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

SEP 2 7 2012

Jeffrey Childers, Project Manager
California Desert District Office
Bureau of Land Management
22835 Calle San Juan de Los Lagos
Moreno Valley, California 92553

Subject: Draft Environmental Impact Statement for the Proposed Alta East Wind Project, Kern County, California (CEQ #20120205)

Dear Mr. Childers:

The U.S. Environmental Protection Agency has reviewed the Draft Environmental Impact Statement (DEIS) for the Proposed Alta East Wind Project. Our review and comments are provided pursuant to the National Environmental Policy Act, the Council on Environmental Quality Regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

EPA continues to support increasing the development of renewable energy resources 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.

EPA provided extensive formal scoping comments for the project on August 15, 2011, including detailed recommendations regarding purpose and need, range of alternatives, cumulative impacts, biological and water resources, air quality, and other resource areas of concern. We are pleased to note that, as described in the DEIS, BLM's preferred alternative – Alternative C – would avoid the northern 318 acre parcel containing Joshua tree woodland habitat adjacent to the Pacific Crest Trail and the portion of the project site nearest active golden eagle nests. We also commend the early resource analyses and agency coordination that resulted in the evaluation of 7 alternatives, including two reduced footprint alternatives.

Notwithstanding the positive aspects of the proposed project, EPA is concerned about potential impacts to air quality and site hydrology, and we continue to have the concerns raised in our scoping comments regarding cumulative impacts to resources resulting from the 21 existing or proposed large-scale wind energy projects in the Tehachapi Wind Resource Area. We are also concerned about potential impacts to avian species, particularly the golden eagle and California condor. Based on our review of the DEIS, we have rated the project and document as *Environmental Concerns – Insufficient Information* (EC-2) (see the enclosed "Summary of EPA Rating Definitions").

With respect to adverse air quality impacts resulting from the construction period, we recommend requiring more stringent mitigation measures, phased construction, and early coordination among multiple renewable energy project construction schedules to minimize adverse air quality impacts to nearby sensitive receptors and the region.

With regard to site hydrology, we understand that, since the publication of the DEIS, the Army Corps of Engineers has determined that all aquatic resources on the project site are intrastate isolated waters not subject to section 404 of the Clean Water Act. While not federally jurisdictional, such resources are important features of the desert ecosystem, and we recommend that avoidance of those drainages and associated habitat on the site be maximized through design modifications to the wind turbine layout.

As noted in the DEIS, the project is located within an essential landscape linkage for a functioning wildland network; therefore, we recommend that the applicant and BLM continue to work closely with the U.S. Fish and Wildlife Service to protect habitat connectivity for special status species and avoid avian bird strikes during operations. In coordination with USFWS, the FEIS should identify sufficient lands for habitat compensation for the project's impacts, in order to ensure that compensatory lands are of comparable or superior quality, and are suitable compensation for the unique habitat on the project's site. In addition to including the final Avian and Bat Protection Plan and Eagle Conservation Plan, the FEIS should clarify how the applicant will comply with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Ongoing renewable energy programmatic planning efforts, such as the Desert Renewable Energy Conservation Plan, may be relevant to the proposed project. We recommend that the FEIS integrate the latest analyses from, and demonstrate the proposed project's consistency with, the DRECP. We also recommend that BLM commit, in the FEIS and ROD, to measures similar to those adopted for the Desert Sunlight Solar Project, to protect the portions of the subject Right-of-Way that were specifically avoided due to resource impacts, and we further encourage BLM to consider such a land use policy modification through the development of the DRECP.

The enclosed detailed comments elaborate on the above concerns and provide specific recommendations regarding analyses and documentation needed to assist in assessing potential significant impacts from the proposed project, and for minimizing adverse impacts. We are available to further discuss all recommendations provided.

Please note that starting October 1, 2012, EPA Headquarters will not accept paper copies or CDs of EISs for official filing purposes. Submissions on or after October 1, 2012, must be made through the EPA's new electronic EIS submittal tool: *e-NEPA*. To begin using *e-NEPA*, you must first register with the EPA's electronic reporting site - https://cdx.epa.gov/epa_home.asp. Electronic submission does not change requirements for distribution of EISs for public review and comment, and lead agencies should still provide one hard copy of each Draft and Final EIS released for public circulation to the EPA Region 9 office in San Francisco (Mail Code: CED-2). If you have any questions, please contact me at (415) 972-3843 or contact Tom Plenys, the lead reviewer for this project. Tom can be reached at (415) 972-3238 or plenys.thomas@epa.gov.

Sincerely,

Kathleen Martyn Goforth, Manager
Communities and Ecosystems Division

Enclosures: Summary of EPA Rating Definitions
EPA's Detailed Comments

cc: Jacquelyn Kitchen, Kern County Planning and Community Development Department
Ray Bransfield, United States Fish and Wildlife Service
Craig Bailey, California Department of Fish and Game

Israel Naylor, Chairperson and Dennis Mattison, Environmental Director (ED), Fort Independence Reservation
Wayne Burke, Chairman and John Mosley, ED, Pyramid Lake
Lee Choe, Acting Chairman, San Juan Paiute
George Gholson, Chairperson and Michael Babcock, ED, Timbisha Shohone
Daniel Gomez, Chairman and Oscar Serrano, Senior Engineer, Colusa Indian Colony
Carla Rodriguez, Chairperson and Clifford Batten, Environmental Coordinator, San Manuel

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 FOR THE PROPOSED ALTA EAST WIND PROJECT, KERN COUNTY, CALIFORNIA, SEPTEMBER 27, 2012

Air Quality

EPA is concerned about the direct, indirect and cumulative impacts of construction emissions and fugitive dust associated with the project, even after mitigation measures have been taken into account. The proposed project is located in Mojave Desert Air Basin which is in non-attainment for federal eight hour ozone standards and State standards for particulate matter 10 microns or less in size (PM_{10}) (p. 4.2-18). The DEIS includes estimated emissions for criteria pollutants and a description of the mitigation measures that would be implemented to reduce the adverse air impacts identified in the DEIS; however, even with implementation of these mitigation measures, maximum daily construction emissions are predicted to exceed Eastern Kern Air Pollution Control District (EKAPCD) thresholds of significance for oxides of nitrogen (NO_x) and PM_{10} (p. 4.2-4). We also note that the project's dispersion modeling analysis identified 'significant and unavoidable' impacts to residents living in close proximity to the project site (p. 4.2-5). In light of the area's nonattainment status, potential health impacts to local residents, and the construction of ten reasonably foreseeable wind and transmission projects in the area, all feasible measures should be implemented to reduce and mitigate air quality impacts to the greatest extent possible.

Recommendations:
Include, in the FEIS and Record of Decision (ROD), a commitment to implement all mitigation measures in the DEIS, and additional mitigation measures that go beyond those in the DEIS (see recommendations, below), on a schedule that would reduce construction emissions to the maximum extent feasible.

Describe, in the FEIS, how these mitigation measures would be made an enforceable part of the project's implementation schedule. We recommend implementation of applicable mitigation measures prior to or, at a minimum, concurrent with the commencement of construction of the project.

Discuss, and consider incorporating in the ROD, mitigation measures from the South Coast Air Quality Management District's Rule 403 to ensure best available and enhanced dust control measures for large scale construction projects, and estimate, in the FEIS, the additional emission reductions that could result.

The FEIS and ROD should include a commitment by the applicant to minimize disturbance to the natural landscape as much as possible, so that the need for measures to reduce fugitive dust is minimized or eliminated.

Correct, or provide support for, the statement that Alternative C would "Result in 80 percent lower annual/total construction emissions" (p. ES-8).

Additional mitigation for non-road and on-road engines

EPA supports incorporating mitigation strategies to reduce or minimize fugitive dust emissions, as well as more stringent emission controls for PM and ozone precursors for construction-related activity. We commend BLM for incorporating EKAPCD's Rule 402 to reduce PM emissions during construction, as well as MM 4.2-3 to further reduce fugitive dust on unpaved roads and particulate emissions from onsite dedicated equipment exhaust (p. 4.2-25). We note that MM 4.2-2 recommends Tier 3 engines, if available

(p. 4.2-24). EPA began phasing-in Tier 4 standards for non-road engines in 2008[1]; however, the DEIS does not mention the availability of Tier 4 non-road engines. The use of such engines would result in an approximately 90% reduction in NO_x and PM emissions as compared to Tier 3.

Recommendations:
The FEIS should discuss, and include emission tables for, various classifications of on-road and non-road engines, highlighting emission levels for PM_{10}, $PM_{2.5}$ and NO_x.

The FEIS should provide a list of the equipment to be used during construction and indicate the expected availability of Tier 3 and Tier 4 engines for each application.

The FEIS and ROD should commit to using non-road construction equipment that meets Tier 4 emission standards, when available, and best available emission control technology, for construction that occurs prior to Tier 4 standards availability.

The FEIS should update the tables in the Section 4.2 impact analysis to reflect the additional criteria pollutant emissions reductions that would result from using Tier 4 engines for each component of project construction.

We recommend that the applicant and BLM commit to implementing best available emission control technologies for construction, ahead of the California Air Resources Board's in-use off-road diesel vehicle regulations, regardless of fleet size.[2]

All applicable State and local requirements, and the additional and/or revised measures listed above, should be included in the FEIS, and the FEIS and ROD should include a condition that the applicant incorporate all such measures into construction contracts.

Cumulative Air Quality Analysis

Table 4.2-9 – Cumulative Annual Construction Emissions – indicates that construction of this project, in conjunction with the ten other foreseeable wind and transmission projects listed, would exceed annual EKAPCD emission thresholds for volatile organic compounds (VOCs), NOx, PM_{10} and $PM_{2.5}$ (p. 4.2-19). We also note that the annual PM_{10} emissions threshold will be exceeded during operations of reasonably foreseeable projects.

Recommendations:
Utilize the cumulative emissions data and, in consultation with the EKAPCD, develop a phased construction schedule, for projects that will undergo construction concurrently, that will not result in any violations of local, state or federal air quality regulations. EPA recommends incremental construction on-site to ensure air quality standards are not exceeded.

The FEIS should provide technical justification for any determination that a future project is too far from the proposed project to contribute to cumulative air quality impacts. While the DEIS states that a cumulative air quality analysis was conducted within one mile of the project site (p. 4.2-20), the appropriate area to consider depends on the emissions, size of the source, and release height, among other criteria.

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[1] See EPA website: http://www.epa.gov/nonroad-diesel/2004fr/420f04032.htm#standards
[2] See CARB's Factsheet at: http://www.arb.ca.gov/msprog/ordiesel/faq/overview_fact_sheet_dec_2010-final.pdf

Estimate, and incorporate into the FEIS' cumulative impact analysis, air emissions for the High Speed Rail project and provide an update on the expected time frame for its construction.

If additional mitigation measures would be needed, based on the evaluation of cumulative emissions, or if the project would affect the ability of other foreseeable projects to be permitted, the FEIS should discuss this.

In light of the greater than 3,700 daily truck and worker commute trips expected (p. 4.16-14), develop a construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow in coordination with concurrent nearby projects. Incorporate a discussion of potential transit options (including formal rideshare, carpooling, and bussing) to transport workers from the nearest population centers to the project sites, as well as other measures to facilitate accessibility to the job sites and reduce greenhouse gas emissions resulting from worker transportation.

Public Health and Sensitive Receptor Notification

In light of the projected daily emission exceedances and the identified 'significant and unavoidable' impacts to local residents, the FEIS should include a detailed discussion of the potential health effects of these emissions to sensitive receptors and consider a mitigation measure that would ensure that sensitive receptors are informed of these potential risks in advance of construction. This information should be provided concurrently with advanced notification of construction provided as mitigation for noise impacts.

Recommendations:
Expand the air quality impact analysis to include a detailed discussion of the potential health effects to sensitive receptors from exposure to PM_{10} and $PM_{2.5}$, as well as toxic air contaminants.

Incorporate into MM 4.6-2 advanced notification to sensitive receptors of the potential health effects of PM_{10} and $PM_{2.5}$, as well as toxic air contaminants.

Given the proximity of several schools to the project site, consider whether the pollutants and sources of concern pose a particular hazard to children's health (for example, PM_{10}, dust, heavy metals, or air pollution from near construction or roadway exposures). Discuss potential impacts to children's health in the context of Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (April 21, 1997), which directs each Federal agency, to the extent permitted by law and appropriate, to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children, and to ensure that its policies, programs, activities, and standards address these risks.

Greenhouse Gas Emissions - Construction and Operation Bid Specifications

To minimize greenhouse gas emissions from project construction and operations, we recommend that the FEIS and ROD include commitments to incorporate the following into all contract solicitations:

a) Soliciting bids that include use of energy- and fuel-efficient fleets;
b) Requiring that contractors ensure, to the extent possible, that construction activities utilize grid-based electricity and/or onsite renewable electricity generation rather than diesel and/or gasoline powered generators;

c) Employing the use of zero emission or alternative fueled vehicles;
d) Using lighting systems that are energy efficient, such as LED technology;
e) Using the minimum amount of GHG-emitting construction materials that is feasible;
f) Using cement blended with the maximum feasible amount of fly ash or other supplemental cementitious materials that reduce GHG emissions from cement production;
g) Using lighter-colored pavement where feasible; and,
h) Recycling construction debris to maximum extent feasible.

Water Resources

Drainages and Ephemeral Washes

Proposed project construction associated with access roads and transmission line development could directly (via temporary or permanent fill) and indirectly affect drainages and ephemeral washes within the proposed project area. Roughly 42 acres of State jurisdictional drainages were delineated on site. Based on the current project design, access roads and collector lines are expected to intersect ephemeral streams in 99 locations, and would result in temporary and permanent impacts to roughly 5 acres of California Department of Fish and Game-jurisdictional streambeds (p. 4.17-6).

Ephemeral 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. As the DEIS notes, drainages occurring in the region are likely to function as movement corridors, and upland habitat is expected to provide vital linkages for many terrestrial species (p. 3.21-5). 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.

The DEIS provides minimal information on the direct and indirect impacts to waters as a result of the proposed project and does not consider the up- and downstream reach and extent of waters or their importance in this landscape.

Recommendations:
The FEIS should characterize the functions of aquatic features, such as washes, on the proposed project site and discuss how the project would protect and maintain those functions.

Describe how the proposed project layout, roads, and drainage channels have been configured to avoid ephemeral washes to the maximum extent practicable.

Demonstrate that downstream flows would not be adversely impacted due to proposed changes to, and crossings of, natural washes.

Include a finalized drainage plan in the FEIS to facilitate assessment of impacts and effectiveness of mitigation measures.

To avoid and minimize direct and indirect impacts to ephemeral washes (such as erosion, migration of channels, and local scour), we suggest the following additions to MM 4.17-4 – BMPs for Activities In or Near Ephemeral Drainages (p. 4.17-26):

- Avoid placing turbine support structures in aquatic features to the maximum extent practicable.
- Implement all practicable opportunities to further reduce the footprint of project elements (parking, buildings, roads, etc.);
- Use natural washes, in their present location and natural form and including adequate natural buffers, for flood control, to the maximum extent practicable.
- Minimize the number of road crossings over waters and design necessary crossings to provide adequate flow-through during storm events to the maximum extent practicable.

The cumulative impacts analysis of Section 4.17, Vegetation Resources, includes a discussion of the impacts and mitigation measures for state jurisdictional drainages and concludes that "jurisdictional habitats are limited in the western Mojave Desert and arid foothills of the Tehachapi Mountains, and when considered cumulatively on a region-wide scale, impacts to jurisdictional areas would remain significant and unavoidable under CEQA" (p. 4.17-20). It appears that the project could result in a net loss of desert wash resource functions as application of MM 4.17-1 (Habitat Restoration and Revegetation Plan) allows for a choice between off site conservation, on-site restoration or mitigation banking (p. 4.17-23).

Recommendation:
Consider including a commitment to pursue opportunities to restore or enhance other lands within the watershed to replace desert wash functions lost on the project site and to demonstrate, and ensure, no net loss of desert wash resource function.

Fencing

The DEIS does not provide information about the potential effects of fencing on drainage systems. By entraining debris and sediment, fencing can interfere with natural flow patterns. Fence design should address hydrologic criteria, as well as security performance criteria.

Recommendations:
In the FEIS, describe where permanent fencing will be used and the potential effects of fencing on drainage systems. Ensure that the fencing proposed for this project will meet appropriate hydrologic performance standards.

Review the National Park Service's published article[3] on the effects of the international boundary pedestrian fence on drainage systems and infrastructure, and ensure that such issues are adequately addressed with this project.

[3] National Park Service, August 2008, Effects of the International Boundary Pedestrian Fence in the Vicinity of Lukeville, Arizona, on Drainage Systems and Infrastructure, Organ Pipe Cactus National Monument, Arizona.

Floodplain Hazards

Executive Order 11988 Floodplain Management requires federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains. A 100-year Flood Hazard Area designated by FEMA was identified along Cache Creek (p. 4.19-7).

> *Recommendations:*
> Demonstrate, in the FEIS, how each alternative analyzed in the DEIS is consistent with the provisions of Executive Order 11988.
>
> Provide, in the FEIS, a detailed description of the current FEMA floodplain, and include results of consultation with FEMA, if appropriate.

Groundwater

We are concerned about the potential groundwater drawdown and cumulative impacts to the Fremont Valley Groundwater Basin associated with the concurrent construction and operational phases of the proposed project in conjunction with the reasonably foreseeable projects in the vicinity. As prior BLM NEPA documents have noted, even modest drawdowns of 0.3 foot can adversely affect vegetation if groundwater drops below the effective rooting levels for a sustained period of time.[4] A drop in groundwater levels could also impact neighboring wells, lower the water table, and adversely affect groundwater-dependent vegetation and woodlands.

> *Recommendations:*
> The FEIS should include confirmation that the selected municipal water district is able to supply the water needed for construction.
>
> Expand, in the FEIS, MM 4.19-5 – Develop a Water Supply Contingency Plan – to include what mitigation measures would be taken, and by whom, should groundwater resources in the basin become overextended to the point that further curtailment is necessary due to, for example, additional growth, the continued influx of large-scale wind projects, drought, climate change, or the utilization of existing or pending water rights in the basin.
>
> Include, in Section 4.20 of the FEIS, a numerical analysis, based on expected pumping rates and best available data, of the anticipated drop in groundwater levels and associated impacts to groundwater-dependent vegetation and woodlands.

<u>Biological Resources</u>

Endangered Species and Other Species of Concern

The site supports a diversity of mammals, birds, and reptiles, including special status wildlife species. While we note considerable coordination to date between the applicant, BLM and USFWS on the project's avian issues, we understand that a Biological Opinion has not been prepared for this project, and it is unclear whether a BO is currently under development specific to the resources identified. It is also unclear whether USFWS or the California Department of Fish and Game have reviewed or commented on the adequacy of the surveys and monitoring of biological resources conducted to date.

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[4] For example: Bureau of Land Management and California Energy Commission, March 2010. Staff Assessment and Draft Environmental Impact Statement for Genesis Solar Energy Project, p. C.2-4.

The USFWS finalized the voluntary Land-Based Wind Energy Guidelines on March 23, 2012, which provide a structured scientific process for addressing wildlife conservation concerns at all stages of land-based wind energy development. They also promote effective communication among wind energy developers, government agencies and local conservation organizations and tribes. The Guidelines use a "tiered approach" for assessing adverse effects to species of concern and their habitats.[5].

Recommendations:
The FEIS should provide an update on the Endangered Species Act consultation process and include the Biological Opinion, if one is issued, as an appendix.

Mitigation and monitoring measures that result from consultation with USFWS to protect sensitive biological resources, including desert tortoise, burrowing owl, golden eagles and the California condor, should be included in the FEIS and, ultimately, the ROD.

Discuss, in the FEIS, coordination with USFWS and CDFG and their review of the surveying, monitoring, and reporting protocols completed to date. Include a commitment to consistent application of USFWS and CDFG supported methods in future protection and mitigation efforts.

Coordinate with USFWS to incorporate recommendations from the recently published USFWS Land-Based Wind Guidelines into the FEIS and ROD.

Golden Eagles

The DEIS indicates that golden eagles were observed foraging in the project area during surveys in all four seasons (p. 4.21-7). Three active and 10 inactive golden eagle nests were found within 10 miles of the project boundary. Among golden eagle observations, 87.7 percent were recorded flying within the rotor-swept height (p. 2-22). Further, 7 golden eagle carcasses have been reported at the Pine Tree Wind Farm located roughly 10 miles north of the proposed project (p. 4.21-21).

All raptor species are protected under the Migratory Bird Treaty Act (MBTA). The golden eagle also receives protection under the Bald and Golden Eagle Protection Act (BGEPA). In September 2009, the USFWS finalized permit regulations[6] under the BGEPA for the take of bald and golden eagles on a limited basis, provided that the take is compatible with preservation of the eagle and cannot be practicably avoided. The final rule states that if advanced conservation practices (ACPs) can be developed to significantly reduce take, the operator of a wind-power facility may qualify for a programmatic take permit. Most permits under the new regulations would authorize *disturbance*, rather than take.[7] According to the DEIS, a regression analysis was used to predict raptor mortality. The analysis results predict an estimated fatality rate of 3 raptors per year from the proposed project (p. 4.21-19). While the DEIS acknowledges the risk of golden eagle mortality due to collision with the proposed project's wind turbines

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[5] US Fish and Wildlife, Land-Based Wind Energy Guidelines, March 23, 2012, Available: http://www.fws.gov/windenergy/

[6] 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

[7] See U.S. Fish Wildlife Service Migratory Bird Management Information: Eagle Rule Questions and Answers. http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BaldEagle/QAs%20for%20Eagle%20Rule.final.10.6.09.pdf

is high (p. 4.21-21), the DEIS does not adequately address the acquisition of permits associated with disturbance or take of golden eagles.

Recommendations:
Identify, in the FEIS, specific measures to reduce impacts to eagles. Specify in the FEIS how approval of the proposed project would comply with the MBTA and BGEPA.

Discuss, in the FEIS, the applicability of the recently finalized USFWS permit regulations (50 CFR Parts 13 and 22) to the proposed project. Elaborate on the process and likelihood of obtaining a permit via these regulations.

Consider site specific risk mapping for avian species of concern as a means to site individual wind turbines in lower risk areas. An example of this type of study was performed at the Altamont Wind Resource Area.[8] This study was funded by the California Energy Commission's Public Interest Energy Research program.

Discuss the applicability of the recent Eagle Conservation Plan Guidelines[9] to the proposed project and, as necessary, describe compensatory mitigation to reduce the effect of permitted mortality to a no-net-loss standard. Include the Final Eagle Conservation Plan as an appendix.

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

Describe, in the FEIS, design practices, supported by USFWS and CDFG, for the proposed transmission line to minimize bird collisions and reduce raptor fatalities resulting from electrocution. Discuss the recommendations adopted from the following references: *Suggested Practices for Avian Protection on Power Lines: State of the Art in 2006* and the Avian Power Line Interaction Committee's *Mitigating Bird Collisions with Power Lines: The State of the Art in 1994.*

California Condor

As the DEIS notes, the project site is within the historic condor range and recent data suggest that there is range expansion in the general direction of the project area. Additionally, development of a wind resource facility at this location is considered to pose a high risk of collision to this species (p. 4.21-22).
To vet a potential strategy to avoid collisions, we understand that a demonstration of the Condor Monitoring System proposed under MM 4.21-9 is scheduled in October 2012.

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

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

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[8] Smallwood, K. S., and L. Neher. 2008. Map-Based Repowering of the Altamont Pass Wind Resource Area Based on Burrowing Owl Burrows, Raptor Flights, and Collisions with Wind Turbines. California Energy Commission, PIER Energy-Related Environmental Research Program. CEC-500-2009-065.
[9] See Draft Eagle Conservation Plan Guidelines, February 2011: See internet address: http://www.fws.gov/windenergy/eagle_guidance.html

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

Elaborate on the demonstration of the Condor Monitoring System. Factors to address include:

- Its limitations, including how weather may affect its performance and whether the system has any potential 'blindspots';
- Contingency plans in the event of technical or mechanical failure; and,
- Results from other projects that have used this approach, if any.

Compensatory Mitigation

In light of the numerous renewable energy projects in the Tehachapi Wind Resource Area, the availability of land to adequately compensate for environmental impacts to resources such as state jurisdictional waters, Joshua tree woodlands, and desert tortoise, may serve as a limiting factor for development. For example, we note that mitigation measure MM 4.17-2 provides an extensive protocol to ensure adequate compensatory mitigation for impacts to Joshua tree woodlands and requires protection of compensatory lands 'into perpetuity'; however, the measure defers identification of compensatory lands to a later date. A total of 1,135 Joshua trees greater than 9 feet tall and 8 feet wide have been mapped on the site.

Recommendations:
Identify compensatory mitigation lands or quantify, in the FEIS, available lands for compensatory habitat mitigation for this project, as well as reasonably foreseeable projects in the Tehachapi Wind Resource Area.

Specify a clear timetable, to be adopted in the ROD, for ensuring adequate compensatory mitigation has been identified, approved and purchased, as appropriate. Describe the implications on project construction if the timetable is not met.

The FEIS and ROD should incorporate, for each affected resource, the mechanisms that would protect into perpetuity all compensatory lands that are selected.

Commit, in the FEIS and ROD, to exclude the non-developed portion of the subject ROW from further disturbance or development, as was agreed upon for BLM's Desert Sunlight Solar Farm, based on this project's resource analyses and the decision to select the proposed project's footprint to minimize environmental impacts (e.g. the 318 acre northern parcel of the project not included in Alternative C).

<u>Climate Change</u>

EPA commends the BLM for including estimates of greenhouse gas emissions from construction and operation of the project. The DEIS includes, however, only a brief discussion of the potential impacts of climate change on the project.

Recommendation:
Considering that the project is planned to be in operation for 30 years, the FEIS should include a description of how climate change may affect the project. Include, in the FEIS, information detailing the impacts that climate change may have on the project, particularly its sources of groundwater, and reclamation and restoration efforts after construction and decommissioning.

The FEIS should also discuss how climate change may affect the project's impacts on sensitive species.

Consistency with the California Desert Renewable Energy Conservation Plan

The California DRECP, scheduled for completion in 2013, is intended to advance State and federal conservation goals in the desert regions while also facilitating the timely permitting of renewable energy projects in California. The DRECP will include a strategy that identifies and maps areas for renewable energy development and areas for long-term natural resource conservation.

Recommendation:
The FEIS should elaborate on the DRECP, and include up-to-date maps illustrating the current boundaries and conceptual alternatives that are relevant to the proposed project. Discuss whether the site is expected to be included within renewable energy development areas of the DRECP and whether this is consistent with Kern County's wind resource development areas. Acknowledge that additional requirements and/or conditions may apply upon approval of the DRECP.

Cultural Resources and Coordination with Tribal Governments

A total of 15 cultural resources have been inventoried to date for the project (p. Appendix Q-4.4). The DEIS states that BLM has formally invited American Indian Tribes to consult at the government-to-government level throughout the review of the project and we commend BLM for initiating consultation in February of 2011 (p. 5-5).

Please note that we have copied 6 tribes on these comments in our effort to coordinate pursuant to Executive Order 13175. These tribes, while not geographically located near the project, have historical connections to the area where the project is proposed.

Recommendations:
Identify, in the FEIS, the tribes that were contacted for consultation, and describe the outcome of government-to-government consultation between the BLM and each of the tribal governments contacted.

Discuss issues that were raised, how those issues were addressed in relation to the proposed action, and how impacts to tribal or cultural resources will be avoided or mitigated consistent with Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments,* Section 106 of the National Historic Preservation Act, and Executive Order 13007, *Indian Sacred Sites.*

Update the Cultural Resources chapter to reflect the above recommendations related to tribal resources and revise the alternatives development and screening section (p. 2.1.1) to account for tribal concerns.

If not included in BLM's consultation communications to date, please include the additional tribal representatives copied on this comment letter to ensure that they are provided the opportunity to participate in the ongoing government-to-government consultation for the project.