

PMC-ND

(1.08.09.13)

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



RECIPIENT: Sacramento Municipal Utility District

STATE: CA

PROJECT TITLE : Construction Support for New Slab Creek Powerhouse Project

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000486	DE-EE0005413	GFO-0005413-002	GO5413

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.)

B5.24 Drop-in hydroelectric systems The installation, modification, operation, and removal of commercially available smallscale, drop-in, run-of-the-river hydroelectric systems that would (1) involve no water storage or water diversion from the stream or river channel where the system is installed and (2) not have the potential to cause significant impacts on water quality, temperature, flow, or volume. Covered systems would be located up-gradient of an existing anadromous fish barrier that is not planned for removal and where fish passage retrofit is not planned and where there would not be the potential for significant impacts to threatened or endangered species or other species of concern (as identified in B(4)(ii) of this appendix). Covered actions would involve no major construction or modification of stream or river channels, and the hydroelectric systems would be placed and secured in the channel without the use of heavy equipment. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Sacramento Municipal Utility District (SMUD) to deploy a drop-in hydroelectric turbine at a new powerhouse on the South Fork American River.

DOE completed a previous NEPA review (GFO-0005413-001, CX A9, C12, 03/07/2012) that included developing a technology transfer plan (Task 1); licensing and permitting (Task 2); and design (Task 3). That review did not review activities associated with Task 4, construction and system testing. The original Statement of Project Objectives (SOPO) contained 4 tasks. Since that time SMUD has modified the SOPO in which they modify task numbers, splits some tasks into separate tasks, and add a task. In the new SOPO, the activities associated with the original Task 1 have been added to a new Task 6 (described below). The original Task 2 (licensing and permitting) has become the new Task 1 (preliminary licensing and permitting) and Task 3 (final licensing and permitting). The original Task 3 (originally called final design) has become the new Task 2 (conceptual design) and Task 4 (final design). The content of these Tasks (the new Tasks 1 to 4) were reviewed in the prior NEPA review and will not be reviewed here. The original Task 4 (construction and system testing) has become the new Task 5. Added is a new Task 6 (performance and LCOE analysis) which would include an analysis of the efficiency of the turbine installed in Task 5, as well as development of a technology transfer plan (the original Task 1). As such, this NEPA review will review the new Tasks 5 and 6. Task 6 is composed of activities which are information gathering and dissemination, essentially determining how efficient the new turbine is and sharing that information. Task 5 involves the installation of a turbine and is discussed below.

Previous to the proposed project SMUD instituted the relicensing of the Upper American River Project (UARP) and Chili Bar Hydroelectric Project. That project utilizes water from Slab Creek Dam to power the White Rock Powerhouse, approximately 5.2 miles downstream from the dam. The White Rock Powerhouse is the farthest downstream and the largest (224MW) within the UARP. The White Rock Powerhouse feeds water into the Chili Bar Reservoir, which is a component of Pacific Gas & Electric Company's Chili Bar Project.

In 2007 SMUD received a new UARP license from the Federal Energy Regulatory Commission (FERC). That license incorporates Final Terms and Conditions associated with a January 2007 "Relicensing Settlement Agreement for the

Upper American River Project and Chili Bar Hydroelectric Project" (the Settlement Agreement). Pursuant to the Settlement Agreement, and thus mandated by the UARP license, SMUD is required to make annual and varying minimum releases at Slab Creek Dam that range from 63 to 415 cfs. SMUD is also required to release whitewater boating flows of up to 1,500 cfs. These requirements are for both conservation of fish and wildlife resources and recreation purposes.

The Slab Creek Dam contains a small powerhouse and water release system below the dam. That existing infrastructure, however, is not large enough to release the water and whitewater flows required by the UARP license. As such, under the UARP license SMUD is required to take some action to insure the mandated water releases. SMUD identified two options to comply with the license requirements. First, SMUD could penetrate the existing dam and insert a water control valve to allow for releases. Under this option SMUD would need to create a construction area under the dam, construct access to that area, and then develop a method to penetrate the dam and insert a water control valve, without compromising the integrity of the dam. SMUD has determined that this option is not viable. The second option would be to run water for the mandated releases to a new structure (boating flow release valve and/or powerhouse) approximately ¼ mile below the dam and release water at that point. Because this option does not require penetrating the existing dam, and does not require building a construction staging area at the base of the dam, SMUD has chosen this general alternative as the means to meet the requirements of the UARP license.

On August 27, 2014 and supplemented on April 20, 2015 and June 11, 2015, SMUD filed an application with FERC to amend its UARP license to install the new powerhouse and boating flow release valve at the location ¼ mile downstream from the dam (Final Application for Amendment of License for the Upper American River Project; FERC Project No. P-2101; To Authorize the Construction of the New Slab Creek Powerhouse and Boating Release Valve; August 2014).

The final proposed action in the application included the construction of a 400- foot-long, 8 foot in diameter, steel penstock to get water to the new location; a fixed-cone valve within a concrete reinforced vault to supply boating flows; a new minimum-flow powerhouse ¼ mile downstream from Slab Creek Dam; the installation of a single Francis 2.7kW turbine generator unit at the powerhouse; and, a 1,600-foot-long, 12kV transmission line (see Order Amending License, Revising Project Description, and Approving Exhibit F Drawings; November 9, 2016; sections 4-9).

In support of the final proposed action SMUD has consulted or met with parties including recreational user groups, area tribes, the State Historic Preservation Office, US Fish and Wildlife Service (USFWS), US Forest Service, Bureau of Land Management, and California State Offices. SMUD has completed consultation under section 7 of the Endangered Species Act (ESA) and found no endangered or threatened species or critical habitat to exist in the project area, a finding adopted by FERC. SMUD received a Section 401 certification from the State of California. SMUD has prepared a California Environmental Quality Act review for the State of California, and an Environmental Assessment (EA) for FERC. On April 29, 2015 FERC adopted SMUD's applicant-prepared EA and published a draft, seeking comment, with comments due by May 29, 2015. FERC received no comments. On November 9, 2016 FERC granted SMUD's application and amended the license. (Order Amending License, Revising Project Description, and Approving Exhibit F Drawings; November 9, 2016).

The FERC order amending the license included a Finding of No Significant Impact (FONSI) regarding the entirety of the proposed action (see Order Amending License, Revising Project Description, and Approving Exhibit F Drawings; November 9, 2016; section 73).

The proposed DOE action associated Task 5 is to provide funding to purchase, install and bring online the Francis 2.7MW turbine generator and associated systems components and valves. As described above, the DOE action was included in the much broader FERC proposed action, and was evaluated by FERC in its order amending the license and in its FONSI. (SMUD initially proposed construction of a two-turbine, 5MW facility. Design work in Tasks 1-3 led to modifications to the design of the proposed project to include only one small-scale, 2.7MW hydro turbine generator, which is what was evaluated in the FERC-adopted, applicant-submitted EA and approved in the FERC license and FONSI).

Because the 2007 FERC license mandates the water releases, the proposed action approved by the November 2016 order will occur regardless of DOE involvement, with the exception that SMUD may not install the 2.7MW hydro turbine generator.

Neither the underlying project mandated by the UARP License, nor the DOE proposed action would have a significant impact to water quality, temperature, flow, or volume. The project would not involve water storage or diversion of water from a stream or river. Instead, the project would involve return of water to a stream or river, as mandated by the UARP License.

DOE reviewed the EA, the Biological Assessment, the 2007 order, the November 2016 order amending the license and FONSI, as well as the consultation materials prepared for the project, and found them to be thorough. DOE reached out to USFWS to determine if they wanted to provide input regarding the DOE action. USFWS did not

respond. Because no ESA-listed species or critical habitat exist in the project area DOE has determined that the project would have no effect to those species or habitats and thus additional consultation is not necessary.

Based on the review of the proposal, DOE has determined the proposal fits within the class of actions and the integral elements of Appendix B to Subpart D of 10 CFR 1021 outlined in the DOE categorical exclusions selected above. DOE has also determined that: (1) there are no extraordinary circumstances (as defined by 10 CFR 1021.410(2)) related to the proposal that may affect the significance of the environmental effects of the proposal; (2) the proposal has not been segmented to meet the definition of a categorical exclusion; and (3) the proposal is not connected to other actions with potentially significant impacts, related to other proposals with cumulatively significant actions, or an improper interim action. This proposal 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:

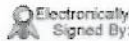
If the Recipient intends to make changes to the scope or objective of this project, the Recipient is required to contact the Project Officer, identified in Block 15 of the Assistance Agreement before proceeding. The Recipient must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved. If the Recipient moves forward with activities that are not authorized for Federal funding by the DOE Contracting Officer in advance of a final NEPA decision, the Recipient is doing so at risk of not receiving Federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

This NEPA determination does NOT require a tailored NEPA provision
Water Power Program
NEPA review completed by Roak Parker 12.09.16

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:



Signed By: Kristin Kerwin

Date: 12/15/2016

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:

Field Office Manager

Date:
