

**Defenders of Wildlife ~ Sierra Club ~ Audubon California ~
Natural Resources Defense Council ~ The Wilderness Society ~
California Native Plant Society ~ Center for Biological Diversity**

December 5, 2013

Dave Harlow, Director
Desert Renewable Energy Conservation Plan
California Energy Commission
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California Energy Commission
Dockets Office, MS-4
Docket No. 09-RENEW EO-01
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Re: Additional Input for the Desert Renewable Energy Conservation Plan (DRECP)

Dear Mr. Harlow:

We are pleased to see further progress on the DRECP, and in particular, are pleased with the Databasin Gateway tool developed by Conservation Biology Institute. This tool should greatly increase transparency to stakeholders and the public by openly sharing the information and data layers that are informing the structure of the plan. Access to this information in a collaborative and accessible web-based platform will greatly assist our organizations and our memberships in a thorough review of the Draft EIS/EIR for the DRECP when it is released next year. We support the DRECP in taking the time necessary to craft a plan that uses the best available science to identify those places that are most appropriate for renewable energy development in the California deserts.

Our organizations have supported the development of the DRECP because we believe that it is critical to our shared goal of facilitating responsible and sustainable renewable energy development in order to meet the state's renewable energy mandates and needs while simultaneously providing lasting conservation for species, natural communities and ecological processes in the California deserts. For this reason, we continue to dedicate substantial resources toward achieving a successful DRECP.

In this letter, we would like to bring to your attention some lessons learned, new information and studies that we recommend be considered in developing the DRECP with the aim of informing the DRECP planning process going forward. Below we highlight some observations and lessons learned from renewable energy projects being constructed or operational in the DRECP area, and provide summaries of new information that we recommend be considered in developing the Draft EIS/EIR. Thank you for your consideration of these suggestions and recommendations.

1) **Bird Mortality at Solar Facilities in the DRECP Planning Area.**

Starting in early July 2013, news of bird mortality at solar facilities under construction in the California deserts started to come through via incidental monitoring reports. At the Desert Sunlight project, as many as 18 bird deaths have been publically reported between April 3 and July 15, 2013.¹ As many as 70 birds and/or bats have been incidentally found dead at the project site.² The Genesis Solar Monthly Compliance Report submitted to the California Energy Commission reported over 60 bird mortalities at the project site during the month of August 2013.³ And at the Ivanpah Solar Energy Generating Station, 72 birds were found dead or injured between January 3 and September 19, 2013. Close to 30% of those birds were discovered during the first 2 weeks of September.

All of these bird deaths have been discovered incidentally, as none of these projects have initiated standardized bird mortality monitoring while still under construction. Bird mortality monitoring may reveal more bird deaths at solar facilities.

Considering the relevance of this issue to the development of an HCP and NCCP for the DRECP, we assume the U.S. Fish and Wildlife Service (FWS) and California Department of Fish and Wildlife (DFW) will work together to develop comprehensive monitoring guidelines for the DRECP that adequately track bird mortalities and injuries at renewable energy project sites. Due to the fact that projects are seeing higher than expected injuries and deaths during the construction phase, we strongly recommend that the DRECP also develop comprehensive monitoring guidelines for the construction phase of project development. FWS (Pacific Southwest Region) has drafted the document, “Monitoring Migratory Bird Take at Solar Power Facilities: An Experimental Approach,” that outlines an approach to monitoring that can be used as a starting place for DRECP as it develops its monitoring protocol for bird mortalities at solar power facilities.

While we strongly support the mitigation hierarchy that recommends first to avoid, minimize, rectify or reduce the impacts to migratory birds, and then to mitigate outside the area of impacts, at this time we do not have specific recommendations regarding avoidance or minimization of bird mortality at solar facilities. In this case, it may be necessary to develop a regional mitigation strategy that invests in the restoration, creation, enhancement or preservation of key stopovers along the Pacific Flyway. This type of regional mitigation planning is supported by the Bureau of Land Management’s Interim Policy on Regional Mitigation (IM 2013-142).

¹ For list of birds reported dead at Desert Sunlight and Genesis Solar Projects, see: <http://www.kcet.org/news/rewire/solar/water-birds-turning-up-dead-at-solar-projects-in-desert.html>

² First Solar. “Desert Sunlight Environmental Avian Overview.” Presentation from August 30, 2013.

³ For the August 2013 Monthly Compliance Report , see: http://docketpublic.energy.ca.gov/PublicDocuments/09-AFC-08C/TN200657_20130930T120056_August_2013_Monthly_Compliance_Report.pdf

The DRECP should take into account the information resulting from the on-going FWS investigations and work to ensure they are avoided, minimized, rectified or reduced at future projects. It is likely that, as solar projects continue to be built; this may not be adequate to address regional impacts to migratory birds, in which case we strongly urge the DRECP to include a comprehensive regional mitigation strategy responsive to this issue.

2) **Climate Change Impacts and Adaptation.**

Climate change is one of the most important issues facing environmental managers and planners, and promises to remain so for the foreseeable future. Climate change will alter the landscape of the desert in expected and unexpected ways and that these predicted alterations should inform how the DRECP plans for conservation of species as well as identification of appropriate areas for renewable energy development. Thus, we recommend that the DRECP take a close look at climate change impacts on the desert as it develops environmental review documents in compliance with the National Environmental Policy Act (NEPA).

The Council on Environmental Quality released draft guidance on incorporating climate change into NEPA, particularly Environmental Impact Statements (EISs), in February 2010. Defenders of Wildlife conducted a study which analyzed 154 EISs released between July 2011 and April 2012 to determine how well agencies had incorporated the draft guidance's climate adaptation recommendations.⁴ In the study, Defenders found that even the best-performing EISs had only a limited consideration of climate change, failed to make a full comparison between various alternatives as specifically relating to climate change, or used short and qualitative statements rather than full analysis based on the best available science.

Defenders offers multiple recommendations for improving incorporation and analysis of climate change in EISs: (1) The purpose and need should be examined to determine if they are robust in a changing climate; (2) the EIS preparers should include individuals with expertise in climate change and its incorporation into analysis and planning; (3) significance of a proposed action's effects must be considered in the context of climate change; (4) agencies should consider whether climate change may affect the ability of each alternative to meet the purpose and need, such as by assessing the vulnerability of each alternative to relevant climate change impacts; (5) agencies should discuss the effects of climate change on each environmental resource, the extent to which each alternative's impacts will exacerbate climate change impacts, and the interaction with other threats, stressors, and cumulative impacts; (6) in addition to mitigation via greenhouse gas reduction, the EIS should discuss opportunities to mitigate other potential climate change impacts resulting from the plan.

⁴ Defenders of Wildlife. August 2013. "Reasonably Foreseeable Futures: Climate Change Adaptation and the National Environmental Policy Act." Defenders of Wildlife Climate Change Whitepaper. Available online at: <http://www.defenders.org/sites/default/files/publications/reasonably-foreseeable-futures-climate-change-adaptation-and-the-national-environmental-policy-act.pdf>

We recommend that the DRECP review this report and incorporate the suggestions and recommendations that it provides. Given the potentially profound impacts of climate change on desert ecosystems, it is critical that analysis of these impacts be incorporated into the DRECP planning process. In this way, DRECP will be able to make more robust planning decisions and ensure that natural resources are resilient to climate change.

3) **Climate Change and Storm Intensity.**

Storm intensity is expected to increase in many parts of the world as a result of global climatic changes due to increased greenhouse gas emissions in the atmosphere. The most recent IPCC report stated that: “it is likely that the area encompassed by monsoon systems will increase over the 21st century. While monsoon winds are likely to weaken, monsoon precipitation is likely to intensify due to the increase in atmospheric moisture.”⁵ The report also claims that the length of the monsoon season is likely to increase.

The DRECP encompasses the Sonoran desert ecoregion which, unlike the Great Basin and Mojave desert ecoregions of California, receives as much as 50% of its annual precipitation in the summer months. This precipitation comes from moist subtropical air masses that push northward from the Gulf of Mexico and Sea of Cortez – the North American Monsoon.

Based on the latest IPCC report, we can expect that the North American Monsoon that frequents the Sonoran desert in California may increase in intensity and duration. This will affect the landscape of desert regions slated for large scale renewable energy development and must be considered when choosing sites and designs for utility-scale solar energy developments. Already, we have seen the impacts of summer monsoonal storms in the BLM’s Riverside East Solar Energy Zone. This past August, intense storms rolled through the region and washed out roads and infrastructure. Utility-scale projects that remove vegetation, soil surface or stabilized pebble terraces are likely to exacerbate the impacts of increasing storm intensity in the region. We recommend the DRECP carefully analyze the interconnected direct impacts of a changing climatic regime and large-scale soil and vegetation removal on drainage systems, sedimentation and soil erosion. There may also be indirect impacts to desert ecology, covered species, natural communities and human development that we recommend are considered as well.

4) **Golden Eagle Take Permit Considerations for Wind Energy Facilities.**

On September 20, 2013, some of our organizations submitted a letter to the DRECP requesting that as the conservation strategy for Golden Eagle is drafted, the DRECP agencies consider all baseline fatalities of Golden Eagles. We specifically cited an article by

⁵ Intergovernmental Panel on Climate Change. Climate Change 2013: The Physical Science Basis. Summary for Policymakers. 27 September 2013. Available online at: http://www.climatechange2013.org/images/uploads/WGIAR5-SPM_Approved27Sep2013.pdf

Pagel et al. published in the peer-reviewed Journal of Raptor Research which provides a summary of reported mortalities of golden eagles.⁶ In California alone, not including the Altamont Wind Resource Area, 27 golden eagle fatalities were reported between 1997 and June 2012, over 30% of the total eagle fatalities across the contiguous United States.

Subsequently, the California Wind Energy Association (CalWEA) submitted a letter to DRECP on October 21, 2013 stating that: *“In fact, collision with turbines at modern wind farms is responsible for less than 2 percent of all reported human-caused golden eagle fatalities, with vastly greater amounts attributed to power lines, vehicle strikes, lead poisoning, drowning in stock tanks, illegal shootings, etc.”*

This statement is apparently based on a literature search conducted by Tetra Tech that is included in a comment letter on the U.S. Fish & Wildlife Service draft Eagle Guidance submitted by the American Wind Energy Association on May 19, 2011.⁷ In the Tetra Tech report, the data in Table 3 (p.11) shows that wind turbine blade collision is the cause of 21% (or 565 Golden Eagles) of the total mortality numbers calculated through the literature search by Tetra Tech. This is the second highest cause of mortality behind the 50% attributed to electrocution (1316 Golden Eagles). The Tetra Tech report also states that, *“Golden eagle fatalities due to collisions with wind turbines outside of the Altamont Pass (12 fatalities) represented <1 percent of the known fatalities in our dataset.”*

However, more recent, peer-reviewed studies (e.g. Pagel et al. 2013) have documented a reported 79 golden eagle fatalities at wind facilities outside the Altamont Pass in the contiguous United States in a shorter time period (1997 through June 2012) than that of the Tetra Tech dataset (since 1960). While the Tetra Tech literature search may be the only publicly available document that quantifies eagle mortality from all sources, the DRECP agencies should strive to use the best available, most recent and peer-reviewed material regarding Golden eagle fatalities.

We urge the DRECP to consider all sources of mortality to Golden Eagles including current levels of unauthorized take when calculating allowance of take for wind energy in the DRECP, and not to underestimate the cumulative impacts to populations of breeding, non-breeding and migratory Golden Eagles in California from collision with wind energy turbines.

Our California population of breeding, non-breeding and migratory Golden eagles has been impacted in large numbers by a variety of sources, with wind energy playing a key role. We therefore also ask that the DRECP emphasize avoidance and minimization (including no project or reduced project alternatives), upfront advanced and experimental avoidance,

⁶ Pagel et al. 2013

⁷ The letter is available online at: <http://awea.files.cms-plus.com/FileDownloads/pdfs/AWEA-Comments-on-USFWS-Eagle-Guidance-May-19-2011.pdf>

minimization measures, other conservation practices, and permit denials before consideration of compensatory mitigation to conserve Golden eagles.

Regarding regional Golden Eagle population trends, we want to stress that the Millsap et al (2013) study applies *widely* to Golden Eagle population trends. In the conclusion the authors note that they “*acknowledge occupied breeding areas may be declining locally or regionally.*” Most notably, the authors caution that their findings, “*do not address the question of whether golden eagles have the demographic resiliency to absorb additional mortality and maintain their stable population trajectory.*”

For this reason, we urge the DRECP agencies to proceed with caution when crafting the eagle conservation strategy and when developing an eagle take permit for DRECP.

5) **Electricity Generation Assumptions for DRECP.**

We would like to bring to your attention updates to the assumptions the DRECP is relying upon to calculate how much utility-scale renewable energy development will be needed from the desert region.

First of all, we would like to call your attention to the Energy Commission’s most recent revised electricity demand forecast for the state, to be approved this month⁸. The most recent 2013 mid-case forecast of net energy for load between the years 2012 to 2020 after electric vehicles are excluded⁹, is only 0.708%/year, less than half the 1.5% electricity demand growth assumption used in DRECP’s most recent estimate of the amount of incremental renewable energy required in 2040.¹⁰

Secondly, this year the California Energy Commission, California Public Utilities Commission and California Independent System Operator agreed to work to develop a unified forecast that includes “additional achievable energy efficiency” (AAEE), previously referred to as “uncommitted efficiency”.¹¹ The 2013 base case forecast of achievable energy efficiency between 2012 and 2020 has a savings rate of -0.609%/year. The net result is a growth rate of only 0.099%/year—less than 1/10th of a percent per year.

⁸ California Energy Commission, Draft Staff Report: “California Energy Demand 2014-2024 Revised Forecast, Vol 1.” Available online at: http://www.energy.ca.gov/2013publications/CEC-200-2013-004/CEC_200-2013-004-SD-V1-REV.pdf. Scheduled to be adopted on December 11, 2013.

⁹ The Energy Commission’s forecast includes electric vehicles (EVs), but EVs are accounted for separately in the DRECP model. Therefore, the underlying growth rate must back out demand for electric vehicles to be directly comparable to DRECP’s growth assumption.

¹⁰ Description and Comparative Evaluation of Draft DRECP alternatives, December 17, 2012, Appendix L – Estimating Future Generation Capacity Requirement from the Plan Area.

¹¹ For more information, see letter from CalISO to Senators Padilla and Fuller dated February 25, 2013, available online at: http://www.cpuc.ca.gov/NR/rdonlyres/41487175-97A3-4F02-98CB-41E31844A6C6/0/CECCPUCISOResponsetoSenatorsPadillaandFullerLetter_Feb25_2013.pdf. Additionally, see the CEC Staff Report on Estimates of Additional Achievable Energy Savings from September 2013, available online at: <http://www.energy.ca.gov/2013publications/CEC-200-2013-005/CEC-200-2013-005-SD.pdf>.

We request that DRECP incorporate the 2013 CEC base case forecast, as well as the forecast for AAEE, into its Renewable Energy Calculator. DRECP should do so not as a “plausible lower bound”¹² but to appropriately plan for the future generation capacity requirement from the Plan area using the most recent and credible forecasts available. We recommend the DRECP Energy Assumption be revised prior to issuance of the DEIS/EIR to be consistent with: 1) the CEC’s 2013 underlying baseline forecast; and 2) the forecast for Additional Achievable Energy Efficiency.

6) Independent Science Review.

The NCCP Act specifies that independent scientific input is intended to assist the Department of Fish and Wildlife and plan participants in identifying scientifically sound conservation strategies, reserve design principles, a monitoring and adaptive management framework and data gaps and uncertainties. While the Act states that such input should be solicited as early as possible in the plan initiation, independent scientific input should not be limited only to the beginning of the planning effort. Indeed, DFW’s own white paper on independent science in the NCCP process states that the “independent scientists may be asked to provide guidance on technical issues . . . that arise during any stage of plan development.”¹³

For the DRECP, the independent science advisors recommended that the agencies and plan participants call on independent scientists during the course of the DRECP planning process. Particularly, the advisors recommended that the DRECP team add additional scientific expertise and convene further science advisory processes focused on assisting in the creation of the Adaptive Management Plan.¹⁴

Consistent with the DRECP Independent Science Advisory Report recommendations, we urge the DRECP Team to identify in the Draft DRECP how they have addressed the advisors’ specific recommendations and when they plan to convene a science advisory process to guide the creation of the Adaptive Management Plan.

Conclusion

Thank you for your consideration of these issues as you develop the DRECP. If you have any further questions or would like to discuss any of these issues further, please don’t hesitate to be in touch. Thank you for your efforts to balance renewable energy development with conservation of California’s desert ecosystems – a mammoth undertaking. We continue to support the DRECP as a valuable and necessary endeavor.

¹² In 2012, in response to requests to update outdated and erroneous assumptions in its reference scenario, DRECP produced a Revised Scenario it characterized as a “plausible lower bound,” incorporating the most recent Department of Finance population projection. However, it used the 2009 demand forecast which was already outdated, and the efficiency savings rate used in the Revised Scenario was a product of reverse engineering rather than reasonably expected energy savings, a situation to which it is no longer necessary to resort.

¹³ Guidance for the NCCP Independent Science Advisory Process (August 2001) at page 2.

¹⁴ DRECP Science Advisory Report, Executive Summary (November 2012).

Sincerely,



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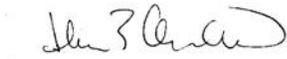
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