



State Water Resources Control Board



Linda S. Adams

Secretary for

Environmental Protection

Division of Water Rights

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Arnold Schwarzenegger

Governor

OCT 23 2008

Steven Nevares, Manager
Kern Canyon Relicensing Project
Pacific Gas & Electric Company
Mail Code N11C
PO Box 770000
San Francisco, CA 94177

Dear Mr. Nevares:

APPLICATION FOR A 401 WATER QUALITY CERTIFICATION FOR THE KERN CANYON HYDROELECTRIC PROJECT, FEDERAL ENERGY REGULATORY COMMISSION NO. 178 IN KERN COUNTY

The State Water Board Executive Director has issued a Water Quality Certification (Certification) pursuant to section 401 of the Clean Water Act for the Kern Canyon Hydroelectric Project, Federal Energy Regulatory Commission No. 178. A copy of the Certification and a copy of the Notice of Exemption are enclosed for your records.

If you have any questions, please contact Jeff Parks of the Division of Water Rights at (916) 341-5319.

Sincerely,

Camilla Williams, Chief
Water Quality Certification Unit

Enclosures: 401 Water Quality Certification
Notice of Exemption

cc: Magalie R. Salas, Secretary
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California Environmental Protection Agency

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification for the

KERN CANYON HYDROELECTRIC PROJECT

FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 178

SOURCE: Kern River, tributary to Buena Vista Lake

COUNTY: Kern County

Project Description

On April 14, 2003, Pacific Gas and Electric Company (PG&E) applied to the Federal Energy Regulatory Commission (FERC) for a new license for the Kern Canyon Hydroelectric Project (Project), FERC No. 178. The Project is an existing and operating hydroelectric facility located on the Kern River in the Kern Canyon, about 15 miles northeast of Bakersfield, California. Sections of the Kern Canyon Hydroelectric Project are located within the Sequoia National Forest. All project facilities are owned and operated by PG&E. The current FERC license expired in April 2005 and has since operated under an annual license. PG&E proposes to continue to operate the Project without an increase in capacity, but with additional environmental enhancements and temporary modifications that will occur when it is necessary to do maintenance on the diversion and outlet works, essential work in the reservoir, or when needed in the interest of public safety.

The Project began operating commercially in 1921, when construction of the Project's major structures, including the diversion dam, tunnel, penstock and powerhouse, was completed. The diversion dam creates a three-acre reservoir with a usable capacity of 27 acre-feet (af). This reservoir serves as the afterbay of Southern California Edison's Kern River No. 1 Powerhouse (FERC Project No. 1930) and as the forebay of the Kern Canyon Powerhouse, with the reservoir level maintained at 947.5 feet elevation. The water is diverted from the reservoir into 1.8 miles of tunnels and penstocks. The powerhouse contains one generating unit with a normal operating capacity of 11.5 megawatts and an historical average annual generation of 67.6 gigawatt-hours.

PG&E operates the Project in a run-of-river mode supplying base-load energy to the electrical transmission grid. There are no direct irrigation diversions or other consumptive uses of water within the Project Area. The flows in the Kern River at the Project forebay are dependent on the water released from Lake Isabella, located 32 miles upstream of the Project facilities. The powerhouse is operated near or at full

load to minimize spill during high water releases from Lake Isabella, which occur during the irrigation season (May-September). Flows in excess of the current FERC license's minimum instream flow requirement (25 cubic feet per second (cfs) during normal years and 12.5 cfs during dry years¹) and the powerhouse capacity are released into the bypass reach by raising the gates at the forebay diversion dam. The bypass reach consists of the natural Kern River channel between the forebay diversion dam and the powerhouse facility outlet.

The flow capacity of the diversion tunnel leading to the powerhouse is designed to accommodate 750 cfs. PG&E holds sufficient water rights, 800 cfs in total, for the full operation of the Project. These water entitlements are based on appropriations prior to the enactment of the State of California Water Commission Act of 1914, and water rights granted by permits and confirmed by licenses issued by the State of California. These include 250 cfs under Statement of Water Diversion and Use S009037, 250 cfs under License 342, and 300 cfs under License 908.

Water Quality Certification Conditions

Minimum Stream Flow

Minimum stream flows provide a balance of protection for the beneficial uses of the Kern River. The goal of minimum stream flow conditions is to achieve the greatest benefit to aquatic habitat for fish, while balancing the needs of other aquatic species with that needed for power generation. This goal is best achieved when the hydrograph closely resembles the unimpaired condition in the bypass reach of the Project. Minimum stream flows are adjusted by water year type so that a higher minimum stream flow is provided during wetter years.

Freshet Flows

Successive low flow years in which no spill occurs may result in accumulation of fine sediments and organic materials in the river substrate, increased encroachment of vegetation into the river channel, and reduced germination and recruitment of riparian vegetation. Freshet flows are significantly less than flood flows and are of a relatively short duration. The goal of freshet flow conditions is to provide a stream flow event to ensure that flows of sufficient magnitude cleanse the stream channel and recharge the riparian ground water at least every other year during the time of year when spills typically occur.

The freshet flow conditions allow PG&E to take advantage of naturally occurring spill events that may not be of sufficient magnitude or duration to qualify as a freshet flow event. These conditions are met by supplementing the natural events with additional stream flow through reduced power generation. These conditions will also allow spills

¹ Water year types for current minimum instream flow requirements are defined in the current FERC license.

resulting from maintenance outages to qualify as freshet flow events if they are of sufficient magnitude and duration.

WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

BY THE EXECUTIVE DIRECTOR:

1. The federal Clean Water Act (33 U.S.C. §§ 1251-1387) was enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (33 U.S.C. § 1251 (a).) Section 401 of the Clean Water Act (33 U.S.C. § 1341) requires every applicant for a federal license or permit which may result in a discharge into navigable waters to provide the licensing or permitting federal agency with certification that the project will be in compliance with specified provisions of the Clean Water Act, including water quality standards and implementation plans promulgated pursuant to section 303 of the Clean Water Act (33 U.S.C. § 1313). Section 401 of the Clean Water Act directs the agency responsible for certification to prescribe effluent limitations and other limitations necessary to ensure compliance with the Clean Water Act and with any other appropriate requirement of state law. Section 401 further provides that certification conditions shall become conditions of any federal license or permit for the project. The State Water Resources Control Board (State Water Board) is the state agency responsible for such certification in California. (Wat. Code § 13160.) The State Water Board has delegated this function to the Executive Director by regulation. (Cal. Code Regs., tit. 23, § 3838, subd. (a).)
2. The California Regional Water Quality Control Boards have adopted, and the State Water Board has approved, water quality control plans (basin plans) for each watershed basin in the State. The basin plans designate the beneficial uses of waters within each watershed basin and water quality objectives designed to protect those uses. Section 303 of the Clean Water Act requires the states to develop and adopt water quality standards. (33 U.S.C. § 1313.) The beneficial uses together with the water quality objectives that are contained in the basin plans constitute state water quality standards under section 303.
3. The Central Valley Regional Water Quality Control Board (Central Valley Region) has adopted, and the State Water Board and the US Environmental Protection Agency have approved, the Water Quality Control Plan for the Tulare Lake Basin (Basin Plan). The State Water Board has also considered the existing water quality conditions and Project related controllable factors.
4. The Basin Plan identifies municipal and domestic supply; agricultural supply; industrial service and process supply; hydropower generation; contact and non-contact recreation; warm freshwater habitat; wildlife habitat; rare, threatened, or endangered species habitat; and groundwater recharge as the existing beneficial uses of the Kern River below Southern California Edison's Kern River Powerhouse No. 1. Protection of the instream beneficial uses identified in the

Basin Plan requires maintenance of adequate instream flows as well as effluent limitations and other limitations for discharges of pollutants from point and non-point sources to the Kern River and its tributaries.

5. The United States Department of Agriculture - Forest Service (US Forest Service) has the authority to issue mandatory conditions regarding the operations of the Project on National Forest System (NFS) lands, pursuant to Section 4(e) of the Federal Power Act (FPA). Section 4(e) of the FPA states FERC may issue a license for a project within a reservation only if it finds that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired. The US Forest Service worked with PG&E to resolve disputes over the section 4(e) conditions and provided the Revised Final Section 4(e) Conditions for the Project on September 26, 2006 and November 30, 2006. The Revised Final Section 4(e) Conditions along with the measures proposed by the Licensee and the additional measures recommended by FERC comprise the environmental measures incorporated into the Project.
6. PG&E has no plans to change the operational mode of the existing Project, and it will be operated as it has in the past, with the exception of the Project incorporated measures as required by this certification and the FERC license. After reviewing and considering all of the pertinent information available in this Project relicensing, the State Water Board has determined that there will be no significant effect on the environment from this relicensing, and that it meets the criteria for a Class 1 categorical exemption under the California Environmental Quality Act (CEQA) for the ongoing operation, repair, and maintenance of an existing facility. (Pub. Resources Code, § 21083; CEQA Guidelines, Cal. Code Regs., tit. 14, § 15301.) The State Water Board has prepared a notice for a Class 1 categorical exemption and will file a Notice of Exemption within five days from the issuance of this certification.

ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER BOARD CERTIFIES THAT THE IMPLEMENTATION AND OPERATION OF THE KERN CANYON HYDROELECTRIC PROJECT BY PACIFIC GAS AND ELECTRIC COMPANY PURSUANT TO THE APRIL 2003 FERC LICENSE APPLICATION will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law, provided that Pacific Gas and Electric Company complies with the following terms and conditions:

Minimum Stream Flow Conditions

1. All minimum stream flows are the average of 7 days of the mean daily flow. Individual mean daily flows may be less than the required minimum stream flow. The instantaneous, 15-minute flow, used to develop the 7 day average and mean daily flows, shall be measured at USGS Gage 11192950. Water Year type for

minimum stream flow conditions will be assessed using the April 1st delineation according to the San Joaquin Four Rivers Index or its successor.

2. PG&E shall, beginning as early as reasonably practicable, but not later than 3 months after license issuance, maintain minimum stream flow in the Kern River bypass reach according to the following schedule:
 - A. From January 1 to December 31 in all water year types:
 - Maintain minimum stream flows of 25 cfs averaged over 7 days, with a minimum instantaneous flow of 20 cfs.
 - B. From June 1 through August 31 in Wet and Above Normal water years, when daily mean stream flows are less than 60 cfs for 10 cumulative days in this period:
 - Maintain daily mean stream flows at 60 cfs averaged over 7 days, with a minimum instantaneous flow of 50 cfs during the remainder of the period for that year.
 - C. In the event that the incoming stream flow above the diversion dam is less than the minimum stream flow set forth in parts A and B of this condition, PG&E shall bypass the incoming stream flow. PG&E shall notify the State Water Board Deputy Director for Water Rights (Deputy Director for Water Rights) immediately, but no later than 48 hours from the time that the minimum stream flows are reduced to the incoming stream flows.
3. PG&E shall provide written notification to the Deputy Director for Water Rights when temporary modifications of the minimum stream flow requirements listed in this certification will occur due to required facility maintenance or modifications. Notification shall be provided at least 30 days prior to implementation of the temporary modifications and shall include information on the type, extent, and duration of the repairs and anticipated effect on minimum stream flows.
4. Flow requirements of this certification are subject to temporary modification if required by equipment malfunction, emergency conditions or law enforcement activity, or critical electric system emergency beyond the control of PG&E. Prior to any temporary modification, PG&E shall provide advance notification to the Deputy Director for Water Rights. If advance notification is not possible because an event is unforeseeable, PG&E shall notify the Deputy Director for Water Rights immediately but no later than 48 hours from the time that any temporary modification has occurred, and shall identify the necessary facility modifications and provide a schedule for facility modification.

Freshet Flow Conditions

5. Natural freshet flows are stream flows sufficient to maintain channel conditions and the riparian community in the Kern River bypass reach. These events must occur at least every second year. For the purposes of this certification, stream flow will be measured at USGS gage 11192950 in the Kern River bypass reach. A natural freshet flow event must meet all of the following requirements:
 - occur at least once in the two year period before March 1 of each year;
 - occur between December 1 and July 31;
 - have a cumulative volume of at least 12,000 af;
 - have a cumulative duration of at least 14 days; and
 - have at least two average daily flows exceeding 750 cfs.
6. PG&E shall release freshet flows, that may be made up of natural and released flows, into the Kern River bypass reach if, as of March 1 of each year, there has been no naturally occurring freshet flow event, as defined in Condition 5 above. PG&E shall notify the State Water Board, the US Forest Service, the California Department of Fish and Game (DFG), and other appropriate agencies and interested parties by March 15 that a naturally occurring freshet flow event has not occurred, so that a freshet flow release plan can be developed for that year.
7. The definition of a natural freshet flow event in the Kern Canyon bypass reach may be modified with written approval from the Deputy Director for Water Rights, in consultation with the US Forest Service and DFG, based on ecological results achieved with the freshet flow defined in Condition 5 above.

Monitoring and Reporting Conditions

8. PG&E shall identify plans for spoil management, erosion, sediment control, and for any activity that may threaten water quality. These control plans must identify the location of at-risk water bodies, and shall include descriptions of the affected materials, water-related Best Management Practices (BMPs)² for control of run-off and erosion, and appropriate soil and water quality monitoring to assure that water quality is not impacted by Project activities. Methods and procedures for spoil management, erosion, and sediment control shall be incorporated into final plans as required by US Forest Service 4(e) conditions.
9. In the event it is necessary to conduct dredging activities on the Project, PG&E shall notify the State Water Board and the US Army Corp of Engineers (ACOE) at least 120 days prior to any anticipated dredging to determine if a nationwide or individual Clean Water Act Section 404 Permit (404 Permit) is required. If a 404 Permit is required by the ACOE, PG&E shall apply to the State Water Board

² Water-related Best Management Practices are defined as techniques, measures, or structural controls that are used for a given set of conditions to manage the quantity and improve the quality of water runoff in the most cost-effective manner.

Executive Director for a water quality certification pursuant to section 401 of the Clean Water Act. (33 CFR 330.4(c)(6).)

PG&E shall develop a dredging plan that addresses potential impacts to Project affected lands or resources. This plan at a minimum shall include:

- Dredging objectives;
- Description and quantities of dredged material;
- Dredging method and procedures;
- Location and description of temporary and permanent disposal sites;
- Erosion control and stabilization methods and procedures;
- Habitat mitigation measures;
- Description of BMPs; and
- Implementation schedule.

PG&E shall consult with DFG, US Forest Service, and US Fish and Wildlife Service for proposals that affect other Project lands or resources and to obtain any necessary approvals needed for plan development. State Water Board approval will be required before implementation of any dredging that affects Project instream flows, including, but not limited to removal of sediment from dam impoundments or tailrace debris removal and dredging. Documentation of agency consultation and approval shall be filed with FERC prior to implementation of any dredging activity.

10. PG&E shall provide the State Water Board staff with a general list of the regular operations and maintenance activities associated with this project. The list shall also identify the type of planned work outside of regular operations and maintenance that is in active development for the Project. PG&E shall update the list annually by March 15, for the duration of the license.

Standard Conditions

11. This certification is contingent on compliance with all applicable requirements of the Central Valley Region Basin Plan for the Tulare Lake Basin, except as may be modified by the specific conditions of the certification.
12. Notwithstanding any more specific conditions in this certification, the Project shall be operated in a manner consistent with all water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act. PG&E shall take all reasonable measures to protect the beneficial uses of the Kern River.
13. PG&E shall provide State Water Board staff access to Project sites to document compliance with this certification. Where necessary for access to unmanned or otherwise inaccessible project facilities, State Water Board staff will provide at least 72 hours advanced notice.

14. The authorization to operate the Project pursuant to this certification is conditioned upon payment of all applicable fees for review and processing of the application for water quality certification and administering the State's water quality certification program, including but not limited to: timely payment of any annual fees or similar charges that may be imposed by future statutes or regulations for the State's reasonable costs of a program to monitor and oversee compliance with conditions of water quality certification.
15. This certification is not intended and shall not be construed to apply to issuance of any FERC license or FERC license amendment other than the FERC license specifically identified in PG&E's application for certification described above.
16. This certification does not authorize any act which results in the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & Game Code, §§ 2050 - 2097) or the federal Endangered Species Act (16 U.S.C. §§ 1531 - 1544). If a take will result from any act authorized under this certification or water rights held by PG&E, PG&E shall obtain authorization for the take prior to any construction or operation of the Project. PG&E shall be responsible for meeting all requirements of the applicable Endangered Species Act for the Project authorized under this certification.
17. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under applicable State or federal law. For the purposes of section 401(d) of the Clean Water Act, the applicability of any State law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification.
18. In response to a suspected violation of any condition of this certification, the State Water Board may require the holder of any federal permit or license subject to this certification to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.
19. In response to any violation of the conditions of this certification, the State Water Board may add to or modify the conditions of this certification as appropriate to ensure compliance.

20. PG&E must submit any change to the Project, including project operations, that would have a significant or material effect on the findings, conclusions, or conditions of this certification, to the Deputy Director for Water Rights for prior review and written approval.
21. This certification is subject to modification upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330 and California Code of Regulations, title 23, division 3, chapter 28, article 6 (commencing with § 3867).
22. The State Water Board reserves authority to modify this certification if monitoring results indicate that continued operation of the Project would violate water quality objectives or impair the beneficial uses of the Kern River.
23. The State Water Board may add to or modify the conditions of this certification, as appropriate, to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.
24. The State Water Board may add to or modify the conditions of this certification as appropriate to coordinate the operations of this Project and other water development projects, where coordination of operations is reasonably necessary to achieve water quality standards or protect beneficial uses of water.
25. The State Water Board shall provide notice and an opportunity for hearing in exercising its authority under conditions 22, 23, and 24 above.



Dorothy Rice
Executive Director

10.23.08

Date