

**UPPER AMERICAN
RIVER PROJECT**
Clean and Reliable Hydro Power



July 2001

*before the
Federal Energy Regulatory Commission*

**UPPER AMERICAN RIVER PROJECT
FERC PROJECT NO. 2101**

**INITIAL
INFORMATION
PACKAGE**



SMUD

SACRAMENTO MUNICIPAL UTILITY DISTRICT

The Power To Do More.SM

SUMMARY

The Sacramento Municipal Utility District (SMUD) is a political subdivision of the state of California formed pursuant to the Municipal Utility District Act (California Public Utility Code §811501 *et seq.*) to acquire, generate, transmit, and distribute electric energy. SMUD currently serves about 1.2 million residents in its 900 square miles service area, which includes most of Sacramento County (including the City of Sacramento) and a portion of Placer County. To meet this power requirement, SMUD has developed an integrated generation portfolio that includes renewable energy sources such as hydro, photovoltaic, and wind, as well as natural gas-fired cogeneration. In a typical year, this portfolio provides about one-half of the power demand of SMUD's customer-owners. Other power is provided for through long- and short-term power contracts.

With an installed capacity of 688 MW, the Upper American River Project (Project) is an important component in SMUD's integrated generation portfolio. In fact, the Project is essential since it provides economical power, operational flexibility, and overall system reliability to SMUD's customer-owners. In addition, the Project's storage capability, coupled with its operational flexibility, provides a much-needed level of protection to SMUD's customer-owners from unexpected increases in the price of electricity on the open market. Therefore, SMUD intends to apply for a new Federal Energy Regulatory Commission (FERC) license in July 2005.

PURPOSE OF THIS INITIAL INFORMATION PACKAGE

This Initial Information Package (IIP) is prepared by SMUD as a reference document to facilitate the initial phase of the relicensing process. Its purpose is to provide basic information on Project facilities, Project operation, and potentially affected environmental resources to aid in: 1) understanding the relationship between the Project and the resources, and 2) identifying issues of importance during the relicensing. The IIP is organized into eight sections. The first four sections contain information that will ultimately be used by SMUD in its license application, with some modification. These sections include:

- IS. Initial Statement
- A. Project Description
- B. Project Operation
- C. Construction History

The next section contains historical Project benefits and cost information. This section will also be required in SMUD's license application, but will include forward-looking, rather than historical, costs and benefits as well as estimates of any capital improvements and other relicensing costs. These forward-looking costs are not currently available. This section is entitled:

- D. Historical Project Benefits and Costs

The next section includes environmental information that is currently available concerning the Project area. This section is divided into the following subsections:

- E. Environmental Resources
 - 1. Geological Resources
 - 2. Water Resources
 - 3. Aquatic Resources
 - 4. Botanical Resources
 - 5. Wildlife Resources
 - 6. Federal Threatened and Endangered Species
 - 7. Cultural Resources
 - 8. Recreational Resources
 - 9. Aesthetics Resources
 - 10. Land Use and Management

Each of the environmental resource sections provides a description of: 1) the laws, ordinances, regulations, statutes, and plans that pertain to that resource; 2) an overview of the resource in the general Project area, including historical trends and current conditions; 3) what is known about that resource in the general vicinity and immediate area of each Project facility and in the river reaches between Project facilities; and 4) literature cited.

The last two sections of this IIP include lists of design drawings and maps, many of which are taken from the current UARP license. These drawings and maps will be updated and will appear in SMUD's eventual license application. Interested parties are requested to contact SMUD for specific copies of the maps and drawings. These sections are entitled:

- F. Design Drawings
- G. Project Maps

SMUD has also included in this IIP a glossary of frequently used terms and abbreviations. The glossary appears immediately following the table of contents.

This IIP may be found in pdf, searchable format on SMUD's relicensing web page at www.smud.org.

HOW THE PROJECT WORKS

The Project was constructed primarily in the late 1950s and early 1960s. It is located in the Silver Creek, Rubicon River, and South Fork American River basins, on the west slope of the Sierra Nevada Mountain Range, in El Dorado and Sacramento counties. The Project is composed of seven separate developments, each of which is described below with reference to how water passes through the Project system to generate power:

1. The Loon Lake Development consists of three dams and reservoirs, three tunnels, and a powerhouse. The first dam lies on the Rubicon River, and captures inflowing river water to create the 1,450 acre foot (ac-ft) Rubicon Reservoir at an elevation of 6,545 feet above sea

level. Water stored in the reservoir is transported via a tunnel to Rockbound Lake (a non-Project facility), from which it naturally flows into the 1,070 ac-ft Buck Island Reservoir, which is created by a second dam on the Little Rubicon River. The water is transported from Buck Island Reservoir to Loon Lake Reservoir via a tunnel. With a storage capacity of 76,200 ac-ft, the Loon Lake Reservoir at elevation 6,410 feet, is the highest and first of the three major storage reservoirs of the Project. Loon Lake Reservoir is created by a dam on Gerle Creek and captures water from the creek as well as from other smaller tributaries feeding directly into the reservoir. From Loon Lake Reservoir, the water drops into a subterranean powerhouse 1,100 feet below the surface of the reservoir. Tailrace water exiting the 82 MW Loon Lake Powerhouse travels through a 3.8-mile-long tunnel before entering Gerle Creek Reservoir. Water is also released from the base of each of the three dams into the respective natural streambeds (Rubicon River, Little Rubicon River, and Gerle Creek) to preserve and protect downstream aquatic resources.

2. The Robbs Peak Development consists of two dams, two reservoirs, a canal, tunnel, penstock, and powerhouse. The first dam lies on Gerle Creek, and captures the tailrace water of the Loon Lake Powerhouse and inflowing water of the creek to create the 1,260 ac-ft Gerle Creek Reservoir at elevation 5,231 feet. Water from the reservoir is transported 1.9 miles via a canal to the small (30 ac-ft) Robbs Peak Reservoir, created by a dam on the South Fork Rubicon River. From this reservoir, water is transported via a tunnel and penstock to the 29 MW Robbs Peak Powerhouse, located on the northeast shore of the Union Valley Reservoir. Water is also released from the base of each dam into the respective streambeds (Gerle Creek and South Fork Rubicon River) to preserve and protect downstream aquatic resources.
3. The Jones Fork Development consists of a dam, reservoir, tunnel, penstock, and powerhouse. The dam lies on the South Fork Silver Creek, and captures inflowing creek water to create Ice House Reservoir, at elevation 5,450 feet. With a storage capacity of 45,960 ac-ft, Ice House Reservoir represents the second major storage reservoir of the Project. From Ice House Reservoir, water is transported via a tunnel and penstock to the 11.5 MW Jones Fork Powerhouse, located on the southeast shore of Union Valley Reservoir, adjacent to Jones Fork Silver Creek. Water is also released from base of the dam into South Fork Silver Creek to preserve and protect downstream aquatic resources.
4. The Union Valley Development consists of a dam, reservoir, tunnel, penstock, and powerhouse. The dam lies on Silver Creek, and captures inflowing water of several sources to create the 277,290 ac-ft Union Valley Reservoir – the third and largest storage reservoir of the Project, at elevation 4,870 feet. The sources of water flowing into the reservoir include the direct outflows of both Robbs Peak and Jones Fork powerhouses, as well as the inflow of Big Silver Creek, Jones Fork Silver Creek, Tells Creek, and Wench Creek. Water is transported from Union Valley Reservoir, via a penstock through the dam, to the 46.7 MW Union Valley Powerhouse, lying at the base of the dam. Water exiting the powerhouse flows directly into Junction Reservoir.
5. The Jaybird Development consists of a dam, reservoir, tunnel, penstock, and powerhouse. The dam lies on Silver Creek and captures water exiting Union Valley Powerhouse and

flowing down South Fork Silver Creek, creating the 3,250 ac-ft Junction Reservoir, at elevation 4,450 feet. Water is transported from the reservoir to the 144 MW Jaybird Powerhouse via a 4.4-mile-long tunnel and 0.5-mile-long penstock. Water exiting the powerhouse immediately enters Camino Reservoir. Water is also released from the base of the dam into Silver Creek to preserve and protect downstream aquatic resources.

6. The Camino Development consists of two dams, reservoirs, and tunnels, with one penstock and powerhouse. The first dam lies on Silver Creek and captures inflowing water from the creek and water exiting the Jaybird Powerhouse to create the 825 ac-ft Camino Reservoir at elevation 2,915 feet. Water is released from the reservoir into a 5-mile-long Camino Tunnel leading to the 150 MW Camino Powerhouse. The tunnel is joined by a second tunnel bringing water from Brush Creek Reservoir, a 1,530 ac-ft reservoir created by a dam on Brush Creek. The combined water drops through a penstock into the Camino Powerhouse, which lies along the South Fork American River. Water exiting the powerhouse immediately enters the Slab Creek Reservoir. Water is released from the base of both dams into the respective streambeds (Silver Creek and Brush Creek) to preserve and protect downstream aquatic resources.
7. The Slab Creek/White Rock Development consists of one dam and reservoir, two penstocks, and two powerhouses. The dam lies on the South Fork American River and captures inflowing creek river water and tailrace water from Camino Powerhouse to create the 16,600 ac-ft Slab Creek Reservoir at elevation 1,850 feet. Water is released from the reservoir through a 36-inch pipe which passes through the dam into the small (400 kW) Slab Creek Powerhouse. Water released from the powerhouse immediately enters the natural streambed of the South Fork American River to protect and preserve downstream aquatic resources. Water is also released from the Slab Creek Reservoir into a 4.9-mile-long tunnel and 0.3-mile-long penstock leading to the 224 MW White Rock Powerhouse, at elevation 993 feet. Water released from the powerhouse immediately enters Chili Bar Reservoir, part of the Pacific Gas and Electric Company's Chili Bar Project.

As presently configured, the Project also includes over 180 miles of overhead transmission lines, numerous access roads, and various recreation facilities including campgrounds, day use areas, boat launches and trails.

POTENTIAL PROJECT MODIFICATIONS AND ADDITIONS

During the course of the relicensing process, SMUD will evaluate the potential for modifications and additions to the Project. Based on these evaluations, SMUD may choose to propose modifications in its license application. At this point, SMUD has identified the following potential changes:

1. Modification of Project Lines – SMUD plans to delete certain transmission lines beyond Folsom Junction from the Project license, since these lines are an integral part of SMUD's transmission system necessary to serve the electrical needs of SMUD's customers and, therefore, are not "primary line" facilities. Consequently, these facilities are not

jurisdictional under Section 3(11) of the Federal Power Act, 16 U.S.C. Section 796(11), and should be deleted from the license.

2. Potential Addition of a Pumped Storage Facility – SMUD plans to conduct feasibility studies for the addition of a pumped storage facility located at Iowa Hill utilizing the existing Slab Creek Reservoir as the lower reservoir.

OVERVIEW OF SMUD’S RELICENSING PROCESS

The process that SMUD will apply to the relicensing of the UARP will follow the alternative relicensing process (ALP), as specified in FERC regulations (18 CFR section 4.34(i)). This process is well adapted to the unique needs and circumstances of SMUD and the interested parties that will participate in the relicensing. The alternative licensing process (ALP) for the Project has four main components:

1. A one-step National Environmental Policy Act (NEPA) review process, in which SMUD, in cooperation with stakeholders and with the assistance of FERC, will prepare a preliminary draft environmental assessment (EA) that will be submitted to FERC along with the UARP license application. The one-step NEPA review process will also be coordinated with the preparation of environmental documents for compliance with the California Environmental Quality Act (CEQA).
2. Broad public participation and open, efficient sharing of information, including the development and use of a Hydro Relicensing Internet web page which will be available to the public.
3. A cooperative, consensus-based approach to identifying and designing licensing studies, analyzing study data, and developing protection, mitigation, and enhancement (PM&E measures).
4. An early start on the relicensing process and a clear, workable schedule, to enable FERC to issue a new license for the Project before the current license expires, without sacrificing the opportunity to conduct comprehensive studies and analysis of the benefits and impacts of the Project.

Applicant-Prepared Preliminary Draft Environmental Assessment

As provided under paragraph 4(iii) of FERC’s regulations governing ALPs, SMUD in cooperation with stakeholders will prepare a preliminary draft EA of SMUD’s license application for the UARP. SMUD will coordinate with FERC to ensure, as appropriate, that the public scoping, studies, other information gathering, and analyses conducted for the preliminary draft EA also satisfy FERC’s information needs and analytical needs for an environmental impact statement (EIS) in the event that FERC decides to prepare an EIS with respect to the UARP license application. SMUD will file the preliminary draft EA with the UARP license application in lieu of an Exhibit E.

In addition, the National Environmental Policy Act (NEPA) review process will be coordinated with review of the license application under CEQA. The public scoping, studies, and analyses conducted pursuant to NEPA and the preliminary draft EA will be used to meet responsibilities under CEQA.

Broad and Active Public Participation

The ALP will be an open, public process in which resource agencies, Native American tribes, citizens' groups, businesses, other organizations, and members of the public will be encouraged to participate. Parties with an interest in the relicensing proceeding (organizations or individuals) may participate actively (Participants) or may passively observe or offer only limited comments, as they prefer. To encourage broad public participation, SMUD will maintain a Hydro Relicensing web page through which material in the public record will be conveniently available. To facilitate cooperation and the open exchange of information, SMUD and the other Participants will endeavor to share information and communications, both formal and informal, with all Participants. SMUD will provide public access to technical data regarding the UARP and licensing studies. To minimize costs, SMUD and the other Participants will rely on electronic communication, as appropriate.

Consensus-Based Decision-Making

Participants will seek to establish consensus on studies needed, study methodologies, appropriate PM&E measures, and other issues. Participants will seek consensus at all stages of the ALP including:

- Final communications and process protocols.
- Project issues, goals, and desired conditions.
- Study-planning phase. Participants will seek consensus on which studies are needed, how the studies should be conducted, and how the results should be prepared and analyzed. SMUD anticipates that each study will be reviewed by a Technical Working Group with expertise regarding the subject matter.
- PM&E measures.

In addition, Participants will seek general consensus regarding the terms of the proposed license and the analysis and conclusions of the preliminary draft EA.

Early Start and Timely Completion

The ALP will start in 2001, one year before FERC's regulations allow SMUD to file a Notice of Intent to File (NOI) a license application. This early start will allow additional time for technical studies, particularly field studies that must be conducted during a seasonal window of opportunity in the Sierra Nevada. The early start will also give SMUD additional time to meet

with Participants to discuss the results of the technical studies and evaluate the effects of the Project operations on resources within the Project area.

The licensing process will progress through five general phases. The first three phases will occur before the license application and the preliminary draft EA are filed. The fourth phase will occur during FERC's review of the license application. The fifth phase will occur after a new license has been issued.

Phase	Description	Time line
Phase I	Review goals and desired conditions; identify issues and concerns; design studies	2001-2002
Phase II	Conduct studies and prepare technical reports	2002-2004
Phase III	Analyze study results and develop PM&E measures; balance tradeoffs; prepare and file license application and preliminary draft EA; perform NEPA/CEQA Scoping	2003-2005
Phase IV	FERC review and licensing decision	2005-2007
Phase V	Implementation of new license	2007+

COMMENTS ON THIS IIP

As stated above, this IIP is intended to be a reference document for Participants during the relicensing process. If any party notices any inaccuracy in the data presented in this IIP or becomes aware of any pertinent data not included in the IIP, please contact SMUD. SMUD does not intend to revise and re-issue this IIP, but will bring corrections and additions forward in the relicensing process. Comments should be sent to:

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