

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** Eaton Corporation**STATE:** WI**PROJECT TITLE:** Cost-Optimized Modular Helical Rotors Turbine-Generator System for Small Hydro Power Plants

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001006	DE-EE0006927	GFO-0006927-001	GO6927

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 Eaton Corporation to design, manufacture and test a 1/10 scale prototype cost optimized modular helical rotor turbine generator for small hydro power plants. Project work would include design, fabrication, and lab testing of the 1/10 scale prototype turbine. Eaton would perform thirteen tasks for this project.

Tasks 1 - 7, and 12 - 13 would involve information gathering, analysis, and dissemination. These tasks would include computer modeling, concept designs, feasibility studies, and reporting.

Tasks 8-10 would include fabrication and procurement of the prototype turbine. The prototype turbine would be approximately one foot in diameter and two feet long. The prototype turbine would be fabricated at Stratasys Direct manufacturing facility in Austin, Texas. An appropriate generator would be procured to match the fabricated turbine requirements.

Task 11 would include laboratory testing of the system. The system would be tested at Alden Research Laboratory in Holden, MA. Testing would occur in the research laboratory's existing closed loop water test facility. No modifications to the testing facility nor new construction would be required for system testing.

No new construction, permits, licenses, authorizations, or modifications to existing facilities will be required.

All solid waste generated by the projects would be disposed of appropriately and would comply with all required standards for disposal of solid wastes.

No additional affects to resources or additional concerns were found to exist during this review.

Based on review of the project information and the above analysis, DOE has determined the 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 exclusion 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.

Note to Specialist :

Water Power Program

This NEPA determination does not require a tailored NEPA provision.

NEPA review completed by Roak Parker on 3.3.15

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: 
NEPA Compliance Officer

Date: 3/4/2015

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: _____
Field Office Manager

Date: _____