

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



RECIPIENT: Public Service Commission of Wisconsin

STATE: WI

PROJECT TITLE : Monona Terrace Geothermal Feasibility Study - City of Madison - EIGP 2023

Notice of Funding Opportunity Number
SEP-IJAALRD

Procurement Instrument Number
DE-EE0010109

NEPA Control Number
GFO-0010109-006

CID Number

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.)

B3.1 Site characterization and environmental monitoring

Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources); (i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to the Public Service Commission of Wisconsin (PSCW) for a horizontal geothermal test bore associated with a geothermal feasibility study. The system would be installed on the City of Madison Property located at 1 John Nolen Drive, Madison, Dane County, WI.

The proposed geothermal horizontal test bore would consist of an approximately 6" diameter boring at a depth ranging from 30'-100'. Once the boring is complete, a HDPE U-bend pipe of 1"- 1.25" in diameter and the annular space would be filled with bentonite clay grout. The horizontal bore length would be approximately 600' and extend northeast along the shoreline of Lake Monona toward Law Park. The bore would be installed by a licensed geothermal contractor, operating under Wisconsin well code rules. Upon completion of the test bore, a thermal conductivity test would be performed which would include hooking a generator powered test rig onto the ends of the bore piping and measure water flow and temperature. A summary report of the results would provide steady state ground temperature, ground conductivity, and ground diffusivity parameters. These parameters would be used to size a potential full horizontal geothermal bore field, that has not yet received funding.

The US Fish and Wildlife Service's Information for Planning and Consultation (IPaC) website identifies two mammals, one bird, two insects and one plant that have home ranges overlapping the project site. The Northern Long-eared Bat and Tricolored Bat are an endangered or proposed endangered species that inhabits trees. There will not be any tree

clearing for this project therefore no impacts will be made to either species. The IPaC cites a non-essential experimental population of whooping crane in proximity to the sites. This designation affords species protection on National Wildlife Refuges and National Park land exclusively, which does not occur at the sites. The rusty-patched bumble bee is a federally endangered species that inhabits mixed woodlands, gardens and urban parks. No habitat for this species persists at the site. The monarch butterfly is a federal candidate species and is not currently afforded protection under the Endangered Species Act. This species occurs a variety of habitats that include patches of milkweed during the local activity season and while this habitat may be in close proximity to the site, no impacts to natural habitat are expected as a result of project implementation. The eastern prairie fringed orchid and prairie bush-clover are two federally threatened plant species that occur within prairies. This habitat type does not persist within either project area and no impacts to this species are expected as a result. The proposed project site is outside of the critical habitat of all IPaC listed species. Accordingly, DOE has determined there would be no effect on federally listed threatened or endangered species. Further, DOE does not anticipate adverse impacts to migratory bird species.

Consultation with the Wisconsin Historical Society (the Wisconsin State Historic Preservation Office) was initiated by the PSCW on October 24th, 2024, and completed on November 12th, 2024. The Historical Society found that no eligible properties would be affected by the project because none are present within the area of potential effect. The Historical Society's response further states that Section 106 of the National Historic Preservation Act (NHPA) consultation requirements for this project have been completed, however, if project plans change or cultural materials/human remains are found during project implementation, project work should be halted, and the Historical Society be contacted.

Any and all permits required for the execution of the project at the above-referenced locations would be the responsibility of the recipient.

Installation of the proposed project may involve the use of heavy equipment and working with electricity. Potential hazards would be mitigated through adherence to established institutional health and safety policies and procedures. The recipient would adhere to all applicable federal, state, and local health, safety, and environmental regulations. Any changes to the project activities or locations are subject to additional NEPA review by DOE and are not authorized for federal funding unless and until the Contracting Officer provides written authorization on those additions or modifications.

DOE has considered the scale, duration, and nature of proposed activities to determine potential impacts on 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.

Any changes to the project activities or location are subject to additional NEPA review by DOE and are not authorized for federal funding unless and until the Contracting Officer provides written authorization.

EERE is aware of the November 12, 2024, decision of *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:

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 SHPO and DOE Project Officer of the discovery so that an evaluation of the discovery can be completed prior to continuing work.

Notes:

Office of State and Community Energy Programs – State Energy Programs
(State Energy Program Transformation & Planning)
NEPA review completed by Emma Luther, 2/26/2025

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: _____



Matthew Blevins

NEPA Compliance Officer

Date: 3/10/2025

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: _____