UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

March 4, 2011

ATTN: Greg Thomsen
Bureau of Land Management
California Desert District Office
22835 Calle San Juan de Los Lagos
Moreno Valley, CA 92553-9046

Iain Fisher
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Subject: Draft Environmental Impact Statement (DEIS) for the Proposed East County (ECO) Substation, Proposed Tule Wind and the Energia Sierra Juarez (ESJ) Gen-Tie Projects San Diego County, California

Dear Mr. Thomsen and Mr. Fisher,

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the Proposed East County (ECO) Substation, Proposed Tule Wind and the Energia Sierra Juarez (ESJ) Gen-Tie Projects (proposed Project) San Diego County, California. Our comments are provided pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

EPA supports increasing the development of renewable energy resources, as recommended in the National Energy Policy Act of 2005, in an expeditious and well planned manner. Using renewable energy resources such as wind power can help the nation meet its energy requirements while reducing greenhouse gas emissions. We encourage BLM to apply its land management and regulatory authorities in a manner that will promote a long-term sustainable balance between available energy supplies, energy demand, and protection of ecosystems and human health.

San Diego Gas & Electric Company (SDG&E) has filed applications with the California Public Utilities Commission (CPUC) and the Bureau of Land Management (BLM) for the proposed ECO Substation Project in the southeastern portion of San Diego County. In addition, the CPUC and BLM have identified two projects as to be "connected actions" (NEPA) and "whole of the action" (California Environmental Quality Act or CEQA):

- Tule Wind Project, as proposed by Pacific Wind Development, which would tie into the proposed Boulevard Substation rebuild component of the ECO Substation Project
- Energia Sierra Juarez U.S. (ESJ) Generator-Tie Project, as proposed by Energia Sierra Juarez U.S. Transmission, LLC, which would connect to the proposed ECO Substation.

The three projects are collectively referred as the proposed Project. In addition, the proposed Invenergy and SDG&E Campo Wind Project, as well as the Manzanita and Jordan Wind Projects, would

connect to the Boulevard Substation rebuild component of the proposed Project. The evaluation of these projects is included on a programmatic level since project level information is not currently available.

On January 28 2010, EPA provided formal scoping comments for the proposed Project. Our comments on the Notice of Intent (NOI) were not included in the BLM's Public Scoping Report. Although some of our concerns were addressed in the DEIS, we request that our comments on the NOI be considered along with the enclosed comments on the DEIS.

Based on our review of the subject DEIS, we have rated the document as *Environmental Concerns – Insufficient Information* (EC-2). Please see the enclosed "Summary of Rating Definitions." An "EC" signifies that EPA's review of the DEIS has identified environmental impacts that should be avoided in order to provide adequate protection for the environment. A "2" rating signifies that the DEIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment.

EPA was pleased to see that the Preferred Alternative (CEQA Environmentally Superior Alternative), which utilizes disturbed land, undergrounds some of the transmission lines, decreases the Wind Turbine Generators, and lessens the environmental impacts, was the preferred choice by BLM and CPUC. We encourage the BLM and CPUC to work with the project proponents to identify appropriate additional measures to avoid significant impacts and fully incorporate this alternative into the Final Environmental Impact Statement (FEIS)

While we note positive aspects of the proposed Project, EPA has concerns regarding technical and financial capability and direct, indirect, and cumulative impacts to water, biological, and cultural resources. We recommend that the Applicants work closely with the U.S. Fish and Wildlife Service in the development of the Avian and Bat Protection Plan. The FEIS should clarify how the Applicant will comply with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. We also recommend that the Applicant consult with the U.S. Corps of Engineers (Corps) to determine if a Clean Water Act Section 404(b) permit will be required. The FEIS should quantify the potential impacts to waters of the U.S. and discuss the steps that would be taken to avoid and minimize such impacts.

The enclosed detailed comments provide specific recommendations regarding analyses and documentation to assist in assessing potential significant impacts from the proposed Project. EPA appreciates BLM's coordination to date and the opportunity to provide input on this Project. If you have any questions, please contact me at (415) 972-3521, or contact Anne Ardillo, the lead reviewer for this project. Anne can be reached at (415) 947-4257 or ardillo.anne@epamail.epa.gov.

Sincerely,

/s/

Kathleen M. Goforth, Manager
Environmental Review Office

Enclosures: EPA Summary of Rating Definitions
EPA Detailed Comments

cc: John Rydzik, Bureau of Indian Affairs
Ewiiaapaayp Band of Kumeyaay Indians
Shanti Santulli, U.S. Army Corps of Engineers
Jesse Bennett U.S. Fish and Wildlife Service
Manzanita Band of the Kumeyaay Nations
Campo Band of Kumeyaay Indians

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

U.S. EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) EAST COUNTY (ECO) SUBSTATION, TULE WIND PROJECT AND ENERGIA SIERRA JUAREZ (ESJ) GEN-TIE PROJECT, SAN DIEGO COUNTY, CALIFORNIA, MARCH 4, 2011

Financial and Technical Capability

The DEIS states that efforts are underway at both the State and federal levels to increase renewable energy production. At the state level, California's Renewable Portfolio Standard (RPS) program required obligated load-serving entities (LSE), including SDG&E, to procure an additional minimum of 1% of retail sales per year from eligible renewable sources until 20% was reached, no later than 2010 (p. A.7). The DEIS also states that the primary purpose of the ECO Substation Project is to interconnect the planned renewable wind generation in southeastern San Diego County. Currently, six active generator applications have been submitted to California Independent System Operator (CAISO) for connections to the Southwest Powerlink (SWPL) transmission line through the ECO Substation, totaling approximately 2,000 MW of wind generation (p. ES.6). The DEIS describes the several wind projects in the vicinity (Tule, Campo, Manzanita and Jordan) and the anticipated buildout of the ESJ US wind project facilities and transmission capabilities.

The DEIS does not provide sufficient information on the overall renewable energy targets and timeline for the State of California and SDG&E and how this Project would contribute to their renewable energy portfolios. It does not discuss the status of the six active generator applications and whether power purchase agreements have been finalized. In addition, the DEIS does not disclose the current transmission capacity of the existing SWPL 500kV transmission line nor state whether or not there is sufficient capacity for the increased load.

BLM issued Instruction Memorandum No. 2011-060 (IM #2011-060) in February 2011 which provides guidance on the due diligence requirements of right-of-way applicants for solar and wind energy development projects on public lands administered by the Bureau of Land Management (BLM). It states that evidence of financial and technical capability can include conditional commitments of Department of Energy (DOE) loan guarantees; confirmed power purchase agreements; engineering, procurement and construction (EPC) contracts; and supply contracts with credible third-party vendors for the manufacture and/or supply of key components for the solar or wind energy project facilities.

The DEIS states that there is one active generator application (Tule Wind Project) that has been submitted to CAISO for connection to the Boulevard Substation, totaling approximately 200 MW of wind generation (p. A.11), which would then feed into the existing Southwest Powerlink (SWPL). However, the DEIS does not indicate that the proponent Pacific Wind has signed a power purchase agreement with a public utility company for the anticipated 200 MW. Since there is insufficient discussion regarding transmission capacity and power purchase agreements, the DEIS does not provide evidence of technical or financial capability.

Recommendations:

Further describe, in the FEIS, utility purchases of power and provide a description of how the power would be bought, sold, and used so that the reader can better evaluate the tradeoffs between resource protection and power generation.

Demonstrate technical or financial capability as outlined in IM #2011-060

Include discussion of the overall renewable energy targets and timeline for the State of California and SDG&E and how this proposed Project would contribute to their renewable energy portfolios.

EPA recommends that the FEIS disclose: 1) the current available capacity of the existing SWPL 500 kV transmission line.; 2) the estimated capacity of the existing SWPL 500 kV transmission line in future years; and 3) to what degree the transmission line is capable of importing renewable energy from the proposed Project, San Diego County, Imperial County and Mexico.

Sunrise Powerlink

The proposed Sunrise Powerlink 500 kV Transmission Line Project (SRPL) would traverse the southeastern portion of San Diego County, running parallel to SWPL and the ECO Substation proposed transmission line, and overlap the proposed Project at the Boulevard Substation. It would transect the southern part of the proposed Tule Wind project area in close proximity to the turbines, the 138 kV transmission line, and the collector substation/O&M facility. The SRPL's FEIS states that part of the purpose and need for the SRPL is to promote renewable energy and provide access for the wind resource development in southeastern San Diego County. None of the alternatives in the DEIS for the proposed Project consider connection of the Tule Wind project to the SRPL.

Recommendation:

The FEIS for the proposed Project should expand on the SRPL's transmission capacity and whether it would utilize any components of the proposed Project (including transmission towers, access roads, etc). Cumulative impacts of the SRPL and the proposed Project should be discussed. The FEIS should state whether or not connection of the Tule Wind project to the SRPL was considered as an alternative to the proposed Project and, if it was, explain why it was rejected.

Water Resources

Clean Water Act Section 404 Jurisdictional Determination

A section titled *Jurisdictional Wetlands and Waters* is presented on page D.2-29 of the DEIS. It states that the aquatic resources located on the Project site may be under the jurisdiction of the U.S. Army Corps of Engineers (Corps) as wetlands or waters of the United States (waters). The DEIS goes on the list some of the major drainages in the proposed Project area, as well as identify the presence of wetland communities and sandy ephemeral washes. Subsequent sections for the ECO Substation, Tule Wind, and ESJ Gen-tie Project (D.2.1.2, D.2.1.3, D.2.1.4) further note the potential presence of waters within the proposed Project study areas.

Although the DEIS describes the potential for waters within the ECO Substation study area (p. D.2-62), it concludes that no Corps jurisdictional wetlands occur in the Tule Wind project (p. D.2-80) nor in the ESJ Gen-Tie project study area (p. D.2-97). At the time of publication of this DEIS, the U.S. Army Corps of Engineers had not yet made a jurisdictional determination for this Project. In the absence of a formal jurisdictional determination verified by the Corps, it is difficult to discern the extent of impacts to waters.

Recommendation:

EPA recommends that the FEIS include: (1) the findings of the Corps' verified jurisdictional delineation, and (2) a table identifying the acreage of jurisdictional waters for each project and project alternative. This table should describe each type of water and include the direct/indirect permanent and temporary impacts to waters.

Compliance with CWA Section 404 Guidelines

If it is determined that there are jurisdictional waters within the Project area, a CWA Section 404 permit from the Corps will be required for any discharges of dredged or fill material into these waters. If a Section 404 permit is required, EPA will review the Project for compliance with the Federal Guidelines for Specification of Disposal Sites for Dredged or Fill Materials (40 CFR 230), promulgated pursuant to Section 404(b)(1) of the CWA (Guidelines). Pursuant to the Guidelines, any permitted discharge into waters must be the Least Environmentally Damaging Practicable Alternative (LEDPA) available to achieve the project purpose. No discharge can be permitted if it will cause or contribute to significant degradation of waters. Based on the information available within the DEIS, the Applicant has not demonstrated compliance with the Guidelines.

If impacts to aquatic resources cannot be avoided, alternatives that minimize impacts must be fully considered. With projects such as transmission lines, substations and wind projects, there are opportunities to avoid and minimize direct, indirect, and cumulative impacts to potential jurisdictional waters by applying sensitive design criteria. EPA offers the following recommendations to help facilitate compliance of the Project with the Section 404 Guidelines:

Recommendations:

The 404 (b)(1) Guidelines require that projects first avoid, then minimize, and, finally, mitigate any impacts to waters. The FEIS should describe in detail the direct, indirect, and temporary impacts to waters, quantify these impacts in a table as recommended above, and discuss steps that would be taken to avoid and minimize impacts of each project alternative. The FEIS should identify the LEDPA, if applicable, and describe how the project would comply with the 404(b)(1) Guidelines. The location of ephemeral waters, emergent wetlands, southern willow scrub, and other sensitive habitat and species should be considered during development of the LEDPA.

Explore additional avoidance and minimization measures, such as bridging and the use of at-grade crossings or Arizona crossings for roads. Sensitive design criteria should also be included, such as: reducing the fill footprint; locating turbines out of all waters; locating substations and transmission towers out of waters and designing turbine pads to ensure erosion and sedimentation off pads into waters is minimized.

Compensatory Mitigation for Losses of Aquatic Resources

The Compensatory Mitigation for Losses of Aquatic Resources Final Rule (Department of Defense [33 CFR parts 325 and 332], Environmental Protection Agency [40 CFR Part 230], April 10, 2008) established standards and criteria for the use of all types of compensatory mitigation to offset unavoidable impacts to waters of the United States authorized through issuance of permits by the Corps pursuant to section 404 of the CWA. Section 230.93(a)(2) compensatory mitigation may be performed using the methods of restoration, enhancement, establishment, and, in certain circumstances, preservation. If an individual permit is required by the Corps, the regulations below require a final approved mitigation plan prior to permit issuance. If the Project would be covered by a Nationwide Permit (NWP) and the Corps determines the applicant needs mitigation, the Corps can issue an NWP based on a conceptual mitigation plan; but the applicant cannot commence work without a final Corps approved plan (230.94 (c)(1)(ii)).

Section 230.93(b)((1): In general, the required compensatory mitigation should be located within the same watershed as the impact site, and should be located where it is most likely to successfully replace lost functions and services, taking into account such watershed scale features as aquatic habitat diversity, habitat connectivity, relationships to hydrologic sources, trends in land use, ecological benefits, and compatibility with adjacent land uses.

Section 230.94(c) Mitigation Plan. (1) Preparation and Approval. (i) For individual permits, the permittee must prepare a draft mitigation plan and submit it to the district engineer for review. After addressing any comments provided by the district engineer, the permitee must prepared a final mitigation plan, which must be approved by the district engineer prior to issuing the individual permit. The approved final mitigation plan must be incorporated into the individual permit by reference.

Recommendation:
Include, in the FEIS, compensatory mitigation measures for potential impacts to waters, as appropriate, pursuant to the Compensatory Mitigation for the Loss of Aquatic Resources Final Rule, 33CFR 325 and 332, April 10, 2008.

Natural Washes and Aquatic Features

EPA is concerned with the scope of indirect and direct impacts to natural washes and site hydrology. The DEIS provides minimal information on the direct and indirect impacts to these resources as a result of the proposed project and fails to consider the updid - and downstream reach and extent of these aquatic features or their importance in this landscape.

Natural washes perform a diversity of hydrologic, biochemical, and geochemical functions that directly affect the integrity and functional condition of higher-order waters downstream. Healthy ephemeral waters with characteristic plant communities control rates of sediment deposition and dissipate the energy associated with flood flows. Ephemeral washes also provide habitat for breeding, shelter, foraging, and movement of wildlife. Many plant populations are dependent on these aquatic ecosystems and adapted to their unique conditions. The potential damage that could result from disturbance of flat-bottomed washes includes alterations to the hydrological functions that natural channels provide in arid ecosystems, such as adequate capacity for flood control, energy dissipation, and sediment movement; as well as impacts to valuable habitat for desert species.

Recommendations:
To the extent any aquatic features that could be affected by the Project are determined not to constitute waters of the U.S., EPA recommends that the FEIS characterize the functions of such features and discuss potential mitigation.

To avoid and minimize direct and indirect impacts to desert washes (such as erosion, migration of channels, and local scour):

- do not place turbine support structures in waters;
- commit to the use of natural washes, in their present location and natural form and including adequate natural buffers, for flood control to the maximum extent practicable;
- reconfigure the project layout, roads, and constructed drainage channels to avoid ephemeral washes and special aquatic sites within the project footprint; and
- minimize the number of road crossings over waters, and design necessary crossings to provide adequate flow-through during storm events.

Fencing

The DEIS does not provide detailed information about fencing nor the effects of fencing on drainage systems. In this region, storms can be sudden and severe, resulting in flash flooding. Fence design must address hydrologic criteria, as well as security performance criteria. The National Park Service recently published an article *National, Effects of the International Boundary Pedestrian Fence in the Vicinity of Lukeville, Arizona, on Drainage Systems and Infrastructure, Organ Pipe Cactus National Monument, Arizona (Park Service, August 2008),* on the effects of the international boundary pedestrian fence on drainage systems and infrastructure. We recommend that BLM review this article to ensure that such issues are adequately addressed.

Recommendation:
Provide more detailed information in the FEIS on the proposed fencing design and placement, and the potential effects of fencing on drainage systems on the Project site. Ensure that fencing proposed for this Project will meet appropriate hydrologic, wildlife protection and movement, and security performance standards. Describe those standards in the FEIS.

Groundwater

The DEIS indicates that construction of the proposed Project would require the use of up to 50 million gallons (154 afy) of water during construction for dust suppression, grading, and concrete mixing (ECO Substation, 92afy, Tule Wind Project 54 afy, ESJ Gen-Tie 2.4 afy). The water would come from local groundwater and imported water supplies (p. D.12-31). Portions of the proposed Project lie within the Jacumba Valley Groundwater Basin, the groundwater storage capacity of which is unknown. Other hydrologic areas include McCain hydrologic subarea, Cannebrake Valley hydrologic subarea and the Cameron hydrologic area. Possible local water suppliers mentioned in the DEIS include the Sweetwater Authority, City of San Diego, Jacumba Community Service District, Live Oak Spring Water Company, and McCain Valley Conservation Camp.

As disclosed in the DEIS, the rate of recharge to the Jacumba Valley Groundwater Basin is estimated to be greater than the rate of usage, based on studies completed in 1980 and 1994" (p. D.12-31). The DEIS describes the rate of recharge as being 2700 acre-feet/year in 1980 (through infiltration of water from the Boundary Creek and Flat Creek drainages) and 982 acre-feet/year in 1994 (from the Boundary Creek); and groundwater usage within the basin was estimated at about 810 acre-feet/year in 1994. The DEIS states that, based on these figures and assuming that conditions have not drastically changed, the rate of recharge to the Jacumba Valley Groundwater Basin is estimated to be greater than the rate of usage (DWR 2004) (p. D.12-5). The Groundwater Supply Study should include any updated information regarding the rate of recharge versus usage.

To mitigate for groundwater usage, the DEIS states that, if the groundwater study indicates that the Projects' use of groundwater would adversely affect groundwater supplies, or monitoring of groundwater wells during construction indicates that use of groundwater is adversely affecting local groundwater supplies, water shall be purchased from other water sources and local pumping of groundwater supplies would halt (p. D.12-31). The Groundwater Supply Study should include the parameters and methods that will be used to determine adverse effects.

One of the possible sources of water identified for the construction of the ECO Substation would be water purchased from the Sweetwater Authority, and confirmation has been provided that the Sweetwater Authority has the capacity to provide 25 million gallons of water (p. D.12-27). In December of 2010, the City of San Diego filed a lawsuit against Sweetwater Authority over concerns about groundwater depletion and overdraft. The DEIS does not mention this lawsuit.

Recommendations:
The FEIS should confirm the availability of an adequate water supply for construction and operations of the Project and fully evaluate the environmental impacts associated with the ultimately proposed supply of water.

The Groundwater Supply Study and Documentation of Purchased Water Source, as indicated in the Mitigation Measure HYD-3 Identification of sufficient water supply (p. D12-28), should be included in the FEIS and Record of Decision (ROD).

Since there are three different applicants overseeing the three components of the proposed Project, the FEIS should describe what mitigation measures would be taken, and by whom, should groundwater resources overextend to the point that further curtailment is necessary.

The FEIS should describe the cumulative impacts on groundwater resources and the Jacumba Valley Groundwater Basin that may result from the proposed Project and other foreseeable projects within the region.

The FEIS should clarify whether the City of San Diego's pending legal action against Sweetwater Authority will affect Sweetwater's ability to provide water needed for the proposed Project.

Biological Resources- Endangered Species and Other Species of Concern

EPA is concerned about potential impacts to sensitive wildlife species, since the proposed Project area supports a number of resident and migratory birds, mammals, reptiles, and insects, and their supporting habitats, including golden eagles, Quino checkerspot butterflies, and a number of bat species.

Migratory Birds and Eagles

The Tule Wind project would construct up to 134 wind turbines in McCain Valley, and the proposed Campo, Manzanita, and Jordan wind energy projects would add approximately 171 wind turbines in close proximity. Given the known bird use and identified nesting birds in the vicinity, several special-status bird and bat species have a significant risk of mortality. (p. A.2-184).

A 2010 helicopter survey within 10 miles of the Tule Wind project documented ten golden eagle territories (six active, one possible, and three inactive) (p. D.2-46), with a total of thirty-one golden eagle nests (p. D.2-89). Given the large home ranges of golden eagles and proximity of nests in the area, some birds are likely to be killed during operations even with protective measures.

Recommendations:
The FEIS should:

- Identify specific measures to reduce impacts to eagles. Specify in the FEIS how the proposed project would comply with the Migratory Bird Treaty Act (MBTA), and the Bald and Golden Eagle Protection Act (BGEPA).
- Elaborate on methods that would be used to quantify compliance with a no net loss standard.[1]
- Discuss the applicability of the recently finalized U.S. Fish and Wildlife Service (FWS) permit regulations (50 CFR Parts 13 and 22) to the proposed project.[2] Elaborate on the process and likelihood of obtaining a permit via these regulations.

[1] See Eagle Permits, 50 CFR parts 13 and 22, issued Sept. 11, 2009. See internet address: http://www.fws.gov/migratorybirds/CurrentBirdIssues/BaldEagle/Final%20Disturbance%20Rule%209%20Sept%202009.pdf

- Discuss the applicability of the recent Eagle Conservation Plan Guidelines[3] to the proposed project and, as necessary, describe compensatory mitigation to reduce the effect of permitted mortality to a no-net-loss standard.

If alternatives cannot be developed that avoid the take of eagles, develop an operational monitoring and adaptive management plan to address this issue and, as necessary, compensatory mitigation, and include it in the FEIS and ROD.

The FWS recently published a set of guidelines and recommendations[4] on how to avoid and minimize impacts of land-based wind farms on wildlife and habitat (March 2010). Further revisions and clarifications were published in February 2011 in the Draft Voluntary Land-Based Wind Energy Guidelines. The Guidelines provide a consistent methodology for conducting pre-construction risk assessments and post-construction impact assessments to guide siting decisions by developers and agencies. Furthermore, the Guidelines address all elements of a wind energy facility, including the turbine string or array, access roads, ancillary buildings, and the above-and below-ground electrical lines which connect a project to the transmission system.

We encourage Pacific Wind and BLM to relocate, reduce, or eliminate portions of the project footprint that, based on pre-construction monitoring, would adversely affect threatened, endangered, or sensitive species or their potential habitat. The FEIS and ROD should include specific and binding commitments to mitigation measures put forth in the DEIS. Additional actions that should be considered are discussed below.

Recommendations:
Continue additional pre-construction biological surveys of raptors and bats prior to siting turbines. Elaborate on risk assessment methods and how seasonal, prey and biotic variations were accounted for. The FEIS should discuss the extent to which the recently released Draft Voluntary Land-Based Wind Energy Guidelines were followed.

Minimize placement of wind turbines near areas of prey concentrations within the proposed project area.

Consider incorporating a tactical shut down requirement during critical hours of species activity, as appropriate, to minimize adverse impacts on such species.

Consider blade feathering/idling (including on-the-spot and seasonal shutdowns), reducing cut-in speeds, and adjusting turbine speeds during strategic intervals to reduce take and to prevent avian and bat mortality

Implement and use design models that present the least threat to all wildlife for all transmission and distribution lines, as well as associated infrastructure at substations/switchyards. Incorporate

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[2] See Eagle Permits, 50 CFR parts 13 and 22, issued Sept. 11, 2009. See internet address: http://www.fws.gov/migratorybirds/CurrentBirdIssues/BaldEagle/Final%20Disturbance%20Rule%209%20Sept%202009.pdf

[3] See Draft Eagle Conservation Plan Guidelines, February 2011: See internet address: http://www.fws.gov/windenergy/eagle_guidance.html

[4] U.S. Fish and Wildlife Service Wind Turbine Guidelines Advisory Committee Recommendations, submitted to the Secretary of the Interior by the U.S. Fish and Wildlife Service, March 4, 2010. See Internet address: http://www.fws.gov/habitatconservation/windpower/Wind_Turbine_Guidelines_Advisory_Committee_Recommendations_Secretary.pdf

design features for proposed detention ponds (e.g. pond netting, fencing) and commit to regular inspection and maintenance to ensure proper protection of birds and wildlife.

Include a copy of the Avian Protection Plan in the FEIS and ROD.

Consider mathematical models in post construction surveys that account for local variations and difficulty in locating carcasses, which may reduce the number found.

The DEIS states that, of the raptor species detected in Tule Wind Project area, red-tailed hawks and turkey vultures had the highest encounter rates. Based solely on the encounter rates, these two raptor species would have the highest risk of collision. In addition, other raptor species were detected in the project area.

Recommendation:
The Avian Protection Plan should describe how mortalities of species such as Red Tail Hawks and other avian species will be assessed and evaluated for compliance with the Migratory Bird Treaty Act.

California Condor

The California condor (*Gymnogyps californianus*) is a federally and State-listed endangered species, as well as a State Fully Protected species. According to the DEIS, the condor is not known to commonly occur in San Diego County; however, this species has the potential to fly over the proposed Project site. The San Diego Zoo Institute for Conservation Research has re-introduced a California condor population in the Sierra San Pedro Martir Mountains in Baja, approximately 100 miles south of the proposed Project. The goal is to establish 20 breeding pairs in hopes that the Baja population will in time, link to the central California populations. Condors range widely in their foraging flights and can fly more than 150 miles in a single day, provided there are strong and consistent winds. The type of wind conditions that favor condor flight may be present in the vicinity of the Project area. In addition, the DEIS states that 340 transmission towers will be installed in the proposed Project area; these could provide perching opportunities and ample structures for roosting.

Although there have not been recent observations of the condor in the proposed Project area, the potential exists and will increase as the species' population and range expand. Since Pacific Wind Development is requesting a minimum of 30-year ROW to construct and operate the Tule Wind project, the FEIS should address this foreseeable presence and possible impacts.

Recommendations:
Include, in the FEIS, the results of any ESA consultation with the FWS regarding the California condor and demonstrate how the project will comply with the MBTA for this species.

Monitor the San Diego Zoo Institute's condor re-introduction efforts in Baja.

Include the condor in the Avian Protection Plan or develop a protection plan that is unique to the condor.

Address the potential for the transmission towers to provide attractive perching and roosting opportunities for the condor.

Bats

According to the U.S. Geological Survey (USGS), bat fatalities have been documented at nearly every wind facility in North America where adequate surveys for bats have been conducted, and several

of these sites are estimated to cause the deaths of thousands of bats per year. Twenty-three species of bats are found in San Diego County, including two California Species of Special Concern, the pallid bat (*Antrozous pallidus)* and pocketed free-tailed bat (*Nyctinomops femorosaccus*). The DEIS states that there is moderate potential for these species to forage over the site. The most likely roosting habitat for bats is within canyons, caves, crevices, rock outcrops, and man-made structures -- features that are present in the wind park project area.

The DEIS states that there are at least 48 abandoned or inactive mine openings in the vicinity of Tule Wind Project, with the majority of these located near Julian and McCain Valley (p. D.13-17), but only several of the mines were surveyed for possible roosting or presence of pallid and pocketed free-tailed bats. The number of mines that were surveyed is not provided nor is there any explanation of why the majority were omitted. The DEIS states that there is roosting potential for the pallid and pocketed free-tailed bats in one mine shaft; but results of the survey conducted in June 2010 were not yet available. Bat monitoring efforts are currently underway at other locations within the Project site, and resulting report is pending. (p. D.2-3). The DEIS does not state whether bats will be included in the Avian Protection Plan or whether a separate plan will be developed that is unique to them.

Recommendations:
Include the results of the June 2010 surveys and additional studies in the FEIS.

Explain the rationale for omitting the majority of the mines from acoustic and visual surveys.

Describe other bat species that may be present or impacted by the turbines.

Describe avoidance measures to deter bats from roosting in the additional man-made structures

Include bats in the Avian Protection Plan or develop a protection plan that is unique to the bats.

Consider utilizing unique types of radar technology to monitor for bird and bats. [5]

Consider a tactical shut down option during critical hours of species activity, as appropriate, to minimize adverse impacts on such species.

Consider blade feathering/idling (including on-the-spot and seasonal shutdowns), reducing cut-in speeds, and adjusting turbine speeds during strategic intervals to reduce take and to prevent mortality.

Quino Checkerspot Butterfly

The DEIS states that the proposed Project poses potential un-mitigable direct, indirect, and cumulative adverse impacts to the endangered Quino checkerspot butterfly (*Euphydryas editha quino*) (p. D.2-147, D.2-155, D.2-166). A draft biological assessment has been completed and a take permit is being requested from the FWS.

Recommendations:
Include, in the FEIS, the results of ESA consultation for the Quino checkerspot butterfly.

[5] For example, see http://www.detect-inc.com/avian.html and http://www.upi.com/Science_News/Resource-Wars/2010/03/18/Radar-reduces-wind-farm-risk-to-birds/UPI-71441268920323/. These resources are provided as examples only and do not constitute endorsement of any particular product by EPA.

Describe, in the FEIS and ROD, all biological resources mitigation commitments and how they will be funded and implemented.

Cumulative Impacts Analysis

Cumulative impacts are defined in the Council on Environmental Quality's (CEQ) NEPA regulations as "the impact on the environment that results from the incremental impact of the action when added to the other past, present, and reasonable foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such actions (40 CFR Part 1508.7)". We acknowledge that the DEIS identifies and lists (Table F-2) fifty-three approved and pending projects, and provides a brief description and cumulative impact discussion of some of the larger scale projects. In its analyses, the DEIS often describes the mitigated cumulative impact conclusions with the phrase "given the largely undeveloped nature of the area, (the vegetation communities) in this region are not likely to become limited in acreage or extent". There is no reference nor explanation of what constitutes "undeveloped", and no quantifiable analyses are presented to determine acreage or extent. In addition, the DEIS assumes that the mitigation measures will be the same for the foreseeable projects.

The DEIS states that the Sunrise Powerlink Transmission project (SRPL) was scheduled to begin construction in June 2010, but has been delayed. According to San Diego Gas & Electric (SDG&E), construction of that project would take approximately 34 months (CPUC and BLM 2008, p. B.70) and, therefore, construction of the SRPL and the proposed Project could occur simultaneously (p. F.4-6). Given the proposed Sunrise Powerlink's close proximity to the proposed Project, the FEIS should include a specific detailed cumulative impact analysis regarding the two projects.

Recommendation:
The FEIS should define and quantify the terms "undeveloped" and "limited in acreage or extent".

For each resource analyzed, the DEIS should:

- Identify the current condition of the resource as a measure of past impacts. For example, the percentage of species habitat lost to date.
- Identify the trend in the condition of the resource as a measure of present impacts. For example, the health of the resource is improving, declining, or in stasis.
- Identify the future condition of the resource based on an analysis of impacts from reasonably foreseeable projects or actions added to existing conditions and current trends.
- Assess the cumulative impacts contribution of the proposed alternatives to the long-term health of the resource, and provide a specific measure for the projected impact from the proposed alternatives.
- Disclose the parties that would be responsible for avoiding, minimizing, and mitigating those adverse impacts.
- Identify opportunities to avoid and minimize impacts, including working with other entities.

The FEIS should propose mitigation for all cumulative impacts, and clearly state the lead agency's mitigation responsibilities and the mitigation responsibilities of other entities.

The FEIS should include a specific detailed cumulative impact analysis of the proposed Project and the SRPL. Topics such as increased transmission towers and lines, access roads, disturbance to vegetation and wildlife, increased fire risk and aquatic resource impacts should be included.

Indirect Impacts

CEQ's NEPA Regulations require that the DEIS discuss the growth-inducing impacts of a proposed Project (40 CFR 1508.8(b)). As an indirect result of providing additional power, it can be anticipated that this project will allow for development and population growth to occur in those areas that receive the generated electricity.

Recommendation:
The FEIS should describe the reasonably foreseeable future land use and associated impacts that will result from the additional power supply and jobs created by the project. The document should provide an estimate of the amount of growth, likely location, and the biological and environmental resources at risk.

Cultural Resources and Coordination with Tribal Governments

Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments* (November 6, 2000), was issued in order to establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, and to strengthen the United States government-to-government relationships with Indian tribes. The DEIS states that government-to-government consultations are ongoing for the ECO Substation, Tule Wind Project, and ESJ Gen-Tie projects, and cultural resource surveys for ECO Substation and ESJ Gen-Tie have not been completed. Surveys done for the Tule Wind Project area indicate the presence of numerous cultural resources.

Section 106 of the NHPA requires Federal agencies to consider the effects of their actions on cultural resources, following regulations at 36 CFR 800. Consultation for tribal cultural resources is required under NHPA Section 106, which requires a federal agency, upon determining that activities under its control could affect historic properties, to consult with the appropriate State Historic Preservation Officer/Tribal Historic Preservation Officer (SHPO/THPO). Under NEPA, any impacts to tribal, cultural, or other treaty resources, and possible measures to mitigate such impacts, must be discussed in the EIS.

Executive Order 13007 *Indian Sacred Sites* (May 24, 1996) requires federal land managing agencies to accommodate access to, and ceremonial use of, Indian sacred sites by Indian Religious practitioners, and to avoid adversely affecting the physical integrity, accessibility, or use of sacred sites. It is important to note that a sacred site may not meet the National Register criteria for a historic property and that, conversely, a historic property may not meet the criteria for a sacred site.

Several proposed utility-scale renewable energy projects in California are currently the subject of lawsuits pertaining to tribal cultural resources. We urge BLM and the CPUC to ensure that government-to-government consultations are being conducted in a manner that is meaningful to the Tribes that would be affected by the proposed Project.

The DEIS states that, since the cultural resources survey and NHPA Section 106 consultations are ongoing, the BLM has not yet made a determination of project effect, and The proponent is committed to revising the project layout as necessary to avoid National Register of Historical Places and California Register of Historical Places(NRHP- and CRHR)-eligible sites to the greatest extent possible. The BLM anticipates developing either a Programmatic Agreement (PA) or a Memorandum of Agreement (MOA) to complete its obligations regarding the Section 106 process. It will do so through consultation with other state and federal agencies, including the SHPO and ACHP, and interested Native American communities (p. 7-58).

Recommendations:
Discuss, in the FEIS, how any concerns raised by Tribes were addressed and resolved. Provide an update on the status of the Programmatic Agreement. The FEIS should indicate whether the Tribes are in agreement that the Programmatic Agreement will reduce impacts to prehistoric and sacred sites to less than significant.

Adopt consistent requirements to establish regular and meaningful consultation and collaboration with tribal officials, to inform project and programmatic level efforts, and to address how any impact to tribal or cultural resources will be avoided or mitigated, consistent with Executive Order 13175, Section 106 of the National Historic Preservation Act, and Executive Order 13007, Indian Sacred Sites.

The FEIS should address Executive Order 13007, distinguish it from Section 106 of the NHPA, and discuss how the BLM will avoid adversely affecting the physical integrity, accessibility, or use of sacred sites, if they exist.

Climate Change

EPA commends BLM for the attention given to the issue of climate change**.** Scientific evidence supports the concern that continued increases in greenhouse gas emissions resulting from human activities will contribute to climate change. Effects on weather patterns, sea level, ocean acidification, chemical reaction rates, and precipitation rates can be expected. These changes may affect the proposed Project and its environs. We understand that, once the Project is operational, it would generate electricity without air pollution, potentially reducing overall emissions associated with power production in the Project area; however, the DEIS does not include measures to avoid, minimize, or mitigate the effects of climate change on the proposed Project, nor does it discuss the extent to which climate change may alter the impacts of the proposed Project on the environment.

Recommendations:
Consider how climate change could affect the proposed Project and the affected environment, specifically within sensitive areas, and assess how the impacts of the proposed Project could be exacerbated by climate change.

Identify strategies to more effectively monitor for climate change impacts in the surrounding area, such as monitoring possible groundwater changes due to impermeable surfaces created at the base of turbines and the effects of such changes on special status species.

Identify specific mitigation measures needed to 1) protect the Project from the effects of climate change, and 2) reduce adverse effects to air quality caused by Project construction activities.

Completion of Surveys and Plans

The DEIS states that several surveys and plans were not completed before publication. Some of these include: rare plant surveys, bat surveys, drainage plan, Maintenance Fire Prevention/Protection Plan, Habitat Restoration Plan, Noxious Weeds and Invasive Species Control Plan, Avian Protection Plan and Historic Properties-Cultural Resources Treatment Plan.

Recommendations:
The results of surveys that are needed to complete the development of appropriate avoidance and mitigation measures to minimize impacts to various resources should be included in the FEIS.

The missing plans should be completed and included in the FEIS and ROD.

Air Quality

The Project area is located within the jurisdiction of the San Diego Air Quality Management District, (SDAQMD). EPA supports incorporating mitigation strategies to reduce or minimize fugitive dust emissions, and emission controls for particulate matter (PM), toxic emissions, and ozone precursors from construction-related activity. All applicable State and local requirements to reduce impacts from such emissions should be included in the FEIS. Corrections are needed to some of the information provided in the DEIS regarding EPA's air quality program.

Recommendations:
The following air quality information should be updated or corrected and included in the FEIS:

Section D.11.1.1 Criteria Air Pollutants (p.D.11-3) states "…the U.S. Environmental Protection Agency (EPA) has adopted health-based ambient air quality standards and regionwide pollution reduction plans. Seven air pollutants…" This should be corrected to state "…the U.S. Environmental Protection Agency (EPA) has adopted health-based ambient air quality standards and State and Local pollution reduction plans. Six air pollutants…" Note: EPA considers PM10 and PM2.5 to be one pollutant.

EPA suggests that Section D.11.1.1 (p. D.11-6) Table D.11-1 include the appropriate standards for comparison purposes.

Section D.11.1.1 (p. D.11-7) Table D.11-2: EPA suggests replacing the data for the National 1-hour Ozone Standard with the relevant data for the National 8-hour Ozone Standard, as well as including the relevant data for the National Annual PM2.5 Standard.

Section D.11.2.1 Ambient Air Quality Standards (p. D.11-9) states "… The NAAQS include maximum concentration levels for seven criteria pollutants…" This should be corrected to state "… The NAAQS include maximum concentration levels for six criteria pollutants…" as PM10 and PM2.5 are considered one pollutant.

Section D.11.2.1 (p. D.11-9) Table D.11-3: Moving this table more toward the beginning of the "Existing Air Quality" section would help clarify the information presented there.

Section D.11.2.4 (p. D.11-13) - The bullet "EPA/CARB Off-Road…" should be changed to "CARB Off-Road…" since all the listed regulations appear to be CARB's, not EPA's.

MM AQ-1 (p. D.11-24) has two bullet points: "All active construction areas, unpaved access roads, parking areas, and staging areas will be watered or stabilized with nontoxic soil stabilizers as needed to control fugitive dust" and "Exposed stockpiles (e.g., dirt, sand) will be covered and/or watered or stabilized with nontoxic soil binders as needed to control emissions." EPA suggests that these include language that is consistent with statements on p. D.11-22, D.11-26 and D.11-30: "To account for fugitive dust control measures in the calculations, it was assumed that the active sites would be watered at least three times daily to comply with SDAPCD Rule 55."