

PMC-EF2a

(20402)

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



RECIPIENT: Energy Northwest

STATE: WA

PROJECT TITLE : Packwood Lake Hydroelectric Project

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000120	DE-EE0002672	GFO-10-109	0

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:

B5.1 Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

Energy Northwest (EN) will use DOE ARRA funding for the design, manufacture, and installation of a new Pelton Wheel turbine runner and related infrastructure upgrades at the Packwood Lake Hydroelectric facility.

The new turbine runner will replace one existing runner within the Packwood hydropower facility's powerhouse. The new equipment being installed will increase the efficiency of the facility's turbine, but will not change the nameplate rating of the generator (26,125 kW).

The increase in efficiency would be obtained by (1) replacing the turbine runner (waterwheel) with one of modern design and construction, (2) modifying the two needle valve jet nozzles as necessary to support the operation of the new runner, and (3) modification of the existing governor software to allow single-jet operation (for efficiencies at low power operations).

This upgrade has become necessary due to the facility's new operating license. The upgrade in plant efficiency will help offset generation losses caused by the requirement to increase flows in the bypassed reach of Lake Creek under this new operating license.

Construction and operation:

No additional construction will be needed, nor will the footprint change. The heavy work will be confined to the facility's Turbine Deck inside the powerhouse. The effort to upgrade the turbine runner will consist of disassembly, installation of runner, reassembly, and testing.

Energy Northwest has a certificate of water right for the facility for up to 260 cfs, but seldom operates at this capacity. The nominal design capacity of the pipeline and penstock system is approximately 236 cfs.

Disposal/Removal of Equipment and Materials:

Once removed, the old carbon steel turbine runner will be sold to a scrap metal vendor for recycling.

Safety:

Energy Northwest has several procedures and plans in place, and the Project Personnel also follow the directions provided in Energy Northwest's corporate General Information Handbook (GIH) and the Industrial Safety Program Manual (ISPM).

Plans in place for this project include:

*The Industrial Safety Plan – this is based in OSHA and WISHA codes and complies with all requirements.

*The Public Safety Plan – this addresses public safety features of the Project. The Plan's purpose is to describe the types of hazards that exist and the safety devices or other measures that can be employed to enhance the protection of the public.

*The Emergency Plan – this considers the actions and responsibilities of Energy Northwest personnel and off-site assistance groups during situations that may require physical corrective actions. This Plan includes procedures designed to outline preventive measures for specific conditions that could evolve into an emergency situation, and outline procedural methods for mitigating an emergency should one occur.

*Spill Prevention Control and Countermeasure Plan (SPCC)

* Regulated Waste Management Plan

* Lead Containing Material Handling Policy

These plans and policies have been updated and submitted to FERC in December 2009.

The current FERC license number is P-2244. A Final Signed Programmatic Agreement was issued to Energy Northwest on January 25th, 2010 regarding its relicensing procedures. The relicensing process included Sec 106 and Sec 7 consultation with the State Historic Preservation Office and the US Fish and Wildlife Service; concurrence was given by each agency.

This project comprises action to conserve energy through improvements in generator efficiency; therefore a CX B5.1 applies.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

None Given.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  Date: 2/25/10
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