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

March 4, 2013

Robert Eben, Superintendent
Southern California Agency
Bureau of Indian Affairs
1451 Research Park Drive
Riverside, California 92507

Subject: Draft Environmental Impact Statement (DEIS), Shu'luuk Wind Project, Campo Indian Reservation, San Diego County, California (CEQ # 20130001)

Dear Mr. Eben:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document 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. Our detailed comments are enclosed.

The Draft Environmental Impact Statement (DEIS) assesses the impacts of three project alternatives and a No-Action alternative. A preferred alternative is not identified. According to the DEIS, Alternative 1 would generate approximately 250 megawatts (MW) and consist of 85 3-megawatt turbines; Alternative 2 would generate approximately 200 MW and consist of 80 2-MW turbines plus 40 MW solar photovoltaic panels; and Alternative 3 would generate approximately 160 MW and consist of 71 2.3-MW turbines. All alternatives would include 25 miles of new road, 52 miles of underground cable, an on-Reservation substation, up to 5 miles of transmission line, an operations and maintenance facility, meteorological towers, and groundwater wells.

EPA supports increasing the development of renewable energy resources, as recommended in the National Energy Policy Act of 2005. Using renewable energy resources such as wind power can help the nation meet its energy requirements while reducing greenhouse gas emissions. We are also very supportive of tribal government interests in renewable energy as a means to help meet tribal economic development goals and help the nation's transition to cleaner energy.

Based on our review, we have rated the DEIS's project alternatives as Environmental Concerns – Insufficient Information (EC-2) (see enclosed "Summary of Rating Definitions"). The DEIS acknowledges significant impacts regarding biological resources (birds and bats), noise, and visual resources, but does not clearly differentiate the levels of these impacts among the alternatives. For biological resources, the DEIS does indicate that Alternative 3 would result in lower golden eagle collision risk, and implies that it would present lower risk to raptors in general; however, insufficient information is provided to determine whether that alternative would also result in significantly reduced noise or other impacts. A clearer depiction of the severity of impacts of each alternative, especially with regard to those impacts that the DEIS predicts are significant, would offer valuable information to the decision-maker and the public.

A more robust alternatives analysis would help to illuminate the extent to which the scope and severity of impacts is driven by the size, number and location of turbines, thereby informing identification of the environmentally preferable alternative and selection of the preferred alternative.

Because the Campo Reservation has existing turbines, there is an opportunity to incorporate actual monitoring data into the impact assessment, yet no such information was provided in the DEIS. We encourage BIA to incorporate this information in the FEIS, to the extent it is available, to inform the impact assessment conclusions. Additional recommendations are included in the attached comments.

EPA appreciates the opportunity to review this DEIS. When the Final EIS is released for public review, please send one copy to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3521, or contact Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,

Kathleen Martyn Goforth, Manager
Environmental Review Office (CED-2)

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

cc: Ralph Goff, Chairman, Campo Band of Mission Indians
Melissa Estes, Director, Campo Environmental Protection Agency

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's 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 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 must 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 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.”

Alternatives Analysis

The alternatives analysis is the heart of the Environmental Impact Statement (40 CFR 1502.14). The alternatives analysis should present the environmental impacts of the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public. This is especially important for this DEIS because no preferred alternative has been identified.

The analyses in the DEIS do not clearly distinguish impacts among alternatives. For those impacts that the DEIS concludes are significant (biological, noise and visual resources), the DEIS simply states that they are significant but does not distinguish their nature or intensity between alternatives. As an example, to better convey impacts, the alternatives analysis could quantify the number of individuals that could be impacted for each alternative (birds, bats, people) and/or better characterize the intensity of the impact for each alternative. Since there is a difference in the number of turbines among the alternatives, a clear depiction of impacts is valuable information for the decision-maker and the public.

> *Recommendation:* We recommend attempting to quantify or otherwise more specifically characterizing the differences in impacts among the alternatives in the FEIS. Update Table 2.6-1 to reflect these changes.

Noise Impacts

The noise impact assessment utilized the Federal Energy Regulatory Commissions' noise standard of 55 dBA Ldn (A-weighted decibels day-night average level) as a significance threshold for noise impacts. The DEIS concludes that operation of turbines under Alternative 1 could expose on-Reservation residences to significant noise levels but that no off-Reservation properties would receive significant noise levels exceeding the FERC standard. However, Appendix E states that "Under Alternatives 1, 2, and 3, operation of the turbines would expose off-Reservation residences to noise levels that exceed the FERC guideline of 55 dBA Ldn." (p. 71). The DEIS also states that wind turbines cannot be relocated, therefore no feasible mitigation measures are available to reduce noise levels (p. 4.10-8).

In previous comments, we recommended using C-weighted noise metrics as well as the usual A-weighted analysis to cover the low-frequency sounds often associated with wind turbines. The noise analysis in the DEIS proper does not discuss low-frequency noise, but Appendix E states that low-frequency noise would not result in adverse noise impacts because all residences and sensitive receptors would be located a quarter-mile (1,320 feet) from turbines. It cites a 2009 study that concluded that measured noise levels beyond 1,000 ft were below interior low-frequency noise criteria for bedrooms, classrooms and hospitals and, therefore, would not cause more than minimal annoyance, if any (App E, p. 69). No additional information is provided regarding the low-frequency criteria that were used. The National Academy of Sciences[1] has stated that noise produced by wind turbines generally is not a major concern for humans beyond a half-mile or so because various measures to reduce noise have been implemented in the design of modern turbines.

[1] National Academy of Sciences. 2007. Environmental Impacts of Wind-Energy Projects. Available: http://www.nap.edu/catalog.php?record_id=11935

Potential health impacts from noise were not discussed. The World Health Organization recommends that, where noise is continuous, the equivalent sound pressure level should not exceed 30 dBA indoors if negative effects on sleep are to be avoided. When the noise is composed of a large proportion of low-frequency sounds, a still lower guideline value is recommended, because low frequency noise can disturb rest and sleep even at low sound pressure levels[1]. Additionally, for the construction phase, the DEIS states that there would likely be some construction activity at nighttime (p. 2-18); this should be discussed in relation to potential health impacts. Because of the proximity of proposed turbines to both on and off-Reservation populations, some of which are characterized as environmental justice populations, additional discussion of noise impacts is recommended.

> *Recommendation:* Clarify the inconsistencies between the DEIS and Appendix E regarding the significance of noise impacts for on and off-Reservation populations. Discuss low-frequency noise impacts in the Final EIS, including potential impacts to children's health pursuant to Executive Order 13045 - Protection of Children from Environmental Health Risks and Safety Risks. Discuss potential health impacts of construction noise occurring at night and whether this is necessary for the project. We recommend distinguishing noise impacts among alternatives, including quantifying the number of sensitive receptors that would be exposed for each alternative. This information may be useful to decision-makers and reveal opportunities to minimize impacts to the most affected receptors during micro-siting of turbines.

Water Resources

Groundwater supply

The DEIS indicates that water demand during the construction phase could exceed the yield of the on-Reservation groundwater wells for the first 3 months of construction activity but would be supplemented by water purchased from other on- or off-Reservation sources and, possibly, from the use of reclaimed water from the Tribe's Acorn Casino (p. 4.2-5). The DEIS states that water levels in supply wells and monitoring wells would be monitored throughout project construction to ensure drawdown does not exceed current modeling estimates and, if drawdown exceeds modeling estimates, the applicant would purchase additional supply from off-Reservation sources (p. 4.2-6). It is not clear whether water purchase would be triggered by the drawdown of the wells or by the amount of water used during construction. The modeling estimates seem to reference amount of water used, not well water drawdown. It is also not clear if there would be other impacts from groundwater use during the construction phase, such as drawdown impacts to other water wells in the vicinity.

> *Recommendation:* Clarify the groundwater monitoring commitment and identify it as a mitigation measure with additional information regarding the conditions that would trigger on and off-Reservation water purchase. Discuss potential impacts to other groundwater wells. We encourage the use of reclaimed water to the extent permittable by the California state regulations for reclaimed wastewater referenced on p. 3.2-8.

Wetlands and Riparian Habitat

The DEIS indicates that some wetlands would be impacted (just over half an acre) and that use of a Nationwide 404 permit (No. 51) is anticipated. The DEIS does not show the location of drainages, but states that roads would be located away from drainage, wetlands and erodible soils to the greatest extent

[1] See http://www.who.int/docstore/peh/noise/Comnoise-4.pdf p. 58

practicable (p. 4.2-6) and this micro-siting for both roads and turbines will occur at the final design phase (p. 1-4).

> *Recommendation:* We recommend that the Final EIS clearly lay out the process of avoidance that will occur during the micro-siting of turbines and that commitments to this avoidance be included in the final project approvals. Based on Figure 2-7, it appears that Option 2 for the Operations and Maintenance (O&M) facility would avoid impacts to southern coast live oak riparian forest. If this is the case, we recommend this option be pursued over Option 1 for the O&M facility.

Stormwater Pollution and Erosion Control - BMP effectiveness

The DEIS states that preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) will ensure that project construction activities would not result in adverse direct or indirect effects (p. 4.1-4). While implementation of a SWPPP can help reduce impacts, it should be noted that effectiveness of stormwater best management practices (BMPs) varies. A 2006 review of stormwater Best Management Practices (BMPs) at large construction sites revealed that effectiveness of erosion control and sediment control varied by site, with failures of all BMP types observed[1]. The primary factor influencing effectiveness appeared to be regular inspections and maintenance, including reinstallation or application of the BMP if necessary. Many of the sediment control BMPs observed in the study were in disrepair and showed signs of recent failure from heavy rainfall. Maintenance problems included inadequate removal of sediment from behind the BMP and failure to replace the BMP when damaged. Since the DEIS indicates that soils on the project site have a moderate erosion hazard (p. 3.1-4), it is important that inspection and maintenance be included to increase BMP effectiveness.

> *Recommendation:* In the FEIS, qualify the impact assessment conclusions to consider the potential effectiveness of BMPs. Identify who would be responsible for inspection and enforcement of construction BMPs for the project.

Construction Stormwater Permit

- The discussion of the Construction General Permit on page 3.2-2 should reference the permit issued by EPA, not the State, since the project is on Tribal land. See http://cfpub.epa.gov/npdes/stormwater/cgp.cfm for the 2012 EPA Construction General Permit. A minor error is present on page 2-14, which references a multi-sector stormwater permit in the text. This should reference the construction stormwater permit, as the heading indicates.
- The DEIS states that any site-specific BMPs and measures to address erosion control and sediment transport during project operation would be included with the project grading plans submitted to the Campo EPA and U.S. EPA for review as part of the permitting process, ensuring that project operation would not result in adverse direct or indirect effects. We note that, unless a SWPPP is specifically requested by EPA, there is no requirement to submit SWPPPs to EPA; they are required to be implemented and be present on-site.

[1] U.S. Environmental Protection Agency, Region IX, California Regional Water Quality Control Board Los Angeles Region.,Review of Stormwater Best Management Practices at Large Construction Sites, August 2006. Available: http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/bmp/largeconstreport-august-06.pdf

- We note that the Construction General Permit states that, before submitting a Notice of Intent (NOI) for permit coverage, the operator must ensure and document that discharges are not likely to jeopardize the continued existence of any Federally-listed endangered or threatened species under the Endangered Species Act (ESA). In addition, the operator's SWPPP must contain documentation of permit eligibility regarding the protection of endangered species and critical habitat. Documentation must include: (1) information on whether federally-listed or endangered or threatened species or critical habitat are located near the site; (2) whether such species or habitat may be adversely affected by the stormwater discharges or related activities coming from the site; (3) the results of the screening determination from Appendix C of the permit; (4) confirmation of delivery of NOI to EPA or to EPA's electronic NOI system.

Sanitary Septic System

The project includes an on-site sanitary waste septic system (p. 4.2-3). It is not clear how this system would be sized, but onsite wastewater disposal systems such as septic systems may be subject to the Safe Drinking Water Act's Underground Injection Control (UIC) Program requirements if they (1) are designed to receive bathroom, kitchen, or laundry wastes from 20 or more persons per day, and/or (2) they are plumbed to receive waste fluids from industrial or commercial processes, such as machine shops, carwashes or other industrial settings. Additionally, drywells, unlined sumps, and seepage pits are also subject to UIC regulation. When used for the disposal of solvents or other toxic waste, or for the disposal of untreated sewage, these wells may contaminate underground sources of drinking water. Because the project is located over a sole source aquifer, it is important to ensure protection of groundwater quality.

> *Recommendation:* Clarify the sizing of the septic system in the FEIS. Identify any hazardous wastes that would be generated from the operations and maintenance facility and substation and indicate how they would be stored and disposed. If underground injection could occur for the project, EPA may require a Class V UIC operating permit (40 C.F.R. §144.25). Please contact Elizabeth Janes of EPA Region 9's Ground Water Office at (415) 972-3537 or by email at janes.elizabeth@epa.gov with any questions regarding potential UIC program requirements for this project.

Air Quality

The air quality analysis predicts emissions of criteria pollutants during the construction phase (Tables 4.3-3 and 4.3-4) but does not make it clear that these emissions include mitigation measures. The DEIS states that standard practices to control dust and particulates during earthwork would be incorporated, but it is not clear if this mitigation is the same as that which was identified in Appendix B and used in the emissions predictions.

> *Recommendation:* The FEIS should identify the mitigation measures that were included to calculate emissions and label Tables 4.3-3 and 4.3-4 as representing mitigated emissions. In addition to the practices identified in the DEIS, we recommend the following reasonable mitigation measures:
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> - Phase grading operations where appropriate. Install wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) where soils are disturbed in construction, access and maintenance routes, and materials stock pile

areas. Keep related windbreaks in place until the soil is stabilized or permanently covered with vegetation.

- Limit speeds to 25 miles per hour on stabilized unpaved roads as long as such speeds do not create visible dust emissions; limit speeds to 10 miles per hour or less on unpaved areas within construction sites on unstabilized (and unpaved) roads. Post visible speed limit signs at construction site entrances.
- Provide gravel ramps of at least 20 feet in length at tire washing/cleaning stations, and ensure construction vehicles exit construction sites through treated entrance roadways.
- Reduce use, trips, and unnecessary idling from heavy equipment.
- Identify the location of sensitive receptors in the project area (residences, health care facilities, schools, etc.), and locate construction equipment and staging zones away from these receptors.

Biological Resources

Impacts to Raptors

We are concerned with the significant impacts to migratory birds, especially red-tailed hawks. The DEIS predicts high mortality rates to individuals and significant adverse effects to the population on the Reservation. The DEIS does not specify the expected raptor mortality rates, but states that mortality would be expected to occur at a level similar to the average calculated for other projects in the western portion of the Pacific Flyway. In addition, there is potential for golden eagle mortality; however, we note that Alternative 3 is predicted to result in lower golden eagle collision risk (p. 4.4-53).

> *Recommendation:* Specify the expected raptor mortality rates for each alternative in the body of the Final EIS. We strongly recommend that an Eagle Conservation Plan be prepared for the project and that the proponents pursue a golden eagle programmatic take permit with the U.S. Fish and Wildlife Service. We recommend that BIA include this as a mitigation measure in the ROD and as a condition of approval. The DEIS should clarify whether Alternative 3 would be expected to have a lower risk of raptor collisions, in general, in addition to its lower golden eagle collision risk.

Impacts to Bats

We are concerned with the significant impacts to bats identified in the DEIS (p. 4.4-38). The DEIS does not specify the expected bat mortality rates, but states that bat mortality rates under Alternative 1 are expected to be similar to the average calculated for projects in the western portion of the Pacific Flyway (p. 4.4-38). The DEIS states that the effect of this mortality on the local bat species populations would likely be minimal (p. 4.4-39), but does not provide the basis for this conclusion. It also states that mitigation measures MM BIO-2(a) through (c) are provided to avoid, minimize, and mitigate adverse impacts to bats, but it is not clear how these measures would reduce impacts. BIO-2(a) assigns a project biologist to address permit requirements, none of which are applicable to bats; BIO-2(b) involves environmental training; and BIO-2(c) addresses weed management. The DEIS does include a recommendation for a Bird and Bat Conservation Strategy in MM BIO-3(d) to include minimization and compensation for adverse impacts, but no further information is provided on whether or how this could be accomplished for bats.

Recommendation: Specify the expected bat mortality rates for each alternative in the body of the Final EIS. Clarify how the mitigation measures identified would mitigate impacts to bats.

We recommend further discussion of potential mitigation for bats. The DEIS indicates that most bat fatalities have been recorded in the Fall, coinciding with peaks in echolocation activity, and that bat species are at most risk during August and September because juveniles are flying and fall migration is occurring. It also states that low wind speeds have been correlated with increased bat fatalities. The DEIS should discuss bat monitoring and whether it's possible to turn off turbines during some of these conditions to minimize bat mortality. Additionally, because the alternatives vary in terms of the size of the turbines, the FEIS should discuss any information available regarding differences in pressure change for various turbine sizes that could affect barotrauma and other impacts on bats.

Cultural Resources

The DEIS states that coordination with the Campo Environmental Protection Agency was conducted during the cultural resource surveys for the project and that the Tribe coordinated Native American participation for the pedestrian survey (p. 3.6-10). It is not clear if tribes other than Campo were consulted for the project. Additionally, the DEIS states that, if human remains are discovered, excavation may take place only with the consent of the Tribe and the BIA, and must follow the requirements of the Archeological Resource Protection Act (ARPA) (p. 4.6-9).

Recommendation: In the FEIS, clarify the extent of tribal coordination that occurred for the project and that would occur if human remains or other artifacts were discovered during project construction. The DEIS states that the eastern staging area for the Operations and Maintenance facility would not impact a known cultural resource. Since this eastern option also appears to avoid riparian habitat, we recommend selecting the eastern location (O&M Option 2).