

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



RECIPIENT: Lei Zuo at University of Michigan

STATE: MI

PROJECT TITLE : Adaptive Hybrid Noise Mitigation for Offshore Wind Turbine Construction using Metamaterials

Notice of Funding Opportunity Number
DE-FOA-0003121

Procurement Instrument Number
DE-EE0011642

NEPA Control Number
GFO-0011642-001

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.)

B3.6 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.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to the University of Michigan (UM) to develop, design, model, and test a hybrid noise mitigation system for offshore wind turbine construction. The proposed project would be completed over two Budget Periods (BPs) with a Go/No-Go decision point between the BPs.

Proposed activities would occur at UM in Ann Arbor, MI, Virginia Tech in Blacksburg, VA, the Pacific Northwest National Laboratory (PNNL) in Richland and Sequim, WA, American Bureau of Shipping in Spring, TX, and Georgia Tech in Atlanta, GA. As award activities completed in BP1 would further identify activities that would be completed in BP2, there is insufficient information available at this time to complete a thorough review of anticipated project activities identified in BP2. This NEPA Determination (ND) only applies to BP1. Proposed activities in BP1 would include hydroacoustic modeling, structure design, analysis, acoustic wave tank and lab testing for a balloon curtain and metamaterial piles, and identifying potential open water test sites. All proposed activities in BP1 would be completed in existing, purpose-built facilities that are currently used for the type and scale of activities proposed.

Proposed activities in BP2 would include open water testing and site demonstrations. Open water testing would occur at PNNL's Sequim Bay Underwater Demonstration Site and at a location that would be identified during BP1.

Potential hazards in BP1 would involve laboratory testing with water tanks, acoustic equipment, the operation of electrical and mechanical testing equipment. Equipment use would follow all safety procedures and be used in accordance with established laboratory safety protocols, including personnel training, use of personal protective equipment, safety monitoring, and compliance with environmental health and safety guidelines. All facilities are existing, purpose-built, and currently used for the type and scale of activities proposed. Facility modifications would not be required.

DOE has considered the scale, duration, and nature of the 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 which would be considered significant or require DOE to consult with other agencies or stakeholders. Any work proposed to be conducted at a federal facility may be subject to additional NEPA requirements by the cognizant federal official and must meet the applicable health and safety requirements of the facility.

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 conditional NEPA determination.

The NEPA Determination applies to the following Topic Areas, Budget Periods, and/or tasks:

BP1

The NEPA Determination does not apply to the following Topic Area, Budget Periods, and/or tasks:

BP2

Notes:

Wind Energy Technologies Office (WETO)
NEPA review completed by Brittany White, 2/4/2025

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.

A portion of the proposed action is categorically excluded from further NEPA review. The NEPA Provision identifies Topic Areas, Budget Periods, tasks, and/or subtasks that are subject to additional NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____



NEPA Compliance Officer

Date: 2/25/2025

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: _____

Date: _____

