

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



RECIPIENT: New York State Energy Research and Development Authority

STATE: NY

PROJECT TITLE : National Offshore Wind Research and Development Consortium

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001767	DE-EE0008390	GFO-0008390-046	GO8390

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 funding to the New York State Energy Research and Development Authority (NYSERDA) to form a not-for-profit 501(c)(3) entity, the "National Offshore Wind Research and Development Consortium" (NOWRDC) which would be led by NYSERDA, along with key industry stakeholders and research institutions. The Consortium would finance research initiatives seeking to address the technical barriers faced by offshore wind developers, original equipment manufacturers (OEMs), and supply chain partners, with the goal of reducing the Levelized Cost of Electricity (LCOE) for U.S. offshore wind plants and increasing opportunities for U.S. manufacturing.

The proposed project is divided into four (4) Budget Periods (BPs). DOE previously completed NEPA reviews for BP1, 2, 3, and 4 (GFO-0008390-001 CX A1, A9, and A13, 10/09/2018; GFO-0008390-002 CX A1, A9, and A13, 01/13/2020; GFO-0008390-019 CX A1, A9, and A13, 12/02/2020; GFO-0008390-042 CX A1, A9, A11, and A13, 12/28/2021). In addition, DOE completed NEPA reviews for 16 subawards made by the consortium under Task 19 and 22 subawards made by the consortium under Task 27 as well as awards under an Annual Operating Plan to the National Renewable Energy Laboratory (various CX determinations and dates). This NEPA review is for a sub award proposed to be made under Task 35 to GE Renewable Energy (GER).

Task 35 in BP4 involves reviewing applications received in response to the solicitation released in Task 34, and then choosing specific projects which would receive a sub award. While NYSERDA is allowed under the previous NEPA determination to proceed with choosing projects under Task 35, all projects chosen for sub award are subject to additional NEPA analysis prior to NYSERDA contracting for the sub award and prior to any work being completed on the sub award.

Under this proposed sub award, GER (Niskayuna, NY) would address the high levelized cost of energy and the growing need for larger wind turbine generators. These generators would be composed of iron castings split into smaller sections to reduce costs and provide technology that is easier to supply and manufacture. This sub award

would create representative test specimens (coupons ) of the small sections to yield insight into the characterization of a full scale weld.

Sub award activities would commence with the creation of a project advisory board made up of contractors, developers, and NOWRDC Consortium members. GER and GE Global Research (GRC) (Niskayuna, NY) would identify what is needed for the welding castings and establish a cost model, material feasibility study, and a list of candidate materials. Characterization of materials would be carried out at Missouri University of Science and Technology (MST) (Rolla, MO). The American Foundry Society (AFS) (Schaumburg, IL) would complete a techno-economic analysis and analyze unit costs. After candidate material selection, GRC and MST would lead the welding and characterization testing. Candidate materials would be eliminated based on performance. After identifying the best candidates, a coupon would be created, and MST would perform a final demonstration using the created coupons. The final weld would be prepared for the final qualification study, and GRC would continue to carry out weld trials to screen, optimize, and select parameters for the final sub article weld. GRC would use distortion model and characterization data to develop strategies to apply knowledge gained to large casting segmentation and weld assembly. All project work would be done in cooperation with DNV, an international classification society that provides services such as technical assessment, certification, risk management and software development.

Existing corporate health and safety procedures would be followed, including employee training, proper protective equipment, engineering controls, monitoring, and internal assessments. Appropriate welding related health and safety procedures would be followed for the different weld metals.

No physical modifications, ground disturbing activities, changes in use of the facilities, or installation of outdoor equipment would occur. No new permits would be needed at this time.

## NEPA PROVISION

DOE has made a conditional NEPA determination.

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

[Budget Period 1](#)  
[Budget Period 2](#)  
[Budget Period 3](#)  
[Sub Award to GE Renewable Energy](#)

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

[Budget Period 4](#)

Notes:

[Wind Energy Technologies Office \(WETO\)](#)  
[Review completed by Alex Colling on 05/31/2022.](#)

## 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:  **Electronically Signed By: Kristin Kerwin** \_\_\_\_\_ Date: 6/8/2022  
NEPA Compliance Officer

**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: \_\_\_\_\_  
Field Office Manager