

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



RECIPIENT: Public Service Commission of Wisconsin

STATE: WI

PROJECT TITLE: Kaukauna Utilities Headquarters Building Geothermal Transition Project - City of Kaukauna - EIGP 2023

Notice of Funding Opportunity Number  
SEP-IIJAALRD

Procurement Instrument Number  
DE-EE0010109

NEPA Control Number  
GFO-0010109-005

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.)

**B5.16 Solar photovoltaic systems**

(a) The installation, modification, operation, or decommissioning of commercially available solar photovoltaic systems:

1. Located on a building or other structure (such as rooftop, parking lot or facility, or mounted to signage, lighting, gates, or fences); or
2. Located within a previously disturbed or developed area.

(b) Covered actions would be in accordance with applicable requirements (such as land use and zoning requirements) in the proposed project area and the integral elements listed at the start of appendix B of this part, and would be consistent with applicable plans for the management of wildlife and habitat, including plans to maintain habitat connectivity, and incorporate appropriate control technologies and best management practices.

**B5.19 Ground source heat pumps**

The installation, modification, operation, and removal of commercially available smallscale ground source heat pumps to support operations in single facilities (such as a school or community center) or contiguous facilities (such as an office complex) (1) only where (a) major associated activities (such as drilling and discharge) are regulated, and (b) appropriate leakage and contaminant control measures would be in place (including for cross-contamination between aquifers); (2) that would not have the potential to cause significant changes in subsurface temperature; and (3) would be located within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

**Rationale for determination:**

The U.S. Department of Energy (DOE) is proposing to provide federal funding to the Wisconsin Office of Energy Innovation for the design and installation of a 100-kW rooftop solar photovoltaic (PV) array and a 70-ton capacity geothermal heat pump system to replace the aging heating, ventilation, and air conditioning (HVAC) system at the Kaukauna Utilities (KU) Headquarters Building in Kaukauna, WI.

Project activities would include engineering, design, installation, and commissioning of a retrofit of the existing HVAC system. The proposed PV array would cover approximately 15,000 square feet of the KU Headquarters Building roof. Electrical modifications to the KU Headquarters Building would include new wiring to connect the PV panels to an existing panel. The proposed geothermal system would include installation of a borefield within an adjacent city-owned park and associated piping from the borefield to the KU Headquarters Building. Installation activities would not affect park structures or public use of the park. The geothermal system borefield would consist of approximately 36 boreholes drilled to 500 feet within a 10,000 square foot area. Boreholes would contain HDPE piping and cement-

based grout. The HDPE piping would be routed from the borefield to the heat pump system to be installed within the Old Badger Powerhouse, a decommissioned part of the KU Headquarters Building.

The geothermal borefield would be located within the Federal Energy Regulatory Commission (FERC) project boundary for the Badger Hydroelectric Project (FERC # P-2677), at least 60 feet away from the Badger Power Canal. Due to the proximity of the geothermal borefield to the power canal walls, FERC would require a Drilling Program Plan to ensure the integrity of the project structures would not be impacted by the borefield installation. In addition, due to the presence of arsenic within confined aquifers in Outagamie County, the Wisconsin Department of Natural Resources (WDNR) would need to approve a Closed Loop Heat Exchange Well application prior to installation of the geothermal borefield.

Current FEMA flood maps show the proposed borefield as located within a regulatory floodway. However, this flood designation is based upon 2010 data and the property was redeveloped in 2013/2014. In accordance with the FERC approved relicensing for the New Badger Hydroelectric Plant, the Old Badger Powerhouse was decommissioned, and all water conveyance structures were sealed and/or backfilled. Since that time, there have been no updates to the FEMA flood maps. All piping associated with the geothermal system would be located underground and the vegetated surface would be returned to original condition. On February 21, 2025, the City of Kaukauna Floodplain Manager provided DOE a letter stating that the proposed project would not result in any change to the existing flood conditions in the area and has received necessary local approvals.

Drilling cuttings and the borefield installation area would be protected with silt fencing to prevent erosion and sediment runoff. Storm drain filters would also be put in place within any catch basin located downgradient. The fencing and filters would be inspected each week and within 24 hours of a precipitation event of 0.5 inches or more. Appropriate leakage and contaminant control measures would be in place during and after the installation of the geothermal project, as determined by WDNR and all other applicable authorities. The geothermal installation would not have the potential to cause significant changes in subsurface temperatures, as the system would be designed to keep temperature drift at acceptable levels per the American Society of Heating, Refrigerating and Air-Conditioning Engineers Best Practices for Designing Geothermal Systems.

The U.S. Fish and Wildlife Service's Information for Planning and Consultation (IPaC) website indicates that the proposed threatened monarch butterfly may occur within the project area. The location identified for the geothermal borefield is regularly maintained (mowed) and would be returned to its original vegetative condition; therefore, DOE has made a no effect determination for the monarch butterfly. While eagles could be present, there are no large trees at the proposed borefield location, making it unsuitable for nesting.

The recipient has worked directly with their State Historic Preservation Officer (SHPO) to ensure protection of cultural resources during project activities, per their historic preservation programmatic agreement with DOE and the Wisconsin SHPO. On November 8, 2024, the recipient received concurrence from the Wisconsin SHPO that no eligible properties would be adversely affected by the project activities. The recipient is responsible for reviewing the online NEPA and Historic preservation training at [www.energy.gov/node/4816816](http://www.energy.gov/node/4816816) and contacting [gonepa@ee.doe.gov](mailto:gonepa@ee.doe.gov) with any NEPA or general historic preservation questions.

Installation of the proposed project would involve the use of heavy equipment and working with electricity. Potential hazards would be mitigated through adherence to established health and safety policies and procedures. The general contractor would be responsible for maintaining safety onsite. Hazard tape would be placed around the geothermal borefield installation area and all boreholes would be temporarily capped while work is not in progress. Project personnel would adhere to all applicable federal, state, and local health, safety, and environmental regulations.

All required permits, licenses, and authorizations, including a FERC-approved Drilling Program Plan and a WDNR-approved Closed Loop Heat Exchange Well application, would be obtained prior to construction activities. No change in the use, mission, or operation of existing facilities would arise out of this effort.

DOE has considered potential impacts on resources of concern, including those of a historical, cultural, and socioeconomic nature, and does not anticipate impacts on these resources.

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.

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:

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 Wisconsin Office of Energy Innovation must inform the Wisconsin State Historic Preservation Officer and DOE Project Officer of the discovery so that an evaluation can be completed prior to continuing work.

Notes:

Office of State and Community Energy Programs – State Energy Programs  
This NEPA determination requires legal review of the tailored NEPA provision.  
NEPA review completed by Melissa Parker, 02/27/25

## 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: 3/5/2025

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