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*Comment Received From: Garry George*
*Submitted On: 4/21/2025*
*Docket Number: 23-OPT-02*

## Audubon Comments

*Additional submitted attachment is included below.*

Audubon

April 21, 2025

California Energy Commission (CEC)
via CEC e-commenting
https://www.energy.ca.gov/powerplant/solar-photovoltaic-pv/darden-clean-energy-project

Dear CEC:

Audubon protects birds and the places they need, today and tomorrow. We work across the Western Hemisphere, driven by the understanding that what is good for birds is good for the planet. Through a collaborative, bipartisan approach across habitats, borders, and the political spectrum, Audubon drives meaningful and lasting conservation outcomes.

For more than 120 years, we have brought people together to experience birds and learn about how we can all work together to protect them. Our 415 chapters, 31 centers, and 29 sanctuaries across the country provide firsthand opportunities to see how science-based conservation benefits local communities, wildlife, and the economy.

Climate change threatens more than two-thirds of North America's bird species with extinction, according to Audubon's 2019 report *Survival By Degrees: 389 Species on the Brink*. However, the same science suggests that by limiting global warming to 1.5 degrees Celsius, vulnerability is reduced for more than three-quarters (76%) of species. Audubon supports efforts to reach net-zero carbon pollution by 2050 through renewable energy and transmission and natural climate solutions.

On October 24, 2024, we commented on the Notice of Preparation of a Draft Environmental Impact Report for the Darden Clean Energy Project (SCH 2024091023). Those comments are included by reference and attached. Included in those comments was a comment on Siting that the project's site conforms to the 2016 Berkeley Law Center for Law, Energy & the Environment (CLEE) project to identify Least-Conflict Solar PV Development in California's San Joaquin Valley[1] and our conclusion that, "The Project is well-sited as it is located on these ideal lands making it a suitable project in our opinion to receive a rapid environmental review and permitting process."

We have reviewed the Staff Assessment (SA) and DEIR for the Darden Clean Energy Project (DCEP), a solar photovoltaic (PV) facility, battery storage system (BESS), substation, and

[1] UC Berkeley Law, May 2016. "Mapping Lands to Avoid Conflict for Solar PV in the San Joaquin Valley," https://www.law.berkeley.edu/research/clee/research/climate/solar-pv-in-the-sjv/ accessed March 6, 2025.

generation-intertie (gen-tie) line on approximately 9,500 acres in unincorporated Fresno County, California, near the community of Cantua Creek. DCEP consists of 1,150 MW solar PV, up to 4,600 MWh BESS, a 34.5-500 kV grid step-up substation, a 15-mile 500 kV generation intertie (gen-tie) line, and a 500 kV utility switching station. The project would connect to the existing Pacific Gas & Electric Company (PG&E) Los Banos-Midway #2 500 kV transmission line.

**We agree with staff's analysis recommending the CEC issue a certification for the DCEP allowing for the construction and operation of the project with conditions.**

Our comments follow and are limited to the Biological Resources evaluation in the DEIR.

1. Lake effect and avian impacts.

   We agree with Staff's Assessment that the "applicant's assessment is misleading" in their assessment of potential avian impacts as presented in the Avian Fatality Assessment for PV Solar Projects (Avian Assessment) submitted by Tetra Tech and Dr. Karl Kosciuch. The claim that the project "is not anticipated to result in direct or indirect avian morbidity or mortality above baseline conditions" is not well supported.

   We found that the Avian Assessment made no reference to the Diehl et al CEC Pier program funded study on "lake effect". Dr. Kosciuch is collaborator of the study and the omission of any reference to that study is surprising.

   Additionally, the assessment claimed that "It is likely that either two standard industry practices, which began around 2014, has reduced collision risk for birds. These are 1) installing of single-axis tracker panels, and/or, 2) the addition of anti-reflective coating." There is no citation of research or scientific justification for this claim in the Avian Assessment that single-axis tracker panels or anti-reflective coating will eliminate or even reduce impacts to birds. We are not aware of any studies or science validating these minimization measures but would appreciate ongoing research to validate these minimization measures as effective.

   Audubon is a founding member of the now concluded Avian Solar Work Group that collaborated from 2015-2025. The Avian Solar Work Group (ASWG) is a collaborative group of environmental organizations, academics, solar companies, and solar industry representatives that will advance coordinated scientific research to better understand how birds interact with solar facilities. Members included Clearway Energy Group, Defenders of Wildlife, Duke Energy, EDF Renewables, Intersect Power, National Audubon Society, Natural Resources Defense Council, The Nature Conservancy, NextEra Energy Resources and Recurrent Energy.

The ASWG and individual members of ASWG served in a Technical Advisory Committee established by the grant recipients of the CEC EPIC program research on lake effect and received information and made recommendations during the four to five years of the research. Individual company members of ASWG also provided data and access to sites as well as additional funding for the study.

The ASWG released a statement on the "lake effect" study as follows:

> *ASWG Statement of Understanding on Lake Effect Research*
> *ASWG Approved 5/24/2022*
>
> *Some utility-scale PV solar facilities in the California desert have reported incidents of dead, injured or stranded waterbirds, leading to the formulation of a hypothesis that these birds might perceive these facilities as water bodies and attempt to land there, resulting in collision or inability to return to flight. However, the number of birds found at these facilities appears small, and similar phenomena have not been detected in other parts of the country.*
>
> *Between 2019 and 2021, an interdisciplinary team of researchers tested the "lake effect" hypothesis by investigating visual response to polarized light, behavioral flight orientation as measured by radar detection, and bird communities and mortality events at solar facilities versus paired control sites. The first part of this work found that several species of songbirds can detect and respond favorably to certain wavelengths of polarized light. The radar studies showed evidence of attraction via change in altitude or orientation.*
>
> *The community and fatality data demonstrated that the number of birds that approach and attempt to land at solar facilities is much smaller than that of real water bodies, but higher than at reference sites in the desert. Therefore, for species like loons, grebes, coots, ruddy ducks, attraction may be the likeliest explanation for their presence at solar facilities. The California Energy Commission Electric Program Investment Charge (EPIC) Program, along with solar companies' matching funds, funded each of these studies.*
>
> *Future research is needed to better understand the relationship between avian perception, attraction, and mortality at utility-scale PV solar facilities. More specifically, it remains unclear if visual response to polarized light results are applicable to water birds. The radar studies also did not discern bird behavior in close proximity to the panels, and the impact, if any, of the attraction is therefore unknown.*

**We support the SA conclusion and analysis that includes citations of the Diehl, et report to the CEC EPIC program and support the monitoring regime proposed by Staff.**

**We also propose that the monitoring condition include public availability of the monitoring studies for research purposes, and that the CEC approve the protocol and methodology of the monitoring studies in consultation with USFWS Migratory Bird division and avian scientists from the environmental or university communities before implementation.**

2. Minimization measures for collision with electrical distribution lines.

   The Staff Assessment states:

   > "The gen-tie line (jurisdictional component) transmission facilities would be designed consistent with the APLIC 2006 guidelines and would be evaluated for potential collision reduction devices in accordance with APLIC 2012 guidelines. These guidelines are industry best practices for minimizing avian electrocution and collision risks associated with power lines. Special-status species such as Swainson's hawk and other raptors and birds would continue to utilize nearby areas for foraging and nesting," (p. 5.2-149).

   However, in addition to the APLIC 2006 and 2012 guidance, APLIC has prepared a revised Suggested Practices for Avian Protection on Power Lines: State of the Art in 2024 guidance. We recommend that the Assessment and DEIR include this document as a requirement for the design, construction and operation of the gen-tie and any other distribution lines to ensure that impacts on birds of the gen-tie and any other distribution power lines are less than significant with mitigation incorporated. This revised document should be included in BIO-7 under number 20.

   Burying power lines and distribution lines within the project underground would eliminate the need for minimization measures, and Staff should consider this requirement in order to truly ensure that the impacts are less than significant.

3. Swainson's Hawk considerations:

   We have reviewed and support DCEP's Swainson's Hawk Conservation Strategy and Foraging Habitat Revegetation and Management Plan, a unique strategy that may reveal that Swainson's Hawk and PV solar projects may have some compatibility as long as nesting and foraging habitat are available, and the birds are not disturbed to the extent that they abandon their nesting or foraging territories.

   We recommend that staff include conditions that:
   1. That research and reports on the project by Dr. Grodsky and/or others be made publicly available to the public and scientific community;
   2. That the endowment includes funding if needed for peer review of the protocols and methodology of the research and management plan by CDFW, the Swainson's Hawk

Technical Advisory Committee, and/or Renewable Energy Wildlife Institute (REWI) before implementation.

4. Burrowing Owl and Tricolored Blackbird considerations:

   We appreciate staff's consideration of the potential benefits to Burrowing owl as well as Tricolored Blackbird from implementation of Swainson's hawk BIO-9, 11, 12 and 13.

   We also appreciate in BIO-8 Nesting Bird Avoidance and Minimization Measure and Tricolored Blackbird Avoidance and Minimization Measures the requirements for pre-construction surveys to identify any nesting activities and if identified how to avoid impacts to nesting Tricolored Blackbirds.

   We also recommend that CEC consider the formation of a Technical Advisory Committee of avian experts on Swainson's hawk and other raptors, Tricolored Blackbird, and Burrowing owl to review yearly reports and make recommendations and evaluations on the progress of the mitigations and conservation plans for avian resources.

We congratulate staff of CEC for their thorough review of the DCEP and the conditions that staff has imposed on the project working with the developer and find that the impacts on avian resources as presented in the Assessment and DEIR will reduce the impacts to less than significant, especially if the CEC provides additional conditions as recommended in this letter.

Regards,

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