity Number**  
DE-FOA-0002632

**Procurement Instrument Number**  
DE-EE0010670

**NEPA Control Number**  
GFO-0010670-002

**CID Number**  
GO10670

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**

**Description:**

**A9 Information gathering, analysis, and dissemination**

Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)

**B3.6 Small-scale research and development, laboratory operations, and pilot projects**

Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

**B3.15 Small-scale indoor research and development projects using nanoscale materials**

Siting, construction, modification, operation, and decommissioning of facilities for indoor small-scale research and development projects and small-scale pilot projects using nanoscale materials in accordance with applicable requirements (such as engineering, worker safety, procedural, and administrative regulations) necessary to ensure the containment of any hazardous materials. Construction and modification activities would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible).

**Rationale for determination:**

The U.S. Department of Energy (DOE) is proposing to provide federal funding to The University of Oklahoma (OU) to design and implement a solar-geothermal district heating and cooling (Sol-GDHC) system within the Citizen Potawatomi Nation (CPN) in Shawnee, OK.

This project (award number DE-EE0010670) received a Conditional NEPA determination (GFO-0010670-002; A9 and B3.1) on August 4, 2023. The previous ND included planning and design of the geothermal system (Budget Period (BP) 1). The previous ND did not apply to deployment and installation (BP2). This ND applies to BP2 which would include the deployment and installation of the geothermal system.

BP2 of the proposed project would involve finalizing build design, installation, and commissioning of the Sol-GDHC system on CPN property. The geothermal system would service 36 residential units and 4 commercial buildings including the gym, clinic, afterschool, and behavioral center. The plan includes tying into an existing geothermal field and construction of a new geothermal field, on the east side of the project area, consisting of 98 wells drilled to a depth of 450 feet. Piping would be run from the existing and new geothermal fields to the residential and commercial buildings. Other facilities would be conducting engineering and other project management support, no ground disturbing activities would be conducted at those locations. Project activities would be conducted in accordance with industry standards for the protection of underground water sources and would comply with all state and local permitting.

Hazards for the project would involve the use and handling of different hazardous materials such as materials for thermal insulation and industrial solvents. All handling of hazardous materials would occur onsite, and proper hazardous material handling and disposal practices would take place to ensure activities would not cause or pose risk to the environment. All hazardous materials procedures would be managed by following the Federal, State, and Local environmental and safety regulations.

The Department of Energy received an email from R. Blake Norton, M.A, Director/THPO on April 1, 2025 stating, "Currently, we don't anticipate any impacts and/or issues, but if any inadvertent discoveries are made during the project and/or future use of the site, containing artifacts, objects of cultural significance and/or human remains, we ask that the Citizen Potawatomi Nation Tribal Historic Preservation Office be contacted immediately and all site activities halted until further notice. confirming no-effects."

DOE has considered the scale, duration, and nature of the proposed activities to determine potential impacts on sensitive resources, including those of an ecological, historical, cultural, and socioeconomic nature. DOE does not anticipate impacts on these resources that would be considered significant or require DOE to further consult with agencies or stakeholders.

EERE is aware of the November 12, 2024, decision in *Marin Audubon Society v. FAA*, No. 23-1067 (D.C. Cir. Nov. 12, 2024). To the extent that a court may conclude that the Council on Environmental Quality (CEQ) regulations implementing NEPA are not judicially enforceable or binding on this agency action, EERE has nonetheless elected to follow those regulations at 40 C.F.R. Parts 1500-1508, in addition to DOE's procedures/regulations implementing NEPA at 10 C.F.R. Part 1021, to meet the agency's obligations under NEPA, 42 U.S.C. §§ 4321 et seq.

## NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

### Provisions

1. If during project activities the recipient or their contractors encounter any cultural materials (i.e. historic or prehistoric), all activities must cease in the vicinity of the discovery immediately. The recipient must inform the DOE Project Officer of the discovery so that an evaluation of the discovery can be completed prior to continuing work.

Notes:

Geothermal Technologies Office  
NEPA review completed by Emma Luther, 5/15/2025

## FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The proposed action is categorically excluded from further NEPA review.

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

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



Electronically Signed By: **Matthew Blevins**

NEPA Compliance Officer

Date: **5/19/2025**

**FIELD OFFICE MANAGER DETERMINATION**

☒ Field Office Manager review not required

☐ Field Office Manager review required

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: \_\_\_\_\_

Field Office Manager

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