FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426
January 29, 2021

OFFICE OF ENERGY PROJECTS

Project No. 2105-089 – California
North Fork Feather River
Hydroelectric Project
Pacific Gas and Electric Company

VIA FERC Service

Jan Nimick
Vice President, Power Generation
Pacific Gas and Electric Company
245 Market Street, Mail Code: N11E
San Francisco, CA 94105

**Reference: Additional Information Request for the Upper North Fork Feather River Hydroelectric Project No. 2105-089**

Dear Mr. Nimick:

We are in the process of updating our review of Pacific Gas and Electric Company's (PG&E) license application for the Upper North Fork Feather River Project, in light of the Relicensing Settlement Agreement, additional information filed by PG&E in the proceeding, the final environmental impact statement (final EIS) for the project,[1] and an updated threatened and endangered (T&E) species list. Based on our review, we need additional information to update the record regarding: (1) project facilities, operation, and generation; (2) the cost of proposed and recommended measures; (3) water quality in the Upper North Fork Feather River; (4) project effects on federally listed T&E species for purposes of consultation under the Endangered Species Act of 1973;[2] and (5) compliance with the Coastal Zone Management Act.

Pursuant to section 4.32(g) of the Commission's regulations, please provide the additional information requested in items 1-9 and 11-18 in the enclosed Schedule A

[1] The final EIS was issued on November 10, 2005.

[2] 16 U.S.C. § 1536(a).

within 90 days from the date of this letter. Your response to item 10 must be provided within 120 days from the date of this letter. If the requested information causes any part of the application to be inaccurate, that part must be revised and refiled by the due date.

The Commission strongly encourages electronic filings. Please file your response using the Commission's eFiling system at https://ferconline.ferc.gov/eFiling.aspx. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov, (866) 208-3676 (toll free), or (202) 502-8659 (TTY). In lieu of electronic filing, you may submit a paper copy. Submissions sent via the U.S. Postal Service must be addressed to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Room 1A, Washington, DC 20426. Submissions sent via any other carrier must be addressed to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 12225 Wilkins Avenue, Rockville, Maryland 20852. The first page of any filing should include docket number P-2105-089.

Please contact Allan Creamer at (202) 502-8365, or via email at allan.creamer@ferc.gov, if you have any questions.

Sincerely,

Stephen Bowler, Chief
South Branch
Division of Hydropower Licensing

Attachments: Schedule A

**SCHEDULE A**
**ADDITIONAL INFORMATION REQUEST**

***Developmental Analysis***

1. The final environmental impact statement (final EIS), *Section 1 – Purpose of Action and Need for Power*, indicates that the project has an authorized capacity of 342.6 megawatts (MW); has a dependable capacity of 357.3 MW; and generates, on average, 1,171,900 megawatt-hours of electricity per year. Since the filing of your application on October 23, 2002, there have been modifications to the project that could affect the authorized installed capacity and generation [*see* Additional Information Request (AIR) #6]. Therefore, please update the above numbers, as appropriate. Provide your basis for determining the project's dependable capacity. The estimate for the project's annual generation should be inclusive of the years 2002 through 2020.

2. The application does not describe the segments of river downstream from each of the project's powerhouses. Therefore, for the following river segments, please provide a description of the reach downstream from the powerhouse (i.e., open channel or conduit), the approximate length of each reach, and a description of how flows are released from the powerhouse:

(a) From the Oak Flat Powerhouse to the North Fork River;
(b) From the Belden Powerhouse to the non-project Rock Creek Reservoir;
(c) From the Caribou No. 2 Powerhouse to Belden Reservoir;
(d) From the Caribou No. 1 Powerhouse to Belden Reservoir; and
(e) From the Butt Valley powerhouse to Butt Valley Reservoir.

3. The Commission's June 16, 2017, Safety Inspection report notes that in 2016 work was in progress to consolidate switching at the Caribou No.'s 1 and 2 powerhouses with that of the Rock Creek Powerhouse, which is part of the Rock Creek – Cresta Project No. 1962. Please identify any changes to the project switching stations that have been completed, including the status of the Caribou No. 1 Switching Center, which is the central switching station for the project.

4. Since the license application was filed, PG&E has removed segments of a transmission line from the project and modified the switching station at the Caribou No 1 Powerhouse. Therefore, we need a description of any changes in how power from the project is transferred to the grid. For each of the project's five powerhouses; Butt Valley, Caribou No. 1, Caribou No. 2, Oak Flat, and Belden, please describe how power is now transferred from the powerhouse to the grid. Provide a description of any switching station, including its location relative to the powerhouse, and the approximate length of any lead lines or transmission lines.

5. Exhibit A of the license application, at section A.1, states that the maximum authorized storage elevation for Lake Almanor, 4,494 feet Pacific Gas and Electric (PG&E) datum, or 4,504.2 feet U.S. Geological Survey (USGS) datum, has never been exceeded. Please update this information to include the period since filing your application on October 23, 2002.

6. Our current understanding is that the project includes the generators and turbines described in the following table. Please confirm this information and update it, as necessary, to include any upgrades to the generators or turbines that have been completed since filing your license application on October 23, 2002.

| Description | Generator Rating | Power factor | Turbine Horsepower |
|---|---|---|---|
| Butt Valley Powerhouse | 44,400/51,100 kVA | 0.9/0.96 | 55,000 hp |
| Caribou No. 1 Powerhouse, Unit 1 | 26,500 kVA | 0.9 | 30,000 hp |
| Caribou No. 1 Powerhouse, Unit No. 2 | 30,500 kVA | 0.9 | 30,000 hp |
| Caribou No. 1 Powerhouse, Unit No. 3 | 27,777 kVA | 0.9 | 30,000 hp |
| Caribou No. 2 Powerhouse, Unit No. 4 | 67,000/77,000 kVA | 0.95 | 76,000 hp |
| Caribou No. 2 Powerhouse, Unit No. 5 | 64,000 kVA | 0.9 | 76,000 hp |
| Oak Flat Powerhouse, Unit No. 1 | 1,628 kVA | 0.86 | 1,837 hp |
| Belden Powerhouse, Unit No. 1 | 131,000/150,650 kVA | 0.9 | 158,000 hp |

7. The final EIS, *Section 2 – Proposed Action and Alternatives*, provided Commission staff's summary of the project's facilities and operation based on information in the license application. Please update Exhibit A (Project Description) and Exhibit B (Project Operation) in the application to reflect any changes in project facilities and operation, as well as any environmental measures you have implemented, since the issuance of the final EIS. Such measures are to include, but not necessarily be limited to: (a) use of the upper gates at Canyon Dam to alleviate heavy metal concentrations;

(b) measures for monitoring flow(s) and water levels; (c) measures to improve water temperature and dissolved oxygen in project waters; (d) minimum and pulse flows in the Belden and Seneca Reaches; (e) ramping rates; (f) fish barrier removals; (g) measures to protect or enhance threatened and endangered species or their habitats; and (h) any new project recreation site(s) and/or amenities. Also, please update Exhibit D, as necessary, to provide capital and annual operation and maintenance cost(s) for any new measures identified in response to this AIR that PG&E has implemented since the issuance of the final EIS, including new facilities, operational changes, and environmental measures. You should file the updated Exhibits in their entirety.

***Dam Safety***

8. As part of your flow proposal, you plan to use the upper-level gates in the Canyon Dam outlet tower to release flow to the Seneca Reach, beginning in September and continuing until at least mid-October. There are seven slide gates at the outlet tower, of which the upper five slide gates are functional and currently used in project operation. Three (Gates 3, 5, and 6) are fully operational, and two (Gates 1 and 7) are under restricted use pending maintenance and repair of their motors. Gates 1 and 7 are each currently restricted to release less than 700 cubic feet per second (cfs). Given these restrictions to Gates 1 and 7, please indicate how Gates 1 and 7 will be operated to provide your proposed flows, while at the same time maintaining the maximum release restriction of 700 cfs. For example, you propose to release pulse flows of 1,000 to 1,200 cfs in February and March. However, you provide no detailed description regarding how PG&E will provide the pulse flows if PG&E intends to follow the current release restrictions of 700 cfs.

9. As outlined in the Relicensing Settlement Agreement for the Upper North Fork Feather River Project, you propose to release minimum flows to the Seneca and Belden reaches (*see* tables A-1 and A-2 in Appendix A of the Relicensing Settlement Agreement). The flow releases would be measured at gages NF-2 and NF-70, respectively. These minimum flows would commence within 60 days of the issuance of any new license, unless PG&E and/or the Commission determine that facility modifications are required.

Gages NF-2 and NF-70 are currently used to measure dam leakage and instream flow releases from Lake Almanor (Canyon Dam) and Belden Forebay Dam, respectively. These gages are also designated as Emergency Action Plan gages and are remotely monitored via a SCADA [Supervisory Control and Data Acquisition] system. Since NF-2 is used to measure the leakage flow from Canyon Dam, please clarify the procedure to differentiate dam leakage and the minimum stream flow as measured at gage NF-2.

10. The final EIS describes PG&E's proposed lake level management for Lake Almanor, the Butt Valley Reservoir, and the Belden Forebay, as well as the flow release regimes for environmental and recreation flows.[3] The normal operating range for the Belden Forebay is from elevation 2,955 feet to elevation 2,975 feet (PG&E Datum). There is no rule curve or reservoir level restriction for the Belden Forebay. The minimum water surface elevation of 2,905 feet (PG&E Datum) is well below the current normal operating range of the Belden Forebay. Within 120 days of the date of this AIR, please provide an updated stability analysis for the revised drawdown condition (dam and reservoir rim). PG&E's Chief Dam Safety Engineer should provide a statement confirming that the proposed change will not affect dam safety. The stability analysis should follow FERC Engineering Guidelines and requirements.

***Water and Aquatic Resources***

11. On February 28, 2003, the Commission issued an order modifying and approving a Water Temperature Monitoring Plan under Article 401 of the license for the Rock Creek-Cresta Project No. 1962. The plan includes provisions to monitor, model, and report water temperature and flow in the Upper North Fork Feather River Project area for 15 years.[4] In accordance with this requirement, PG&E filed a Water Temperature Monitoring 5-Year Summary Report in 2008 for the 2002-2007 monitoring period. In addition, PG&E filed annual water temperature monitoring reports from 2009 (covering the 2008 monitoring period) through 2020 (covering the 2019 monitoring period). In order to update the record for the Upper North Fork Feather River Project No. 2105, and inform our supplemental biological assessment for newly listed threatened and endangered (T&E) species, please file in the Upper North Fork Feather River Project record:

(a) The Water Temperature Monitoring 5-Year Summary Report filed in the Rock Creek-Cresta proceeding in August 2008, and the annual water temperature monitoring reports filed from 2009 through 2020; and

[3] PG&E's operational proposals include: (1) taking reasonable actions to prevent the Lake Almanor's elevation from exceeding 4,494 feet (PG&E Datum); (2) continuing to maintain the Butt Valley reservoir at a minimum elevation of 4,120 feet (PG&E Datum) from June 1 through September 30 and 4,115 feet (PG&E Datum) from October 1 through May 31; (3) continuing to maintain the Belden Forebay at a minimum elevation of 2,905 feet (PG&E Datum) year-round; and (4) releasing seasonal environmental flows in the Seneca and Belden reaches, as well as implementing a recreation flow plan in year 6 of a new license.

[4] *See* 102 FERC ¶ 62,136 (2003).

(b) A summary of the water temperature data, presented in a format similar to the summary provided in table 3-7 in the final EIS for project, including the water-year type (*e.g.,* normal, wet, dry, critically dry) for each year sampled.[5]

***Threatened and Endangered Species***

12. The U.S. Fish and Wildlife Service's (FWS) current official list of T&E species that may occur at, and/or be affected by, issuing a new license for the Upper North Fork Feather River Project includes: the California red-legged frog (RLF) (*Rana draytonii*); Sierra Nevada yellow-legged frog (YLF) (*Rana sierrae*); conservancy fairy shrimp (*Branchinecta conservatio*); delta smelt (*Hypomesus transpacificus*); and slender Orcutt grass (*Orcuttia tenuis*).[6] This T&E species list differs from the list of species covered by our initial consultation associated with the final EIS for the project. Final critical habitat has been designated for all these species, with all the units occurring outside the project boundary. However, critical habitat units for slender Orcutt grass and the Sierra Nevada YLF occur in the project vicinity.[7]

Given the changes to the official T&E species list for the project and the individual species' status since 2005, please update the information in the record for any occurrences and project-related effects on California RLF, Sierra Nevada YLF, conservancy fairy shrimp, delta smelt, and slender Orcutt grass, based on your geographic information system (GIS) database of special-status species[8] and any additional T&E species survey results that may be available for the Upper North Fork Feather River Project. You should also consult with FWS, the Forest Service, Bureau of Land Management, and the California Department of Fish and Game to obtain and file

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[5] PG&E defines Water Year (WY) type as the predicted inflow to Lake Oroville in thousand acre-feet (TAF): Wet WY is greater than or equal to 5,679 TAF; Normal WY is less than 5,679 TAF, but greater than or equal to 3,228 TAF; Dry WY is less than 3,228 TAF, but greater than or equal to 2,505 TAF; and Critically Dry WY is less than 2,505 TAF.

[6] Commission staff generated the current list of federally listed T&E species using FWS's Information for Planning and Conservation (IPaC) system and filed it on January 11, 2021. *See* https://ecos.fws.gov/ipac/.

[7] FWS reviewed and updated the critical habitat for the California red-legged frog in 2010. None of the revised critical habitat units for this species occur within the Upper North Fork Feather River Project vicinity. *See* 75 Fed. Reg. 12,816-12,959 (2010).

[8] PG&E maintains a GIS database to map and track occurrences of species status at the Upper North Fork Feather River Project that is used to evaluate plans for management, siting new recreation facilities, and considering the potential effects of other ground-disturbing and/or habitat-altering activities.

information on any occurrences of these T&E species that the agencies may have documented at the Upper North Fork Feather River Project since your relicensing surveys were conducted. Based on the review and agency consultation, please provide an updated list of T&E species known to occur within, or adjacent to, the project boundary. Your response should include descriptions and a map of occurrences of any federally listed species, or their suitable habitats, within the Upper North Fork Feather River Project boundary, or that could be affected by the operation and maintenance of the project, or recreation related to the project. If available, please file the GIS data (e.g., species occurrence coordinates, and population and/or suitable habitat polygons) that were collected to prepare the map.

13. As discussed in the final EIS, the Forest Service filed 4(e) conditions regarding special status species that include provisions to: (a) annually update the list and surveys of T&E species that might occur on Forest Service land and be affected by the project; (b) implement protection measures to address any project-related effects to T&E species that may be identified on Forest Service land; and (c) evaluate and address effects to T&E species that may occur as a result of the construction of any new project features on Forest Service land during a new license term.[9] In order for us to prepare a supplemental biological assessment for newly listed T&E species, and as part of your response to AIR #7 above, please describe any measures, along with their costs, that PG&E has implemented for T&E species or their habitats at the Upper North Fork Feather River Project since the issuance of the final EIS.

14. In section E3.3.1, *General Upland Vegetation*, of the license application, you state that "[d]etailed vegetation cover type maps of the entire project have been prepared on CD and are available from the Licensee on request." Based on our review of the record, we are unable to determine if the vegetation cover type maps were provided via CD and/or filed on the Commission's e-library. To facilitate our review of potential project-related effects on the current list of federally listed T&E species and their habitats, if available, please file the GIS data that was used to create your vegetation cover type maps of the Upper North Fork Feather River Project area. If more recent vegetation cover type data is also available, please file it with the original cover type data. Please file this data to the project docket on the Commission's e-library (i.e., instead of via CD).

15. Wildfires have occurred in the project area and could have significantly affected plants and wildlife, including the aforementioned T&E species and their habitats. The "Chips" fire occurred from July 27, 2012 through August 30, 2012, burning about 75,431

[9] Forest Service 4(e) Conditions 44 and 45 were filed November 4, 2004, and amended on August 30, 2006.

acres in and around the portion of the project area south of Lake Almanor.[10] To facilitate our review of the existing environment and associated effects of project operation and maintenance, as well as project-related recreation on the current list of federally listed T&E species and their habitats at the project, please confirm whether or not additional wildfires occurred in the project area in 2012, and/or other years since you conducted surveys to support the development of your license application. If fires have occurred within or adjacent to the project boundary during that time frame, please provide a detailed description of any changes and/or effects to T&E species and their habitats. In addition, if available, please include the following information: (a) name(s) of the fire(s); (b) the dates on which they were detected and contained; (c) the estimated extent of the areas burned; (d) a description of the severity of the fire(s) within the project boundary; and (e) the extent to which T&E species and their habitats at the Upper North Fork Feather River Project have recovered from the wildfire(s), if applicable.

***Recreation and Land Use***

16. Both the license application and the 2004 Settlement Agreement for the Upper North Fork Feather River Project contain descriptions of existing and proposed recreation facilities at, or near, the Upper North Fork Feather River Project. To ensure that the licensing record for the project contains a current and accurate description of these facilities, please provide an updated description of all project recreation sites at each development.

For each project recreation site, please provide the following information in tabular format:

(a) the site's official name and any alternative name used for the site;
(b) the development where the site is located;
(c) whether the site is existing, proposed, or closed;
(d) a list of the existing amenities at each site (e.g., boat launch, parking area, trail, etc.), including a basic description of each amenity, such as the approximate length of any trail and/or portage, number of parking spaces for a parking area, and/or type of boat launch, etc.;
(e) the owner and operating/managing entity for the site, or individual amenities within the site;
(f) the site locations relative to the project boundary (e.g., whether it is located entirely within, or partially outside, the project boundary);

[10] *See* Data Basin Datasets, California Fire Perimeters (1989-2019); data uploaded by Conservation Biology Institute. Available at https://databasin.org/datasets/bf8db57ee6e0420c8ecce3c6395aceeb. Accessed on October 28, 2020.

(g) the size of the site, in acres, including a breakdown of the acreage within and outside the project boundary; and
(h) a list of recreation enhancements (e.g., bank fishing, parking, boat launch improvements, etc.) proposed under a new license.

If significant changes (i.e. closure of amenities, construction of new amenities) have been made at a project recreation site since the issuance of the final EIS, please describe those changes and identify the associated development. Finally, provide maps depicting the location of each existing and proposed project recreation site at each development, relative to the project boundary.

***Project Boundary***

17. There have been multiple adjustments[11] made to the project boundary since the issuance of the final EIS for the project, some involving U.S. Forest Service lands. Therefore, please update: (1) the total acres of land currently enclosed within the project boundary, and that would be enclosed by the proposed project boundary for the Upper North Fork Feather River Project, including all proposed recreation development; (2) the acres of land currently enclosed within the project boundary, and that would be enclosed by the proposed project boundary, for each ownership category, including PG&E-owned lands; federal, state, and local lands; and other private lands; and (3) a breakdown of the amount of federal land that would be within the proposed project's transmission line corridors compared to the total federal land within the proposed project boundary.

***Coastal Zone Management Act Certification***

18. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA), the Commission cannot issue a license for a project within or affecting a state's coastal zone, unless the state CZMA agency concurs with the license applicant's certification of consistency with the state's CZMA program, or the agency's concurrence is conclusively presumed by its failure to act within 6 months of its receipt of the applicant's certification. To demonstrate compliance with the CZMA, please provide documentation of the following:

(a) The date PG&E sent its request for consistency certification to the California Coastal Commission, together with a copy of the consistency certification;
(b) Documentation of the date the California Coastal Commission received the certification, any action taken by the state, and the date of that action; and
(c) Copies of any correspondence between PG&E and the California Coastal Commission regarding the CZMA consistency certification.

[11] *See*, *e.g.*, 172 FERC ¶ 62,108; 167 FERC ¶ 62,064; and 160 FERC ¶ 62,115.