

ORIGINAL



**Pacific Gas and Electric Company**

FILED  
OFFICE OF THE  
SECRETARY

Power Generation

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FEDERAL ENERGY  
REGULATORY COMMISSION

January 11, 2005

Honorable Magalie Roman Salas, Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426

**Re: Upper North Fork Feather River Project - FERC No. 2105-089  
Response to December 17, 2004 Additional Information Request**

Dear Secretary Salas:

The attachment to this letter provides the Pacific Gas and Electric Company's response to the Commission's December 17, 2004 Additional Information Request (AIR).

Parties interested in obtaining copies of the reports referenced in this AIR response can be obtained by contacting me at (415) 973-9320.

Sincerely,

Tom Jereb  
Upper North Fork Feather River Project Manager

Original and 8 copies to FERC

Attachment

Cc: Project 2105 Service List  
Project 2105 Interested Parties List

**Honorable Magalie Roman Salas**

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**Project 2105 Interested Parties:**

**American Whitewater  
Mr. John T Gangemi  
482 Electric Ave.  
Bigfork, MT 59911**

**Water Resources Control Board  
Mr. Jim Canaday  
P. O. Box 2000  
Sacramento, CA 95812**

**Maidu Cultural and Development Group  
Mr. Farrell Cunningham  
P. O. Box 426  
Greenville. CA 95947**

**Baiocchi Family  
Mr. Robert J Baiocchi  
P. O. Box 1790  
Graeagle, CA 96103**

**Water Resources Control Board  
Ms. Sharon Stohrer  
P. O. Box 2000  
Sacramento, CA 95812**

**Greenville Rancheria  
Ms. Lorie Jaimes, Tribal Chair  
410 Main Street  
Greenville, CA 95974**

**California Trout  
Mr. Curtis Knight  
P. O. Box 650  
Mt. Shasta, CA 96067**

**County of Plumas  
County Counsel  
520 Main Street, Room 302  
Quincy, CA 95971-9115**

**Susanville Indian Rancheria  
Valerie Edwards, Tribal Chairperson  
Drawer U  
Susanville, CA 96130**

**CA Dept. of Fish and Game  
Mr. Banky Curtis, Reg. Mgr.  
1701 Nimbus Road, Suite A  
Rancho Cordova, CA 95670**

**County of Plumas  
Tom Hunter  
1834 East Main  
Quincy, CA 95971**

**Susanville Indian Rancheria  
Mr. Alan Lowry  
Drawer U  
Susanville, CA 96130**

**CA Dept. of Fish and Game  
Ms. Lori Powers  
P. O. Box 1858  
Portola, CA 96122**

**Lake Almanor 2105 Committee  
P. O. Box 3343  
Lake Almanor, CA 96137-3343**

**Honey Lake Maidu  
Mr. Jeremy Peconom  
7597 Elizabeth Road  
Vacaville, CA 96130**

**CA Dept. of Fish and Game  
Robert Hughes  
Native Anadromous Fish and  
Watershed Branch  
830 S Street  
Sacramento, CA 95814**

**Supervisor Bill Dennison  
Board of Supervisors, Plumas  
County  
520 West Main Street, Room 309  
Quincy, CA 95971**

**Honey Lake Maidu  
Mr. Ron Morales  
1101 Arnold Street  
Susanville, CA 96130**

**Shasta Paddlers  
Mr. Kevin Lewis  
4641 Hornbeck Ln  
Anderson, CA 96007-2631**

**Supervisor Robert Meacher  
Board of Supervisors, Plumas  
County  
520 West Main Street, Room 309  
Quincy, CA 95971**

**CA Sportfishing Protection Alliance  
Mr. Jerry Mensch  
1673 Kendall Street  
Roseburg, OR 97470**

**Chico Paddleheads  
Mr. Dave Steindorf  
179 Valley Ridge Dr.  
Paradise, CA 95964**

**County of Plumas  
Ms. Christi Goodman  
1834 East Main  
Quincy, CA 95971**

**California Hydropower Reform Coalition  
Ms. Luara Norlander  
2140 Shattuck Ave. 5<sup>th</sup> Floor  
Berkeley, CA 94704**

**Honorable Magalie Roman Salas**

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**Friends of the River  
Ms. Kelly Catlett  
915 20<sup>th</sup> Street  
Sacramento, CA 95814-3115**

**U. S. Forest Service  
Mr. Mike Taylor  
Feather River Ranger District  
875 Mitchell Ave.  
Oroville, CA 95965-4699**

**U. S. Forest Service  
Mr. Bob Hawkins  
Regional Hydropower Coordinator  
650 Capitol Mall, Room 7524  
Sacramento, CA 95814**

**Trout Unlimited  
Chuck Bonham  
828 San Pablo Ave., Suite 208  
Albany, CA 94706**

**National Marine Fisheries Service  
Eric Theiss  
650 Capitol Mall, Suite 8-300  
Sacramento, CA 95814**

**U.S. Fish and Wildlife Service  
Endangered Species Branch  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825**

**U. S. Forest Service  
Ms. Terri Simon - Jackson  
159 Lawrence Street  
Quincy, CA 95971-6025**

**U.S. Fish and Wildlife Service  
Mr. Steven Schoenberg  
2800 Cottage Way, Rm W2605  
Sacramento, CA 95825**

**Federal Energy Regulatory Commission  
Mr. John Mudre  
Mail Code PJ-11.7  
888 First Street, N.E.  
Washington, DC 20426**

**National Park Service  
Mr. Stephen Bowes  
1111 Jackson St., Suite 700  
Oakland, CA 94607**

**Ms. Frankie Green  
Lois Berger Group  
655 Cherokee Heights Road  
Tallassee, AL 36078**

**Mr. Takeshi Yamashita  
Federal Energy Regulatory Commission  
901 Market Street, Suite 350  
San Francisco, CA 94103-1778**

## **Upper North Fork Feather River Project, FERC No. 2105 Licensee Reply Response to**

**FERC'S DECEMBER 17, 2004  
ADDITIONAL INFORMATION REQUEST**

***FERC's December 17, 2004 A.I.R. Please file an original and eight copies of the above-mentioned study results and/or reports. (The request is for recent reports and information on water temperature alternatives.)***

### **Licensee Response to FERC's December 17, 2004 A.I.R.:**

**Study Reports Concerning Water Temperature:** A Compact Disk (CD) is provided herein which includes copies of the study reports and information below. Licensee has conducted seven principle studies assessing the feasibility of obtaining colder water in the North Fork Feather River. An executive summary (PG&E 2004a) which summarizes each of the seven study results and contains some examples of the most current simulation results is included herein for reference. Copies of the seven principle study reports are also included and listed below. Note that some of the study reports are in draft form. The majority of the study effort described in the seven study reports is associated with obtaining cold water from Lake Almanor through the use of floating thermal curtains or other means. For the reader's reference, below is a list of the cold water alternatives evaluated:

1. Six configurations of floating curtains (thermal curtains) at Prattville Intake at Lake Almanor
2. Two configurations (long and short) of a submerged pipeline and hooded pipe at Prattville Intake at Lake Almanor
3. Dredging of Prattville Intake area and nearby underwater channel at Lake Almanor only or in combination with Alternatives 1 and 2 above
4. Two floating thermal curtains in Butt Valley Reservoir and one floating thermal curtain at Prattville Intake at Lake Almanor
5. Reduced Butt Valley Powerhouse flows to draw cooler Lake Almanor water
6. Reduced Butt Valley Powerhouse flows to draw cooler Lake Almanor water combined with high water releases at Canyon Dam
7. Selectively operating Caribou 1 over Caribou 2 to draw cooler Butt Valley Reservoir water
8. Selective operation of Canyon Dam Tower outlet gates (high/low gates) to preserve cold water in Lake Almanor
9. Higher water releases at Belden Dam to cool Belden bypass reach
10. Higher water releases at Rock Creek Dam to cool Rock Creek bypass reach
11. Higher water releases at Cresta Dam to cool Cresta bypass reach
12. Higher water releases at Poe Dam to cool Poe bypass reach
13. Reoperation of the Bucks Creek Project

In addition, Licensee has evaluated ten additional alternatives to provide colder water to the North Fork Feather River. A copy of the evaluation of additional alternatives study report is included herein (PG&E 2004c). The ten additional alternatives are basically two categories of

alternatives: 1) cooling water with refrigeration or cooling towers and 2) developing new sources of cool water. The ten additional alternatives evaluated are the following:

1. Mechanical Cooling Tower Alternative
2. Mechanical Water Chillers Alternative
3. Well Water Alternative
4. Pumping Lake Oroville Alternative
5. Pipe Upper North Fork Feather River Water Alternative
6. Pipe Yellow Creek Water Alternative
7. Pipe Bucks Creek Powerhouse Water Alternative
8. New Reservoir Alternative
9. Enlarging Existing Reservoir Alternative
10. Vegetation Management and River Shading Alternative

Status of Ongoing Collaborative Discussions: Licensee, state and federal resource agencies, local Counties and interested stakeholders are continuing to meet to discuss water temperature alternatives. No decisions or recommendations have been made at this time. However, on November 18, 2004 Licensee made the following public statement on the thermal curtain for Lake Almanor:

***Pacific Gas and Electric Company  
Statement on Thermal Curtain for Lake Almanor***

*PG&E has clearly heard the community's request that PG&E comment on the prospects for a floating thermal curtain in Lake Almanor. Based on studies and information to date, PG&E does not anticipate recommending a floating thermal curtain in Lake Almanor as a reasonable control measure for reducing downstream water temperatures in the North Fork Feather River. PG&E expects to issue a report in early 2005 evaluating more than twenty potential water temperature reduction alternatives it has studied.*

*Studies and information to date indicate a floating thermal curtain in Lake Almanor:*

- *Is technically feasible*
- *Would reduce water temperatures in the Rock Creek and Cresta reaches (approximately 23 miles downstream from Lake Almanor) 1 to 2 degrees Celsius*
- *Would reduce cold water habitat in Lake Almanor and fish production in Butt Valley Reservoir*
- *Is strongly opposed by Lake Almanor area residents*
- *Would be very costly for the benefits achieved*

The report referenced in the above Statement is being prepared as part of the requirement of Condition No. 4D for the Rock Creek – Cresta Project (FERC 1962) license.

**Consolidated List of Study Report Information provided herein for FERC's December 17, 2004 A.I.R.:**

- PG&E. 2004a. Upper North Fork Feather River (FERC 2105), Executive Summary Of Studies Conducted To Assess the Feasibility of Obtaining Colder Water in the North Fork Feather River, Pacific Gas and Electric Company, October 2004**
- IIHR. 2004. Lake Almanor Cold-water Feasibility Study: Hydraulic Model, IIHR Report No. 438, IIHR – Hydroscience and Engineering, The University of Iowa, Iowa City, Iowa 52242, July 2004**
- Black & Veatch. 2004. Prattville Intake Modifications, Phase 3, Feasibility Study, December 14, 2004, Black & Veatch**
- Bechtel. 2004. Upper North Fork Feather River In-stream Temperature Studies, 33 Years of Synthesized Reservoir Operations, Evaluation of Installation of Curtain and Modifications in Lake Almanor and Blending of Canyon Dam Outflows, Bechtel, DRAFT, January 2004**
- Jones and Stokes. 2004. Simulation of Temperature and Dissolved Oxygen in Lake Almanor, California, Using the CE-QUAL-W2 Water Quality Model, Jones and Stokes, March 2004**
- Thomas R. Payne and Associates. 2004a. Prattville Intake Modification and Potential Impacts to Lake Almanor Fishery Study, Thomas R. Payne and Associates, Interim Report June 2004**
- Thomas R. Payne and Associates. 2004b. Temperature-Conditioned Relative Suitability Index for the Seneca, Belden, Rock Creek, Cresta, and Poe Reaches of PG&E's North Fork Feather River Hydroelectric Projects, Thomas R. Payne and Associates, Draft Report, December 6, 2004**
- PG&E. 2004b. Rock Creek – Cresta Project FERC No. 1962, Ecological Resources Committee, Annual Report on 2003 Operation and Monitoring License Condition 22 And Annual Water Temperature Monitoring Report License Condition 4.C, Final Report, May 28, 2004**
- PG&E. 2004c. Evaluation of Additional Alternatives to Provide Cooler Water to the North Fork Feather River, Mechanical Cooling Tower Alternative, Mechanical Water Chillers Alternative, Well Water Alternative, Pumping Lake Oroville Alternative, Pipe Upper North Fork Feather River Water Alternative, Pipe Yellow Creek Water Alternative, Pipe Bucks Creek Powerhouse Water Alternative, New Reservoir Alternative, Enlarging Existing Reservoir Alternative, Vegetation Management and River Shading Alternative, Pacific Gas and Electric Company, December 2004**