PMC-EF2a
(2.04.02)

U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION

RECIPIENT: Aleutian Pribilof Islands Association **STATE:** AK

PROJECT TITLE : Feasibility of Tidal and Ocean Current Energy in False Pass, Aleutian Islands, AK

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000424	DE-EE0005624	GFO-0005624-001	

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), 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.)
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.

Rational for determination:

DOE is proposing to provide federal funding to the Aleutian Pribilof Island Association (APIA) to perform a feasibility study to determine if a tidal energy project would be a viable means to generate at least 30% of the electrical and heating needs of the tribal-owned buildings in False Pass, Alaska. APIA is proposing a thirty-day deployment of an Acoustic Doppler Current Profiler (ADCP) in the Isanotski Straight near False Pass (proposed project).

False Pass, Alaska is located at the far west end of the Aleutian Islands on an ocean pass known as the Isanotski Straight (54.853940oN, -163, 408830oW). The Isanotski Straight is known for its extreme currents between the Bering Sea and the North Pacific Ocean.

The objectives of the proposed feasibility study include:

1. Determining the viability of the current resource in False Pass for energy production
2. Providing an economic analysis of a tilde energy project at False Pass
3. Providing environmental and permitting analysis and identifying and documenting critical issues

With the exception of the 30-day ADCP deployment, the majority of tasks for this feasibility project would entail information gathering and analysis only.

Prior to the proposed deployment of the ADCP, project partners would characterize the ocean and tidal current resource using a combination of computer modeling and data collection. When a suitable site is identified, an ADCP, mounted on a weighted frame, would be deployed on the seafloor and left to operate for a full lunar cycle (30-days).

The ADCP would be retrieved after one month of operation and the data, including outputs on peak ebb and flood current velocities, energy density and potential annual energy output would be analyzed to assess the viability of the resource at False Pass.

The ADCP is an active device (4-beam, convex) that operates at 300 kHz. The device would be mounted on a 600 pound mooring frame made of aluminum and lead. The mooring frame is a tripod measuring 4 feet on each side and 2 feet tall. The ADCP would be attached to the mooring frame, which would be lowered to the seafloor with a doubled-up line. The line would be retrieved once the mooring is on the seafloor. No holes would be drilled in the seafloor.

Additional equipment that could be deployed in addition to the ADCP would include a side-scan sonar, single-beam sonar or multi-beam sonar to identify hazards prior to ADCP deployment. Also, an acoustic modem and transducer system located on the mooring frame would be used to communicate with the ADCP. All of the above instruments operate at frequencies greater than 200 kHz. At the end of the proposed project, the equipment would be retrieved and removed from the water.

Transportation to and from the ADCP device would be by a water taxi service that adheres to all US Coast Guard and OSHA safety and operating procedures that ensure minimal impact to the surrounding environment.

Because the ADCP device and associated equipment would operate at high frequencies, above the hearing sensitivities of marine mammals and the threatened loggerhead sea turtle (>200 kHz), these devices are not known to have an adverse effect. On July 3 2012, the National Marine Fisheries Service (NMFS) concurred with DOE's no effect determination of the ADCP deployment on marine mammals and threatened and endangered species known to occur in the area.

Additionally, since many marine mammals make seasonal migrations/movements, NMFS recommends APIA deploy the unit when marine mammals are least likely to be in the vicinity.

Prior to ADCP deployment, APIA would obtain land use permits form the Alaska Department of Natural Resources (ADNR) for the deployment of bottom-mounted, scientific equipment. The Alaska Environmental Review will be coordinated with the State of Alaska Coastal Management Office, who were contacted and provided an application to be completed and submitted upon receiving federal funding. The Office of Coastal Management will act as a clearinghouse for all federal, state and local regulatory agencies and requirements including environmental review and review by the Regulatory Commission of Alaska (RCA).

Based on this information and the temporary deployment of the ADCP device, DOE has determined the work outlined is consistent with activities identified in categorical exclusion A9 (information gathering) and B5.25 (small-scale renewable energy research and development and pilot projects in aquatic environments.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Insert the following language in the award:

You are required to:
All equipment must operate above 200 kHz

Note to Specialist :

Cristina Tyler 7.3.2012

DOE Funding: $222,350
Cost Share: $36,128

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By: Lori Gray / Lori Gray Date: 7/3/2012
NEPA Compliance Officer