

PMC-ND

(1.08.09.13)

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



RECIPIENT: City of Wyandotte

STATE: MI

PROJECT TITLE : Wyandotte Integrated Renewable Energy Strategy – WRES 2

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-FG36-06GO86090	GFO-86090-005	GO86090

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:

- 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.)
- B5.19 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 authorize the expenditure of federal funds by Wyandotte Municipal Services (WMS) for a geothermal heat pump system at the BASF building on Hudson St. in Wyandotte, MI. This project is one of several projects proposed as part of the larger project titled "The Wyandotte Integrated Renewable Energy Strategy – Wyandotte WRES 2." The overall goal of Wyandotte WRES 2 is to reduce the City of Wyandotte's environmental and energy impact and encourage businesses and citizens to adopt cleaner energy practices.

DOE has previously completed four NEPA determinations and authorized the use of federal funds for some activities associated with this award. The previous NEPA determinations are summarized below:

- GFO-06-078: CX-A9, CX-B3.1 and CX-C12; 6/21/2006. This determination applied to the original Phase 1 and Phase 2 of the project which was a wind power demonstration project. After completion of the feasibility study and a draft Environmental Assessment (EA), the project was re-scoped and construction of the wind power demonstration project was not completed.
- GFO-86090-002: CX-A9; 11/20/2013. This determination applied to administrative and project management activities, including research, feasibility studies, design, outreach and education, and the NEPA review of the various proposed renewable energy and energy efficiency installation projects found in Phase 2 of the current Statement of Project Objectives (SOPO).
- GFO-GO086090-003: CX-B5.1; 3/7/2014. This determination applied to the design and installation of energy-efficient and low-maintenance LED streetlights and stadium lights (Phase 2 Task 1 of the current SOPO).
- GFO-86090-004: CX B5.19; 6/1/2015. This determination applied to design and installation of geothermal infrastructure at Bacon Memorial District Library described in Phase 2, Task 3 of the current SOPO.

This NEPA determination applies to the planning, design, and installation of geothermal infrastructure at the BASF building on Hudson St. in Wyandotte, MI as outlined in Phase 2, Task 3 of the current SOPO.

The proposed project site is the BASF building located at 139 Hudson Street. The project would be an addition to the existing geothermal heat pump system on site. Project activities would include completing the required mechanical and electrical engineering retrofits on the second floor of the building to accommodate the new geothermal HVAC system and updating a limited number of spaces on the first floor. The water source heat pump would be a 40-ton rooftop unit. The building's existing boiler would be removed and replaced with two water-to-water heat pumps. A complete re-balance of the hydronic system would be necessary at each terminal unit. The geothermal loop would be expanded to accommodate the new loads and the three capped geothermal header pipes buried outside the building would be connected to 18 new boreholes. These bores would be located in the same line as the original 14 boreholes, and would be 340 ft. deep and spaced 13.5 ft. apart. The well heads and connections would be located six (6) feet below ground. The project proponents have met MDEQ criteria for horizontal distance from any and all various sources of public water supply as well as criteria regarding appropriate use of heat transfer fluids.

The proposed project would not require any new facilities to be constructed or any change in use, mission, or operation of existing facilities arising out of or resulting from work under the project. The BASF building is a 2-story commercial office building that is not included on the National Register of Historic Places. DOE consulted with the Michigan SHPO per Section 106 of the National Historic Preservation Act and the SHPO concurred with the DOE's determination that no historic properties would be affected by the project. There are no wetlands in the project area and no adverse impacts to endangered or threatened species are anticipated. Drilling of the new boreholes would temporarily disturb the city-owned green space along Hudson Street, however, efforts would be made to minimize the amount of ground disturbance and disturbed areas would be restored after construction is complete.

Waste associated with the proposed project would include scrap sheet metal, electrical wiring and both steel and plastic piping. There would also be waste associated with equipment and material packaging and shipping dunnage. Materials would be recycled as appropriate. Non-recyclable materials would be sent to an existing solid waste landfill. No construction or expansion of any waste storage, disposal, recovery, or treatment facilities would be required and no pre-existing hazardous substances, pollutants, or contaminants would be disturbed.

Based on review of the project information and the above analysis, DOE has determined that proposed planning, design, and installation of geothermal infrastructure at the BASF building on Hudson St. in Wyandotte, MI would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined these activities are consistent with actions contained in DOE categorical exclusions A9 "Information gathering analysis and dissemination" and B5.19 "Ground source heat pumps" and are categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a conditional NEPA determination for this award, and funding for certain tasks under this award is contingent upon the final NEPA determination.

Insert the following language in the award:

You are restricted from taking any action using federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding the project.

Prohibited actions include:

Phase 2, Task 2 "Planning and installation of micro-wind turbine demonstration sites".

Phase 2, Task 3 "Evaluation, engineering, plan development, and installation of a geothermal infrastructure" EXCEPT FOR installation of the ground source heat pump systems at the BASF Building at 139 Hudson St., Wyandotte, MI 48192 and the Bacon Memorial District Library at 45 Vnewood, Wyandotte, MI 48192.

Phase 2, Task 4 "Installation of electric vehicle charging stations".

This restriction does not preclude you from:

Phase 1

Phase 2 Task 1 "Evaluation and installation of energy-efficient and low-maintenance LED streetlights and stadium lights"

Phase 2 Task 3 "Evaluation, engineering, plan development, and installation of a geothermal infrastructure" ONLY Installation of the ground source heat pump systems at the BASF building at 139 Hudson St., Wyandotte, MI 48192 and the Bacon Memorial District Library at 45 Vnewood, Wyandotte, MI 48192.

Phase 2, Task 5 "Renewable energy job training program & the school and public outreach program"

Phase 2, Task 6 "Project management and project reporting"

If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

Project Management Coordination Office
This NEPA determination requires a tailored NEPA provision.
Review completed by Rebecca McCord, 07/21/2015

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____
Kyran M. [Signature]
NEPA Compliance Officer

Date: 7/21/2015

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: _____
Field Office Manager

Date: _____