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

April 6, 2009

Mr. Justin Seastrand
USDA Forest Service
c/o Aspen Environmental Group
30423 Canwood Street, Suite 215
Agoura Hills, CA 91301

Subject: Draft Environmental Impact Statement (DEIS) for the Tehachapi Renewable Transmission Project, Kern, San Bernardino, and Los Angeles Counties, CA (CEQ # 20090035)

Dear Mr. Seastrand:

The U.S. Environmental Protection Agency (EPA) has reviewed the DEIS for the Tehachapi Renewable Transmission Project (Project) 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 comments were also prepared under the authority of, and in accordance with, the provisions of the Federal Guidelines (Guidelines) promulgated at 40 CFR 230 under Section 404(b)(1) of the Clean Water Act (CWA).

The DEIS provides a comprehensive analysis of this highly complex project. We recognize the considerable level of effort that has gone into the analysis, discussion, and graphic illustrations of the Project. The EPA supports the Project purpose to provide adequate transmission capacity for renewable wind energy sources -- a step towards accommodating renewable energy transmission and reducing the demand for traditional forms of energy production that contribute significantly to air pollution, including climate changing greenhouse gasses. We also support the Project objectives to minimize environmental effects by maximizing the use of existing transmission line right of way, and appropriate siting of infrastructure.

We have rated the DEIS EC-2, Environmental Concerns – Insufficient Information (see attached "Summary of the EPA Rating System"). Because of the complex nature of this proposed 173 mile transmission line, and the variety of landscapes, land uses and habitat areas that would be affected, we have identified several concerns and recommendations, summarized below. Our detailed comments are enclosed.

The EPA recommends the FEIS include a commitment to implement Alternative 6 *Maximum Helicopter Construction in the Angeles National Forest* (ANF), and that the Forest Service consider modifications to Segment 10, and correct the figures for Segment 8A. The DEIS identifies the environmentally superior alternative under the California Environmental Quality Act as a combination of four alternatives, including the partial implementation of Alternative 6. EPA is concerned with the level of impacts to terrestrial and aquatic resources that would result from Alternative 2 (Proposed Project) construction and operations associated with extensive road widening and crossings of riparian conservation areas. We recommend full implementation of Alternative 6 to reduce these impacts in the ANF. We also question the alignment of the first portion of Segment 10 and recommend considering an alternative alignment that reduces impacts to undisturbed areas. The Project follows existing transmission lines for most of the proposed alignments, but the DEIS fails to show the existing alignment in Segment 8A and should be corrected.

EPA encourages the project proponent Southern California Edison to commit to working with the California Public Utilities Commission and the California Independent System Operator to maximize the Project transmission of energy from wind or other renewable sources. We also suggest that a discussion of Project consistency with the environmental protection goals of the California Renewable Energy Transmission Initiative would be beneficial in the FEIS.

We recommend the FEIS provide a discussion of Clean Water Act jurisdictional waters that could be filled by Project activities and include descriptions of type and acreage of jurisdictional waters, measures to avoid impacts, and consistency with the *Compensatory Mitigation for Losses of Aquatic Resources; Final Rule*. We are also concerned with the level of impacts from stream crossings in the ANF and recommend full implementation of Alternative 6 as a way to reduce these impacts. The FEIS should discuss crossings in non-National Forest Service lands and describe how spoils from construction activities will be stored and disposed to avoid environmental impacts, including aquatic resources.

The Air Quality analysis should be updated in the FEIS to reflect the most recently approved State Implementation Plan and to accurately portray information pertaining to existing air quality conditions. A discussion of health impacts from particulate matter should be provided and sensitive receptors should be notified in advance of exposure from construction. We recommend an expanded discussion of the practicability of purchasing offsets for nitrogen oxide emissions in the South Coast Air Basin and suggest additional source controls as a possible alternative. To reduce impacts from ozone due to helicopter emissions, the EPA recommends best available emission control technologies, and scheduling heavy helicopter usage primarily in the fall and winter months when ozone formation is lowest. The EPA is available to serve in our consulting agency capacity prior to the finalization of the National Forest Service (NFS) determination of general conformity with local air quality plans.

The attached detailed comments provide additional information regarding the above-stated concerns, and provide additional recommendations regarding invasive species management, revised environmental justice analysis to consider existing health burdens, and use of tubular steel towers to reduce visual impacts. Thank you for the opportunity to review this

DEIS and discuss our preliminary comments with you, the California Public Utilities Commission, and Southern California Edison on March 30, 2009. When the FEIS is published, please send one hard copy to us at the address above (Mail Code: CED-2). If you have any questions, please contact me at 415-972-3521, or contact Paul Amato, the lead reviewer for this project. Paul can be reached at 415-972-3847 or amato.paul@epa.gov.

Sincerely,

/s/

Kathleen M. Goforth, Manager
Environmental Review Office

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

cc:
Mr. John Boccio, California Public Utilities Commission

Alternatives

Consider full implementation of Alternative 6, Maximum Helicopter Construction in the Angeles National Forest (ANF). Section 4 of the Draft Environmental Impact Statement (DEIS) compares the Project alternatives and identifies the environmentally superior alternative under the California Environmental Quality Act (CEQA) as a "…combination of Alternative 2 (Southern California Edison's (SCE) Proposed Project) Alternative 3 (West Lancaster) Alternative 6 (Maximum Helicopter Construction in the ANF), and Alternative 7 (66-kV Subtransmission)." As described in the DEIS, the environmentally superior alternative would include partial implementation of Alternative 6. The EPA supports the National Forest Service (NFS) Alternative 6 that would maximize use of helicopters to construct the Project in the ANF and we encourage full implementation of this alternative to reduce long-term impacts to terrestrial and aquatic resources described in the DEIS. We understand that Alternative 6 could have greater construction emissions than the Proposed Project, but consider the long-term impacts that widening existing roads and constructing new roads would have to biological resources, water quality, land use, and wilderness and recreation to outweigh the short-term air quality impacts that would occur during construction. We also recommend measures to reduce air quality impacts from helicopter use under our air quality comments.

> *Recommendation:*
> Fully implement Alternative 6 to reduce environmental impacts that would otherwise occur from road widening and new road construction.

Discuss the potential environmental benefits of realigning part of Segment 10. As depicted in Figure 2.2-1b, the first 4.8 miles of Segment 10 would be sited through relatively open and undeveloped desert habitats and would cross at or near two ephemeral drainage confluences; areas that can provide higher quality habitats. The existing 90th Avenue appears to provide an alignment from north to south in an already disturbed area, potentially eliminating the need to construct the access and maintenance road along the proposed alignment. We appreciate the Project goals to minimize environmental impacts through selection of routes and follow existing right of way (ROW) throughout most of the Proposed Project, and recommend Segment 10 be sited along existing roads in an effort to accomplish similar impact minimization.

> *Recommendations:*
> Consider siting the first 4.8 miles of Segment 10 along 90th Avenue, or another existing roadway, to minimize impacts of locating the proposed transmission line and associated road through undisturbed desert habitats.

Update the FEIS to accurately portray Segment 8A existing transmission lines. The DEIS description of the Proposed Project mentions that an existing transmission line would be replaced between Segment 8A, mile post 19.2 and the existing Chino Substation, but this is not reflected in Figures 2.2-1x and 1v. Instead, the legend designation for existing transmission lines is absent

between these two points. The figures should be updated to avoid confusion and accurately reflect the intent to follow an existing alignment.

Recommendation:
Update Figures 2.2-1x and 1v to show the existing transmission line between Segment 8A, mile post 19.2 and the existing Chino Substation.

Purpose and Need

The California Public Utilities Commission (CPUC) and Southern California Edison should work with the California Independent System Operator (CAISO) to ensure the Tehachapi Renewable Transmission Project (Project) wind energy transmission purpose is met. The DEIS states that the purpose of the proposed Project is to provide electrical facilities necessary to integrate new wind generation in excess of 700 MW and up to 4,500 MW from the Tehachapi Wind Resources Area (TWRA). The EPA supports the appropriate development of renewable energy resources and reducing the use of fossil fuels for energy development as a critical step towards reducing major sources of greenhouse gasses that contribute to climate change. To that end, we also support efforts to meet the State of California's Renewables Portfolio Standard (RPS) of 20 percent renewable energy sources by 2010. According to the RPS website, transmission is a major barrier to RPS project development. Based on information provided in the DEIS, the Project would provide an important element toward overcoming this barrier.

The DEIS discloses the potential for non-renewable energy projects to utilize the Project as interconnection requests to the California Independent System Operator (CAISO) are approved based on the order they are received, and that there is no guarantee against other types of energy projects connecting prior to wind projects. Specifically, the Walnut Creek Energy Park natural gas plant and the El Paso Line 1903 Conversion to natural gas are mentioned in Section 2.9.3. The EPA understands that the CAISO will ultimately decide what energy projects are permitted to connect to the proposed Project, but we strongly encourage the CPUC and SCE to work with the CAISO to ensure consistency with the Project purpose and maximize wind energy transmission, or other renewable energy transmission.

Recommendations:
CPUC should work with the SCE and the CAISO to maximize approval of wind energy projects (or other renewable energy) for connection to the Project.

The FEIS should include a discussion of the application and decision making process used by the CAISO to determine transmission line connection permits.

The FEIS should discuss consistency with environmental goals of the State of California Renewable Energy Transmission Initiative (RETI). The RETI, an effort supervised by the CPUC, CAISO, and others is intended to help identify the transmission projects needed to accommodate California's renewable energy goals. The EPA understands that the DEIS does not discuss the RETI because the Project was developed in advance of this effort but it would be useful to include a discussion in the FEIS that describes Project consistency with the RETI goal

to "…identify those [transmission] zones that can be developed in the most cost effective and environmentally benign manner."

Recommendation:
The FEIS should include a discussion describing Project consistency with the environmental goals of the RETI.

Introduction

Update Table 1-1 to clarify Regional Water Quality Control Board (RWQCB) permit authority. Table 1-1 *Required Federal and State Permits and Approvals* does not include the need to apply to the appropriate RWQCB for Clean Water Act (CWA) Section 401 water quality certification and/or waste discharge requirements, pursuant to the Porter-Cologne Water Quality Control Act, for fill of waters of the State.

Recommendation:
Table 1-1 should be updated to include RWQCB authority to issue CWA Section 401 water quality certifications and/or waste discharge requirements under Porter-Cologne.

Waters of the U.S.

Potential wetland fill and mitigation should be clarified. Impact B-39 describes potential impacts to waters of the U.S. (jurisdictional waters), commits to obtaining appropriate State and federal permits, and to mitigating unavoidable impacts through the restoration, enhancement, and/or preservation of existing wetlands; however, there does not appear to be a jurisdictional delineation or even an estimate of the acreage of different types of jurisdictional waters that could be filled by the Project. The DEIS also lacks a clear discussion of avoidance measures that would be implemented to prevent impacts and to comply with CWA Section 404(b)(1) Guidelines (Guidelines) that require selection of the least environmentally damaging practical alternative (LEDPA). The FEIS should include a more detailed discussion of impact avoidance measures and unavoidable impacts to jurisdictional waters, including the acreage and type(s) that could be filled. The FEIS should also provide a more detailed discussion of the availability of mitigation opportunities and compliance with the *Compensatory Mitigation for Losses of Aquatic Resources; Final Rule* (Mitigation Rule) 33 CFR Parts 325 and 332, and 40 CFR Part 230 found at: http://www.epa.gov/wetlandsmitigation/ and at: http://www.usace.army.mil/cw/cecwo/reg/citizen.htm.

Recommendation:
Expand the FEIS discussion of impacts to jurisdictional waters to include an estimate of type(s) and acreage, and include a discussion of impact avoidance measures, mitigation availability, and compliance with the Guidelines and Mitigation Rule.

Impacts to riparian areas from road crossings should be avoided. According to Table 3.4-19, under the proposed Project, 171 Riparian Conservation Areas (RCAs) in the Angeles National Forest (ANF) would be subject to some form of permanent crossing, of which 95 would not conform to the Forest Plan. The EPA is concerned with the potential direct and indirect impacts

that could result, and suggests the FEIS provide a more detailed discussion of the different types of crossings and their potential impacts to RCAs. The FEIS should also provide a similar discussion for crossings on non-NFS lands. The EPA considers Alternative 6, Maximum Helicopter Construction in the Angeles National Forest, to be the environmentally preferred alternative for the ANF as it would reduce the total number of crossings to 86, with only 57 being subject to adverse impacts. Alternative 6 would also reduce direct impacts, such as clearing vegetation, and indirect impacts, such as sedimentation to riparian areas from road widening.

Recommendations:
Expand the discussion of stream crossings to include crossings outside of the ANF, descriptions of the different crossing types, and their potential impacts.

Select Alternative 6 to reduce direct and indirect impacts to riparian areas and jurisdictional waters in the ANF.

Commit to appropriate construction spoil disposal that avoids impacts. Project construction includes auguring for transmission tower foundations and the creation of concrete batch plants. The EPA is concerned that these activities could generate significant amounts of sediment runoff into aquatic resources. The DEIS does not discuss what would be done with spoils left after auguring and creation of the proposed concrete batch plants. According to the DEIS, 15 to 100 cubic yards of concrete would be needed for each tower foundation, depending on the design. These volumes would presumably replace similar volumes of excavated and/or augured spoils. Concrete batch plants are estimated to be approximately 2 acres each in size. Spoils generated from these activities could result in substantial volumes of loose sediment potentially contributing to water quality degradation and habitat impacts, as well as air quality impacts from fugitive dust. The FEIS should describe what would be done with construction spoils and commit to storage and disposal methods that would avoid and minimize impacts.

Recommendation:
Describe what would be done with construction spoils and how environmental impacts would be avoided.

Air Quality

Revise the air quality analysis to reflect the recently approved 2003 State Implementation Plan (SIP). The EPA recently approved the 2003 SIP for the South Coast Air Basin (SoCAB) and, effective April 9, 2009, the Basin will be redesignated attainment for one hour ozone, and maintenance for nitrogen dioxide (NO_2). Table 3.3-5 of the DEIS, the discussion of existing air quality, and the air quality analysis for the SCAB should be revised to reflect the 2003 SIP.

Recommendation:
Revise the air quality analysis for the SoCAB, Table 3.3-5, and the discussion of existing air quality to reflect the recently approved 2003 SIP for one-hour ozone and NO_2, and include these in the FEIS.

Revise the SoCAB carbon monoxide (CO) National Ambient Air Quality Standard designation. The DEIS discussion of existing air quality incorrectly states that the entire SoCAB is designated as a nonattainment area for CO (p. 3.3-12). Table 3.3-5 correctly shows that the SoCAB is in attainment. EPA granted the State request to redesignate the SoCAB from nonattainment to attainment on June 11, 2007.

Recommendation:
Revise the FEIS discussion of existing air quality to reflect the CO attainment designation in the SoCAB and to be consistent with Table 3.3-5.

Revise the statement that $PM_{2.5}$ is not included in air quality threshold tables. The DEIS discussion on regional air quality significance criteria incorrectly states that particulate matter smaller that 2.5 microns ($PM_{2.5}$) is not included in Tables 3.3-13, 3.3-24, and 3.3-15 (p. 3.3-25). All three of these tables include $PM_{2.5}$. This is inconsistent and confusing.

Recommendation:
Revise the discussion on regional air quality significance criteria to correctly reflect $PM_{2.5}$ data in Tables 3.3-13, 3.3-14, and 3.3-15, and include this information in the FEIS.

Consider expanding the air quality analysis to include a discussion of potential health effects from particulate matter. Project construction emissions would exceed SCAQMD PM_{10} and $PM_{2.5}$ thresholds and would have a significant and unavoidable impact to local sensitive receptors located within 25 meters of construction (p. 3.3-37). Table 3.3-20 compares the worst case daily construction emissions to the SCAQMD less than significant thresholds and shows that construction would generate 6.5 pounds of PM_{10} per day, exceeding the less than significant threshold of 4. $PM_{2.5}$ emissions would equal 3.5 pounds per day, exceeding the daily threshold of 3. As a result, the FEIS should include a discussion of the potential health effects of these emissions to sensitive receptors and consider a mitigation measure that would inform sensitive receptors of these potential risks in advance of construction. This information could be provided concurrently with the advanced notification of construction Applicant-Proposed Measure (APM) NOI-3 for noise impacts.

Recommendation:
Expand the air quality impact analysis to include a discussion of the potential effects to sensitive receptors from exposure to PM_{10} and $PM_{2.5}$.

Consider an APM that would provide advanced notification to sensitive receptors of the potential effects of PM_{10} and $PM_{2.5}$.

Consider consultation with the EPA for general conformity. The DEIS air quality analysis concludes that a complete general conformity analysis will be completed as a result of exceeding NOx thresholds for the SoCAB (p. 3.3-38) and that, if needed, the NFS will obtain emission reduction credits to offset NOx emissions consistent with Mitigation Measure AQ-6. The EPA is concerned that NOx emission offset credits may not be a viable or practicable option for the NFS, due to cost and availability, and we suggest greater source control measures be considered. In addition to working with the SCAQMD, the NFS should consider consulting with the EPA

prior to finalizing your general conformity determination. To consult with the EPA, please contact Mr. John Kelly of the Air Division at (415) 947-4151, or by email at Kelly.JohnL@epa.gov.

Recommendations:
Include a discussion in the FEIS describing the availability and practicability of purchasing NOx offsets for the SoCAB. Commit to greater source control measures in the event offsets cannot be purchased.

Consider consulting with the EPA before finalizing the general conformity determination for the Project.

Schedule Helicopter construction during the winter months to reduce ozone from NOx emissions. The DEIS describes the formation of ozone from NOx and volatile organic carbons (VOCs) in the presence of ultraviolet radiation, and demonstrates how ozone creation is higher in the spring and summer. Because emissions of NOx and VOCs would be greater for Alternative 6 Maximize Helicopter Construction in the ANF, the EPA recommends the scheduling of heaviest helicopter usage during the fall and winter months when ozone formation is lowest. We also recommend the best available control technologies be used to reduce helicopter emissions.

Recommendations:
The Project schedule should minimize helicopter construction during the spring and summer months and instead, schedule the heaviest helicopter use during the fall and winter when ozone production is the lowest.

Use the best available control technologies to reduce helicopter emissions.

Biological Resources

Revegetation plans should be prepared for areas of native and non-native vegetation disturbance. APM BIO-2 proposes to minimize vegetation removal and prepare revegetation plans for native vegetation temporarily disturbed by construction activities. The EPA agrees with this approach; however, we are concerned that areas of nonnative, or mixed native and non-native vegetation would not be subject to the same level of revegetation. Non-native vegetation can provide some level of habitat, as well as soil stability, and should be revegetated with native vegetation when disturbed. We understand from our March 31, 2009 meeting that the intent is to revegetate all disturbed areas with a native vegetation seed mix, regardless of the pre-construction vegetation community, but that areas previously occupied by non-native communities would not be held to the same standard of success as those that were native. This should be included in the FEIS.

Recommendations:
Amend AMP BIO-2 to include revegetation of both native and non-native vegetation that is temporarily disturbed by construction activities.

Include a discussion of revegetation success criteria for areas disturbed by construction.

Non-native vegetation communities should be mitigated for both NFS and non-NFS lands. Table 3.4-17 shows the vegetation communities that would be disturbed on non-NFS lands, the mitigation ratios for permanent and temporary impacts, and the total mitigation acres. According to the table, permanent impacts to 4.63 acres and temporary impacts to 6.27 acres of non-native woodland would go unmitigated. The same is true for ruderal wetland areas. The discussion in the DEIS characterizes non-native woodland as common and low quality and uses this characterization as justification for not mitigating these effects. Ruderal wetland does not appear to be discussed in this context. It also remains unclear whether these are jurisdictional wetlands under the Clean Water Act (CWA) or areas that could potentially support listed species.

Table 3.4-18 provides the same information as Table 3.4-17 for NFS lands and includes a 3:1 mitigation ratio for permanent impacts to non-native woodlands, and 1:1 for temporary impacts. The commitment to mitigate on NFS lands contradicts the characterization of non-native communities as low quality and common. The EPA is concerned that such areas would go unmitigated on non-NFS lands, resulting in prolonged impacts to habitat, increased opportunities for noxious weed species to establish, or excessive sediment to runoff into aquatic resource areas.

> *Recommendation:*
> The FEIS should commit to mitigation of non-native woodlands and ruderal wetland communities on both NFS and non-NFS lands that are disturbed by temporary and permanent Project activities. A description of ruderal wetlands should be provided and any CWA jurisdiction confirmed.

The FEIS should clarify whether all existing weed seed sources will be removed prior to construction. Mitigation Measure B-3a, *Prepare and Implement a Weed Control Plan*, includes several ongoing measures to prevent weed infestations in areas disturbed by Project construction and operation. Mitigation Measure B-3b, *Remove weed seed sources from construction access routes*, would include identification and control of weed seed sources along transportation routes to prevent spread of infestations following Project land disturbance. The EPA supports these mitigation measures but we suggest the control of noxious weeds and weed seed sources in all areas within the transmission line right of way (ROW), such as areas previously disturbed by the existing transmission line structures. All noxious weed sources should be controlled to prevent infestations in disturbed areas. We recommend consulting the California Native Plant Society and California Invasive Plant Council for an inventory of noxious weeds in California.

> *Recommendation:*
> Mitigation Measures B-3a and b should be revised in the FEIS to include ongoing control of noxious weeds and pre-construction noxious weed seed control in all areas of the Project ROW.

<u>Environmental Justice</u>

Revise the Environmental Justice analysis to consider any existing burdens. The Environmental Justice (EJ) section of the DEIS does a good job of looking at demographic and

income data of the general population that resides along the proposed transmission alignment. Based on these data, the discussion concludes that Project impacts will be distributed evenly along the alignment; therefore it will not result in a disproportionate impact to minority communities (no low income communities were identified). The EPA does not disagree with the approach used to identify EJ communities along the proposed Project alignment but we do suggest the NFS revise the criteria used to determine disproportionate impacts. The EPA's Environmental Justice Toolkit, found at http://www.epa.gov/compliance/resources/policies/ej/ej-toolkit.pdf, states that,

> "Disproportionately high and adverse effects or impacts means an adverse effect or impact that: (1) is predominately borne by any segment of the population, including, for example, a minority population and/or a low- income population; or (2) will be suffered by a minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect or impact that will be suffered by a non-minority population and/or non-low-income population."

The DEIS conclusion is consistent with the first criterion but lacks any discussion of whether the impacts of the Project would be appreciably more severe to any of the existing minority communities. The FEIS should discuss whether any of the EJ communities identified could be more severely affected by Project impacts due to existing burdens that may already be affecting those communities.

> *Recommendation:*
> Revise the EJ analysis to consider whether any of the minority communities along the Project alignment would be more severely affected due to existing burdens that may already be more significant in those communities.

Visual Resources

Commit to using tubular steel towers in Segment 10 and in natural areas close to recreational users. The DEIS states that lattice steel towers (LSTs) are not recommended in Segment 10 because tubular steel towers (TSPs) would blend better with the existing monopole wind turbines to reduce visual impacts (p. 3.14-97). Reduced bird-kills are also noted as a benefit of TSPs. Figures 3.14-3b and 4b contradict this statement and show LSTs in the post-Project visual simulations for Segment 10. The EPA supports the use of the TSPs over LSTs for the reasons stated. In addition, Applicant-Proposed Measure (APM) AES-3 specifies the use of TSPs in close proximity to existing residential areas. The EPA supports the use of TSPs over LSTs in these areas and suggests the FEIS include an additional APM that specifies the use of TSPs in natural settings near areas frequented by recreational users, such as in proximity to the Pacific Crest Trail.

> *Recommendations:*
> In the FEIS, revise the visual simulations for Segment 10 to be consistent with the discussion in Section 4.14 of the DEIS that describes the use of TSPs to reduce visual impacts and reduce bird-kills.

Include an APM that specifies the use of TSPs in natural settings near areas frequented by recreational users.

Noise

Clarify noise policies for the City of Industry. Table 3.10-9 provides a description of applicable municipal noise policies and an analysis of Project compliance. The table indicates that construction activities would be compliant with City of Industry ordinances but also says "no noise policies apply during construction." The table should be revised to reflect what noise ordinances will be followed for construction in the City of Industry.

Recommendation:
Revise Table 3.10-9 to reflect applicable noise ordinances and policies for the City of Industry.