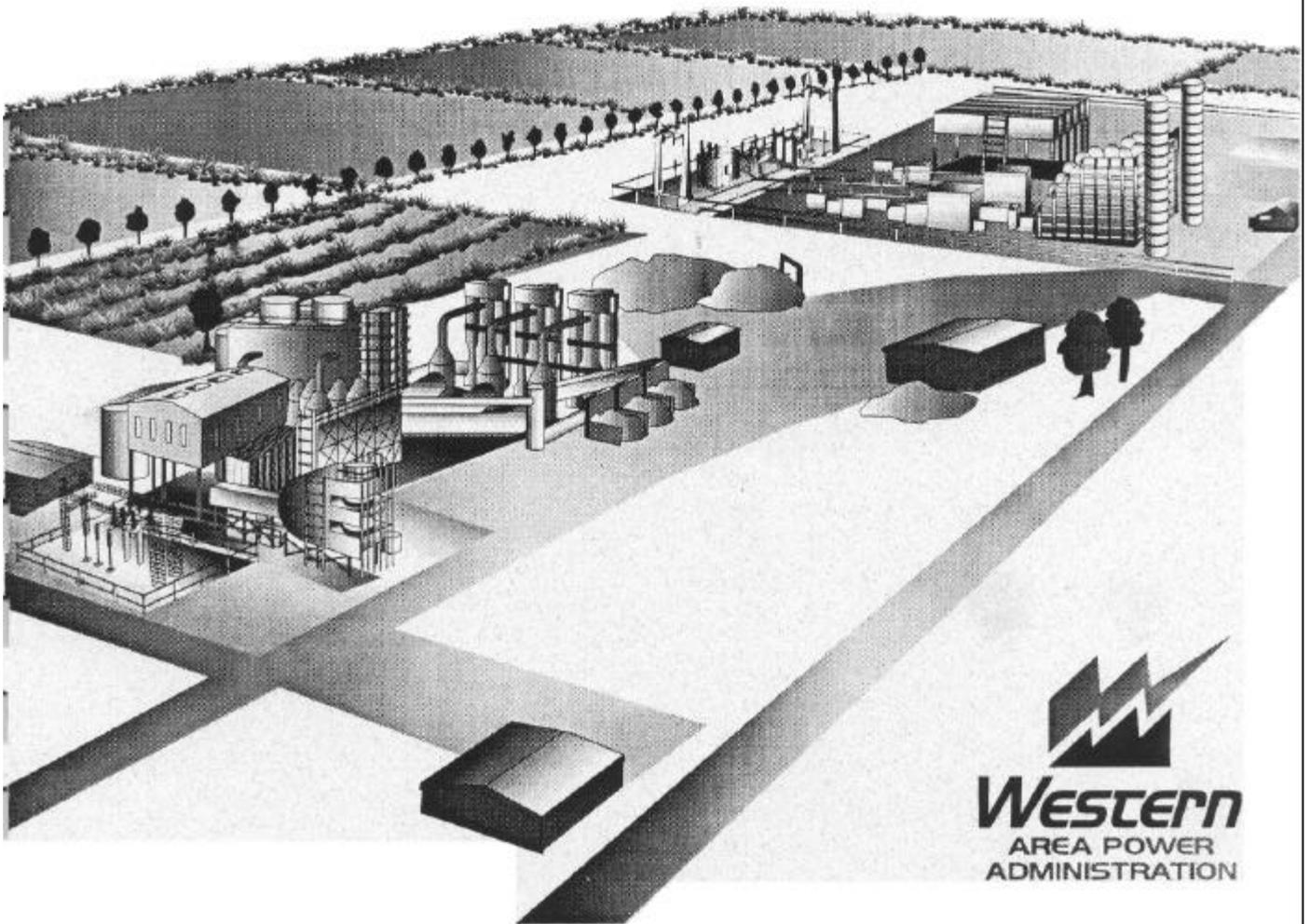




Sutter Power Project

Final Environmental Impact Statement
Volume I

DOE/EIS 0294



Sierra Nevada Customer Service Region

Western Area Power Administration

U.S. Department of Energy

APRIL 1999



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Final Environmental Impact Statement
Volume I

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Sierra Nevada Customer Service Region

Western Area Power Administration
U.S. Department of Energy

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COVER SHEET

Project Title: Sutter Power Project, Final Environmental Impact Statement
Sutter County, California

Federal Lead Agency: Western Area Power Administration, U.S. Department of Energy

Related Actions: California Energy Commission's Certification for the Sutter Power Project
Calpine Corporation's Application for Certification for the Sutter Power Project
Sutter County General Plan Amendment and a Planned Development Rezone
Western's Sutter Powerplant -- Interconnection Feasibility Study

Technical Assistance: Foster Wheeler Environmental Corporation
CH2M Hill
R. W. Beck

ABSTRACT

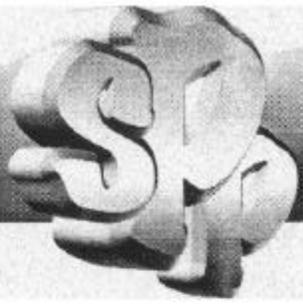
Western Area Power Administration operates and maintains a high-voltage electric transmission system in California to deliver power to qualified customers. Calpine Corporation has requested that Western study and consider the feasibility of an interconnection with Western's Keswick-Elverta/Olinda-Elverta 230-kilovolt (kV) transmission lines. Calpine proposed to construct and operate of the Sutter Power Project. The project, as proposed, would include a 500 megawatt (MW) natural gas-fueled, combined-cycle, electric generation facility; a new 5.7 mile 230-kV generation tie-line; a transmission line switching station; and a 12-mile (16 inch) natural gas pipeline to connect with Pacific Gas and Electric's Line 302. The siting of the project's generation facility is proposed on a portion of a 77-acre parcel of land owned by Calpine, adjacent to Calpine's existing Greenleaf 1 cogeneration powerplant in Sutter County, approximately 7 miles south of Yuba City and 36 miles northwest of Sacramento. Calpine's stated objective for developing the Sutter Powerplant is to sell power to a mix of retail and wholesale customers in the newly deregulated electricity market. As a "merchant plant," Calpine intends to sell power on a short and mid-term basis to customers, and on the spot market. On July 29, 1998, Western issued a Sutter Powerplant Interconnection Feasibility Study. The study results indicated that the output from the proposed Sutter Powerplant Project would improve system reliability in the generation deficient Sacramento area. Based on Western's interest in improving system reliability and as the owner of the transmission lines for the proposed project interconnection, Western is the lead federal agency responsible for the project's National Environmental Policy Act compliance. The California Energy Commission has the statutory authority to license thermal powerplants of 50 MW or greater. The Energy Commission's siting facility certification process has responsibilities that are functionally equivalent to those of a lead agency under the California Environmental Quality Act. Because of these similar agency responsibilities to examine environmental impacts, Western and the Energy Commission are joint-lead agencies for this project's environmental review. Although this arrangement was successful during the scoping and *Draft Environmental Impact Statement* stages of review, the two agency processes were separated at the close of the *Draft Environmental Impact Statement* public comment period on December 14, 1998, to assure process integrity for each agency.

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Websites that contain information on this project include:

Western Area Power Administration	www.wapa.gov
U.S. Department of Energy	http://tis.eh.doe.gov/nepa/
California Energy Commission	www.energy.ca.gov/sitingcases/sutterpower



Summary

Sutter Power Project

Sierra Nevada Customer Service Region

SUMMARY

SUTTER POWER PROJECT

S.1 INTRODUCTION

This summary includes discussions of:

- The Proposed Action (Sec. S.2)
- The Purpose and Need for Action (Sec. S.3)
- Public Involvement and Comment (Sec. S.4)
- Alternatives (Sec. S.5)
- Impacts (Sec. S.6)

This summary provides an overview of the *Final Environmental Impact Statement (Final EIS)* prepared for the proposed Sutter Power Project by Western Area Power Administration (Western). Western is the lead federal agency on this project. This *Final EIS* was prepared to meet the requirements of the National Environmental Policy Act (NEPA) and the implementing regulations of the President's Council on Environmental Quality.¹

S.2 PROPOSED ACTION

The Calpine Corporation (Calpine) proposes to construct and operate the Sutter Power Project (SPP), a 500-megawatt (MW) natural gas-fueled, combined-cycle, electric generation facility. The SPP would be located in Sutter County, approximately 7 miles southwest of Yuba City on South Township Road near the intersection with Best Road. The location is adjacent to Calpine's Greenleaf 1 49-MW natural gas-fueled cogeneration powerplant. The land dedicated for the facility will comprise approximately 16 acres of Calpine's existing 77-acre parcel. In addition to the proposed powerplant, the SPP will include the construction and operation of a new overhead electric transmission line, a new switching station, and a new 16-inch natural gas pipeline.

Calpine's stated objective for developing the SPP is to sell electric power to a mix of retail and wholesale customers in the newly deregulated electricity market. The project would provide support and improvement to the local transmission system by

¹The *Draft EIS* was prepared jointly with the California Energy Commission Final Staff Assessment and meets the Commission's requirements from the California Environmental Quality Act and guidance of the Commission.

SUMMARY

increasing voltage support in the Sacramento area. The project would also conform to the requirements of the State of California goals for an efficient electrical system.

S.3 PURPOSE AND NEED FOR AGENCY ACTION

Calpine Corporation has requested an interconnection to Western's Keswick-Elverta/Olinda-Elverta double-circuit 230-kV transmission line to transmit electricity generated by their proposed SPP. The purpose and need of the proposed action is for Western to respond to Calpine's request for interconnection.

S.4 PUBLIC INVOLVEMENT

Public involvement is an integral part of the decision-making process for both Western and the Commission. Both Western's and the Commission's processes are intended to inform the public (including individuals, interested parties and Federal, State, local, and tribal agencies), gather information from the public to identify public concerns and values and to consider such input in decision making. Western has received input on the scope of the SPP and on the alternatives through public meetings, workshops, hearings, and comments on the *Draft EIS*. The public's concerns have been focused on visual, land use and air impacts of the proposed powerplant and its affect on agriculture, the primary industry in the county. Western's responses to the public's concerns are presented in Chapter 5 of this document.

Through the combined efforts of Calpine, the Commission and Western, an extensive effort was made to notify all potentially interested parties about the SPP and the opportunities for involvement. Between June and September 1997, five pre-filing workshops were held to discuss Application for Certification (AFC). The AFC was filed on December 15, 1997.

On February 13, 1998, Western published a notice of intent to prepare an environmental impact statement for the SPP in the *Federal Register*. This was intended to notify the general public, as well as other interested parties and agencies, of the upcoming scoping meeting, and request identification of issues and reasonable alternatives to be considered in the *EIS*. The scoping meeting was held in Yuba City on March 3, 1998, and the comment period was set through May 5, 1998. The Commission filed the Preliminary Staff Assessment on July 1, 1998, followed by nine workshops to discuss and receive input for the *Draft EIS/Final Staff Assessment (FSA)*. The joint *Draft EIS/FSA* was filed on October 19, 1998. The Environmental Protection Agency's notice of availability was published in the *Federal Register* on October 30 and Western's Notice of Availability was published on November 6, 1998. Subsequently, four evidentiary hearings were held to solicit and obtain public comment. December 14, 1998, marked the end of the *Draft EIS* comment period.

Comments taken from the four public hearings covered many of the issues under consideration in the *EIS* process. More than 40 persons provided comments, observations and suggestions. Written comments were also received from individuals, organizations, and agencies on the *Draft EIS*. In addition to the comments centering on environmental impact issues, comments supported the project and comments were made on the procedures used by Western and the Commission in analyzing the environmental impacts. Western believes that all comments have been properly considered in the analysis of the impact of this project.

S.5 ALTERNATIVES

Federal agencies are required under NEPA to consider a range of alternatives that could feasibly achieve the basic objectives of the proposed SPP. The alternatives analysis is designed to provide a reasonable range of feasible alternative sites, which could substantially reduce or avoid any potentially significant adverse impacts of the proposed project. Eleven potential alternative sites were identified through discussions with the public, Sutter County staff, the Commission and from a prior local siting case (Sacramento Ethanol and Power Cogeneration Project).

The number of alternatives was reduced by a comparison of all 11 sites to specific screening criteria. Four sites remained for detailed analysis: Sacramento Ethanol and Power Cogeneration Project (SEPCO) SAC 1, SEPCO S1, Sutter Buttes, and O'Banion Road in addition to the proposed project site. The analysis also considered the "no project" alternative, which assumed that the project would not be constructed. The Commission process differed from the typical NEPA "no action" alternative analysis, by comparing the alternatives against the proposed project instead of against the "no action" alternative. The analysis also considered technical and operational alternatives to the project proposal, which resulted in the reduction of environmental impacts.

SEPCO SAC 1

The SEPCO SAC 1 site is located in Sacramento County approximately 12 miles north of the city of Sacramento, about one mile east of Highway 99/70 between Elverta Road and Elkhorn Boulevard. The 19-acre parcel is zoned Heavy Industrial with a Flood Combining Zone applied to about half of the site. Details of this alternative include: a 4,000 foot transmission line to connect to Western's existing Elverta Substation; 16 miles of natural gas pipeline; and 200 residences within 1 mile of the site. Property ownership has not been determined.

SEPCO S1

The SEPCO S1 site is located in Sutter County approximately 28 miles south of Yuba City, about 2 miles east of Highway 99/70 on the south side of Sankey Road. The 33-

SUMMARY

acre parcel is zoned General Agriculture and is within the South Sutter County Industrial/Commercial Area that has an Industrial/Commercial General Plan designation. Details of this alternative include: one mile of transmission, but not a separate switching station; 20 miles of natural gas pipeline; and 40 residences within 1 mile of the property with expected residential growth. The property is not for sale.

Sutter Buttes

The Sutter Buttes site is located in Sutter County approximately six miles west of Yuba City on the north side of Highway 20, about one mile south of the unincorporated area of Sutter County. The 67-acre parcel is zoned Industrial with a General Plan designation of Industrial/Commercial with prohibited height restrictions. Details of this alternative include: 5 miles of transmission line; 28 miles of natural gas pipeline; 40 residences are within 1 mile of the property; and a separate switching station would be needed. The property is currently for sale.

O'Banion Road

The O'Banion Road site is located in Sutter County approximately 10 miles south-southwest of Yuba City, about 4 roadway miles from the proposed SPP site, located on the south side of O'Banion Road at the Sutter Bypass. The 56-acre parcel is zoned for agriculture use and is in rice production and by a duck club. The site is within ½ mile of the Sutter National Wildlife Refuge. The powerplant is potentially inconsistent with the uses of the refuge, as the rice fields provide habitat for the waterfowl on the refuge, and there are increased avian collision concerns. Details of this alternative include: no transmission line or switching station would be needed; 16 miles of natural gas pipeline; and one residence within 1 mile of the property. Sixty-six percent of current property owners are unwilling to sell.

Preferred Alternative

Western identifies as the preferred alternative the proposed action with the dry-cooling alternative and a transmission line alternative that would route the line south along South Township Road to O'Banion Road, then to an alternative switchyard site at the end of O'Banion Road.

“No-Project” Alternative

This alternative assumes that the project is not constructed. In the AFC, Calpine presents three arguments stating this alternative would be infeasible because:

- (1) it does not meet Calpine's business plans and the purpose of a merchant plant;
- (2) the SPP will displace production from older, less efficient, higher air emission utility-owned plants; and

(3) the SPP will add stability to the Sacramento area transmission network.

The “no project” alternative does not support the growing demand for electricity in the greater Sacramento Area, and some form of additional generation would be needed within six years.

S.6 IMPACTS

The Commission holds responsibility for approving Calpine’s Application for Certification. The Commission has included 166 Conditions of Certification (see Appendix O) in the *Revised Presiding Members Proposed Decision (PMPD)*. A draft of these Conditions was included in the *Draft EIS*. These Conditions are specific requirements which determine how the proposed facility will be designed, sited, and operated to protect environmental quality, assure public health and safety, and operate in a safe and reliable manner. The impacts to the following are, or will be once the Conditions of Certification have been met, reduced to less than significant:

- Air Quality
- Public Health
- Land Use and Recreation
- Socioeconomic Resources
- Visual Resources
- Biological Resources
- Noise
- Facility Closure
- Soil and Water Resources
- Hazardous Material Management
- Waste Management
- Worker Safety and Fire Protection
- Cultural Resources
- Paleontological Resources
- Facility Design
- Powerplant Reliability
- Powerplant Efficiency
- Transmission System Engineering
- Transmission Line Safety
- Traffic and Transportation

The *PMPD* also includes requirements for Compliance Monitoring and General Conditions.

The Proposed Action will permanently remove 3.0 acres of man-made seasonal wetlands. An additional 2.83 acres will be temporarily impacted during construction activities. There will be no impact to aquatic biota because there will be no wastewater discharge. A total of 19 acres of Swainson’s Hawk foraging habitat and 4.9 acres of giant garter snake upland habitat will be impacted. These impacts will be mitigated through an off-site mitigation bank purchase of 38.488 acres. There is potential for migratory bird collision with the transmission line and heat recovery steam generators stacks.

SUMMARY

In accordance with 10 CFR1022, Western believes that there is no practicable alternative to the proposed project that would avoid impacts to floodplains/wetlands.

Websites

Electronic versions of this document and many of its components, can be found on these three websites:

Western	http://www.wapa.gov
U.S. Department of Energy's NEPA	http://tis.eh.doe.gov/nepa
Commission	http://www.energy.ca.gov/sitingcases/sutterpower

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- A. Wetland Delineation Report for Sutter Power Plant Project, Sutter County, California by Foster Wheeler Environmental Corporation; dated June 1997.
- B. Department of the Army Clean Water Act Section 404 Individual Permit for Filling Wetlands on the Proposed Sutter Power Plant Project Site (ID# 199700183); dated September 30, 1998.
- C. *FSA/Draft EIS* Distribution list and transmittal letters; dated October 1998.
- D. California Energy Commission Correction to the *FSA/Draft EIS* on Waste Management, Noise, Paleontological Resources, and Transmission System Engineering; dated November 2, 1998.
- E. Sutter County Community Services Department correspondence to Sutter County Planning Commission regarding General Plan Amendment land use change and Rezoning; dated November 12, 1998.
- F. Final Determination of Compliance for the Sutter Power Plant FRAQMD, dated November 13, 1998.¹
- G. Revised Air Quality Testimony for the Sutter Power Plant; dated November 17, 1998.
- H. Errata for Air Quality Testimony Filed on November 17, 1998; dated November 30, 1998.
- I. Supplemental Testimony for the Sutter Power Project (on Alternative Project Sites, Alternative Transmission Line Routes, Socioeconomics, and Plant Closure Fund); dated November 24, 1998.
- J. Calpine Corporation's Biological Resources Mitigation Implementation Plan; dated December 1998.
- K. California Energy Commission Brief on Visual Resource Impacts in the matter of the Application for Certification of the Sutter Power Project; dated December 9, 1998.
- L. Department of the Interior letter to Western; dated January 6, 1999.
- M. Calpine Corporation letter to California Energy Commission regarding Process Water Mitigation; dated February 26, 1999.
- N. State of California, Office of Historic Preservation (SHPO) letter to Western; dated March 2, 1999.
- O. Complete Table of Conditions of Certification for the SPP (from *Draft EIS, Presiding Members Proposed Decision* and the *Revised Presiding Members Proposed Decision*).

¹ The version included is the errata for the DOC, which contains the redline/strikeout format; dated December 1, 1998.

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- P. National Marine Fisheries Service Biological Opinion on the Sutter Power Project; dated March 7, 1999.
- Q. California ISO letter to Western Area Power Administration on Calpine Corporation and Proposed Sutter Power Plant; dated March 8, 1999.
- R. Native American Contacts and contact letters (dated March 24, 1998) from the Cultural Resources Inventory of the Sutter Power Project, Sutter County, California by Douglas M. Davy, Ph.D. and Jennifer K. B. Nachmanoff; dated January, 1999.
- S. Easement Restriction for Sutter National Wildlife Refuge, dated February 17, 1999.
- T. U.S. Fish and Wildlife Service Biological Opinion on the Sutter Power Project; dated April 2, 1999.
- U. Commission Order Adopting *Revised Presiding Members Proposed Decision*, Docket No. 97-AFC-2, dated March 17, 1999.

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LIST OF ACRONYMS

AFC—Application for Certification
AG — Generic Agriculture
ANSI—American National Standard Institutes
ASCE—American Society for Civil Engineers
ASTM—American Society for Testing and Materials
Cal. Pub. Res Code— California Public Resources Code
Calpine—Calpine Corporation
CCR—California Code of Regulations
CEQA—California Environmental Quality Act Cal. Pub. Res.Code 21000, *et seq.*
CESA—California Endangered Species Act, CCR § 2050, *et seq.*
CFR—Code of Federal Regulations
Commission—California Energy Commission
CPM— Compliance Project Manager
CURE—California Unions for Reliable Energy
CWA—Clean Water Act 33 U.S.C. 1251, *et seq.*
DOE— U. S. Department of Energy
EIS/FSA— Environmental Impact Statement / Final Staff Assessment
EIS—Environmental Impact Statement
EMF—electromagnetic field
ERC—Emission Reduction Credit
ER—Electricity Report
ESA—Endangered Species Act 16 U.S.C. 1531, *et seq.*
FDOC—Final Determination of Compliance
FEMA—Federal Emergency Management Agency
FERC—Federal Energy Regulatory Commission
FRAQMD—Feather River Air Quality Management District
FSA—Final Staff Assessment
FWS—U.S. Fish and Wildlife Service
gpm—gallons per minute
gpd—gallons per day
HRSG—heat recovery steam generators
IEEE—Institute of Electrical and Electronic Engineers
IIPP—Injury and Illness Prevention Plan
ISO—Independent System Operator
kV—kilovolt
LORS— laws, ordinances, regulations and standards
MW—megawatt

CONTENTS

NEC—National Electric Code
NEPA—National Environmental Policy Act 42 U.S.C. 4371, *et seq.*
NESC—National Electrical Safety Code
NHPA—National Historic Preservation Act 16 U.S.C. 470
NMFS—National Marine Fisheries Service
OAT—Open Access Tariff
PDOC—Preliminary Determination of Compliance
PG&E—Pacific Gas and Electric Company
PMPD—Presiding Members Proposed Decision
PSA—Preliminary Staff Assessment
ROD—Record of Decision
SEPCO—Sacramento Ethanol and Power Cogeneration Project
SHPO—State Historic Preservation Office/Officer
SPP—Sutter Power Project
U.S.C.—United State Code
Western—Western Area Power Administration