

US EPA ARCHIVE DOCUMENT



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX**

**75 Hawthorne Street
San Francisco, CA 94105**

August 24, 2010

CarLisa Linton-Peters
Federal Energy Regulatory Commission
Office of Energy Projects
888 First Street, NE
Washington, DC 20426

Subject: Draft Environmental Impact Statement for License Surrender for the Kilarc-Cow Creek Hydroelectric Project, FERC Project No. 606 [CEQ # 20100236]

Dear Ms. Linton-Peters:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the License Surrender for the Kilarc-Cow Creek Hydroelectric Project, FERC Project No. 606, Shasta County, California. Our comments are provided pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

Pacific Gas and Electric (PG&E) has filed an application to surrender its license for the Kilarc-Cow Creek Hydroelectric Project, located on Old Cow Creek, South Cow Creek, and tributaries in Shasta County, California. The Proposed Action includes decommissioning and removal or modification of project facilities, including diversion dams, forebays, canal segments, and powerhouses, returning the bypassed creek reaches to natural flow conditions and allowing free fish passage and sediment transport and deposition.

EPA supports the return of the Cow Creek watershed to more natural flow and hydrologic conditions that will provide long-term benefits for water quality and quantity, fisheries, and threatened and endangered species. We recommend aggressive implementation of mitigation measures to minimize identified adverse impacts.

Based on our review of the DEIS, we have rated the project and document as *Environmental Concerns – Insufficient Information* (EC-2). Please see the enclosed “Summary of EPA Rating Definitions.” In the enclosed detailed comments, we provide recommendations regarding analyses and documentation needed to assess and reduce potential adverse impacts from the Proposed Action and Action Alternatives. Specifically, EPA is concerned with: 1) impacts to air quality, 2) mitigation measures for potential adverse effects, and 3) cumulative effects of climate change.

EPA appreciates the opportunity to provide input on this license surrender. We are available to discuss all recommendations provided. When the Final EIS is released for public review, please send one hard copy to the address above (Mail Code: CED-2). If you have any questions, please contact me at 415-972-3521, or contact Laura Fujii, the lead reviewer for this project. Laura can be reached at 415-972-3852 or fujii.laura@epa.gov.

Sincerely,

/s/

Kathleen M. Goforth, Manager
Environmental Review Office (CED-2)
Communities and Ecosystems Division

Enclosures: Summary of EPA Rating Definitions
Detailed Comments

Cc: Steve Edmondson, NOAA Fisheries
Susan K. Moore, US Fish and Wildlife Service
Steve Nevares, PG&E
Mark Emerson, Sierra Pacific Industries
Russ Mull, Shasta County Dept of Resource Management

U.S. EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR LICENSE SURRENDER FOR THE KILARC-COW CREEK HYDROELECTRIC PROJECT, FERC PROJECT NO. 606, SHASTA COUNTY, CA., AUGUST 24, 2010

Air Quality

Describe ambient air quality and potential air quality effects. The DEIS does not describe existing air quality nor the potential effects, if any, of the Proposed Action and alternatives on air quality. Project decommissioning, facilities removal, construction of fish ladders and screens, and habitat restoration activities could generate construction and traffic emissions.

Recommendations:

Ambient Conditions: The Final Environmental Impact Statement (FEIS) should include a detailed description of ambient air conditions (i.e., baseline or existing conditions), the area's attainment or nonattainment status for all National Ambient Air Quality Standards (NAAQS), and potential air quality impacts (including cumulative and indirect impacts) from decommissioning, facilities removal, and construction activities for each fully evaluated alternative. The FEIS should include estimates of all criteria pollutant emissions and diesel particulate matter (DPM).

Relevant Requirements: The FEIS should describe any applicable local, state, or federal air quality requirements.

Conformity: If the proposed project area is in a nonattainment area, the FEIS may need to demonstrate compliance with general conformity requirements of the Clean Air Act [Section 176(c)]. General Conformity Regulations can be found in 40 CFR Parts 51 and 93 (58 Federal Register, page 63214, November 30, 1993). These regulations should be examined for applicability to the proposed action.

Mitigation and Monitoring

Describe and evaluate mitigation measures for the reduced ability to divert water from Hooten Gulch. Decommissioning and removal of the Cow Creek Development would eliminate the artificial perennial flows from the Cow Creek powerhouse to Hooten Gulch, which would return to its natural ephemeral flow. The Abbot Ditch Users (ADU), an informal association of seven property owners, operates an agricultural diversion in Hooten Gulch known as the Abbott Diversion, providing water for domestic, livestock, and irrigation use on 312 acres of South Cow Creek bottomlands. ADU is entitled to divert 13.13 cubic feet per second (cfs) from the natural flow of the east channel of South Cow Creek below the confluence with Hooten Gulch (and not from Hooten Gulch itself) (p. 197). Tetrick Ranch holds a consumptive water right of 1.1 cfs from the Abbot Diversion (p. 204), which it uses for irrigation water (p. 181), and operates its micro-Tetrick Hydroelectric Project on Hooten Gulch downstream of the Cow Creek powerhouse (p. 55). Loss of perennial flow in Hooten Gulch would eliminate the ability to divert water from Hooten Gulch during drier periods of the year and may result in the shutdown of the micro-Tetrick Hydroelectric Project.

ADU and Tetrick Ranch have requested mitigation for the reduced ability to divert water from Hooten Gulch (p.205). The Federal Energy Regulatory Commission (FERC) and Pacific Gas and Electric (PG&E) state that replacement of lost flows to Hooten Gulch or construction of an alternative point of diversion is outside the scoping of this proceeding because the Federal Power Act reserves to the States jurisdiction over matters pertaining to water rights (p. 61).

Recommendations:

Pursuant to the National Environmental Policy Act (NEPA), all relevant and reasonable mitigation measures that could improve the project should be identified, even if they are outside the jurisdiction of the lead agency. This will serve to alert agencies or officials who can implement these extra measures. The environmental impact statement and Record of Decision should indicate the likelihood that such measures will be adopted or enforced by the responsible agencies [40 CFR Section 1502.16(h) and 1505.2 (c), and Forty Most Asked Questions Concerning CEQ' NEPA Regulations, Question 19 Mitigation Measures].

EPA recommends the FEIS further explore and describe potential mitigation measures to address impacts from the reduced ability to divert water from Hooten Gulch. For instance, describe opportunities to consolidate diversions, implement water conservation measures (ditch lining, improved irrigation efficiency), provide for a new diversion on South Cow Creek below the confluence with Hooten Gulch in accordance with the state court adjudication, or develop other water supply sources (e.g. groundwater).

Consider working in partnership with PG&E, ADU, Tetrick Ranch, Shasta County, and other appropriate entities to evaluate and implement water supply options for Tetrick Ranch and ADU.

Provide information on South Cow Creek water flows, water efficiency of the Abbot Diversion, and fish use of Hooten Gulch. Due to the lack of monitoring, stream gages, and historical flow data, there is a need for studies to determine the water quantity available from South Cow Creek, water delivery efficiency of the unlined Abbot Diversion canal and Hooten Gulch, and steelhead use of Hooten Gulch. For instance, studies are needed to determine how much water is lost from the Abbot Diversion through evaporation, leakage, and infiltration between Cow Creek diversion dam on South Cow Creek and Abbott ditch diversion dam on Hooten Gulch (pps. 65, 145).

Recommendations:

We recommend the FEIS include additional information, if available, on water quality and quantity of South Cow Creek. This information may be available from the 1969 Cow Creek Adjudication (p. 206, California State Water Resources Control Board, 1969).

ADU, Tetrick Ranch, PG&E, and FERC should consider collaborating on studies to determine how much water is lost from the Abbot Diversion through evaporation, leakage, and infiltration between Cow Creek diversion dam on South Cow Creek and the Abbott Diversion dam on Hooten Gulch. Consider conducting additional studies to obtain data on fish use of Hooten Gulch. These studies would help fill data gaps regarding South Cow Creek flows, fish presence and use, water supply delivery efficiencies, and the ability of South Cow Creek to provide a reliable water supply for ADU and Tetrick Ranch. This information would help determine feasible optional water sources for ADU and Tetrick Ranch, and further inform efforts to restore fisheries in the Cow Creek watershed. These studies may also be considered as mitigation for the reduced ability to divert water from Hooten Gulch and loss of its artificial perennial flow.

Describe and evaluate mitigation measures to minimize effects of reintroduced anadromous fish on timber operations. Recent California Department of Forestry and Fire Protection regulations to protect listed anadromous salmonids have increased riparian buffer zones and significantly restricted activities of timber harvest adjacent to streams. Sierra Pacific Industries has expressed concern with the reintroduction of anadromous fish above the Kilarc Development in Old Crow Creek where they have commercial timber lands (p. 230).

Recommendation:

We recommend the FEIS describe and evaluate mitigation measures that help minimize potential effects of reintroduced anadromous fish on Sierra Pacific Industries timber operations. For instance, Sierra Pacific Industries could utilize timber harvest methods that allow timber harvest in wider riparian buffer zones (hand removal, techniques that allow harvest from the buffer zone edge) and/or develop a Habitat Conservation Plan with National Marine Fisheries Service and U.S. Fish and Wildlife Service to ensure Endangered Species Act compliance for their activities.

Implement a validation monitoring program to verify assumed and calculated flow information. Due to the absence of monitoring stations, there is no upstream flow nor monthly bypassed reach flows data for Old Cow Creek and South Cow Creek, nor flow data for diversions at project facilities on North and South Canyon Creeks and Mill Creek (p. 49). Thus, the DEIS effects analysis is based upon bypassed reach flows calculated by subtracting flows diverted for project use from PG&E modeled flow data over the same time period (p. 54). FERC staff calculated flows under the Proposed Action by adding flows historically diverted for project use to estimates of flow in the Old Cow Creek bypassed reach under the existing license (p. 55).

The DEIS also states that release of sediment from behind the existing diversion dams is not expected to result in a measurable effect on heavy metal concentration in the downstream water column. Although one sediment sample from the Kilarc Development exhibited concentrations exceeding the threshold effect level for copper, water column concentrations of copper in the creek do not exceed state water quality objectives, indicating no significant release of copper from the sediment to the water column under current conditions (p. 74).

Recommendation:

We recommend PG&E implement a validation monitoring program to verify the flow assumptions, flow calculations, and conclusions regarding potential heavy metal contamination from released sediment.

Cumulative Effects of Climate Change

The discussion of cumulative effects in the DEIS does not address potential cumulative effects of climate change on the project area and how this may affect future conditions in Old Cow Creek, South Cow Creek, and their tributaries. Nor does the DEIS address the potential effects of climate change on the performance and effects of the Action Alternatives that would retain either the Kilarc or Cow Creek facilities. While it may be difficult to predict specific climate change effects, they should be identified and discussed to the extent knowledge allows.

The Government Accountability Office released a report entitled, “Climate Change: Agencies Should Develop Guidance for Addressing the Effects on Federal Land and Water Resources” (August 2007). According to the GAO report, federal land and water resources are vulnerable to a wide range of effects from climate change, some of which are already occurring.

Based on the freshwater ecosystem case study in the GAO report, possible effects to the proposed project could include average temperature increases in Spring with earlier initial and maximum snow melt and higher water levels; changing precipitation patterns with more rain and less snow in winter causing winter stream flows to increase; decreased snowpack and altered timing of Spring runoff; larger and more severe storms; warming temperatures and more severe drought with increased risk of warmer stream temperatures negatively affecting aquatic organisms and fish species that thrive in cold water.

Recommendation:

We recommend the FEIS include a discussion of climate change and its potential effects on the Proposed Action and Action Alternatives, and on their potential performance and impacts. We recommend this discussion include a short summary of applicable climate change studies, including their findings on potential environmental and water supply effects and their recommendations for adaptation to these effects.