

PMC-ND

(1.08.09.13)

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



RECIPIENT: Ocean Renewable Power Company

STATE: ME

PROJECT
TITLE: Modular RivGen

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002080	DE-EE0008948	GFO-0008948-002	G08948

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.)
- B3.16 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.
- 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 Ocean Renewable Power Company, Inc (ORPC) to develop and demonstrate the RivGen3.0 modular crossflow turbine.

The proposed project is divided into two Budget Periods (BP). DOE completed one previous NEPA determination covering BP1. (GFO-0008948-001; CX A9, 01/24/2020). This NEPA review is for Tasks 9-14 of BP2.

In Task 9 ORPC, along with the National Renewable Energy Laboratory and Sandia National Laboratory, would conduct river hydraulic and fluid dynamic modeling using computers.

In Task 10 ORPC would perform site characterization of the selected test site on the Millinocket Stream in Millinocket, Maine, to determine whether the site is suitable for deployment of the RivGen. The proposed site is located adjacent to a dam operated by Brookfield Renewable Partners, at coordinates 45°38'48.76" N , 68°42'10.66" W. Work would include deployment of a floating Acoustic Doppler Current Profiler and would be conducted using methodologies consistent with IEC TS 62600-301. No geophysical, geotechnical work, or other active work at the river site would occur. On March 25, 2021 ORPC staff Nate Johnson contacted the Maine Department of Environmental Protection and determined that no Endangered Species Act (ESA) listed species would likely be at the proposed site, principally due to the large number of hydroelectric dams downstream from the proposed site. As such, DOE has determined that the proposed site survey work would have No Effect on ESA listed species. No permits would be needed for this Task. If ORPC determines that the site is not suitable for deployment ORPC would need to seek additional NEPA review before performing any assessment work at an alternative site.

In Task 11 ORPC would identify and obtain any permits needed for eventual deployment at the Millinocket site.

In Task 12 and 13 ORPC would complete module design and commercialization analysis.

In Task 14 ORPC would fabricate a modular RivGen device. The device would be approximately 9 feet by 25 feet by 8 feet in size and would be fabricated from carbon, stainless steel, composite materials, and electronics. Fabrication would occur at ORPC headquarters in Portland, Maine at a pre-existing fabrication facility. No new permits or facility modifications would be required for fabrication.

Work would include general office work as well as field work in a stream and fabrication. ORPC would mitigate hazardous by following existing corporate health and safety policies, including employee training, monitoring, and proper protective equipment.

In Tasks 15 and 16 ORPC would ship the RivGen to the test site and then deploy the RivGen. Because the test site has not yet been definitively selected these tasks, and subsequent tasks, cannot be evaluated at this time, and are thus restricted until further NEPA review.

Any work proposed to be conducted at a federal facility may be subject to additional NEPA review by the cognizant federal official and must meet the applicable health and safety requirements of the facility.

NEPA PROVISION

DOE has made a conditional NEPA determination.

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

BP 1 All Tasks
BP 2 Tasks 9-14

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

BP2 Task 15-19

Include the following condition in the financial assistance agreement:

Site characterization work in Task 10 is limited to the identified site on the Millinocket Stream, located at 45°38'48.76" N, 68°42'10.66" W.

Notes:

Water Power Technologies Office
This NEPA determination does require a tailored NEPA provision.
Review completed by Roak Parker, 07/02/2021

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: **Roak Parker**
NEPA Compliance Officer

Date: 7/2/2021

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: _____