UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

November 3, 2008

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Place, N.E.
Washington, DC 20426

Subject: Draft Environmental Impact Statement (DEIS) for Hydropower Licenses – Big Creek Nos. 2A, 8, and Eastwood – FERC Project No. 67, Big Creek Nos. 1 and 2 – FERC Project No. 2175, Mammoth Pool – FERC Project No. 2085, and Big Creek No. 3 – FERC Project No. 120 – California (CEQ # 20080357)

Dear Ms. Bose:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the Hydropower Licenses for Big Creek Nos. 2A, 8, and Eastwood – FERC Project No. 67; Big Creek Nos. 1 and 2 – FERC Project No. 2175; Mammoth Pool – FERC Project No. 2085; and Big Creek No. 3 – FERC Project No. 12 (Big Creek Projects). Our comments are provided under the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act. Based upon our review, we have rated the proposed action as *Environmental Concerns- Insufficient Information (EC-2*). See attached "Summary of the EPA Rating System" for a description of the rating. The basis for the rating is summarized below and further detailed in our enclosed comments.

The Federal Energy Regulatory Commission (FERC) is considering an application from the Southern California Edison (SCE) for new licenses for the existing Big Creek facilities. The Big Creek Projects are located in the upper San Joaquin River basin in Fresno and Madera Counties, California. The application includes actions agreed to by SCE and other signatories of the *Big Creek Alternative Licensing Process (ALP) Hydroelectric Projects Settlement Agreement -- Mammoth Pool Project (FERC Project No. 2085); Big Creek Nos. 1 and 2 (FERC Project No. 2175), Big Creek Nos. 2A, 8, and Eastwood (FERC Project No. 67); and Big Creek No. 3 (FERC Project No. 120)* (February, 2007). FERC must decide whether to issue new licenses to SCE for the Big Creek Projects and what conditions, if any, should be placed on the licenses. The DEIS

presents FERC's evaluation of SCE's Proposed Action, FERC's alternative to the Proposed Action (Staff Alternative), and a no-action alternative.

We have concerns about the analysis of the no-action alternative and impacts related to construction activities. We also request additional information regarding the impacts of climate change on the Big Creek Projects and the analysis of cumulative impacts. Please see the enclosed Detailed Comments for a description of these concerns and our recommendations.

We appreciate the opportunity to review this DEIS and are available to further discuss all recommendations provided. When the FEIS is released for public review, please send two copies to the address above (Mail Code: CED-2). If you have any questions, please contact me at 415-972-3521, or contact Susan Sturges, the lead reviewer for this project. Susan can be reached at 415-947-4188 or sturges.susan@epa.gov.

Sincerely,

/s/ Carolyn Mulvihill for

Kathleen M. Goforth, Manager
Environmental Review Office (CED-2)

Enclosures: Summary of EPA Rating Definitions
Detailed Comments

Analysis of Alternatives

No-Action Alternative

Defining the no-action alternative is a critical step in the environmental analysis as it provides a baseline for comparison with the action alternatives. The no-action alternative does not necessarily constitute a no-impact baseline, as continuation of the existing practices may cause or contribute to significant environmental impacts. EPA believes that to interpret the "no action" alternative as having "no impacts" may not be consistent with the rigorous analysis described in 40 CFR 1502.14.

The Draft Environmental Impact Statement (DEIS) does not provide sufficient information on the environmental impacts of the no-action alternative. Section 3.4 (No-Action Alternative, pg. 3-245) states, *"Under the No-action Alternative (baseline condition), the Big Creek ALP [Alternative Licensing Process] Projects would continue to operate as they have in the past. None of the [Southern California Edison] SCE's proposed measures in the Settlement Agreement would be implemented. The continued operation of existing Big Creek ALP Projects would not result in any atmospheric emission of criteria pollutants or other hazardous material that can affect air quality. The continued operation of the existing facilities under the no-action alternative would, on average, result in the annual generation of 3,366,590 MWh of clean energy."*

There is no analysis of the environmental impacts, on each resource, of implementing the no-action alternative, thereby preventing an adequate comparison of all alternatives.

Recommendation:
The Final EIS (FEIS) should provide additional information on the no-action alternative to describe the environmental impacts of continuing to operate the project under the terms and conditions of the current license. See EPA's recommendation under *Comparison of Alternatives* (below) for a suggested format to summarize this information.

Comparison of Alternatives

The DEIS describes the SCE's proposal of continued operation of the Big Creek Projects and recommends conditions for a new license for each project. SCE's Proposed Action includes a number of environmental measures (Table 2-5, pg. 2-23) described in a Settlement Agreement filed by SCE in February 2007. Federal Energy Regulatory Commission (FERC) staff have evaluated the application, and proposed a Staff Alternative to address their concerns and recommendations which contains additional measures (pg. 2-35). The third alternative is the no-action alternative.

40 CFR 1502.14 of the Council of Environmental Quality regulations describes how an EIS should present the environmental impacts of the proposed action and alternatives (including the no-action alternative) in a comparative form, sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public.

The environmental measures proposed under the action alternatives are essentially mitigation measures to evaluate (monitor) or lessen environmental impacts from continued operation of the existing hydroelectric projects. For each of the resources addressed in Chapter 3 (Environmental Analysis), the DEIS describes the affected environment, discusses the applicant's proposed actions, and reviews requirements of the Settlement Agreement and recommendations from other agencies. FERC then provides an analysis that includes their recommendations.

Although the DEIS provides a thorough analysis of the Proposed Action, as well as FERC's rationale for their preferred alternative (Staff Alternative), the information in the DEIS is not presented in a way that provides the reader with a clear comparison of the alternatives and their environmental effects. As previously stated, the evaluation focuses on implementation of the proposed environmental measures and does not address the potential environmental impacts of relicensing the project under the terms and conditions of the current license (i.e., the no-action alternative).

Recommendation:
The FEIS should include a concise summary of the environmental analysis performed in Chapter 3 that allows for a clear comparison of the impacts of all alternatives, including the no-action alternative. For each environmental resource evaluated in Section 3.3, the comparison should clarify:

a) the impacts of the hydroelectric project operation on that resource,
b) the environmental measures that are proposed under each alternative, and
c) the impacts of the project after implementing the environmental measures under each alternative.

EPA suggests that a table format be used to summarize and display the information. For this particular DEIS, since the no-action alternative is the continuation of the existing project, the no-action alternative column should summarize the information referenced in (a), above (i.e., the impacts of the project). Information for (b) and (c) would be summarized in other columns addressing SCE's Proposed Action and FERC's Staff Alternative.

Impacts from Construction-related Activities

The DEIS describes a number of proposed actions that involve construction activities, such as the dismantling of small diversions, sediment removal, and a number of recreation improvements, including the construction of boat ramps and docks. EPA recommends the FEIS

include measures that will be implemented to ensure that in-water work activities do not result in excessive short-term turbidity or other impacts.

Recommendation:
EPA recommends the FEIS provide additional detail describing how activities will be performed for all proposed dismantling or construction actions, including in-water work activities. Include measures that will be taken to avoid and minimize both short- and long-term adverse impacts to water quality, aquatic resources, and other resources. Propose mitigation to compensate for unavoidable impacts Commit to these measures and mitigation in the Record of Decision (ROD).

Air Quality

The DEIS does not include an evaluation of existing air quality within the geographic scope of the project and does not examine the potential impacts to air quality from the project. Such an evaluation is necessary to assure compliance with State and Federal air quality regulations, and to disclose the potential impacts from temporary or cumulative degradation of air quality. The DEIS lists numerous environmental measures proposed by SCE and FERC staff (Sections 2.2 and 2.3) that have the potential to impact air quality from construction, maintenance, or operational activities. Those impacts are not evaluated.

Environmental analyses from a recommended fire management and response plan within the project boundary are not included in the DEIS. The U.S. Forest Service conditions specify that SCE file a fire prevention and response plan within 1 year of license issuance (pg. 3-242).

Recommendation:
The FEIS should include a discussion of existing air quality and conformity with State and Federal air regulations. It should describe and estimate air emissions from potential construction and other activities, as well as proposed mitigation measures to minimize those emissions. Include an analysis of impacts expected from implementation of a fire management and response plan.

Cumulative Impacts Analysis

The DEIS identifies the following resources to be cumulatively affected by the project: aquatic resources (water quantity, water temperature, sediment transport, and resident fish), native amphibians, and recreation (pg. 3-1). The DEIS further states that impacts on other resources including vegetation, wildlife other than native amphibians, land use, aesthetics, and cultural resources are project-specific in nature and not influenced by other past, present, or reasonably foreseeable actions at other projects or by other parties. EPA believes this statement is a mischaracterization of cumulative impacts, unless the statement is implying that these resources have not been or will not be impacted by other past, present, or reasonably foreseeable actions from other projects or by other parties.

Cumulative impacts are defined in the CEQ NEPA regulations as the impact on the environment that results from the incremental impact of the action when added to the other past, present, and reasonable foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such actions (40 CFR 1508.7). The DEIS does not sufficiently evaluate the potential cumulative effects from the project on resources in the surrounding area other than hydropower operations, nor does the DEIS sufficiently describe impacts to resources from other projects or activities within the identified geographic and temporal scope of the project.

Recommendations:

- EPA recommends using the California Department of Transportation Indirect and Cumulative Impacts Analysis, which is co-authored by EPA and is applicable to impact analyses for non-road projects outside of California. This guidance can be found at [http://www.dot.ca.gov/ser/cumulative_guidance/purpose.htm] and [http://www.dot.ca.gov/ser/Growth-related_IndirectImpactAnalysis/gri_guidance.htm].

- The FEIS should provide a substantive discussion of, and quantify where possible, the cumulative effects of the project when considered with other past, present, or reasonably foreseeable projects, regardless of what agency or person undertakes those actions (see 40 CFR Section 1508.7). The document should also propose mitigation for all cumulative impacts, and clearly state the lead agency's mitigation responsibilities and the mitigation responsibilities of other entities.

Cumulative Effects of Climate Change

The discussions of cumulative effects in the DEIS do not mention the potential cumulative effects of climate change on the project area and how this may affect the operation of the proposed projects. While it may be difficult to predict specific climate change effects, they should be identified and discussed to the extent possible, especially considering the long term nature of the proposed relicensing. A number of studies specific to California have indicated the potential for significant environmental impacts as a result of changing temperatures and precipitation.[1]

The Government Accountability Office recently 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 projects could include average temperature increases in Spring with earlier initial and

[1] For example: Our Changing Climate: Assessing the Risks to California, A Summary Report from the California Climate Change Center, July 2006; Climate Change and California Water Resources, Brandt, Alf W.; committee on Water, Parks & Wildlife, California State Assembly, March 2007.

maximum snow melt and higher water levels; vulnerability to fire due to evaporative stress (drying) from more hot days; changing precipitation patterns with more rain and less snow in winter causing winter streamflows to increase; decreased snowpacks and altered timing of spring runoff; larger and more severe storms and lightning causing more forest fires and drier conditions feeding larger, more intense wildland fires; warming temperatures and more severe drought with increased risk of insects and diseases to trees; possible increases in invasive species, and 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 on the action's impacts. We recommend this discussion include a short summary of any applicable climate change studies, including their findings on potential environmental and water supply effects and their recommendations for addressing these effects.