



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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San Francisco, CA 94105-3901

April 18, 2022

Chip Lewis
BIA Western Regional Office
Branch of Environmental Quality Services
2600 North Central Avenue, 4th Floor
Phoenix, Arizona 85004-3008

Subject: Draft Environmental Impact Statement for the Proposed Chuckwalla Solar
Projects, Moapa River Indian Reservation, Clark County, Nevada (EIS No. 20220024)

Dear Mr. Lewis:

The U.S. Environmental Protection Agency has reviewed the above-referenced document pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

The DEIS evaluates four photovoltaic solar energy generation and storage projects on the Moapa River Indian Reservation (Reservation). The facilities would be located on up to 6,500 acres of tribal trust land (1,977 acres for Project 1A, 689 acres for Project 1B, 1,573 acres for Project 2, and 2,016 acres for Project 3) and would have a combined capacity of up to 700 megawatts (MW). The four solar Projects include the solar fields, access roads, temporary water pipeline and connection with an existing transmission gen-tie line. No action alternatives are evaluated. The EPA is serving as a cooperating agency for the project EIS and provided scoping comments (5/20/21) and comments on the administrative draft of the EIS (10/7/21 and 12/20/21).

We appreciate the additional information in the DEIS in response to our previous comments including the possible use of redox flow batteries, potential jurisdictional waters, flood zone location, and cumulative groundwater use. We also appreciate the appended hydrology report per our suggestion. We recommend the applicant-proposed mitigation measures identified in Appendix C be retained in the FEIS.

We commented previously that the project would require a Construction Stormwater National Pollutant Discharge Elimination System (NPDES) permit, which would be issued by EPA on tribal land. Table 1-3 in *Section 1.8 – Permits and Approvals Required for the Proposed Projects* identifies this permit for the Gen-Tie lines but not for the solar fields. It also is not listed in Table 1-3 in the Plan of Development in Appendix D. Since the DEIS acknowledges that 6 of the 8 ephemeral drainages within the solar lease area drain directly into California Wash and are expected to be deemed jurisdictional waters of the United States by the U.S. Army Corps of Engineers (p. 3-65), this permit would be required. We recommend this permit requirement be added to these tables in the FEIS.

Our previous comments also noted the continued use of a groundwater model utilizing data from 2001 which is quite dated for use in NEPA analyses.¹ Evaluation in 2014 indicated that records of hydraulic responses to initial pumpage would be available to refine modeling predictions of impacts for added pumping increments; however, this has not occurred for any subsequent projects. According to the U.S. Geological Survey, because groundwater is dynamic, model forecasts need to be updated periodically as the actual groundwater system responds to changing conditions over time.² There have been increases in pumping from multiple solar projects on the Reservation and the large Gemini Solar Project may be purchasing between 500-2000 acre-feet of groundwater from the Tribe for its construction. Additionally, Clark County has experienced multiple drought periods over the last 20 years and the DEIS acknowledges the uncertainty regarding the amount of groundwater that can be sustainably pumped in the flow system.³

The DEIS assumes that the construction phases for this and other projects would not overlap and therefore would not have an additive effect on groundwater levels and flows at the Muddy River Springs area, which supports the endangered Moapa dace; however, this may not be realistic considering the number of projects being planned. We recommend the BIA and the Tribe monitor pumping and water levels in the well to be utilized for the projects⁴ and document results to contribute data towards understanding aquifer hydraulics and the effect of pumping on discharge at the Springs. We recommend the FEIS and future project's NEPA documents provide a clear accounting of estimated groundwater pumping, current water levels, and flow measurements in relation to flow trigger points in the 2006 Programmatic Biological Option and Memorandum of Agreement for the Moapa dace. Determining impacts based on the availability of water rights is not recommended when a basin is overallocated. We also recommend the groundwater model be updated to reflect the most current conditions if it will be used to support impact assessment conclusions for the additional planned solar projects.

The EPA appreciates the opportunity to serve as a cooperating agency on this EIS. We look forward to continuing our work with the BIA and the Tribe through the remainder of the NEPA process. Please continue to coordinate with Karen Vitulano, the lead reviewer for this project, at vitulano.karen@epa.gov. If you have any questions, please contact me at (415) 947-4167, or contact Karen Vitulano at 415-947-4178 or via email.

Sincerely,

Jean Prijatel
Manager, Environmental Review Branch

cc: Laura Watters, Chairwoman, Moapa Band of Paiute Indians
Michael Schwemm, U.S. Fish and Wildlife Service

¹ The 2001 modeling effort occurred for the Calpine Project and was updated for the Moapa Solar Energy Center in 2014 using the same 2001 data (project was later expanded and renamed Arrow Canyon Solar Project).

² https://pubs.usgs.gov/circ/1323/pdf/Circular1323_book_508.pdf

³ The DEIS references the Nevada State Engineer's Order 1309, dated 6/15/2020, that ordered reductions in pumping in the Lower White River Flow System hydrographic basin.

⁴ The DEIS indicates the well to be used for this and the Gemini Solar Project would be either the well at the Moapa Paiute Travel Plaza or a new well developed within the shared facilities area.