

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D.C. 20426  
January 31, 2011

OFFICE OF ENERGY PROJECTS

Project No. 2310-173 – California  
Drum-Spaulding Project  
Pacific Gas and Electric Company

Steve Peirano, Project Manager  
Pacific Gas and Electric Company  
Mail Code N11C  
P.O. Box 770000  
San Francisco, CA 94117

**Reference: Comments on Draft License Application**

Dear Mr. Peirano:

Pursuant to 18 CFR § 5.16(e), this letter contains Commission staff's comments on your draft license application for the Drum-Spaulding Project's integrated licensing process (ILP), filed on November 3, 2010.

We reviewed the draft license application and determined that although the draft license application met most of the Commission's regulations and contained a large quantity of data, it did not contain all information that will be necessary for a complete license application, as required by §5.18. We have noted these potential deficiencies in Appendix A.

Your draft license application contained an Exhibit E that included a description of the project's existing facilities and potentially affected environmental resources, as well as a discussion of the results obtained from the relicensing studies completed thus far. We have determined that, overall, Exhibit E lacked information in three major areas that will need to be addressed in your final license application: (1) an integrated analysis of how each resource would be affected by the no-action alternative and your proposed project; (2) finalized, proposed environmental measures and how these measures mitigate project-related effects on environmental resources; and (3) specific details for resource-specific protection plans. We have noted our comments on additional information requirements and inconsistencies within the application in Appendix B.

In several places throughout the draft license application, you indicate that additional information will be provided regarding final/additional study results, proposed/developing environmental measures, and resource management plans. The results of all studies, all proposed environmental measures, and resource management

plans are required to be included in the final license application. For each measure, please provide the information described in the Commission's *Guidance on Environmental Measures*, which is available on the Commission's web site.

...applicants...should provide specific measures that permit staff to describe what is going to be done, where, when, how, and why. That information should include at a minimum: (a) a description of the specific measures to be implemented, including conceptual drawings, depictions, or similar graphic information for any facilities proposed to be constructed; (b) a clear description of where any proposed measures are likely or intended to be implemented, whether these are related to operation (e.g., the release points for minimum flows and where the flow would be measured), facilities, or protective or mitigative measures for addressing project-related effects, including reference to the project boundary; (c) a preliminary description of any steps necessary to implement measures and the preliminary schedules for implementing the measures referenced to the license issuance date; (d) a description of the purpose of the measures and the benefits that they would provide; (e) the consultation record leading to the measures; (f) an estimated cost for the implementation of each measure; and (g) as applicable, an applicant's explanations as to why it is not adopting any comments or recommendations made by stakeholders. Final details may not always be possible. However, what is provided should be sufficient to answer the above questions.

If you have any questions regarding this letter or the contents of your final license application, please contact Alan Mitchnick at (202) 502-6074, or via email at [alan.mitchnick@ferc.gov](mailto:alan.mitchnick@ferc.gov).

Sincerely,

Timothy J. Welch, Chief  
West Branch  
Division of Hydropower Licensing

Enclosures:

Appendix A Comments on the Draft License Application—Deficiencies  
Appendix B Comments on the Draft License Application—Additional  
Information

cc: Mailing List  
Public File

## **Appendix A Comments on the Draft License Application Deficiencies**

Your draft license application did not contain some of the information that is required by our regulations for a final license application (§5.18). In this appendix, we note the areas of the draft license application where more specific information will be needed for a complete license application.

### Initial Statement

- Include in section 9.0 a list of irrigation districts, drainage districts, or special purpose political subdivisions, as required by §5.18(a)(2)(iii), or a statement that there are no such entities.
- Provide the statement required by §5.18(a)(3)(i) that the parties identified in that regulation have been or will be notified of the filing of the final license application by certified mail, and provide the contents of the notice.
- Add the applicant's address to the subscription and verification statement, as required by §5.18(a)(4).
- Add to the public notice for the final license application the libraries at which it will be available to the public. Note that the public notice must be published within 14 days after the filing of the final license application, as required by §4.32(b)(6), not 15 days as stated in section 12.0 and at the top of the notice provided in the draft license application.

### Exhibit A

- On page A-1, you state that there are seven transmission lines associated with the project, but you do not provide a description of them in section 1.0. In table 2.1-1, you list only the Spaulding #3 to Spaulding #1 60-kV and Deer Creek to Drum 60-kV transmission lines. In the final license application, please ensure that Exhibit A includes the length, voltage, and interconnections of the seven transmission lines associated with the project, as required by §4.51(b)(4).
- Although you provide in table 2.1-1 a summary of total United States lands within the FERC boundary, you do not provide the description of all lands of the United States by development, as required by §4.51(b), or identify and tabulate them by legal subdivisions, as required by §4.51(b)(6). As this information is generally different in nature from the detailed facility descriptions in table 2.1-1, please provide it in a separate table or section.

- Please provide a description of the physical features and operation of the Nevada diversion and the Towle diversion as required by §4.51(b)(1) through (5).
- In Section 2.0, you do not include descriptions of the recreation facilities (although table 2.1-1 refers to Exhibit G drawings for “associated recreation facilities within the FERC project license”). In the final license application, please identify in Exhibit A the existing recreation facilities associated with each development/reservoir as required by §4.51(b)(1) through (5), or clearly reference where this information can be found elsewhere in the license application.
- You propose to decommission Alta powerhouse no. 2, which is currently not operating. You do not indicate whether any decommissioning actions have already been implemented. In section 3.0, please provide a description of any completed and proposed decommissioning measures for Alta powerhouse no. 2.
- In Section 3.0, you do not discuss the proposed changes to recreation facilities; however, you state that “PG&E also proposes to build new recreation facilities and rehabilitate recreation facilities.” In the final license application, please provide information regarding the proposed changes to non-generating facilities (i.e., roads, recreation facilities, etc.) as required by §4.51(b)(1) through (5), or clearly reference where this information can be found elsewhere in the license application.

#### Exhibit B

- As required by 4.51(c)(2)(iv), please provide a tailwater curve for each development.
- As required by 4.51(c)(2)(v), please specify the minimum, maximum, and normal heads for each powerhouse.
- You provide the total project dependable capacity only in a footnote on page B-133. Please provide this information in text, and as required by 4.51(c), please provide the dependable capacity for each development and specify the period of critical streamflow used to determine that capacity.
- In section 6.4, please provide a statement about the decommissioning of Alta powerhouse no. 2 and a discussion about what was done or remains to be done to decommission the unit.

#### Exhibit D

- Please provide an estimate of severance damages, as required by §4.51.(e)(2)(iii).

- Please provide costs for decommissioning of Alta no. 2, including work completed and proposed, as required by §4.51(e)(3)(ii).

### Exhibit E

#### Project Facilities

- In section 5.1.2.1, you do not include the seven transmission lines associated with the project in figure 5.1.2-1 or in the description of the project facilities. Please include these transmission lines in the figure and the text in your final license application.

#### Cumulative Effects

- In section 3.3.2, you list reasonably foreseeable future actions, but you do not discuss the effects of these actions on the project area's resources. As required by §5.18(b)(2), in section 3.3.2 you must "[h]ighlight the effect on the cumulatively affected resources from foreseeable future actions."

#### Recreation

- In table E10.3-2 of Appendix E10, you state that a detailed schedule of the activities contained within the Recreation Facilities Plan (RFP) can be found in the RFP in Appendix E8; however, in the RFP, you provide only a generic timetable for completing the main steps involved with major capital improvements in section 3.2.2. In the RFP submitted with the final license application, please provide additional detail regarding the implementation/construction schedule for each proposed recreation facility, showing the intervals following license issuance when implementation of each of the measures or construction of the facilities would be commenced and completed, as required by §5.18(b)(5)(ii)(2)(E).

### Exhibit F

- You provide drawings for Lower Feeley Lake, which was renamed Carr Lake. Please add a statement in Exhibit F confirming Lower Feeley Lake was renamed and modify the Exhibit F-8 drawing accordingly.

### Exhibit G

- Please show on the project maps the non-federal lands (i.e., owned by PG&E) as required by §4.41(h)(4).
- Five transmission lines associated with the project are indicated on the project maps as "(FERC 2310)." Please ensure that all seven project transmission lines

are included on the project maps, with associated project boundaries, in the final license application.

## **Appendix B Comments on the Draft License Application Additional Information**

Commission staff has identified that your draft license application contained inconsistent statements or did not contain the complete information or analysis that will be required by staff to prepare the environmental documentation for the proposed license. In this appendix, we note the areas of the draft license application where inconsistencies should be resolved and where more specific information will be needed for the environmental analysis.

### General

- In Exhibits B and E, you define the no-action alternative as continued operation of the Drum-Spaulling Project under the terms and conditions of the current license, without any additional protection, mitigation, and enhancement (PM&E) measures. However, you incorporate future increased water supply demands as projected by NID and PCWA into the no-action alternative (e.g., Exhibit B, section 7; Exhibit E page 6.0-2, footnote 1).

The Commission uses the no-action alternative to establish baseline environmental conditions for comparison with other alternatives. The Commission defines the no-action alternative essentially as a snapshot of existing conditions without consideration of future changes in the environmental baseline. Your incorporation of projected changes in water supply is not consistent with the Commission's use of the no-action alternative and will not allow Commission staff to properly evaluate alternatives as part of the NEPA process.

Therefore, in order for the final license application to provide the information that we need to evaluate project alternatives, you should redefine the no-action alternative to exclude projected water supply demands. Any analyses that use the no-action alternative as baseline conditions in Exhibits B, D, E, and H (project economics, hydrology, fish habitat conditions, reservoir levels, etc.) should be revised accordingly. An analysis of future water demands should be considered as potentially future actions and incorporated into your cumulative impact assessment for the project in Exhibit E.

- Please ensure that all figures are sharp and legible; the system schematics, in particular, are blurry and somewhat illegible.

Exhibit A

- Show the boundary of the Drum-Spaulling Project in figure 2.1-1 to rectify the discrepancy between the figure, which shows the Middle Yuba River as part of the project area whereas the text on p. A-1 does not include that watershed.
- Please provide a map of the project watersheds that shows all of the facilities listed or described in section 1.0 and table 2.1-1.
- In sections 1.0 and 2.0, you describe project facilities and features and the area within the FERC project boundary; however, you do not describe the existing project boundary and its location relative to project facilities (i.e., which project facilities are located within and outside of the project boundary). Although you include Exhibit G maps that show the project boundary, you do not include a description of the project boundary in narrative form in Exhibit A. In Exhibit A of the final license application, please describe the project boundary and its location relative to existing project facilities, and in Exhibit E, please describe the project boundary and its location relative to proposed project facilities.
- Please rectify the following inconsistencies in the final license application:
  - Nameplate hydraulic capacity/rated flow of the Drum No. 2 powerhouse: section 1.5, 505 cfs; page A6-42, 520 cfs.
  - Nameplate hydraulic capacity/rated flow of the Halsey powerhouse: section 1.7, 495 cfs; page A6-47, 490 cfs.

Exhibit B

- On page B-5, you state that annual average generation is 794 GWh historically and 734 GWh under the no-action case. In the final license application, please explain the reason for this predicted 60 GWh decrease in generation, especially because it is larger than the decrease you predict from no-action to your proposed project, 12 GWh, on page D-8 of Exhibit D.
- In section 5.1, you state that seven articles from your existing FERC license relate to the hydraulic operation of the project, but you list and provide only four articles. Please correct this in the final license application.
- In section 6.0, you provide a general statement that the rule curve depicts the physical, regulatory limitations of the reservoir operation. Please provide a specific explanation for each reservoir, i.e., list the site-specific physical and regulatory limitations plus site-specific operational objectives and constraints,

including downstream consumptive water requirements, hydroelectric generation and recreational benefits, as applicable.

- For many of the historical storage curves (e.g., figure 6.1-2), you provide a note explaining why there are large data gaps in the record. Please provide similar explanations for other curves where such data gaps exist but are not explained (e.g., figure 6.1-6).
- You should consistently label the y-axis of the storage and rule curve figures in section 6 as usable or gross storage (e.g., figures 6.5-10, 6.5-11, 6.6-2, 6.6-3, 6.7-2, 6.7-3, 6.8-2, 6.8-3).
- In section 4.1, you state that you will provide flow duration graphs to characterize the operation of the project's reservoirs and powerhouses in dry, normal, and wet years. In section 6, however, you have not provided the graphs for the non-powerhouse reservoirs and you have not provided curves for dry, normal, and wet years. Please provide the missing graphs, and for clarity, please provide the annual curves for the dry, normal, and wet years as well as the period average curve on separate graphs from the monthly curve graphs.
- In section 7.1, you provide projected water demand for NID and PCWA. Please provide more-detailed explanations of these demands, including: whether the flows have been assumed to increase immediately or at some increasing rate over a longer period of time, assumptions for NID demand beyond the year 2032 (i.e., constant or continuing to increase), correlation between water demands and actual withdrawal points, and seasonal variations.
- In section 7.3, you state that NID and PG&E will dispatch the two Dutch Flat powerhouses based on water rights. Please explain when this change would be implemented. Also, please explain how operations under this scenario would be different from existing operations, especially with respect to releases to Bear River.
- In section 7.4, please explain why and how operations were changed after the 1997 storm.

#### Exhibit D

- Please ensure that the PM&E measure numbers in table 4.4-1 are consistent with the numbers used in Exhibit E.
- In table 4.4-1 and table 8.2-1 of Exhibit E, you identify costs for DS-RR1 (implementation of the RFP) for each recreation area; however, you have not provided costs for the individual recreation facilities or other elements of the RFP

(i.e., the periodic monitoring, reporting, meetings, etc.) as described in the RFP. In the final license application, please provide a detailed breakdown of costs for the individual recreation facilities and all elements of the RFP.

- Please ensure that you provide the year of all dollar costs (e.g., table 9.0-1), and please provide the period you use for determining annualized costs.

### Exhibit E

#### General

- In each resource of section 6, you state that your proposed project would not create any significant, unavoidable adverse effects. Your analysis of unavoidable adverse effects should include a discussion of ongoing effects of continued operation of the project (streamflow regulation, interbasin transfers, reservoir fluctuations, etc.). Your discussion should not be limited to significant impacts; §5.18(b)(5)(ii)(D) requires that you discuss the duration (long term, short term), magnitude (minor, major), and extent (cumulative, site-specific) of the impacts.
- Several references that you have cited in the text throughout Exhibit E are missing from section 11.0, *References Cited* (e.g., NID 2000 on page E6.6-3, CDFG 2007 on page E6.6-4, Nevada County 2004 on page E6.6-4, NID 2008 on page E6.6-4, the Forest Service's Land and Resource Management Plan on page E6.7-5, and BLM's Sierra Resource Management Plan on page E6.7-6). In section 11.0 of the final license application, please list all references cited in the text.

#### Cumulative Effects

- Please include in your list of reasonably foreseeable future actions, section 3.3.2, the ongoing operations of the non-project facilities listed in table 2.2-1. Describe the purpose of each facility and identify any effects on water and aquatic resources. The cumulative effect of these facilities should be described in the cumulative effect sections for water and aquatic resources.

#### Project Facilities

- In section 5.1.2.1, you do not include descriptions of the existing recreation facilities (although you reference "...and appurtenant facilities and structures, including recreation facilities"). In the final license application, please include in this section information on the existing recreation areas and/or facilities associated with each development/reservoir, or clearly reference where this information can be found elsewhere in the license application.

- In section 5.1.2.1, you reference figure 5.1.2-3, a map of the existing project facilities, which is not included in the draft license application. Please include this figure in the final license application.
- On page E5-36, you explain that “Additional changes from those submitted as Phase 1 are included in the Exhibit G maps for this draft license application. Phase 2 focuses on changing the project boundary to be consistent with the approved Roads and Trails Study Plan, table 1.0-1 and to correct discrepancies in the boundary through the use of aerial maps and field observations.” The Exhibit G maps identify several Phase 2 changes, many of which relate to project road additions or removals. To be able to evaluate the proposal to change the project boundary, please include in Exhibit E of the final license application more specific information about the proposed changes, along with documentation of the need for the changes. This information should be provided as an itemized list of each change and/or explanation of universal changes.
- On pages App. E7-34 and 35 and page App. E10-2, you indicate that the *Transportation Plan for Project Roads on NFS Lands Within FERC Project Boundary* will be developed within 2 years of license issuance. As stated throughout this process, all resource-specific protection plans should be included in the final license application. In the final license application, please provide a detailed Transportation Plan.

### Geology and Soils

- In table 6.1-11, you list seven channel instability areas, but in the preceding paragraph, you refer to eight locations. Please correct or explain the inconsistency.
- In the Channel Morphology Technical Memorandum, you list the results of the channel stability study in section 3.1, but you do not discuss the results in section 4.0. So that we can assess project effects on channel stability, please discuss the results of this analysis in the sections of Exhibit E in which you discuss channel stability, 6.1.1.5.4 and 6.1.2.1.3.
- The draft license application does not adequately describe existing geological conditions. In section 6.1, please provide maps showing the existing geology, topography, and soils of the proposed project and surrounding area. Also, please provide “a description of the soils, including the types, occurrence, physical and chemical characteristics, erodibility, and potential for mass soil movement.”

Water

- On page E6.2-14, you identify 1995 as the wet water year but in Exhibit B, page B-20 you report 2006 as the wet water year. Please resolve the inconsistencies in the final license application and explain your rationale for selecting the dry, normal, and wet water years.
- In Exhibit E, you do not state or demonstrate how the project's rule curves and flow duration curves may change under the proposed project. Please provide a discussion, and revised graphs where appropriate, of changes in the rule curves or predicted flow duration curves under your proposed project as compared to the graphs provided in Exhibit B. Also, in the environmental effects section, please describe how any changes would affect water resources. This information is necessary for staff to assess the effects of the proposed project on project operations and streamflows.
- Footnote 4 is missing from table 6.2.1-2. Please update the table to provide the missing information.
- On page E6.2-23, you state that there were eight samples that were below the 7.0 mg/L minimum requirement for dissolved oxygen, but you provide the results for 11 samples in the paragraph. In Technical Memorandum 2-1, page ES-1 you say there were nine samples but list 12. Please resolve these inconsistencies in the final license application.
- You do not present the results of the dissolved oxygen profiles you collected in project reservoirs. So that we can assess the degree of dissolved oxygen stratification in project reservoirs and the potential impacts of increased minimum flow releases, please provide vertical profile graphs of dissolved oxygen in the reservoirs similar to the temperature profile graphs you provide in section 6.2.1.2.4.
- On page E6.2-24, you state that there were six samples outside the criteria range for pH, but you provide the results for five samples in the paragraph. Please rectify the inconsistencies in the final license application.
- On page E6.2-26, you state that there were 70 water temperature monitoring sites, whereas you list 79 sites in table 6.2.1-4. In the Water Temperature Monitoring Technical Memorandum, page ES-1, you state that 81 sites were monitored consisting of 73 stream, 7 conveyance, and 4 reservoir sites, which equals 84 sites. Please rectify the inconsistencies in the final license application.

- In the second paragraph on page E6.2-26, you refer to additional temperature data from 2010; however, you do not provide the data. Therefore, please include those data in your final license application.
- In table 6.2.1-7, you list two monitoring stations, whereas you refer to three stations in the preceding text; please include the third station in the table.
- On page E6.2-38, you report that the Lake Valley reservoir depth is 60 feet and storage is 7,964 ac-ft; but on page A6-38, you report the depth as 57 ft and storage as 7,902 ac-ft based on a 2007 bathymetric survey. Please rectify these inconsistencies in the final license application.
- On page E6.2-39, you do not discuss the thermocline depths in Lake Spaulding that are discussed in the Water Temperature Monitoring Technical Memorandum or discuss the significance of the inflow data you provide for Lake Spaulding. So that we can evaluate temperature profiles in the project reservoirs, please provide this information in the final license application.
- There are duplicate figures numbered 6.2.1-8. Please correct figure numbering starting on page E6.2-43.
- Please define “ATL” on page E6.2-44.
- The effects of proposed project operations on water quantity and use are a key component of staff’s assessment of the proposed project. In section 6.2.2.2.1, you state that the reservoirs would be operated in the future as they have historically, yet your description of the no-action alternative in Exhibit B describes several changes from existing conditions and your proposed project includes several streamflow changes. Furthermore, your estimates of past and future generation show significant changes from existing (794 GWh) to no action as you defined it in the draft license application (734 GWh) to proposed project (722 GWh). Please clarify how future operations would be the same as existing operations, yet generation would decrease; and if future operations would not be the same as existing operations, please discuss how the operational changes would result in different reservoir elevations, streamflows, or water quality under proposed operations compared to no-action.
- In sections 6.2.2.2.2 and 6.2.2.2.3, you focus your discussions on reservoirs or stream reaches where water quality objectives are not currently met, but do not discuss reservoirs or stream reaches where those objectives are currently met but could be adversely affected by the proposed project. Please discuss the potential effect of future operational changes on water quality even where objectives are currently met; for example, the effect of increased minimum releases on dissolved oxygen in the receiving stream. So that we can assess project effects on water

quality, please provide a summary of each project-affected reservoir/stream segment discussing existing upstream/reservoir/downstream conditions and how project operations (no-action and proposed project) will or will not change conditions. Please provide relevant data, figures, or tables to support your discussions.

- In the section on bacteria on page E6.2-55, please complete the unfinished first sentence in the second paragraph.
- On page E.6.6-74, you state that you may identify opportunities for whitewater boating flows after completing several studies. If you propose boating flows, please ensure that you discuss the effects of the flows on water resources, especially with respect to seasonal streamflow, stream temperature, and dissolved oxygen, in section 6.2.2.2 in the final license application.
- The cumulative effects section does not consider the additive effects of your project to other projects in the watershed that also affect these resources. Please discuss the cumulative effects of your project with the other reasonably foreseeable future actions you list in section 3.3.2.
- In section 6.2.4.2.1, you do not list proposed measure Drum-Spaulling-AQR2, which you list in Appendix E7. Please rectify these inconsistencies in the final license application.
- In Appendix E11, table 11.1-2, you list drainage areas for the following developments that are inconsistent with Exhibit A:
  - Upper Rock Lake: page E11-1, 0.18 sq mi; page A6-12, 0.23 sq mi.
  - Lower Rock Lake: page E11-1, 0.29 sq mi; page A6-13, 0.36 sq mi.
  - Culberston Lake: page E11-1, 0.47 sq mi; page A6-14, 0.44 sq mi.
  - Upper Lindsey Lake: page E11-1, 0.16 sq mi; page A6-15, 0.06 sq mi.
  - Middle Lindsey Lake: page E11-1, 0.38 sq mi; page A6-16, 0.41 sq mi.
  - Lower Lindsey Lake: page E11-1, 0.88 sq mi; page A6-16, 0.91 sq mi.
  - Fuller Lake: page E11-2, 0.54 sq mi; page A6-21, 0.55 sq mi.
  - White Rock reservoir: page E11-2, 1.17 sq mi; page A6-23, 1.18 sq mi.
  - Meadow Lake: page E11-2, 1.30 sq mi; page A6-24, 1.98 sq mi.

- Lake Fordyce: page E11-2, 31.29 sq mi; page A6-25, 31.7 sq mi.
- Lake Sterling: page E11-2, 1.06 sq mi; page A6-26, 1.02 sq mi.
- Kidd Lake: page E11-2, 0.56 sq mi; page A6-27, 0.50 sq mi.
- Upper Peak Lake: page E11-2, 0.62 sq mi; page A6-28, 0.66 sq mi.
- Lower Peak Lake: page E11-2, 1.01 sq mi; page A6-29, 1.02 sq mi.
- Lake Spaulding: page E11-2, 117.7 sq mi; page A6-31, 118.0 sq mi.
- Drum afterbay: page E11-2, 11.91 sq mi; page A6-43, 12.0 sq mi.
- Lake Valley reservoir: page E11-2, 4.36 sq mi; page A6-38, 4.54 sq mi.
- Kelly Lake: page E11-2, 0.53 sq mi; page A6-39, 0.5 sq mi.
- Halsey afterbay: page E11-2, 3.08 sq mi; page A6-48, 3.5 sq mi.
- Rock Creek reservoir: page E11-2, 2.18 sq mi; page A6-49 2.17 sq mi.

### Aquatic

- In section 6.3.1.1.7, you do not interpret the results mentioned in the final two sentences, which state “Rainbow trout population estimates in the South Yuba River ranged from 2,367 to 441 trout/mi between the first and second survey, respectively. Similarly, estimates of rainbow trout in Poorman Creek ranged from 1,171 trout/mi in the first survey to 889 trout/mi in the second survey.” So that we can better understand the effects of seasonal temperature changes on trout populations, please include your interpretation of the significance of these results.
- On page E6.3-56, your text description of foothill yellow-legged frog sightings does not appear to match the number of locations at which frogs, egg masses, and tadpoles were found. Additionally, it is not clear what footnote #3, “N/A”, means. Please clarify this information.
- On page E6.3-130, you state that “even if the Drum Canal hydroacoustic estimates are reliable,” you believe that the estimate of entrainment represents a less than significant effect on fish populations; however, you do not provide the reasoning behind this conclusion. In the final license application, please provide the basis of your conclusion that entrainment by Drum canal does not have a significant effect on fish populations.
- On page E6.3-131, you state that results of the Bear River canal sampling, in conjunction with the stream and reservoir fish population sampling above and

below Bear River canal, indicate that the population of rainbow trout in Bear River Canal is the result of reproduction in the canal and not due to entrainment into the Bear River canal. You conclude that a fish screen or other measures to mitigate effects of entrainment into the Bear River canal on fish populations is not warranted, but you do not provide any rationale. Please provide a discussion with specific analysis supporting your rationale for that conclusion.

- In section 6.3.2.2, you do not discuss effects on special-status/California Endangered Species Act (CESA)-listed aquatic species. If no species were found pertaining to the Drum-Spaulding project area, please explicitly state that in the section.
- In section 6.3.2.2.6, your discussion is focused on the status of the existing fisheries and does not address if there are species that require upstream or downstream passage to complete their life cycles. Please provide more details to support your conclusion that there are no stream locations as a result of project operations that would require measures to provide fish passage.
- The application does not contain any information on the effects of proposed instream flow regimes on special-status amphibians. For all areas where new instream flows are proposed, please evaluate the effects of the proposed flows on special-status amphibians, including the potential to degrade suitable habitat or improve current habitat. In areas where special-status amphibians are not found, please evaluate the potential for the proposed flows to create suitable habitat and become occupied by neighboring populations.

### Terrestrial

- In section 6.4.1.1.4, *Noxious Weeds/Invasive Plants*, you state that current O&M practices include informal weed control programs. Please provide more details on the timing and methodology for implementation of these informal weed control programs.
- In table 6.4.1-12, the text associated with the footnote for the American peregrine falcon is not included in the table. Please provide the missing information in the final license application.
- In Table 6.4.1-13, you include a footnote for the American peregrine falcon that contains information regarding bats. Additionally, it is unclear specifically to which species footnote number 5 pertains. Please correct the inconsistencies in the final license application.

- On page E6.4-36, you state that “sightings and historical records related to the western pond turtle are generally associated with ponds, small lakes, and low-gradient streams...” Please provide a citation for these historical records.
- You describe numerous species in the affected environment section but do not describe the majority of these species in the environmental effects section. Specifically, in section 6.4.2.2.1, you acknowledge evidence of ongoing impacts to special-status plants but do not provide specific details of the potential effects of continued project operation and maintenance on special-status and threatened and endangered species. Please modify the environmental effects section to provide more details on the beneficial and adverse effects of the proposed project on all special-status species with a documented occurrence in the project area.
- In section 6.4.2.2.2, you describe vegetation removal actions but do not discuss the potential effects of the proposed project on the spread of noxious weed species. Please identify the beneficial and adverse effects of the proposed project, including high-effect areas of noxious weeds, a description of the noxious weed species most likely to spread, and effects related to recreation use.
- On page E6.4-49, you state, “There is evidence that some populations of special-status plants are being adversely affected due to ground-disturbing activities; vegetation management, including mechanical clearing and herbicide use; and trampling.” Please provide more detail regarding the type of effect to the special-status species plants (e.g., level of permanence to the plant) from continued operation and maintenance of the project.
- On page E6.4-49, you propose a measure to develop an Integrated Vegetation Management Plan; however, beyond a brief description of this plan on page App. E7-22, the details of this proposed plan are not included in the draft license application. Therefore, in section 6.4.2.2.2, please describe the actions associated with PM&E measures that you propose to control or mitigate adverse effects of noxious weed species on native vegetation and natural habitats.
- The river mile locations for study site reaches provided in the May 29, 2009, revised study plan for study 2.6.1, Riparian Habitat, revised table 6.0-1, do not correspond to the river mile locations for study reaches provided in Technical Memorandum 6-1, Riparian Habitat, table 2.1-1. Please resolve the inconsistencies in the final license application.
- In Technical Memorandum 6-1, Riparian Habitat, you state that there were no variances to the FERC-approved study. However, in a May 29, 2009, letter to the Commission, you modified that location of the riparian study sites. Please indicate in the technical memo that this modification was made to the Commission-approved study.

- The Commission’s Study Determination, dated February 23, 2009, added the following work product to study plan 2.6.1, Riparian Habitat: a data table of study sites including GPS coordinates with the extent (polygon, continuous line, non-continuous line, or point) of the riparian vegetation data collected from the sites; and any GIS files will be provided to relicensing participants. This information does not appear to be provided with Technical Memorandum 6-1, Riparian Habitat or the associated appendices. Please provide this information.
- Technical Memorandum 5-1, Special-Status Plants, states that there is one occurrence of Brandegee’s clarkia on Bureau of Reclamation land. However section 6.4.1.1.1, does not show this occurrence on Bureau of Reclamation land. Please clarify the location of the occurrence.
- In section 6.4.2.2.3, please clarify what “less than significant effect” to riparian habitat and wetlands means and the basis for this conclusion.
- In section 6.4.2.2.3, you state that you are discussing the possibility of future riparian habitat and wetlands monitoring and trigger events at Bear River Reach #2. If future monitoring occurs, please ensure that a monitoring plan is included in the final license application.
- In section 6.4.2.2.6, please clarify what “less than significant effect” means and the basis for this conclusion. In addition, please include any potential effects to bald eagle nesting in the vicinity of the proposed recreational facilities and related to any expected increases in recreational use. Also, discuss the project’s consistency with current National Bald Eagle Management Guidelines.
- In section 6.4.2.2.7, please clarify what “less than significant effect” means and the basis for this conclusion.
- On page E8-2, you provide details for the costs associated with Proposed Measure DS-TR3, Bear River Canal Deer Study. The description of this measure on page App. E7-23 does not describe actions that would contribute to capital costs, beyond study development. Please provide details regarding the development of the \$160,000 capital cost estimate for this measure.

#### Threatened and Endangered Species

- The draft license application mentions that critical habitat has been designated for the California red-legged frog but does not indicate whether the project would affect the habitat. Therefore, discuss the relationship, if any, between the location of designated critical habitat and project facilities and any project effects of the primary constituent elements that the designation is based on.

- In section 6.5.3.1 and Technical Memorandum 7-3, you describe surveys for seven Endangered Species Act (ESA)-listed plants that have a reasonable potential to occur within the project boundary, and you conclude in section 6.5.4.2.1 that, because these species were not found within the project boundary, the proposed project would have no effect on ESA-listed plants. Please discuss the potential for these species to colonize the project area based on suitable habitat within the project area.

### Recreation

- Information about specific recreation facilities (i.e., overall recreation day values, 2050 projected seasonal values for campground and parking occupancy, VAOT numbers, and numbers of parking spaces, campsites, picnic sites) is inconsistent in Exhibit E. Please ensure that the information in Exhibit E, the RFP, and Appendix E7 is consistent in the final license application. In the final license application please clarify inconsistencies between information presented in Exhibit:
  - Overall recreation day values: Table 6.6.1-21 of Exhibit E compared to the text on page E6.6-47.
  - 2050 projected seasonal values for campground occupancy: Table 6.6.1-22 of Exhibit E compared to the corresponding text on pages 6.6-49 through 6.6-59.
  - 2050 projected seasonal values for parking occupancy: Table 6.6.1-24 of Exhibit E compared to the corresponding text on pages 6.6-50 through 6.6-61.
  - 2050 projected occupancy values: Tables 6.6.1-22 and 6.6.1-24 of Exhibit E compared to the text on pages E7-25 through E7-33 of Appendix E7.
- An issue identified in Scoping Document 2 was the effects of reservoir water levels on recreation, including potential conflicts among different recreation uses. In section 6.6.1.3.2, you include statements about visitor reports of whether water levels influenced their ability to recreate; however, you do not discuss at what levels the project boat launches can be operated. In the final license application, please define the water surface levels at which the boat launches can operate and discuss when water surface level changes occur, resulting in the inability to use the boat launches. Please discuss the impacts of the proposed reservoir water levels on recreational use of the boat launches and recreational use in general at the reservoirs.
- On page E6.6-24, as well as in section 2.3.4 of the RFP, you state that the area contains seven project reservoirs; however, the rest of the text details information

related to eight reservoirs. Please rectify this discrepancy in the final license application.

- On page E6.6-54, you include Blue Lake as part of the Grouse Lakes Area; however, on page 6.6-24 and on page 2-11 in the RFP, Blue Lake is identified as a component of the Lake Spaulding Recreation Area. Please rectify this inconsistency in the final license application.
- In section 6.6.1.4, the river reaches you identify in table 6.6.1-25 (page E6.6-64) do not correspond with the subsection headings. Please make sure the table and subsection headings are consistent in the final license application.

Recreation Facilities Plan (RFP; Appendix E8)

- In the RFP submitted with the final license application, please rectify inconsistencies between information presented in the draft license application RFP and other sections of the draft license application:
  - Numbers of parking spaces and campsites: table 6.6.1-11 of Exhibit E and table 2.3-2 of the RFP compared to the text on page E6.6-24 and 2-11, respectively.
  - Numbers of campsites: table 6.6.1-12 of Exhibit E, table 2.3-4 of the RFP, and Appendix E7 compared to the text on pages E6.6-27 and 2-13, respectively, and table 1.1-3 of the RFP.
  - Numbers of picnic sites: table 6.6.1-23 of Exhibit E compared to page E6.6-22, RFP table 1.1-3, and page 2-9.
  - VAOT numbers: table 6.6.1-24 of Exhibit E and table 1.1-3 in the RFP compared to table 6.6-14 and related text, tables 2.3-4 and 2.3-6 and related text of the RFP, and table 2.3-8 and related text of the RFP.
  - Numbers of campsites: Appendix E7 compared to the related narrative in the same section as well as all other references on page E6.6-20 of Exhibit E, and pages 1-3 and 2-7 of the RFP.
  - Numbers of campsites: table 1.1-3 of the RFP compared to table 2.3-3 and the corresponding text.
  - Overnight recreation days: table 2.2-1 of the RFP compared to table 6.6.1-21 in Exhibit E.
  - Land ownership: table 2.3-1 of the RFP compared to table 6.6.1.-9 of Exhibit E; and table 2.3-7 compared to table 6.6.1-15 of Exhibit E.

- ROS classification: tables 2.3-4 and 2.3-5 of the RFP compared to tables 6.6.1-12 and 6.6.1-13 of Exhibit E.
- Numbers of campsites: page 3-2 of the RFP compared to page 2-7 of the RFP and page E6.6-19 of Exhibit E and page E7-24 of Appendix E7.
- On pages 1-2 and 1-3, you provide land ownership acreage values in table 1.1-2 that are not consistent with table 6.7.1-2 in Exhibit E. Please resolve this inconsistency in the final license application.
- In section 4, you describe the recreation monitoring program. It is not clear when the monitoring plan will commence. In the final license application, please clarify the start time of the monitoring program relative to a potential license issuance.
- You propose recreational improvements for Bear Valley, but you do not include the type of monitoring method that will be employed for the proposed facilities in table 4.2-2. In the final license application, please include Bear Valley monitoring information in this table.
- In Attachment 1, you provide Project Reservoir Recreation Maps that show a project boundary; however, it is not clear if this is the existing or proposed project boundary. In the final license application, please clarify in the RFP if the line is the existing or proposed boundary.

### Land Use

- In table 6.7.1-2 and in table 2.1-1 of Exhibit A, you summarize land ownership within the existing project boundary. To allow for comparison and evaluation of the proposed boundary changes, please also provide a similar table for the land ownership acreages for the proposed project boundary.
- In Table 6.7.1-30, you provide details on the inventoried primary project roads but you do not clarify whether they are located within or outside the existing project boundary. In addition, it is not clear how the Road IDs provided in the table correspond to the common name of roads identified in the project maps of Exhibit G. In the final license application, please clarify how Road IDs relate to the common names and which primary project roads are currently within the existing project boundary. Please also provide beginning and end points for each of the road segments within the existing project boundary and/or proposed to be included in the project boundary.
- On page App. E7-35, you state that all primary project roads will be included in a Transportation Plan and that roads outside of the project boundary will be administered as part of a Road Maintenance Agreement with the Forest Service.

Please provide a list of all the roads to be covered under the Road Maintenance Agreement, with a brief justification as to why they will not be included in the Transportation Plan.

### Cultural

- On page E6.8-1, you state that PG&E has completed all tasks in the FERC-approved study (Study 2.12.1), with the exception of: (1) submitting to the California State Historic Preservation Officer (SHPO) National Register of Historic Places (National Register) evaluation of the Drum-Spaulding Project system and its individual features for review and comment; and (2) completion of the technical National Register evaluation memorandum. Please finalize this information (including obtaining responses back from the SHPO) in your final license application, and incorporate this information in your revised historic properties management plan (HPMP). Make sure you submit all National Register eligibility determinations to the SHPO, and document whether you receive responses back from the SHPO on these determinations.
- On page E6.8-1, you state that you need to complete the traditional cultural properties (TCP) study (Study 2.13.1). Please complete the study and file it with the Commission when you file your final license application. Also incorporate the results of the TCP study into your revised HPMP and file your revised HPMP along with your final license application.
- In section 6.8.1.3, you do not discuss in any detail the late twentieth century culture history involving the study area, and in particular, aspects involving the development of hydroelectric power in regards to the project. Please add this additional information at the end of this section and to the HPMP. In expanding this section, use pertinent information that you have already provided in your draft HPMPs. Also, make sure you detail what components of the built environment are more than 50 years old, and which components are less than 50 years old.
- In section 6.8.1.6.2 of the draft license application, in the last paragraph on page E6.8-9, you state that the Dutch Flat Powerhouse Historic District is evaluated as being ineligible for listing on National Register. Please give specific reasons why this district is considered not eligible, as this appears to contradict you statement in the HPMP about this district. Please correct or reconcile these differences.

### Draft Historic Properties Management Plan (HPMP)

- In section 3.3.2.2, under the heading High Elevation Rock Face Dams, on page 3-15, add a concluding sentence or phrase stating that you have determined that these structures are considered not eligible for inclusion in the National Register.

- In section 3.3.3, we recommend that you avoid making any definitive statement about no TCPs being located in the project's APE, since the TCP studies have not been completed yet. Please modify this section, accordingly. In the last sentence of this section (on page 3-18), also add that you would consult with the involved Indian tribes, as well.
- In the last part of the first sentence in section 4.1, you refer to PG&E's requirements for operation and maintenance of the transmission line. This sentence should refer to operation and maintenance of the project instead. Therefore, please make the appropriate correction.
- At the end of section 4.3.9, please add another section (like section 4.4 and related subsections in the Yuba-Bear HPMP) discussing site-specific management measures. Prioritize what specific set of sites would be addressed in the first year, followed by the second, third, fourth, and fifth year.
- In section 5 of the HPMP (Implementation Procedures), please craft a similar section and related subsections as done in section 5 of the Yuba-Bear HPMP.
- In Appendix D, add any new correspondences to the matrix table that you have received or that have been filed with FERC since the draft license application was filed. Add a key to denote the various correspondences identified in the table, along with the respective dates. Also, attach at the end of this table, the actual correspondences cited in the matrix table.

### Exhibit G

- In Table 1.0-1, you summarize the proposed project boundary acreages. To allow for comparison and evaluation of the proposed changes, in the final license application, please also provide the acreages for the existing project boundary. (Also, see comment under Exhibit E, Land Use, above related to citing the same land ownership acreage values for the existing and proposed project boundary in different sections of the draft license application.)
- On the project maps, roads are not consistently labeled (e.g., page G-8, Phase 2 Proposed Project Road Boundary is unlabeled). Please ensure that all roads are labeled on the Exhibit G project maps of the final license application.

### Exhibit H

- In section 9.0, you state that “[the] licensee does not propose to expand the project, but instead, plans to reduce the FERC project boundary to land needed for project O&M.” It is not clear based on the acreage values provided in various sections of the draft license application, whether there would be a net decrease or

increase in land within the project boundary (see comment under Exhibit E, Land Use, above regarding this issue); regardless, the project maps in Exhibit G identify several proposed changes (i.e., Phase 2 changes) that would expand the boundary (not just reduce it). As such, potentially affected land owners would need to be notified. In the final license application, please clarify whether all potentially affected land owners have been notified of the proposed changes (both additions and removals).