



February 18, 2012

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

Via Electronic Submittal

RE: COMMENTS ON PRE-APPLICATION DOCUMENT and STUDY REQUESTS FOR DAGUERRE POINT DAM HYDROPOWER PROJECT (P-14432)

Dear Secretary Bose:

The Foothills Water Network submits this letter in response to Archon Energy 1 Inc.'s Pre-Application Document (PAD) for the Daguerre Point Dam Hydropower Project filed on July 9, 2012. This Proposed Project was subsequently assigned P-14432 by FERC and we refer to it as the "Proposed Project" hereafter. Our comments are also informed by information shared by Archon Energy representatives at the public meeting in Marysville on October 22, 2012 and during a site tour on November 6th. We acknowledge that supplemental information was filed with FERC in the last three weeks, but that information was not shared directly with FWN representatives and we did not have time to include that new information in our review and preparation of the following comments.

The following comments are categorized into two sections:

- A. General Comments
- B. Required Additional Information and Study Requests

Foothills Water Network

This response was jointly developed and has been signed by non-governmental organizations and by individuals participating in the licensing process for the Proposed Project. The Foothills Water Network represents a broad group of non-governmental organizations and water resource stakeholders in the Yuba, Bear, and American River watersheds. The overall goal of the Foothills Water Network is to provide a forum that increases the effectiveness of non-profit conservation organizations to achieve river and watershed restoration and protection benefits for the Yuba, Bear, and American Rivers. This includes negotiations at the county, state, and federal levels, with an immediate focus on the FERC processes.

*Comments of the Foothills Water Network on
Archon Energy 1 Inc.'s Pre-Application Document*

Foothills Water Network Signatories to these Comments:

- Sierra Club - Mother Lode Chapter, Allan Eberhart
- South Yuba River Citizen's League, Gary Reedy
- American Rivers, Steve Rothert
- American Whitewater, Dave Steindorf
- California Sportfishing Protection Alliance, Chris Shutes
- Trout Unlimited, Chandra Ferrari
- Northern California Federation of Fly Fishers, Frank Rinella
- Gold Country Fly Fishers, Frank Rinella

A. GENERAL COMMENTS

The lower Yuba River, including the Daguerre Point Dam area, is a subject to several intensive regulatory, collaborative or legal processes concerning fisheries, river flow, and aquatic habitat. These include the Yuba Accord, relicensing of the Yuba River Development Project (FERC # 2246), the Yuba Salmon Forum, and the Daguerre Point Dam Fish Passage Improvement Project. The Network is concerned that the Proposed Project will conflict with or complicate any of these ongoing processes, negatively change their outcome, and thus negatively impact potential future conditions. We note that even by requiring time for review of material filed on FERC P-12717, professionals participating in these processes, including resource agency staff, are compromised in their ability to fully engage in these other processes. Despite the suggestions by Archon Energy representatives at the public meeting, the Network does not see how the Proposed Project will lead to improved opportunities or outcomes for any of the existing and important processes mentioned above.

In its PAD, the Applicant proposes mitigation or enhancement measures for the following resource areas: geology and soils, water resources, fish and aquatic resources, wildlife and botanical resources, wetlands and riparian, threatened and endangered species, recreation, aesthetic resources, and cultural resources. In every case, the Network finds the proposed measures to be inadequate to address potential impacts of the Proposed Project. In all subjects, there is insufficient information to assess the potential impacts of the Proposed Project at this time, either due to a lack of specifics on proposed facilities and construction, or a lack of understanding of those issues as may pertain to the Proposed Project.

The PAD contains many statements and omits certain pertinent facts, altogether suggesting that the Applicant is not prepared to fully address issues and potential Proposed Project effects. For example, the PAD fails to acknowledge (despite including sections on Fish and Aquatic Resources and Threatened and Endangered Species) that the lower Yuba River is designated critical habitat for three anadromous fish species listed as threatened under the Endangered Species Act: Central Valley spring-run Chinook, Central Valley steelhead trout, and green sturgeon. Similarly, the PAD omits any reference to the fact that Daguerre Point Dam is a public

hazard that has killed many recreationists by drowning, or that the lower Yuba River reach containing Daguerre dam is a popular boating route and that boaters currently portage the dam in the very area of proposed facilities.

For the purposes of providing an adequate Draft License Application, complete with necessary studies and proposed mitigation and enhancement measures, the Applicant should provide a more detailed Proposed Project description and thoroughly address all the following issues:

- Safe downstream passage for listed anadromous salmonids, including adult steelhead and green sturgeon.
- Impacts or changes to upstream fish passage for all species present.
- Facilities' effects on predation rates on juvenile salmon and steelhead.
- Transport of sediment and woody material.
- Dam safety effects from construction.
- Water quality impacts from construction.
- Effects of power lines on raptors.
- Invasive species (noxious weeds during construction)
- Changes in recreational experiences of boaters and fishermen.
- Aesthetic resources.
- Cultural resources.

In addition, the Applicant must demonstrate coordination with the Army Corps of Engineers (Corps) as to not interfere with implementation of the Corp's measures, terms and conditions as specified in the February, 2012 Biological Opinion by National Marine Fisheries Service (NMFS).

Section 4.2 of the Applicant's PAD lists only one study as necessary to gather additional information required to adequately address identified issues. The proposed Desktop Hydraulic Modeling and Sediment Transport Study is not presented with any methods or specific objectives so it is impossible to assess the adequacy of that study to gather information for any of the issues listed above. The Network has included in a study request below what we deem necessary from such a study. Several other studies are needed.

Information in the PAD is inadequate to assess the Proposed Project and associated issues due to a lack of detail for proposed facilities. Archon Energy representatives brought to the public meeting on October 22 diagrams depicting facilities different than the diagrams presented in the PAD, but with no greater detail. Critical unanswered questions about the facility include:

- What is the width, length, slope and capacity of the bypass channel?
- What is the mechanism for turning on and off the hydropower generation?
- How will water flow during periods of outage?
- How will the facility alter inflow to water diversion structures in the area
- What upstream fish passage facility will remain or be constructed on the south side of Daguerre dam?

The PAD also includes an inaccurate baseline based on the obsolete SWRCB hearings and flow results. The Yuba Accord has superseded the SWRCB hearings. In the foreseeable future, the Bay-Delta Water Quality Control Plan Phase II hearings may require different flows from YCWA again. The Applicant should take into account the existing baseline flows and consider the foreseeable future flows required by the Bay-Delta Water Quality Control Plan under its NEPA Analysis.

B. REQUIRED ADDITIONAL INFORMATION AND STUDY REQUESTS

The Network presents the following requests for information or studies as necessary steps toward developing a complete license application with adequate mitigation and enhancement measures. Our presentation of the requests complies with the TLP criteria at 18 CFR 4.38 (b)(5) for study requests. We look to the Applicant to issue study plans for collaborative review. In addition, the Network supports the similar, and in some cases more detailed, study requests by the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife and the State Water Resources Control Board.

1. Effects of facilities on downstream migrating fish

The Proposed Project would utilize Archimedes crew turbines for which extremely limited studies are available to evaluate effects of downstream migrating fish. Despite the Applicant's claims that the turbines are fish friendly, information in the PAD is inadequate to assess the Proposed Project effects of this kind of facility in the lower Yuba River.

The PAD references some fish studies, but these are for much smaller turbines and do not include fish greater than 39 cm in length. Larger fish, such as steelhead kelts (adult steelhead returning downstream) and green sturgeon may not be able to pass as easily or as unscathed through the turbines as the cited studies suggest for smaller fish. Steelhead kelts range in size up to 70 cm and are an important component of the Threatened population. Green sturgeon range in size up to 200 cm. Due to the requirements of the Corps to plan and implement a Daguerre Point Dam Fish Passage Program (NMFS 2012), it is reasonable and foreseeable that green sturgeon will pass at Daguerre Point Dam. Not cited in the PAD was a study of impact to juvenile Chinook salmon from such turbines being employed as diversion "lifts" in the Sacramento River (McNabb 2003). The study found mortality rates of 2-6%. More information is needed to understand what the Proposed Project effects would be on native fish of concern, and develop adequate mitigation measures.

We propose the Applicant conduct a study of fish passage through the proposed Archimedes screw turbines. The Applicant needs to be able to prove that the project will not increase take of Endangered Species spring-run Chinook. The Applicant needs to prove that the proposed facility and Archimedes screw turbines will not harm, injure, or kill ESA species. Harm includes disorienting the fish so that they are more susceptible to predation or not as capable of finding food. The Applicant will need to prove that an ESA species' passage through the proposed turbines does not pose any additional risk to the fish. Moreover, the Applicant must clearly show any potential effects to entrainment at proximal or associated structures.

Study Objectives:

- Assess mortality and sub-lethal effects of the Proposed Project (including screens and turbines) on salmon and steelhead smolts, steelhead kelts and adult green sturgeon.
- Assess any potential risk of harm, injury, or death including physical harm, confusion and disorientation that could make them more susceptible to predation for spring-run Chinook, fall-run Chinook, fall run Chinook, steelhead, and green sturgeon.
- Assess how variability in turbine design, including gaps between screw threads and chamber wall, effect passage for small to large fish through the turbines.
- Assess the feasibility and effectiveness of various measures to protect the fish from the edge of the screw including but not limited to the proposal to build a bumper on the screw threads. This assessment should include an investigation of the effects of scaling up the Archimedes turbines and how and if the same protective measures that worked on smaller screw turbines would be as effective or feasible on the proposed larger version.

Unless additional studies of relevance can be found, the methods necessary to complete this study are expected to require trials with larger fish than used in the studies cited in the PAD.

2. Effects of project on fish behavior and upstream fish migration

Inadequate upstream fish passage has been identified as a problem at Daguerre Point Dam for many years and the Army Corps of Engineers has been required to implement a Fish Passage Improvement Program since 2002. In its recent Biological Opinion, the National Marine Fisheries Service (2012) requires implementation of such measures by 2017. A large part of the problem at Daguerre Point Dam is the lack of attraction flow in the current fish ladders and the distraction of flow over the impassable dam face. The Proposed Project would involve the re-routing of the majority of stream flow through impassable turbine channels many times during the year. This additional re-routing of the stream flow could exacerbate the existing problems for fish behavior and upstream migration.

The PAD does not address how the Proposed Project would affect current fish behavior and passage at Daguerre Point Dam or how it would interact with the Fish Passage Improvement Program of the Corps. Section 3.3.6 of the PAD states that “a state of the art low flow baffled fish pass *might* be installed adjacent to the turbines” [italics added]. Given that NMFS and the court have required fish passage at Daguerre Point Dam, the Proposed Project *must* be

constructed with a new fish passage facility that ensures adequate passage for all native fish. The PAD for the Proposed Project is inadequate in its ambiguity on fish passage facilities. In addition, it remains unclear how the Proposed Project would alter fish behavior near the dam and subsequent effects on migration and fish passage. Species of interest include salmon, steelhead, sturgeon, shad, striped bass and pikeminnow.

Study Objectives:

- Assess the attraction flow of the powerhouse outlet compared to the dam face and fish passage facilities for all species of interest.
- Assess the risk of creating false attraction flows from proposed turbines to ESA species spring-run Chinook and steelhead.
- Investigate and describe criteria for suitable fish passage facilities.
- Assess behavioral impacts, and risks to species migration, holding and distribution, for Proposed Project facilities.
- Assess the Proposed Project's effects on passage of native as compared to non-native species such as striped bass and shad.

Methods necessary to complete this study could involve a thorough review of data available on fish behavior and passage at Daguerre Point Dam and hydropower facilities on rivers of similar characteristics and fish species.

3. Effects on fish predation

Artificially increased rates of predation on juvenile salmonids at Daguerre Point Dam is an issue of concern in the earliest fisheries assessments (CDFG 1991) and remains the responsibility of the Army Corps to study, evaluate and propose mitigation measures (NMFS 2012). The Daguerre Point Dam Plunge Pool is habitat for striped bass and large pikeminnow. By changing the configuration of flow and habitat structure, the Proposed Project could lessen or exacerbate predation on juvenile salmonids. The Applicant must provide information to support the development of any warranted Proposed Project mitigations with regard to predation. In addition, the Applicant must show a level of coordination with the Corps that demonstrates that the Project, if licensed, would not conflict with the obligations of the Corps to study and fully mitigate excessive predation at Daguerre Point Dam.

Study Objectives:

- Assess how the Proposed Project will affect predation of ESA-listed fisheries.
- Assess how the Proposed Project's effects on passage for striped bass and other predator fish will affect Chinook upstream of Daguerre Point Dam.

Methods necessary to complete this study would involve fisheries field work at Daguerre Point Dam because insufficient baseline data currently exists to assess the actual timing and magnitude of predation, as well as the role of various predator species.

4. Effects on transport of water, sediment and wood (hydrodynamics)

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The Proposed Project would change the hydrodynamics around Daguerre Point Dam, thus altering water surface elevations, water velocities and the transport and deposition of sediment and wood. Such alteration of hydrodynamics could be of substantial consequence to several resource conditions, including fish passage facilities, diversions and downstream habitat conditions. Some of the relevant potential consequences of the Proposed Project to these processes and resources could include:

- Sediment deposition at the dam and diversion structures.
- Disruption in the delivery of wood to downstream habitats.
- Rates of flow into existing fish passage facilities.
- Rates of flow into diversion structures (Brophy, Cordua-Hallwood and Browns Valley).
- Bypass flow rates or entrainment at diversion structures.

The Network requests the Applicant conduct a comprehensive Hydrodynamic Modeling Study that can provide information necessary to develop adequate project mitigations and enhancements.

Study Objectives:

- Identify the change in hydrodynamics at Daguerre Point Dam and associated facilities resulting from the Proposed Project.
- Assess effects of the Proposed Project on fish screening at South Yuba - Brophy Diversion.
- Assess Proposed Project effects on sedimentation as may warrant maintenance activities for fish passage and diversion structures.
- Identify the change in channel morphology and long-term sediment movement resulting from the Proposed Project.
- Identify how the change in sediment could affect the proposed canal infrastructure and its intake.
- Identify changes in channel migration particularly immediately upstream of the Proposed Project.
- Identify changes to the downstream transport of woody material.
- Identify how the Applicant could ensure the Proposed Project would not preclude the option to remove Daguerre Point Dam that is required for evaluation by the Army Corps in the Biological Opinion.
- Assess the Proposed Project's effects on sediment changes and related interaction with fisheries and habitat.

Study Methodology

Use the 2-D modeling of the Lower Yuba River Management Team.

Input new alternative Proposed Project facilities into the model. Model with Daguerre Dam and without the dam. Based on the 2-D modeling, build a HEC-RAS model and demonstrate how sediment and flow patterns would change or not change. Use the HEC-RAS model to identify potential changes, effects, and risk to fisheries.

Study Results will include: flow patterns, sediment, riparian vegetation and woody debris, thalweg, channel morphology, river bars and floodplains.

Effects of Proposed Project on Water Supply

The Proposed Project may affect water supply diversions downstream of Daguerre Point Dam. The Hydrodynamics Study request will inform whether the Proposed Project would affect the sediment or water movement around the diversion intakes.

This study would inform the development of an Erosion and Sedimentation Control Plan as mentioned in the PAD.

5. Geologic stability and water quality effects

The Network requests that the Applicant conduct a Geologic Study to assess risks to the safety and stability of the Daguerre Point Dam following the Proposed Project construction. The study should also investigate the potential impacts to water quality resulting from construction.

Study Objectives:

- Evaluate the stability of the existing Daguerre Point dam and its anchor into bedrock.
- Evaluate the risks to stability of the dam following Proposed Project construction activities.
- Evaluate potential impacts to water quality, including mercury mobilization, resulting from Proposed Project construction activities and new surfaces for streambank erosion.

Methods to complete this study involve a specific design for Proposed Project construction, review of Daguerre Point Dam safety specifications, and geological and soils analysis of construction area.

6. Desktop study of recreation and land use

The PAD fails to describe the recreational activities at Daguerre Point Dam. In order to evaluate and develop adequate project mitigations for recreation, the Applicant must present information on the current state of recreational activities.

Study Objectives:

- Determine the number of recreational users by type and season using facilities or resources at, accessing the river through, or portaging around Daguerre Point Dam.
- Evaluate impact of the Proposed Project on existing recreation use.
- Assess of the distance and elevation gain of the proposed portage around the Proposed Project and a comparison to the existing portage.

Methods to complete this study would involve review of records by the Army Corps and managers of similar facilities, and field surveys.

7. Vernal pool survey

The Applicant proposes investigating a few different options for power delivery. In one of the options, the Applicant proposes to build power lines through a vernal pool complex. The vernal pool complex proposed for the power lines is one of the very best in Yuba County and sensitive to impact. In another power delivery option, the Applicant proposes to run a transmission line across the vernal pools south of the Yuba River towards Beale Air force Base. These vernal pools are identified as critical habitat for a variety of dependent species.

Should the Applicants want to continue considering developing these transmission lines for power delivery, they should conduct a study to assess the impact of the Proposed Project on the vernal pools.

The Network supports the US Fish and Wildlife Service's request for a Vernal Pool Study.

8. Bald and Golden Eagle study

The Applicant has proposed investigation of a few different power delivery options. One of the options includes building power lines across a grassland, which pose a risk for Golden Eagles. Another power transmission option includes the development of power lines across the Lower Yuba River at the pool downstream of Daguerre Point Dam. Migratory water birds could be killed by power lines as they try to feed in the river.

The Applicant should study the impact of the Proposed Project on these birds and provide the maximum protection measures for them should a license be granted.

The Network supports the US Fish and Wildlife Service's request for a Bald and Golden Eagle Study.

Citations:

California Department of Fish and Game. 1991. Lower Yuba Fisheries Management Plan.

McNabb, C. et al. (2003). "Passage of Juvenile Chinook Salmon and Other Fish Species through Archimedes Lifts and a Hidrostal pump at Bluff, California." Transactions of the American Fisheries Society. 132, pp326-334.

NMFS. 2012. Biological Opinion on Operations and Maintenance of Daguerre Point Dam and Englebright Dam on the Lower Yuba River by the Army Corps of Engineers.

Thank you for considering these comments. If you have comments or questions, please contact Julie Leimbach, Coordinator of the Foothills Water Network julie@foothillswaternetwork.org 530-622-8497.

Respectfully,

Foothills Water Network Yuba-Bear Working Group



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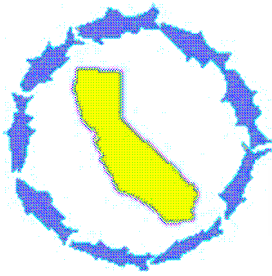
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