

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



RECIPIENT: COLUMBIA POWER TECHNOLOGIES, INC.

STATE: VA

PROJECT TITLE : Design, build, and test of novel, remote, low-power wave energy converter for non-grid applications

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001837	DE-EE0008627	GFO-0008627-003	GO8627

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.

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.

B5.25 Small-scale renewable energy research and development and pilot projects in aquatic environments Small-scale renewable energy research and development projects and small-scale pilot projects located in aquatic environments. Activities would be in accordance with, where applicable, an approved spill prevention, control, and response plan, and would incorporate appropriate control technologies and best management practices. Covered actions would not occur (1) within areas of hazardous natural bottom conditions or (2) 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, use of large-scale vibratory coring techniques, or seismic activities other than passive techniques.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide funding to Columbia Power Technologies, Inc. (CPT) to design, fabricate, and test a prototype wave energy converter (WEC). Testing would occur at the U.S. Navy's Wave Energy Test Site (WETS) (Kaneohe Bay, HI), an open-water marine energy test site.

DOE previously completed two NEPA Determinations (NDs) (GFO-0008627-001; A9, B3.6; 4/29/2019 and GFO-0008627-002; A9, B3.6; 9/29/2020) which applied to Tasks 1 through 14. Activities involved with these tasks include design, fabrication, and bench tests of the WEC and/or its subcomponents. This review (GFO-0008627-003) applies to Tasks 15 through 17.

Task 15 would involve WEC deployment activities at WETS. Such activities would include inspections; preparations for transport and deployment at WETS; installation of the anchor, mooring, and WEC; and WEC testing operations (approximately six months). Testing activities would include deployment and operation of two different passive, environmental monitoring payloads which would interact with the WEC: the Fugro deep environmental lander and the BioSonics marine wildlife monitoring system. Once deployed, both payloads would remain in place on the seafloor until the end of their respective deployment periods.

Task 16 would involve recovery and decommissioning of the WEC. The WEC would be evaluated to determine potential continued use and/or disposal. Task 17 would involve document preparation and other administrative activities required to close out the award.

Prior to this award, and in accordance with the Endangered Species Act (ESA) and Magnuson-Stevens Fishery Conservation and Management Act, the U.S. Navy and the National Marine Fisheries Service (NMFS) completed programmatic consultations concerning deployment activities at WETS. Initially, the ESA programmatic consultation would have applied to all activities and devices involved with this award apart from the proposed anchoring system and its location of deployment at WETS. The U.S. Navy submitted a request to NMFS to update the programmatic consultation to consider the proposed anchoring system and location for this award. NMFS issued a letter of concurrence (01/21/2022) with the determination that the proposed award activities would not likely adversely affect (NLAA) critical habitats or federally listed species. Subsequently, the U.S. Navy issued a Categorical Exclusion determination for the proposed award activities. In their determination, the U.S. Navy states they had also consulted with NMFS regarding potential impacts on Essential Fish Habitats (EFHs) and that NMFS determined the proposed activities conform to the relevant programmatic consultation. Conservation measures would be implemented during award activities to minimize potential impacts to federally listed species, critical habitats, and EFHs. DOE has determined the proposed activities would have no effect on species solely under U.S. Fish and Wildlife jurisdiction.

All facilities at onshore locations are preexisting purpose-built facilities for the type of work to be conducted for this award. Onshore facility modifications would not be required. Award activities would involve hazards associated with engineering, transport, and open water testing of a large WEC. Such hazards include drowning, collisions, and injuries associated with engineering and handling of heavy machinery and materials. Award activities would involve the handling and use of hazardous materials, including lithium batteries and electronic components. All such handling and storage would occur within controlled settings and would follow existing policies and procedures for handling and disposal of these materials. Existing corporate and government health, safety, and environmental policies and procedures would be followed at all locations, including: personnel training, proper personal protective equipment (PPE), engineering controls, monitoring, and internal assessments.

DOE has considered potential impacts on resources, including those of an ecological, historical, cultural, and

socioeconomic nature. DOE does not anticipate adverse impacts to these resource areas.

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

Regarding payloads, ND GFO-0008627-003 only applies to payloads that have been reviewed by the DOE NEPA Division: the Fugro deep environmental lander and the BioSonics marine wildlife monitoring system. Additional payloads, if proposed as part of this award or other connected action, must be reviewed by the EERE NEPA division prior to deployment.

Notes:

Water Power Technologies Office (WPTO)
This ND requires legal review of the tailored NEPA provision.
NEPA review completed by Dan Cahill, 06/13/2022

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.

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: Kristin Kerwin**
NEPA Compliance Officer

Date: 6/15/2022

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