

November 18, 2019

Nathaniel J. Davis, Deputy Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Re: Comment on Haiwee Pumped Storage Project – FERC Project No. P-14991-000

Dear Deputy Secretary Davis,

The undersigned individuals and conservation organizations are submitting these comments concerning the Haiwee Pumped Storage Project – FERC Project No. P-14991, as described in the amendments for the preliminary permit application filed by Premium Energy Holdings on July 12, 2019 and August 22, 2019 respectively. Portions of the proposed project would be located on public lands managed to protect sensitive resources by the Inyo National Forest and the Ridgecrest Field Office of the Bureau of Land Management (BLM). Granting a preliminary permit would allow drilling for soil and rock samples and seismic surveys, activities that would be subject to a variety of land management regulations. The location of Renewable Energy projects in the Eastern Sierra must be carefully thought out and the facts presented to the public prior to the feasibility study phase.

The application includes three alternative reservoir options, two located in the Coso Range and one in the South Sierra. Once one of these alternative locations is selected it would then be connected to a proposed North Haiwee Reservoir by an underground tunnel. At 595 feet high, the proposed Haiwee Canyon Dam would be one of the tallest in California. Although McCloud and Little Cactus proposed reservoirs are smaller at 175 and 235 feet, respectively, the width of these dams creates large open reservoirs that may be prone to significant evaporation loss. The project proponent fails to identify what the consumptive use of water will be due to evaporation and leakage. It is also unclear whether the reservoirs will be sealed to prevent evaporation. This information should be required by FERC prior to the approval of the application. Premium Energy should be required to provide proof of water rights or a contract for water use at the preliminary proposal stage of the application process. All alternatives propose a lower dam/reservoir and associated facilities located on lands owned by the Los Angeles Dept. of Water and Power (LADWP).

Forest Service Alternative

The proposed Haiwee Pass reservoir (alternative 1) is located in an Inventoried Roadless Area (Polygon #1391). This Inventoried Roadless Area (IRA) is protected under the Forest Service's Roadless Area Conservation Rule – road construction and reconstruction is not allowed. The continued protection of this IRA under the Roadless Area Conservation Rule was affirmed in the Inyo National Forest Land Management Plan¹. Furthermore, the area is recommended as an addition to the South Sierra Wilderness in the 2019 Inyo National Forest Management Plan. Recommended Wilderness is subject to management as Wilderness by the INF until Congress can act.

There will also be recreational impacts to the Haiwee canyon road and trail. There is an ongoing effort to rebuild the Haiwee Pass trail, which accesses the Pacific Crest Trail and despite its condition after flooding nearly a decade ago, the trail is still in use. The Haiwee Canyon road has a number of dispersed camping sites and sees frequent use. There are also documented archeological sites in the canyon, including rock art and home sites with intact artifacts. These are irreplaceable heritage resources that are protected under federal law.

The Forest Plan also includes direction to minimize the effects of stream diversions and other flow modification and recommends in-stream flows to maintain and enhance habitat conditions for native aquatic species, and to maintain and restore riparian resources, channel integrity, and aquatic passage². For these reasons, the Haiwee Pass reservoir may be the least feasible of the three alternatives.

BLM Alternatives

The Little Cactus Flat (alternative 2), McCloud Flat (alternative 1) and North Haiwee 2 Reservoir alternatives are subject to compliance with the BLM California Desert Conservation Area Plan (CDCA Plan) (as amended 2016). The area was designated for conservation and recreation as California Desert National Conservation Land (CDNCL) and also has an Area of Critical Environmental Concern (ACEC) to protect the Mohave Ground Squirrel (*Xerospermophilus mohavensis*) (MGS), a species listed in California as threatened. The BLM states that renewable energy is not an allowable use within this ACEC:

“Renewable Energy development is not compatible with NLCS and ACEC unit values and criteria. Allowable Uses: Not an allowable use” (p.1296)

It is worth noting that both storage and generation of renewable energy fall under the category of renewable energy development. The CDCA plan as amended set a 1% disturbance cap for both the CDNCL and the MGS ACEC³. Current calculations by the BLM show the CDNCL existing disturbance at 1.11% and the MGS ACEC has an average existing disturbance of 2.84%. The project area overlaps with two different subunits of this ACEC with an average existing disturbance of 1.17%. Because the

¹ Inyo National Forest Land Management Plan, pg. 106, US Forest Service, August 2018.

² Inyo National Forest Plan pg. 13, August 2018.

³ https://www.drecp.org/finaldrecp/lupa/Appendix_B/West_Desert_and_Eastern_Slopes_Subregion_AppB.pdf

disturbance caps have already been exceeded, Premium Energy would have to commit to restoring existing disturbed land that would cover both the amount over the cap plus the disturbance caused by the project⁴.

McCloud Flat and Little Cactus Reservoirs are both located on lands the BLM identified as Lands with Wilderness Characteristics (LWC). This inventory (CDCA 131-1 Coso) was completed in 2012 and requires mitigation for any impacts to lands with wilderness characteristics. As the proposal currently stands the impact of a reservoir and associated penstocks and infrastructure would require significant mitigation that should be disclosed in the project application. The Little Cactus Reservoir alternative is located in a Joshua Tree woodland with dispersed camping and recreational use. Scholars have also found evidence of some of the earliest uses of modern bow and arrow technology in North America in the Rose Valley area.⁵ There are also several areas listed on the National Register of Historic Places within the vicinity of the project area. Although mitigation will be required for both of these two alternatives, McCloud would be a preferable upper reservoir location.

Special Species

The area not only includes important wildlife connectivity for MGS, it is habitat for the Olancho Coso Range center core population center of the MGS.⁶ North Haiwee Reservoir 2 is within known habitat for Owens Valley checkerbloom (*Sidalcea covillei*), a California Endangered Species and a rare plant listed by California Native Plant Society (CNPS) as having a rank of 1B.1 (*rare, threatened, or endangered in CA and elsewhere*) with a limited distribution of 42 occurrences along about 75 miles of the Owens River drainage according the California Natural Diversity Database⁷. These occurrences are threatened by lowering water tables. Though it is unclear if this project will lower the water table, the possibility of this should be explored in future studies of the project. Various studies show that the checkerbloom is responsive to the groundwater depth and that lower groundwater can aid in recruitment success of plants that have not been historically present. This can cause unprecedented competition, and ultimately the decline of rare species such as Owens Valley checkerbloom.

Additionally, Swainson's hawk (*Buteo swainsoni*) (state threatened) and Sanicle cymopterus (*Cymopterus ripleyi* var. *saniculoides*) (California Native Plant Society 1B.2 rare plant rank, meaning this taxon is considered critically threatened in California by CNPS) both show as "mapped" on the California Department of Fish and Wildlife California Natural Diversity Database table for the area. The 2016 Land Use Plan Amendment to the CDCA Plan also acknowledges the presence of other

⁴ DRECP Land Use Plan Amendment section II.2.1 pg 34

⁵ Yohe, Robert M., "THE INTRODUCTION OF THE BOW AND ARROW AND LITHIC RESOURCE USE AT ROSE SPRING (CA-INY-372)," *Journal of California and Great Basin Anthropology*, Vol. 20, No. 1, pp. 26-52 (1998).

⁶ Land Use Plan Amendment to the California Desert Conservation Area Plan, Bishop Resource Management Plan, and Bakersfield Management Plan, Appendix B, p. 754.

⁷ (<https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>)

threatened and sensitive species such as the desert tortoise and Nelson's bighorn sheep (*Ovis canadensis nelsoni*).⁸

The Mojave desert tortoise (*Gopherus agassizii*) is also present⁹ in the proposed project footprint, a federally threatened species, which is declining range-wide and in need of greater protection. Habitat disturbance, development, fragmentation, and blocking of genetic connectivity corridors have led to population declines and even crashes across the Mojave Desert of California and Nevada. Allison et al. (2018)¹⁰ observe that prevailing declines in the abundance of adult desert tortoises overall and in four of the five recovery units indicates the need for more aggressive implementation of recovery actions and more critical evaluation of the suite of future activities and projects in tortoise habitat that may exacerbate ongoing population declines. The Mojave desert tortoise is now included in the list of the top 50 turtle and tortoise species at greatest risk.¹⁰

Current and Past Projects

Premium Energy should be required to provide proof of water rights or a contract for water use at the preliminary proposal stage of the application process. All alternatives propose a lower dam/reservoir and associated facilities located on lands owned by the Los Angeles Dept. of Water and Power (LADWP). The North Haiwee Reservoir will be located upstream of the existing North Haiwee Reservoir. A project is already underway to add a second dam north of the North Haiwee Reservoir¹¹. The existing North Haiwee Reservoir is slated for a major dam replacement due to earthquake safety issues, with the new dam located 800 feet to the north of the current location. When completed, this project will significantly shrink the area available for the lower reservoir proposed with this project.

Transmission

The project proponent has not provided sufficient information to FERC of the viability of transmission infrastructure needed to support this project. The Inyo Rinaldi Line (alternative 1) may have a limited available capacity between the project and the Barren Ridge Substation, but south of this substation there are current renewable energy projects generating energy that exceed the capacity of the recently upgraded Inyo-Rinaldi Line. Additionally these projects provide energy to the Castaic -Pyramid Lake Energy Storage Project. This LADWP owned transmission line has a LGIP (Large Generation Interconnection Policy) and a priority queue list. The project proponent does not appear to have an application pending with LADWP or a priority queue position. Upon visual inspection, confirmed by Bonneville Power, there are mechanical, physical and financial challenges with capacity and upgrades to the 3100 MW PDCI. Haiwee is proposed to generate 1600-2000 MW. The PDCI operates at full capacity during the

⁸ Ibid.

⁹ examples include a 2015 BLM employee sighting in the vicinity of Haiwee pass road and a confirmed sighting May 1, 2019 (Tom Hopkins, personal communication)

¹⁰ Allison, L. J. and A. M. Mcluckie. 2018. Population Trends in Mojave Desert Tortoises (*Gopherus agassizii*). Herpetological Conservation and Biology 13(2):433-452.

¹¹ [https://eplanning.blm.gov/epl-front-office/projects/nepa/89402/121593/148411/NHD2_Public_Draft_EIREA_508_092117_\(2\).pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/89402/121593/148411/NHD2_Public_Draft_EIREA_508_092117_(2).pdf)

warmer periods of the year. The existing towers of the PDCI will not support additional or larger conductors so new towers engineered to carry the physical load would need to be installed. Bonneville Power would also require new conversion substations at both ends, not only Haiwee, as the pre-application implies. The conversion substations operations and associated communication linkage has an estimated cost of 80 million dollars¹². The project proponent needs to provide additional information to FERC and the public, proving the viability of their transmission alternatives.

Earthquake Risk

The proposed project's penstocks/tunnels cross numerous earthquake faults. There are more than 50 faults in the Coso Range and eastern slope of the Sierra near Olancho. The Coso Volcanic Field is one of the most seismically active areas in the US. Within about 5 miles of McCloud Reservoir, there are about a dozen unnamed Quarternary faults (occurring within the Quaternary Period which began 1.6 million years ago). The same is true for the North Haiwee Reservoir. Haiwee Canyon has the Southern Sierra Nevada Fault Zone not more than 2 miles away; it moved less than 130,000 years ago. A section of the Owens Valley Fault Zone is about 1.5 miles from the North Haiwee Reservoir. That section last moved less than 15,000 years ago. Other sections of that same Fault Zone, located from about 3 to 5 miles north of North Haiwee Reservoir, moved less than 150 years ago¹³. Recent earthquakes to the east and south around the community of Ridgecrest indicate the area's high instability. Earthquake mapping should be required as part of any application for pumped storage.

Interested Parties

Lastly, the interested party list is incomplete. The Little Cactus Reservoir overlaps with California State School Land (PCLID 160-008). The State Lands Commission should be included as an interested party and may require separate environmental permitting. In addition, the area's local tribal nations should be included as interested parties, including the Bishop Paiute and Timbisha Shoshone Tribes. Finally, The North Haiwee Reservoir proposal would be adjacent to the privately owned Butterworth Ranch and as such the owners should also be an interested party.

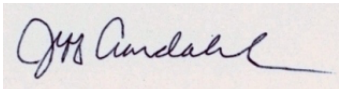
We understand and support the need for renewable energy storage in California and hope these comments will be considered as the Haiwee Pumped Storage project moves forward. Balancing the need to respond to the climate crisis while also ensuring these projects protect sensitive resources on public lands will be essential to our success in transitioning to a carbon free energy economy.

Sincerely,

Jeff Aardahl

¹² Boneville Power, personal communication by phone October 3, 2019

¹³ <https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf>.



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