

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification for the

**PACIFIC GAS AND ELECTRIC COMPANY
CONSTRUCTION AND OPERATION OF THE PIT 3, PIT 4, AND PIT 5 INSTREAM FLOW
RELEASE FACILITIES AND THE BRITTON POWERHOUSE
PIT 3, 4, AND 5 HYDROELECTRIC PROJECT**

FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 233

SOURCES: Pit River

COUNTY: Shasta

Introduction

Pacific Gas and Electric Company (PG&E or Licensee) has applied to the Federal Energy Regulatory Commission (Commission) to amend the license for the Pit 3, 4, and 5 Hydroelectric Project to add the Britton Powerhouse at the Pit 3 Dam. PG&E has also applied to the U.S. Army Corps of Engineers (ACOE) for Nationwide Permits (NWP) for the Britton Powerhouse and for construction of Instream Flow Release (IFR) structures at the Pit 3, Pit 4, and Pit 5 Dams (Projects). Before FERC can amend the license for the Projects, and before the ACOE can issue NWP, PG&E must obtain water quality certification from the State Water Resources Control Board (State Water Board) under section 401 of the Clean Water Act. (33 U.S.C. § 1341.) PG&E has applied for the following NWP:

Pit 3 Dam IFR: Numbers 3 (Maintenance) and 33 (Temporary Construction, Access, and Dewatering)
Pit 4 Dam IFR: Numbers 3 and 33
Pit 5 Dam IFR: Number 3
Britton Powerhouse: Number 17 (Hydropower Projects) and 33

All of these classes of NWP are subject to review under the California Environmental Quality Act (CEQA), and require consideration of issuance of water quality certification on an individual basis.

Pit 3, 4, and 5 Hydroelectric Project

On July 2, 2007, the Commission issued a new license (#233) to PG&E for the continued operation of the Pit 3, 4, and 5 Hydroelectric Project. The Commission prepared an Environmental Impact Statement (EIS) to comply with the National Environmental Policy Act (NEPA). The State Water Board as lead agency under CEQA used the EIS rather than prepare a separate Environmental Impact Report (EIR). The State Water Board circulated a document that added any points of analysis not covered in the EIS but required under CEQA. The State Water Board prepared a Mitigation, Monitoring, and Reporting Plan as required by CEQA (http://www.waterrights.ca.gov/FERC/docs/pit3_4_5_401cert_1_25_07.pdf).

Britton Powerhouse and Instream Flow Release Structures

The new Commission license for Pit 3, 4, and 5 Hydroelectric Project requires the release of higher instream flows than under the previous license. It was anticipated that, except for Pit 3 Dam, the required flows could be released using existing facilities at Pit 4 and Pit 5 dams. At Pit 3 Dam modifications to the current outlet gate were required for implementation of the new flow regime. Additional engineering studies indicated that because of space limitations and safety concerns associated with modifications to the existing Pit 3 Dam low-level outlet valve and conduit, it is not feasible to replace the existing release facilities. Because the planned access to the Pit 3 Dam outlet and the evaluated methods of releasing minimum flows at Pit 3, Pit 4, and Pit 5 dams are not feasible, it was necessary for PG&E to develop and propose an alternative method of making and regulating releases to meet the instream flow requirements.

The demand for renewable carbon neutral sources of power, and the need for PG&E to meet California's Renewable Portfolio Standards, has made the addition of a proposed new Britton Powerhouse feasible. PG&E proposes to construct a new powerhouse at the Pit 3 Dam, which will take advantage of the instream flow requirements required in the Commission license. Before it can build and operate this proposed new powerhouse, PG&E must obtain an amendment to its license for the Pit 3, 4, and 5 Hydroelectric Project from Commission. It is the goal that the powerhouse be on-line by the end of 2010 to fully contribute to meeting the goal established by California Senate Bill 1078 in 2002, and accelerated in 2006 by Senate Bill 107.

The proposed Britton Powerhouse at Pit 3 Dam will be a concrete structure enclosing and protecting the proposed electromechanical equipment (a single turbine/generator unit). A 2.8 mega-watt, horizontal shaft Francis turbine was selected for this facility with the intent of maximizing energy production. The hydraulic turbine will be rated for best efficiency at approximately 370 cfs, and will have the capability of discharging not less than 420 cfs under the maximum expected net head of 88 feet. The powerhouse structure will be located at the downstream end of the existing right spillway wall and will be built on competent foundation material. The structure will be designed to withstand forces from normal operation, flood, snow, wind and seismic conditions and will protect all contents against high flood levels, weather and vandalism. The proposed powerhouse will be connected to the end of the new IFR system (described below) with a penstock.

The proposed modifications at the Pit 3 Dam will include installing a new bypass pipe and discharge valve system on the right (looking downstream) non-overflow section of the dam. The new system would consist of an 8-ft-diameter bypass pipe penetrating through the right non-overflow section of the dam. A steel pre-fabricated intake will be installed on the upstream side of the dam at the existing right low-level outlet intake. The bypass pipe will extend vertically for about 10 feet along the face of the dam, and then through a 90-degree vertical bend for about 20 vertical feet, from where it will follow a horizontal alignment along the face of the dam at the existing 35 degree central angle. The horizontal section will run a total length of about 100 ft from the new intake to the penetration and then downstream approximately 200 ft along the downstream dam face and terminate at a concrete valve house along the right abutment that contains a pipe bifurcation, a 54-inch knife gate valve for discharge of instream flow releases, and an 84-inch butterfly valve connecting to the penstock for the Britton Powerhouse. A 12-foot wide by 10-foot high slide gate will be installed on the dam face at the upstream end of the dam penetration for emergency shutoff and isolation of the downstream valve and bypass pipe. The 84-inch butterfly valve will be installed downstream of the 54-inch knife gate discharge valve to isolate the Britton Powerhouse during routine maintenance, while maintaining the required flow releases without interruption. In addition, an access road will be constructed to the base of Pit 3 Dam to provide construction and operation access for the new IFR structure and Britton Powerhouse.

The proposed IFR structure at Pit 4 Dam will involve replacement of the existing bypass pipe and discharge valve system with a new system that would consist of a larger size pipe and valve with increased capacity. Existing flows will be maintained using the existing low flow outlet gates during construction and when the new instream flow release system is shut down for maintenance and/or repair. The existing bypass pipe, valve and intake system will be removed, and the existing penetration through the right non-overflow section will be enlarged to an 8.5-foot diameter opening from the downstream face to the upstream face. An 8-ft-diameter steel pipe will be sleeved through the 8.5-foot diameter opening and encased in grout. A 96-inch diameter knife gate valve will be provided in a concrete valve house downstream of the dam penetration for discharge and regulation of the required instream flow releases. A new intake structure with a larger trash rack and a trash rake will be installed at the right upstream face of the dam. A slide gate will be installed on the dam face at the upstream end of the dam penetration to provide emergency shutoff and isolation of the discharge valve and bypass pipe for maintenance.

At the Pit 5 Dam stream flow releases will be provided by installing a total of nine slide gates each about 17 in. high by 42 in. wide in the four existing spillway wheel gates. Each of the slide gates will be located near the bottom of the spillway wheel gates and will have a flow capacity range from 73 to 114 cubic feet per second, depending on reservoir water surface elevation. The slide gates will be operated by electric actuators located on top of the wheel gates. Under normal operating conditions, several of the nine new slide gates will be fully opened and the existing 30-inch bypass outlet along the left abutment will be regulated to provide the required instream flows.

Water Quality Certification Conditions

In addition to conditions required by the Commission, the license for the Pit 3, 4 and 5 FERC project also contained mandatory conditions required by the USFS under section 4(e) of the Federal Power Act and by the State Water Board contained in the Water Quality Certificate issued on January 25, 2007. The Commission license required the preparation of 33 resource management plans and monitoring studies as mitigation and enhancement of resources affected by the hydroelectric project. The State Water Board determined the proposed Britton Powerhouse and Instream Flow Release structures, if constructed in accordance with those measures proposed by PG&E and in compliance with the existing resource management plans, would comply with the water quality standards in the Water Quality Control Plan for the Central Valley-Sacramento and San Joaquin River Basins (Basin Plan). The conditions of this water quality certification are necessary to ensure compliance with the proposed measures and construction of the Projects as proposed.

Findings

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 101 of the Clean Water Act (33 U.S.C. § 1251 (g)) requires federal agencies to “co-operate with the State and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources.”
2. 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). Clean Water Act section 401 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

state certification conditions shall become conditions of any federal license or permit for the project. The State Water Resources Control Board (State Water Board) has delegated this function to the Executive Director by regulation. (Cal. Code Regs., tit. 23, § 3838, subd. (a).)

3. 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.
4. The Water Quality Control Plan for the Central Valley-Sacramento and San Joaquin River Basins (Basin Plan) lists the existing beneficial uses designated for the Pit River, mouth of Hat Creek to Shasta Lake, as municipal and domestic supply, agricultural supply, stock watering, power, water contact recreation, non-contact water recreation, canoeing and rafting, cold freshwater habitat, wildlife freshwater habitat, warm and cold spawning. Warm freshwater habitat is listed as a potential use. 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 on discharges of pollutants from point and nonpoint sources to the Pit River and its tributaries.
5. The State Water Board has reviewed and considered PG&E's Federal Energy Regulatory Commission (Commission) Application for License Amendment; the Applicant Prepared Environmental Assessment (APEA); applications for Nation Wide Permits; and comments on the Application for License Amendment APEA by agencies and interested parties. Further, the State Water Board has considered the basin plan, the existing water quality conditions, and project-related controllable factors.
6. The State Water Board is the lead agency under the California Environmental Quality Act (CEQA), in connection with the proceeding to issue water quality certification for the Projects. (Pub. Resources Code, §§ 21000-21177.) On [REDACTED], the State Water Board provided an initial study and notice of intent to adopt a negative declaration (SCH # 2007082008) for the Projects. (Cal. Code Regs., tit. 14, § 15072.) The negative declaration and initial study reflect the State Water Board's independent judgment and analysis. After considering the documents and comments received during the public review process, the State Water Board hereby determines that the proposed project will not have a significant effect on the environment. The negative declaration is hereby adopted. The documents or other material, which constitute the record, are located at the State Water Board, Division of Water Rights, 1001 I Street, Sacramento. The State Water Board will file a Notice of Determination within five days from the issuance of this order.
7. On [REDACTED], State Water Board staff issued a draft water quality certification for public review. On [REDACTED], the State Water Board issued notice pursuant to section 3858 of title 23 of the
8. California Code of Regulations that it intended to issue water quality certification after a 21 day notice period.

ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER BOARD CERTIFIES THAT THE CONSTRUCTION AND OPERATION OF THE BRITTON POWERHOUSE AND PIT 3, PIT 4, AND PIT 5 DAMS INSTREAM FLOW RELEASE FACILITIES BY THE PACIFIC GAS AND ELECTRIC COMPANY, UNDER A LICENCE

AMENDMENT ISSUED BY THE COMMISSION AND NATIONWIDE PERMITS ISSUED BY THE U.S. ARMY CORPS OF ENGINEERS, AS DESCRIBED IN ITS APPLICATIONS FOR WATER QUALITY CERTIFICATION, will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law, provided Pacific Gas and Electric Company complies with the following terms and conditions:

1. PG&E shall submit final design drawings for each of the Projects to the Deputy Director of Water Rights (Deputy Director) prior to beginning construction.
2. PG&E shall comply with the Best Management Practices in the USDA Water Quality Management for Forest System Lands in California, dated September 2000.
3. PG&E shall submit a Notice of Intent (NOI) to comply with the General Permit for Storm Water Discharges Associated with Construction Activity, and a Storm Water Pollution Prevention Plan, to the Central Valley Regional Water Quality Control Board. A copy of this application and Storm Water Pollution Prevention Plan (SWPPP) shall be submitted to the Deputy Director.
4. All equipment will be stored above the 100-year flood level. Equipment used in direct contact with waters will be inspected daily to prevent release of oil. Oil absorbent booms must be used when equipment is used in or immediately adjacent to waters. Any releases of hazardous materials will be reported immediately to the Regional Water Quality Control Board and the California Department of Fish and Game. PG&E and/or its contractors will comply with the conditions of the SWPPP.
5. PG&E shall not allow uncured concrete to enter any water body in a quantity that alters pH. The pH shall be monitored during operations when concrete or grout is placed underwater.
6. PG&E shall maintain the current minimum instream flows during construction.
7. PG&E shall conduct biological surveys consistent with the monitoring plans prior to beginning construction. PG&E shall comply with the conditions of the Vegetation and Invasive Weed Management Plan.
8. PG&E shall install netting to prevent the establishment of cliff swallow nests prior to the arrival of swallows in the spring.
9. Gravel in super sacks used to construct temporary coffer dams shall be the size and shape consistent with that required in the Gravel Management Plan.
10. PG&E shall submit the Memorandum of Agreement between itself and the State Historic Preservation Offices to the Deputy Director prior to beginning construction.
11. Any affected areas will be restored after completion of construction. All construction debris and environmentally deleterious materials will be removed from the dam site and lay-down areas. Lay-down areas will be cleared, regraded, and returned, as much as is reasonably possible, to their preconstruction condition or grade.
12. PG&E and its contractor's employees will regularly monitor all construction areas and the features installed to control runoff and erosion and ensure that erosion control measures are properly working. If discharges are observed, PG&E will notify the Regional Water Quality Control Board-Redding Office within 24 hours.

13. Construction sites near the Pit River will be separated from the river by the following types of barriers. Debris fencing—chain-link fence material on posts to prevent debris from construction sites from entering a waterway; K-rail barriers—barriers used down-slope of construction sites where there is a potential for rock and soil to travel down-slope and enter the waterway; and “Super Sack” cofferdam—Poly bags filled with gravel suitable for use as spawning gravel used to form a cofferdam isolating the construction site from the river.
14. Seepage inside of cofferdams and other construction areas will be pumped to a Baker tank where solids will be allowed to settle before the water is used for dust abatement on Project roads and compaction efforts.
15. Certified weed-free hay bales and straw wattles will be used to prevent the transportation of sediment from the site during construction. If concrete pumping is required at a specific site, excess concrete material in the pump line and equipment containing concrete will be cleaned in secure, lined, above-ground containment units and hauled off-site for proper disposal.
16. Advance notification will be provided to alert the traveling public to the location, timing, and extent of road closures, and alternative routes will be provided. Signs will be posted notifying motorists of road closures and detours.
17. This certification is contingent on compliance with all applicable requirements of the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, except as may be modified by the specific conditions of the certification.
18. Notwithstanding any more specific conditions in this certification, the Projects 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. The Licensee shall take all reasonable measures to protect the beneficial uses of water of the Pit River.
19. 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.
20. 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 amendment specifically identified in Licensee’s application for certification described above. PG&E shall, however, continue to comply with the conditions in the Commission license for the Pit 3, 4, and 5 Hydroelectric Project and the water quality certification for the Pit 3, 4, and 5 Hydroelectric Project dated January 30, 2007.
21. 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 & G. 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 the Licensee, the Licensee shall obtain authorization for the take prior to any construction or operation of the Project. The Licensee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the Projects authorized under this certification.

22. 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. 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. 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.
23. Licensee must submit any change to the Britton Powerhouse and Pit 3, Pit 4, and Pit 5 Dam Instream Flow Release Facilities Projects, including project operation that would have a significant or material effect on the findings, conclusions, or conditions of this certification, to the Deputy Director for prior review and written approval.
24. 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).
25. 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 Pit River.
26. 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.
27. 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 hydrologically connected water development projects, where coordination of operations is reasonably necessary to achieve water quality standards or protect beneficial uses of water.
28. The State Water Board shall provide notice and an opportunity for hearing in exercising its authority to add or modify any of the conditions of this certification.

Dorothy Rice
Executive Director