

## **COMMENTS**

Draft License Application  
DeSabla – Centerville Project (FERC No. 803)  
Docket No. P-803-068  
Applicant: Pacific Gas & Electric Co.

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[contact information with signatures]

September 4, 2007

Ms. Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission

Dear Ms. Bose:

On behalf of the California Sportfishing Protection Alliance, Friends of Butte Creek and Friends of the River, we offer for the record the following comments on licensee's Draft License Application (May 14, 2007) in the Integrated Licensing Process for the DeSabla – Centerville Project (FERC # 803).

### **General Comments and Lack of Completion**

The Draft License Application (DLA) is a mass of placeholders and unanswered questions concerning the key resource issues in this relicensing.

Notably lacking from the DLA are:

- Temperature model runs to evaluate possible benefits and negatives that might be caused by operational changes. In fact, we do not as yet have a temperature model that has buy-in from relicensing participants other than from the licensee and, possibly, its consultants.
- IFIM results for the project reaches.

- Completed fish population studies upstream and downstream of the main project diversions.
- Economic analysis of the project.
- A study elaborating options for the reduction or elimination of thermal loading at DeSabla Forebay. PG&E has informed relicensing participants that this study is underway, but it is not listed in the DLA.
- The 2006 Pre-Spawn Mortality Report for Spring-run salmon.

This is an incomplete list. It goes only to the three issues that the licensee identifies on page ES-1 as the “key drivers” in relicensing this project: provision of cool water to spring-run Chinook, the aged condition of Centerville Powerhouse, and the marginality of project economics.

In the absence of these completed studies and analyses, it is not possible to respond to the DLA as a whole, other than to say that it is incomplete.

### **Temperature modeling**

Licensee emphasizes, on page ES-2, the second page of the DLA, that the Spring-run salmon in Butte Creek have been, in recent years, “averaging 70 percent of the total population of Central Valley spring-run Chinook salmon.”

On of our primary interests in the relicensing of the DeSabla – Centerville Hydroelectric Project is the management of the water temperature and flow in the bypass reach of Butte Creek downstream of Lower Centerville Diversion Dam, where these salmon hold and spawn, (as do ESA listed steelhead, which are no less central to our interest).

On the second page of the DLA, the licensee also states:

“Study results from the water temperature and Project operations models that were developed as part of the relicensing studies will provide more information to assist Licensee in determining the importance of Centerville Powerhouse to the recovery effort [of Spring-run salmon].”

We interpret this to mean the following:

Before the licensee can address the future of Centerville Powerhouse, and possibly the entire Centerville Development, licensee needs to know with certainty whether operating Centerville Powerhouse in the summer months provides a greater benefit to Spring-run salmon than would either de-commissioning the Development or operating it only on a much more limited basis, such as only during winter and spring, and perhaps in autumn periods when there is spill. Licensee needs the greatest possible clarity on this issue before it evaluates its options in addressing the obsolescence of Centerville Powerhouse.

This clarity is in the critical path in front of the economic evaluation of options for this project.

The creation of and use of an accurate, reliable and thoroughly versatile water temperature model that addresses that portion of the project which directly affects water temperatures in the Lower Centerville bypass reach is therefore essential to all the participants in this relicensing. This model must have buy-in from all participants. It must be sufficiently accurate to make potential life and death decisions for 70 percent of the total population of Central Valley Spring-run Chinook salmon, as well as for ESA-listed threatened steelhead. While we do not have the independent technical expertise to specify the degree of accuracy required, we do understand enough that we have comfort with such a model if the agency modelers in this process buy in to it.

This relicensing cannot move forward until a temperature model for its critical elements is approved and put to use.

It is essential that this model be able to evaluate the entire range of possibilities of the management of the Centerville bypass reach, including the possibility of completely bypassing Lower Centerville Canal during summer, thus leaving all project water in Butte Creek downstream of Lower Centerville Diversion. The model must also be capable of accurately evaluating the water temperature effects of every option between total bypass of Lower Centerville Canal and current minimum bypass flows. It must be able to evaluate an increase of up to 20 cfs in the minimum instream flow at Hendricks Diversion. It must be able to model DeSabra Forebay under existing conditions and with no thermal loading as water passes through or around that site.

As CSPA stated in its March 15 Comments on the Supplemental Initial Study Report, "CSPA believes that, while consideration of project economics is part of any relicensing process, the a priori exclusion of scientific information gathering or analysis, based on the grounds that the consequences might be outside the licensee's comfort zone, is not scientifically justifiable. Any relicensing participant should be able to request any model run or series of model runs that he or she can describe and defend in plain language as being necessary and germane for informing the record. (CSPA SISR comments, p.5)." Since we are talking, according to the licensee, about 70% of the Central Valley Spring-run, we think it is reasonable to consider balancing the value of potential improvements to Spring-run (and steelhead) habitat against what has over the past several years averaged between 2 and 4 megawatts of summertime and autumn power generation.

In other matters related to the general topic of water temperature monitoring and modeling, we note that temperature monitoring results for 2007 for the West Branch Feather River (WBFR) downstream of Hendricks Diversion need to be reported in the FLA, in addition to discussion of the outstanding temperature models for upper Butte Creek and for WBFR below Hendricks Diversion.

## **Economics:**

We will be asking for an economic appraisal of the costs to the licensee of 1) no generation at Centerville in summer or fall, and 2) de-commissioning Centerville Powerhouse. This is dependent on the results of temperature modeling, but we provide this as a heads up.

## **Final License Application format**

Relicensing participants agreed that the DLA did not need to re-print and include many of the maps and tables provided in the SISR. The Final License Application needs to be a stand-alone document.

Moreover, data in the FLA needs to be presented in a readily usable form. For instance, fish population numbers upstream and downstream of each respective project diversion need to be presented on the same page, in adjacent columns for easy comparison. Raw data for fish and macroinvertebrate populations needs to be presented in Excel format to facilitate ease of use by relicensing participants.

## **Entrainment and Fish Passage**

In CSPA's May 4, 2007 comments on Study 6.3.3-6 (Entrainment), CSPA objected to licensee's use, on March 8, 2007, of "historic" fish population data from 1977 and 1986 to characterize fish populations in the West Branch Feather River in particular, and "to extrapolate from this 'other existing fish population information' to determine the impact of entrainment on the overall fish population in the West Branch Feather River (CSPA Comments, May 4, 2007, P. 2). CSPA also stated that it did not see the point of "compar[ing] the numbers of rainbow trout and brown trout entrained into project canals. We were still trying to figure out how many trout were entrained and how that compared with the number of trout that were not entrained."

Licensee, in its June 4, 2007 response to CSPA's May 4 comments, answered: "The Licensee does not dispute that fish are entrained in the project canals. However, such entrainment is not necessarily lethal, trout can exit the canal and return to Butte Creek, and salvage operations regularly return entrained fish to the stream" (Attachment A-8 Reply Comments, CSPA-14, page 78, pdf pagination). [While CSPA's comments focused on WBFR, licensee's in its response chose to focus on Butte Creek].

In response number CSPA-17, the licensee continued, "The Licensee utilized historical data, when available, and supplemented this information with current relicensing study data. The Licensee believes that the historical data should not be discounted. In the analysis that CSPA is referring to, historical data were used to show annual variability in fish populations, whereas the 2006 dataset better show variability between sites." Yet in spite of this proclaimed and emphasized "annual variability," licensee was unable to compare numbers of fish entrained into project canals in any given year with the number of fish in the stream in that same year, other than in the relicensing study year of 2006.

There simply are no canal rescue numbers for the years 1977 and 1986, the years of the “historic” fish population studies, because there were no rescues in those years.

In response CSPA-18, licensee stated: ‘The Licensee included separate population estimates for trout species because Licensee observed an interesting pattern where brown trout were observed in the canals at a much higher proportion than rainbow trout. There may be several reasons for this, but given the different interests of the relicensing participants, Licensee believed it to be informative to separate the trout species in the analysis.’

Before moving on to the DLA, let us summarize the licensee’s position as of June 4, 2007:

1. Fish are entrained into project canals, but this is not always lethal and many are later rescued (CSPA-14)
2. Historic fish population data within project streams shows variability from year to year, but licensee does not compare numbers of fish taken from canals in the same years as when the streams were sampled (CSPA-17).
3. Separating brown trout and rainbow trout rescued from canals is “interesting” and “informative” (CSPA-18).

In section 6.3.2.4 of the DLA, Fish Entrainment in Project Facilities Affecting National Forest and State of California Resources (Study 6.3.3-6), the licensee takes the entire line of argument that CSPA disputed in its May 4, 2007 comments to a whole different level.

The differentiation of brown trout and rainbow trout rescued from project canals is not simply “interesting” and “informative” in this venue. It has morphed into the cornerstone of an argument for **the complete re-definition of the concept of entrainment**. “Because fish can freely move back and forth between each canal and the river at the mainstem diversion points, fish are not entrained in that their movement is free. Rather, entrance into the canal is more likely the result of voluntary behavioral responses (e.g. density dependence) at the points of entry into the canals. However, the one-way passage through all of the powerhouses is entrainment, because fish are subject to intake currents and potential mortality by turbines” (page E6.3-153).

The licensee contends that brown trout migrate more than rainbows, that there are proportionally more browns than rainbows in the canals than is the case in the WBFR or Butte Creek, that this supports the theory that entrance into the canals is voluntary, and that ultimately this makes it okay.

While movement by fish in any given stream may or may not be voluntary, the fact that, except at spill, 100% of the flow of the WBFR passes through the headworks at Hendricks Diversion and only 5-20% is diverted back into the river, is not up to the fish. The fish entering Butte Canal or Lower Centerville Canal has no more influence on the existence or placement of those canals than does a fish entering the Hendricks Canal, though, at certain flows, the percentages of water in the respective canals and bypass reaches varies from those at Hendricks. The contention by the licensee on page E6.3-155

that “fish movement into a diversion canal may be the result of ‘typical’ migratory behavior,” ignores the fact that the presence of the canal itself is not “typical.” It is also, happily, becoming less “typical” that these particular canals do not have fish screens on them.

We’re sorry, but we hold it to be a self-evident truth that fish belong in rivers or streams, as opposed to the canals associated with hydroelectric projects (and almost all other canal uses, for that matter). Fish in a canal are inherently a negative impact of that water development. The degree of significance of that impact is arguably open to discussion, and we have tried mightily to move a discussion of that significance forward in this process, as have others. We are forced instead to address the contention that this (non)entrainment might in fact represent an enhancement created by the project.

Equally outrageous is the fact that this line of argument’s contention of free movement by trout in and out of project canals is flatly contradicted by one of the other relicensing studies. Even if one were to accept – and we don’t – that it would mean something if fish could exit the canals and re-enter the respective streams if they so chose, the Assessment of Fish Screens PowerPoint, presented to relicensing participants on June 28, 2006 (as noted at the bottom of page E6.3-155 in the DLA), frankly and explicitly says that the present configuration of all three major project diversions precludes this:

Slide 15, “Butte Creek Diversion Dam Engineering and Construction Challenges,” seventh bullet states: “Tunnel and headgate velocities are too high for fish passage.” Slide 37, “Lower Centerville Diversion Dam Proposed Screen & Ladder Used,” states, in the fourth bullet: “The headworks and a portion of the canal would be modified to reduce flow velocities in the fish ladder/screen approach channel.” Slide 24, Hendricks Diversion Dam Engineering & Construction Challenges,” states in the third bullet: “Headgate velocities are too high for fish passage,” and in the fifth bullet: “Will require modifications of the gates and portions of the canal to pass fish.”

Just so that they’re not forgotten, we call attention as well to the fact that there are also tunnels on the Hendricks and Lower Centerville Canals, and that the Hendricks tunnel under Stirling City is over a mile long and begins just a mile downstream of the Diversion.

Licensee started on a statistical fishing expedition in March, and laced its discussion with scientific-looking and -sounding terms and references. The further down this road the licensee traveled, the more the argument ran away with itself and took on a life of its own. But the more the licensee embellished its defense of its excursion, the more it tripped over its own statements.

This rhetoric for its own sake, which seeks only to win, sours the relicensing process far more than straightforward disagreements, for example about benefits and costs. It reduces credibility. It embarrasses those working for the licensee who are straight shooters and solution-oriented.

Unfortunately, regarding fish passage, at least, rhetorical gain-seeking is the rule, not the exception:

Will installation of screens and ladders at any or all of the three main project diversions (Butte Head Dam, Hendricks Diversion Dam, Lower Centerville Diversion Dam) have adverse temperature impacts on Spring-run salmon in Butte Creek? This is one of the questions the creation of a temperature model for the project needs to address. However, the model runs to demonstrate such effect, or lack thereof, have not been performed. Yet, totally lacking specificity except for mentioning possible fish ladders at Round Valley or Philbrook Reservoirs, which no relicensing participant to our knowledge has advocated, the licensee generalizes, in the second paragraph on page 6.3-156, that passage facilities would result in warmer water in lower Butte Creek, thus degrading conditions for Spring-run salmon.

Until specific proposals are made and corresponding temperature model runs are performed, the licensee's contention of such adverse impacts is speculative and unsubstantiated.

At the bottom of the same page, the licensee again selects information that fits its desired outcome, to the exclusion of other conflicting opinions:

Licensee cites a feasibility study for providing fish passage at Lower Centerville Diversion that it performed itself in 1983. Imagine, 24 years ago, the licensee found that the costs outweighed the benefits, just as it finds today.

In the same paragraph, the licensee cites that portion of the Holtgrieve and Holtgrieve report published in 1995, insofar as the authors discuss lack of historical information regarding salmon upstream of Lower Centerville Diversion Dam, and also where they discuss how many potential fish barriers they discovered. Of course, the licensee omits the central conclusion of the report, as stated in the Executive Summary on the report's first page:

It is concluded by this survey team that significant numbers of spring run salmon could negotiate the upper portion of Butte Creek in periods of high water particularly without the loss of flows by diversions. In periods of average and low water, significant migration may be hindered by barriers unless some of those barriers could be modified by human action. With fairly minor barrier modification (blasting large boulders) the fish could migrate all the way to Butte Meadows in average flow years. Opening four miles of deep holding pools and three miles of spawning size gravel beds would create habitat for at least 3,000 spawning pairs.

Licensee next cites the 1998 Kier report, in defense of the notion that there are many fish barriers, and that one is 35 feet high and close to the Centerville Diversion. Again, licensee omits the fact that Kier was (and to this day remains) very positive about the

prospects of increasing anadromous fish habitat by providing fish passage upstream of the Lower Centerville Diversion.

We fully recognize that just because the Holtgrievies and Kier thought that passage was feasible and highly promising does not in itself make it so. What this goes to, however, is a clear and consistent bias on the part of the licensee.

The licensee's arguments regarding fish passage are all over the map. They are self-contradictory. Their only coherence is the overwhelming and overriding goal: to avoid the expense, not only of fish passage facilities, but of having to perform further studies which might further inform the discussion of such facilities.

The licensee would be better served by getting serious about evaluating the biological impacts of fish entrainment and lack of fish passage at the three main project diversions. Part of this evaluation needs to take into account, not only licensee's statement, quoted above, that in recent years the project area has contained 70% of the existing population of Central Valley Spring-run Chinook salmon, but that the existing population is only around 2% of its historic size. The evaluation needs to consider this added responsibility.

## **Conclusion**

We look forward to seeing completed studies, analyses and reports for the Project 803 relicensing process. We also look forward to working with all relicensing parties to evaluate output from a temperature model in which we all have the needed confidence to make critical management decisions for the critical fisheries resources in the project area.

Respectfully submitted,

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