

## DOCKETED

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## PALMDALE ENERGY PROJECT BIOLOGICAL RESOURCES

Supplemental Testimony of Tia Mia Taylor and Eric Knight

Biology staff has considered the effects of the proposed amended Palmdale Energy Project (formerly the "Palmdale Hybrid Power Project" and now known as (PEP) on the federally-listed and state-listed endangered Southwestern willow flycatcher (Swf) and the state-listed endangered willow flycatcher (wf). The PEP will require an amended Air Quality permit because the project emissions exceed the "Potential for Significant Deterioration" (PSD) threshold, which falls under the authority of the Environmental Protection Agency (EPA). As part of its review the EPA has to consider the impacts of the Air Quality permit on wildlife, which prompted agency-to-agency consultation between the EPA and the US Fish and Wildlife Service (USFWS) pursuant to Section 7 of the US Endangered Species Act (ESA). Once contacted, the USFWS informed the EPA that an official consultation on the Swf was required. On Feb 10, 2017 the USFWS called to inform Bio staff about this consultation. The USFWS explained that since the original Commission Decision (CD) on the PHPP was approved in 2011, there is new evidence that suggests Swf and wf are colliding with transmission lines during migration at night. There is no known deterrent that will prevent these collisions, so instead there is a standard death-to-mitigation lands ratio that has been established by the Bureau of Land Management (BLM) and in the Desert Renewable Energy Conservation Plan (DRECP) as 5 acres of nesting habitat per Swf death (Draft DRECP and EIS/EIR, **Appendix H**). This requirement supports the USFW's Swf recovery plan described in the Biological Opinion (BO) on the BLM's Proposed Land Use Plan Amendment under the DRECP. The BO identifies that reclassifying the species from endangered to threatened means protecting enough territory to support at least 1,950 territories or increasing known population to a minimum of 1,500 territories (pg. 128). Staff has been coordinating with the USFWS, EPA, and also the CA Department of Fish and Wildlife (CDFW) on this issue, and the applicant has also communicated directly with USFWS.

As the lead agency under the California Environmental Quality Act (CEQA), the Commission is required to consider new information that was not known and could not reasonably be obtained at the time of the CD, and to propose available mitigation if it determines a significant impact (using the best current information available) could occur. Based on the information provided by the USFWS on other transmission projects, staff concludes that the PEP could have a significant impact on the Swf and wf. The wf and its subspecies the Swf are almost identical, and even experts have difficulty distinguishing between the two. Due to this reason, and considering that both bird species are both state-listed endangered, staff recommends adding the wf to the list of species impacted by the project, contained in **Biological Resources Table 3**, page 273 of the CD. Condition of Certification (COC) **BIO-26** requires that the project owner apply for an Incidental Take Permit (ITP) or Consistency Determination (CD) from the CDFW, and provide 5 acres of nesting habitat per Swf and wf death based on the estimated "take" (the number of Swf/wf deaths during the life of the project).

Staff analyzed two approaches to estimating potential take of Swf and wf. Our first estimate of take assumed 3 Swf/wf per 10,000 acres of development from the DRECP (pg. 157 of the BO). This approach, when applied to the longest transmission line alternative (36 miles) yielded a take range of 1 to 4 Swf and wf, depending on the assumed corridor width. The applicant, in their Prehearing Conference Statement, used this approach assuming a 25 foot-wide corridor, yielding an estimated take of 1 bird, whereas staff assumed a 100 foot-wide corridor, yielding a total of 4 birds. These two estimates are very low compared to recent monitoring studies, specifically for a similar project in a similar desert setting, the 117-mile Sunrise Powerlink project in San Diego and Imperial counties. The monitoring of the Sunrise Powerlink project indicated a much higher incidence of avian transmission line collisions and mortality, including bias factors such as corpse recovery tests and scavenging. While the scientific information regarding transmission line collisions is limited and evolving, staff concludes the most accurate estimate of take could be derived from the comparison to monitoring results from similar projects, rather than calculating a geographic corridor.

Based on information available from other monitoring studies on the Sunrise Powerlink, staff estimates the range of “take” may be as high as 214 – 598 birds for the longest transmission line route over the 30-year project license. This degree of take compares to 36 – 101 for the alternate route, which is mostly underground and much shorter in length (**See Appendix 1** for Calculations). Right now, there is no standard statistical method or model to estimate the number of birds that will die from transmission collisions over the life of the project, so calculations that staff performed were based on blanket assumptions derived from a limited sample (1 comparable project’s monitoring) as explained in Appendix 1.

The depth of knowledge regarding Swf and wf take from transmission line collisions is evolving. Relying on CDFW’s ITP or CD will allow for continued research and monitoring studies to advance and improve the estimated “take” value. Regardless of the exact number, the shorter transmission route alternative would result in less take and require less mitigation. It is staff’s recommendation that the project owner consider building the shorter of the two approved alternative transmission line routes. Staff also recommends that **BIO-24** from the previous CD be retained, with language adapted to monitor Swf/wf collisions with transmission lines and report deaths of avian species. The findings obtained through implementation of **BIO-24** may require additional mitigation pursuant to **BIO-26**. With the adoption and implementation of **BIO-24** and **BIO-26**, as provided below, impacts to the Swf/wf species will be less than significant.

## **WILLOW FLYCATCHER MONITORING**

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**BIO-24** The project owner shall prepare and implement a Willow Flycatcher Monitoring Plan to monitor willow flycatcher collisions with project transmission lines. Transmission line project-related willow flycatcher deaths or injuries shall be reported to the CPM, CDFW and USFWS.

The CPM, in consultation with CDFW and USFWS, shall determine if the Transmission project-related willow flycatcher deaths or injuries are in excess of the take estimate of willow flycatcher identified in the Incidental Take Permit or Consistency Determination issued by CDFW, and if so, whether this difference warrants imposing additional mitigation pursuant to Condition of Certification **BIO-26**.

The Plan shall be approved by the CPM in consultation with CDFW and USFWS, and shall be incorporated into the project's BRMIMP and implemented. The Willow Flycatcher Monitoring Plan shall be based upon recent avian monitoring studies conducted at energy facilities or other applicable literature, and shall include detailed specifications on data and carcass collection protocol and a rationale justifying the proposed schedule of carcass searches. The Plan shall also include seasonal trials to assess bias from carcass removal by scavengers as well as searcher bias and proposed disposition of dead or injured birds.

**Verification:** No more than 60 days prior to ground disturbance the project owner shall submit to the CPM, USFWS and CDFW a Willow Flycatcher Monitoring Plan. Modifications to the Plan shall be made only after approval from the CPM. For one year following the beginning of power plant operation, the Designated Biologist shall submit quarterly reports to the CPM, CDFW, and USFWS describing the methods, dates, durations, and results of willow flycatcher monitoring. The quarterly reports shall provide a detailed description of any Transmission Line project-related willow flycatcher deaths or injuries detected during the monitoring study or at any other time. Following the completion of the fourth quarter of monitoring the Designated Biologist shall prepare an Annual Report that summarizes the year's data, analyzes any Transmission line project-related willow flycatcher fatalities or injuries detected, and provides recommendations for future monitoring. The Annual Report shall be provided to the CPM, CDFW, and USFWS. Quarterly reporting shall continue until the CPM, in consultation with CDFW and USFWS determine whether more years of monitoring are needed.

## **WILLOW FLYCATCHER MITIGATION**

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**BIO-26** Prior to construction of the transmission line, the project owner shall provide to the CPM a copy of the Incidental Take Permit (ITP) per Section 2081 (b) of the California Endangered Species Act or Consistency Determination (CD) per Section 2080.1 of the California Endangered Species Act issued by the California Department of Fish and Wildlife (CDFW). The project owner shall secure compensatory lands to mitigate for the potential take of willow flycatcher and Southwestern willow flycatcher over the life of the project. The estimated take of the species will be determined through the ITP or CD issued by CDFW. Based on the mitigation ratios adopted for the Desert Renewable Energy Conservation Plan (Draft DRECP and EIS/EIR, **Appendix H, Table H-7**), the take of each bird death determined in the ITP/CD will require 5 acres of compensatory nesting habitat. All compensatory mitigation land needs to be within suitable breeding habitat within the California range of the willow flycatcher. The terms and conditions contained in the ITP or CD shall be incorporated into the project's Biological Resources Mitigation

Implementation and Monitoring Plan (BRMIMP) and implemented by the project owner.

**Verification:** No less than 30 days prior to initial ground disturbance for the construction of the transmission line, the project owner shall provide to the CPM a copy of the ITP or CD issued by CDFW. Concurrently the project owner shall provide to the CPM for approval a copy of the revised BRMIMP that shall include the terms and conditions contained in the ITP or CD that must be implemented by the project owner. The CPM must approve the revised BRMIMP before construction activities can begin.

## REFERENCES

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**CEC 2011b** – California Energy Commission (TN 61876). Palmdale Hybrid Power Project Palmdale Hybrid Power Project Final Commission Decision, date submitted to CEC/Docket Unit August 15, 2011, docketed August.

California Energy Commission, 2017 (TN 216453).  
Staff's Proposed Condition of Certification BIO-26 for Discussion at the Palmdale Energy Project Prehearing Conference.

EDM International, INC. 2016. Implementation of the Avian Monitoring and Mitigation Plan. (Confidential Information).

**PHPP 2017a** – Scott A. Galati/DayZen LLC (TN 216372). Palmdale Energy, LLC's Prehearing Conference Statement, dated March 3, 2017. Submitted to CEC/Docket Unit on March 3, 2017.

US Bureau of Land Management. 2014. Draft DRECP and EIR/EIS, APPENDIX H. CONSERVATION AND MANAGEMENT ACTIONS DOCUMENTATION.

US Fish and Wildlife Service. 2016. Biological Opinion on the Proposed Land Use Plan Amendment under the Desert Renewable Energy Plan.

## Appendix 1

### Estimated Willow Flycatcher Deaths for Palmdale Energy Project

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Longest Palmdale Energy Project (PEP) transmission line is 36mi long.  
Sunrise Powerlink transmission line is 117mi long.

WFD = willow flycatcher deaths

BD = bird deaths

0

#### Calculations

1<sup>st</sup> Approach:

$$\frac{6 \text{ WFD}}{2563 \text{ BD}} = .0023... \approx .23\% \text{ of bird deaths annually will be willow flycatchers}$$

.0023... × 9900 BD = 23.175... willow flycatcher deaths annually for Sunrise Powerlink

$$\frac{23.175... \text{ WFD}}{117 \text{ mi}} = \frac{x \text{ WFD}}{36 \text{ mi}} \quad \rightarrow \quad 117x = 834.334... \rightarrow \quad x = 7.131... \approx 7 \text{ WFD annually for PEP}$$

7.131... × 30 years = 213.93 ≈ 214 WFD for the life of PEP

$$214 \text{ WFD} \times \frac{5 \text{ ac}}{1 \text{ WFD}} = 1,070 \text{ acres needed to mitigate for the willow flycatcher deaths}$$

Explanation: This first approach assumes a constant ratio along the entire length of the transmission line and that the transmission lines of Sunrise Powerlink (SRPL) and Palmdale Energy Project (PEP) are equivalent (even though SRPL is both chaparral and desert, while PEP is desert habitat). Accounting for scavenging and detection bias, etc, 9,900 birds are estimated to die annually along the 117mi long SRPL transmission line. However, when they conducted monitoring they found a total of 6 dead willow flycatchers out of 2,563 bird deaths over a 3year period. This ratio remains constant no matter the time period, so annually .23% of bird deaths at SRPL will be willow flycatchers. Also, the monitored total of bird deaths happened at six different segments of the total transmission line which accounts for the lower number of 2,563 over 3 years as compared to 9,900 over one year for the total length of the transmission line. Assuming the constant ratio, about 23 of the 9900 annual bird deaths at SRPL would be willow flycatchers. Now, the 23 willow flycatcher deaths for SRPL happen over 117mi transmission line, so how many willow flycatcher deaths would occur over PEP's 36mi transmission line? To account for the difference in lengths of the transmission lines two ratios were established and a proportion was set up to solve for the total number of willow flycatcher deaths annually at PEP. Over the life of the project, 30 years, with 7 willow flycatcher deaths occurring each year a total of 214 willow flycatchers is estimated to die by colliding into the transmission lines at PEP. The Bureau of Land Management established in the DRECP that for each willow flycatcher death 5 acres of land would be restored for the species.

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2<sup>nd</sup> Approach:

$$\frac{1.60934km}{1mi} \times 36mi \times \frac{147 BD}{1km} = 8,516.627... \text{ bird deaths annually for PEP}$$

$$8,516 \text{ BD} \times 30 \text{ years} = 255,480 \text{ total bird deaths for the life of PEP}$$

$$255,480 \times .0023... = 598.08 \approx 598 \text{ WFD for the life of PEP}$$

$$598 \text{ WFD} \times \frac{5ac}{1 \text{ WFD}} = 2,990 \text{ acres needed to mitigate for the willow flycatcher deaths}$$

Explanation: This second approach assumes that the placement of SRPL's transmission line segments within the desert habitat is equivalent to the placement of PEP's transmission line. The rate of bird deaths along SRPL's 117mi transmission line, were different along segments within its two main habitats: chaparral and desert. SRPL had 147 bird deaths per year per km of transmission line in the desert habitat sections (only 30 bird deaths per km of chaparral habitat). PEP's transmission line corresponds with the desert habitat. By converting PEP's transmission line length into km and then using that ratio 8,516 birds approximately would die annually at PEP. How many of these would be willow flycatchers? Since we are looking only at desert habitat we assume that the monitored ratio from SRPL is accurate, and .23% of bird deaths will be willow flycatchers. Over 30 years, PEP would result in 255,480 bird deaths, and since .23% of these would be willow flycatchers this means that a total of 598 willow flycatchers would die at PEP. It is good to note that the total number of bird deaths for the life of PEP is less than SRPL's longer transmission line and 50 year life span (494,979 total bird deaths among a combined habitat of chaparral and desert). However, total willow flycatcher deaths are much higher in this approach to the calculations as compared to the first approach due to the higher bird death rate in desert habitat.

### Alternative Route

Alternate transmission route for PEP is 6.05 mi long overhead (6.75mi is underground)

1<sup>st</sup> Approach:

$$\frac{6 \text{ WFD}}{2563 \text{ BD}} = .0023... \approx .23\% \text{ of bird deaths annually will be willow flycatchers}$$

$$.0023... \times 9900 \text{ BD} = 23.175... \text{ willow flycatcher deaths annually for Sunrise Powerlink}$$

$$\frac{23.175... \text{ WFD}}{117mi} = \frac{x \text{ WFD}}{6.05mi} \rightarrow 117x = 140.214... \rightarrow x = 1.198... \text{ WFD annually for PEP}$$

$$1.198... \times 30 \text{ years} = 35.95 \approx 36 \text{ WFD for the life of PEP}$$

$$36 \text{ WFD} \times \frac{5ac}{1 \text{ WFD}} = 180 \text{ acres needed to mitigate for the willow flycatcher deaths}$$

Explanation: These are the calculations for the total estimated willow flycatcher deaths for the alternative transmission line route. Part of the alternative route would be underground, so the calculations above are for the overhead portion. Changing the length of the route to 6.05 miles results in 36 willow flycatcher deaths for the life of PEP.



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2<sup>nd</sup> Approach:

$$\frac{1.60934km}{1mi} \times 6.05mi \times \frac{147 BD}{1km} = 1431.26... \text{ bird deaths annually for PEP}$$

1431.26... BD × 30 years = 42,937.995 ≈ 42,938 total bird deaths for the life of PEP

42,938 × .0023... = 100.51 ≈ 101 WFD for the life of PEP

$$101 WFD \times \frac{5ac}{1 WFD} = 505 \text{ acres needed to mitigate for the willow flycatcher deaths}$$

Explanation: Changing the length to 6.05 miles for the alternate route and considering the higher bird death rate in desert habitat results in 101 willow flycatcher deaths for the life of PEP.