

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



RECIPIENT: NREL

STATE: CO

PROJECT TITLE : NREL-25-006 NPS Solutions Turbine Testing - Bisaccia, Italy

Notice of Funding Opportunity Number

Procurement Instrument Number
DE-AC36-08GO28308

NEPA Control Number
GFO-NREL-25-006

CID Number
GO28308

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:

B5.18 The installation, modification, operation, and removal of a small number (generally not more than 2) of
Wind commercially available wind turbines, with a total height generally less than 200 feet (measured from the ground to
turbines the maximum height of blade rotation) that (1) are located within a previously disturbed or developed area; (2) are located more than 10 nautical miles (about 11.5 miles) from an airport or aviation navigation aid; (3) are located more than 1.5 nautical miles (about 1.7 miles) from National Weather Service or Federal Aviation Administration Doppler weather radar; (4) would not have the potential to cause significant impacts on bird or bat populations; and (5) are sited or designed such that the project would not have the potential to cause significant impacts to persons (such as from shadow flicker and other visual effects, and noise). 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. Covered actions include only those related to wind turbines to be installed on land.

Rationale for determination:

The U.S. Department of Energy's (DOE) National Renewable Energy Laboratory is proposing to provide federal funding to Northern Power Systems Solutions (NPS) to complete certification testing of its 100-kW NPS 100 wind turbine. The proposed project is part of the DOE Wind Energy Technologies Office 2024 Competitiveness Improvement Project, which seeks to support small businesses that design and manufacture small or medium wind turbine technology.

The purpose of this project is to complete certification testing, which would support deployment of the wind turbine in the United States.

Certification testing would take place on privately owned agricultural property located in Bisaccia, Italy that is currently used for testing of wind turbines. The turbine is privately owned, however, NPS has full access and control over testing activities. The 100-kW turbine is installed on a monopole tower which is 40-meters tall (at the blade tip), has a 37-meter hub height, and a 24.4-meter rotor diameter. NPS would remove the existing wind turbine rotor and replace it with the 24.4-meter rotor when ready to begin testing. Data acquisition equipment would be installed at the base of the tower. Operations would include power, acoustics, safety, function, and duration testing.

A 37-meter met tower and a 10-meter met tower would be installed for data collection. The met towers would use earth anchors without the need for a concrete base. The met towers would be adjacent to the wind turbine. The 37-meter met tower would be used for power performance testing. This met tower would be stabilized with up to 20 wires and would be removed once testing is completed. The 10-meter met tower would be installed for acoustics testing. This met tower would be stabilized with up to 9 wires and would be removed once testing is completed.

The project would begin turbine configuration and certification operations during the winter of 2024. Prototype testing would occur over an approximately two year period following installation. Once testing is complete, the turbine would be returned to the original rotor configuration and normal operations would resume.

All proposed testing activities would follow local regulations and requirements. Activities with potential hazards would be conducted in accordance with established written procedures.

No direct or indirect impacts are expected to result from the proposed project.

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

All required permits, notifications, and permissions shall be obtained prior to commencing work.

Project activities shall be conducted in accordance with applicable requirements and regulations.

Notes:

Brandon Bammel
NREL, 12/05/2024

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.

DOE has determined that work to be carried out outside of the United States, its territories and possessions is exempt from further review pursuant to Section 5.1.1 of the DOE Final Guidelines for Implementation of Executive Order 12114; "Environmental Effects Abroad of Major Federal Actions."

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:

 Electronically Signed By: Nicole Serio
NEPA Compliance Officer

Date: 12/5/2024

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: