PMC-ND
(1.08.09.13)

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

RECIPIENT: Litoral Power Systems, Inc. **STATE:** MA

PROJECT TITLE: A cost-disruptive, low impact, modular form factor low-head hydropower system

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001286	DE-EE0007243	GFO-0007243-001	

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.)
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 federal funding to Litoral Power Systems, Inc. to re-purpose standard shipping containers and connectors to create dams using modular, prefabricated units that can be swapped out for repair and maintenance.

Proposed project activities would include economic analysis, engineering analysis & design, computational modeling, and assembly and testing of the prototype dam. Economic and engineering analyses and design would occur at the Littoral office in New Bedford, MA, the National Renewable Energy Laboratory in Golden, CO and the University of Massachusetts in Dartmouth, MA. Computational modeling, assembly and testing of the prototype dam would occur at Alden Research Laboratory in Holden, MA. The prototype dam would be constructed from two shipping containers stacked on top of one another. The shipping containers would be placed in an existing, indoor, 100 foot by 10 foot by 20 foot test tank at the Alden Labs facility. The tank would then be sealed off and water would be added to test seepage between adjoining modules. Approximately 26,000 gallons of water would be used for tank testing. Standard practice at Alden is to re-use as much water as possible when testing. The assembly and dis-assembly of the dam would be closely reviewed and monitored to evaluate ability and ease of installation and removal. Testing would involve qualitative investigations with dye to find sources of any leakage in the dam. Remedies for sources of leakage would be evaluated.

Assembly and installation of the prototype dam at the Alden facility would involve operating heavy machinery, working with various hazardous materials, and conducting tests in both high- and low-water-pressure environments. All work would be performed by licensed personnel under supervision of Alden staff. The facilities in which lab work would occur are purpose-built for the type of activities being proposed; therefore, no adverse impacts to sensitive resources are expected as a result of the proposed project. No change in the use, mission or operation of existing facilities would arise out of this effort. The proposed laboratories and facilities would comply with standard safety procedures and all processes and procedures would be monitored by the Environmental Health and Safety staff. The proposed laboratories and facilities have all applicable permits in place, and would not need additional permits for the proposed activities. No hazardous waste would be produced as a result of the proposed project and all handling and disposal of waste materials would comply with appropriate local, state and Federal regulations.

Any work proposed to be conducted at a DOE laboratory may be subject to additional NEPA review by the cognizant DOE NEPA Compliance Officer for the specific DOE laboratory prior to initiating such work. Further, any work conducted at a DOE laboratory must meet the laboratory's health and safety requirements.

Based on review of the project information and the above analysis, DOE has determined that the proposed project would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with actions contained in DOE categorical exclusions A9 "information gathering, analysis and dissemination," and B3.6 "small-scale research and development, laboratory operations and pilot projects" and is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Insert the following language in the award:

You are required to:
Any work proposed to be conducted at a DOE laboratory may be subject to additional NEPA review by the cognizant DOE NEPA Compliance Officer for the specific DOE laboratory prior to initiating such work. Further, any work conducted at a DOE laboratory must meet the laboratory's health and safety requirements.

Note to Specialist :

Wind and Water Power Technologies Office
This NEPA determination requires a tailored NEPA provision.
Review completed by Logan Sholar on 12/15/2015

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By: Kristin Kerwin Date: 12/17/2015
NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____ Date: _____
Field Office Manager