

PMC-EF2a

(20402)

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



RECIPIENT:Brigham City Corporation

STATE: UT

PROJECT TITLE : Brigham City Hydro Generation Project

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
CDP	DE-FG36-06GO86093	GFO-GO86093-002	GO86093

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:

- B1.8 Screened water intake and outflow structures** Modifications to screened water intake and outflow structures such that intake velocities and volumes and water effluent quality and volumes are consistent with existing permit limits.
- B5.2 Modifications to pumps and piping** Modifications to existing pump and piping configurations (including, but not limited to, manifolds, metering systems, and other instrumentation on such configurations conveying materials such as air, brine, carbon dioxide, geothermal system fluids, hydrogen gas, natural gas, nitrogen gas, oil, produced water, steam, and water). Covered modifications would not have the potential to cause significant changes to design process flow rates or permitted air emissions.

Rational for determination:

DOE is proposing to provide federal funding to Brigham City to replace an existing 575 kW hydro-turbine and generator with a 1 MW hydro-turbine and generator. DOE funding would be used to remove and replace the existing powerhouse equipment and a section of concrete encased penstock.

DOE made a previous NEPA determination to assess the energy potential and feasibility of replacing the 575 kW hydro-turbine and generator with a 1 MW hydro-turbine and generator (GFO-06-098-001; CX A9 and B3.1; signed 8.25.2012).

The Upper Hydroelectric Power Plant (UHPP) is located 0.5 mile east of Brigham City at the intersection of Highway 90 and Highway 91. The existing hydro-turbine and generator are located approximately 100 yards north of Box Elder Creek. The site is surrounded by gravel pits and open space. The UHPP was constructed in the 1960's and currently operates at maximum capacity and full turbine speeds. Recently, Brigham City entered into a contract to provide the new Proctor and Gamble plant with an additional four million gallons of water per day. A portion of this new potable water supply will pass through the UHPP.

The proposed project would include removal of the existing equipment and controls inside the powerhouse, demolition of a section of concrete encased penstock, replacement of penstock upstream of the turbine inlet, turbine bypass pipe, turbine shut-off and bypass valves, turbine and generator package, control equipment, assembly, start-up, commissioning, SCADA control and replacement of a section of conductors to step-up the transformer. The majority of the work would be completed within the existing powerhouse, with the exception of the penstock replacement upstream of the turbine inlet. No work would be completed in the river or river bank. During construction, the penstock would be disconnected and water would be diverted through an existing system around the power house and back into the water system. The penstock, which is currently a 30-inch steel pipe, would be removed and replaced with a new 30-inch steel pipe.

Prior to replacement of the hydro-turbine and generator, Brigham City would apply for non-consumptive water rights and a permit from the Federal Energy Regulatory Commission (FERC).

Wildlife cannot enter the system. The water that flows through the penstock comes from enclosed spring boxes and wells. The average flow rate for 2011 was 1.6 cubic feet per second (cfs). While the amount of water flowing through the system is expected to increase, the velocity of the flow re-entering the stream would not change. Similarly, the temperature of the water is currently less than one degree Fahrenheit higher when it is discharged. A change in discharge temperature is not anticipated as a result of the proposed system.

In a response dated August 2, 2012, US Fish and Wildlife Service (USFWS) concurred with DOE's determination that Brigham City's UHPP upgrade would have no effect on federally listed or candidate species. However, USFWS provided some conservation measures to the proposed project under the authorities of the Fish and Wildlife Coordination Act, the Migratory Bird Treaty Act and the Bald Eagle and Golden Eagle Protection Act. As a result of the USFWS consultation, Brigham City Corporation has committed to providing funding to Trout Unlimited to be applied to a conservation action in the Northern Bonneville Geographic Management Unit. Brigham City has requested that the funds be used for the Weber River fish passage structure located near the mouth of Ogden Canyon. The Weber River fish passage structure is located near the mouth of Ogden Canyon at a major irrigation intake facility. Trout Unlimited and Brigham City Corporation may, however, agree at a later date to provide funding to a different conservation project.

DOE has determined the work outline is consistent with activities identified in B1.8 (screened water intake and outflow structures) and B5.2 (modifications to pumps and piping). This project may be subject to additional NEPA review by other federal agencies as part of permitting or approval processes. This NEPA determination applies to the DOE funding action only.

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 :

None Given.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____



Electronically Signed By: Kristin Kerwin
NEPA Compliance Officer

Date: 11/8/2012

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: _____