

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** Lake Erie Energy Development Corporation**STATE:** OH

PROJECT
TITLE : Icebreaker Foundation Engineering & Assessment

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DNFA	DE-EE0006714	GFO-0006714-002	GO6714

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:

B3.16 Research activities in aquatic environments Small-scale, temporary surveying, site characterization, and research activities in aquatic environments, limited to: (a) Acquisition of rights-of-way, easements, and temporary use permits; (b) Installation, operation, and removal of passive scientific measurement devices, including, but not limited to, antennae, tide gauges, flow testing equipment for existing wells, weighted hydrophones, salinity measurement devices, and water quality measurement devices; (c) Natural resource inventories, data and sample collection, environmental monitoring, and basic and applied research, excluding (1) large-scale vibratory coring techniques and (2) seismic activities other than passive techniques; and (d) Surveying and mapping. These activities would be conducted in accordance with, where applicable, an approved spill prevention, control, and response plan and would incorporate appropriate control technologies and best management practices. None of the activities listed above would occur within the boundary of an established marine sanctuary or wildlife refuge, a governmentally proposed marine sanctuary or wildlife refuge, or a governmentally recognized area of high biological sensitivity, unless authorized by the agency responsible for such refuge, sanctuary, or area (or after consultation with the responsible agency, if no authorization is required). If the proposed activities would occur outside such refuge, sanctuary, or area and if the activities would have the potential to cause impacts within such refuge, sanctuary, or area, then the responsible agency shall be consulted in order to determine whether authorization is required and whether such activities would have the potential to cause significant impacts on such refuge, sanctuary, or area. Areas of high biological sensitivity include, but are not limited to, areas of known ecological importance, whale and marine mammal mating and calving/pupping areas, and fish and invertebrate spawning and nursery areas recognized as being limited or unique and vulnerable to perturbation; these areas can occur in bays, estuaries, near shore, and far offshore, and may vary seasonally. No permanent facilities or devices would be constructed or installed. Covered actions do not include drilling of resource exploration or extraction wells.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Lake Erie Development Corporation (LEEDCo) to assess, through research, engineering and laboratory testing, and field testing, the technical and cost effectiveness of the Mono Bucket - Icebreaker foundation for wind turbine placement in Lake Erie.

LEEDCo will perform seven tasks for this project. These include:

- Task 1 – Economic Analysis and Resource Assessment Study
- Task 2 – Prior Uses of Friction Wheel Study
- Task 3 – Completion of Icebreaker Foundation Design
- Task 4 – Ice Characterization and Modeling
- Task 5 – Friction Wheel Lab Testing
- Task 6 – Information Dissemination
- Task 7 – Geotechnical Investigation

DOE completed a previous NEPA review for Tasks 1-6 (DEE-EE0006714-002). Those tasks were limited to information gathering and laboratory work. This NEPA determination applies to Task 7 only.

The work in Task 7 would include conducting a series of tests that measure mechanical properties of the soil which would be under the bucket portion of the Mono Bucket foundation for each turbine. These tests would occur in Lake Erie, approximately 10 miles off the shore of Cleveland, Ohio. Tests would be conducted under USACE Nationwide Permit No. 2010-00223, which is valid until March 2017. A barge would be moved into position by a tug boat, and testing would occur from the barge. These tests would include 18 in situ cone penetration tests (CPT). The CPT probe is approximately 1.4 inches in diameter and would be lowered from the barge to penetrate 25 meters into the lakebed. The drill used for these tests is approximately 5.5 inches in diameter. In addition, Task 7 would include taking samples

of the top layer of sediment via a box core device at each of the 18 CPT locations. The box core device would be lowered onto the lakebed, would penetrate the soil up to .5 meters, and would scoop up a small sample of soil from that top layer. Finally, Task 7 would include taking 6 core samples. Two of these samples would be to a depth of 25 meters, and 4 would be to a depth of six meters. Each test would take several hours to complete. The CPT and box core tests would take a maximum of seven days and the core sampling would take a maximum of five days to complete, for a maximum of 12 days on the water.

The proposed project would be within the range of the Indiana Bat, the Kirtland's warbler and the piping plover. It would also be within the range of the Bald Eagle. Similar geotechnical work was conducted by LEEDCo for a nearby location, 7 miles off the shore of Cleveland, and approximately 3 miles from this location. That work was funded by the DOE/EERE under DOE grant DE-EE0005989 and reviewed under NEPA determination DE-EE0005989-001. In that determination DOE consulted with USFWS and determined that the project would have no effect on the listed Threatened and Endangered species or the Bald Eagle. Given the similar nature of this project and the similar location, and due to the project type (underwater lakeshore analysis), location, and onsite habitat, the project would have no effect on threatened or endangered species or the Bald Eagle.

It is estimated that Lake Erie houses between 500 – 3,000 shipwrecks, only 250 of which are known. Given the new location for this testing (3 miles from the location studied for DE-EE0005989), a new archeological analysis was conducted for the new site. Results from a literature search and a Phase 1 remote sensing archaeological survey produced no evidence or artifacts of historical significance at the proposed site. On July 30, 2015, after reviewing the archaeological analysis, the Ohio State Historic Preservation Office (O-SHPO) determined that the proposed project would not affect historic properties. Pursuant to the recipient's Nation Wide Permit (clauses 21 and 22), if any historic artifacts are discovered during drilling the work would cease until further consultation has been completed. No additional Section 106 consultation was requested by O-SHPO.

Based on review of the project information and the above analysis, DOE has determined that Task 7 would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed Task is consistent with actions contained in DOE categorical exclusion B3.16, "Research Activities in Aquatic Environments" and is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

Wind Program

This NEPA determination does not require a tailored NEPA provision
NEPA review completed by Roak Parker on July 30, 2015

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

Electronically
Signed By: Lori Gray

NEPA Compliance Officer

Date: 8/3/2015

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: _____