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From: Cmisaaacs@aol.com
Sent: Sunday, March 06, 2011 6:48 PM
To: catulewind@blm.gov; ECOSUB
Subject: Small format glitch in Comments on DEIR/EIS for Ecosub/Tule/ESJ Gen-Tie Projects
Attachments: Tule Draft EIR-EIS Comments C. Isaacs Revised.pdf

Iain Fisher, California Public Utilities Commission
Greg Thomsen, Bureau of Land Management

Dear Sirs:

On Friday I sent you an e-mail with the subject line "Comments on Draft EIR/EIS for Ecosub/Tule/ESJ Gen-Tie Projects" and my comments in an attached file "Tule Draft EIR-EIS Comments C.Isaacs.docx."

Inadvertently, I left formatting in the footer of the document with an "adjusting" date such that any time the document is copied or saved, the date will change. This adjusting date could lead to confusion since the date at the top is "March 4, 2011", so I have stabilized the date in the footer and converted the document to PDF format, and am attaching the revised file here. I made no other revisions.

I hope that you could kindly use this latter document ("Tule Draft EIR-EIS Comments C.Isaacs Revised.PDF") to replace the original one.

Many thanks. I am very sorry for the small formatting glitch and any extra inconvenience to you.

Yours sincerely, Caroline Isaacs

This footnote confirms that this email message has been scanned by
PineApp Mail-SeCure for the presence of malicious code, vandals & computer viruses.

Iain Fisher, California Public Utilities Commission
Greg Thomsen, Bureau of Land Management
c/o Dudek
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March 4th, 2011

Via E-mail: ecosub@dudek.com, catulewind@blm.gov

Re. Draft Environmental Impact Report/Statement for the East County Substation, Tule Wind, and Energía Sierra Juárez Gen-Tie Projects

This letter is a comment in response to the public review period for the Draft Environmental Impact Report/Environmental Impact Statement (Draft EIR/EIS) from the Bureau of Land Management (BLM) and California Public Utilities Commission (CPUC) on the East County Substation, Tule Wind, and Energía Sierra Juárez Gen-Tie Projects.

My interest in these projects is as a resident of the city (and county) of San Diego who has enjoyed the San Diego back country (and adjacent back country in Baja California) over many years, having grown up in the San Diego area and spent many memorable times camping and exploring there, and visiting friends and relatives in Boulevard. My interest is also as a member of the Anza-Borrego Foundation, the American Society for Environmental History, and the Forest History Society. I have some professional experience with environmental issues in my capacity as a geologist (now retired) at the U.S. Geological Survey in Menlo Park, especially as the co-editor of a series of Pacific Climate (PACLIM) Workshop Proceedings that dealt with meteorological and hydrologic connections with past and present ecosystems.

Overall opposition to project. At the outset, I wish to state that I am opposed to the entire set of projects. I support renewable energy, but not at the cost of the major deleterious effects on the environment of a relatively undisturbed area with many critical conservation values. Impacts of these projects that I find particularly objectionable include the massive change that would result to the rural character of the surrounding area, degradation to the amazing scenic vistas in the area, the industrialization of the back country and the public lands, the conversion of conservation areas to industrial use, killing of birds and bats in the turbines (especially rare and endangered species), habitat reduction for native flora and fauna, habitat segmentation for wildlife (especially rare and endangered species), and degradation of hiking and other recreational activities in the area. I am also concerned about the increased fire hazards and the extra difficulties introduced for firefighting in the area, as would be most residents of San Diego County who witnessed the devastating 2003 and 2007 wildfires.

Other concerns include (1) adverse effects on the health and well-being of the local community; (2) major conflicts between the proposed projects and existing land use plans and protected conservation areas; and (3) the need to more fully consider alternative sources of renewable energy that are not as environmentally destructive.

Most of my concerns are much more eloquently described and much more fully detailed in (1) the comments made on the Draft EIS for the Energía Sierra Juárez U.S. Transmission Line Project by Charles and Laurie Baker – comments which also concern the McCain Valley and the McCain Valley Resource Conservation Area – and by Aaron Quintanar (see http://www.esjprojecteis.org/deis_comments.htm); and (2) comments made for the Scoping Report for the East County Substation, Tule Wind, and Energía Sierra Juárez Gen-Tie Projects by numerous organizations, elected representatives, and individuals, including Defenders of Wildlife, County Supervisor Dianne Jacob, U.S. Congressman Duncan Hunter, the Boulevard Planning Group, law offices of Stephan Volker (representing Backcountry Against Dumps, the Protect Our Communities Foundation, East County Community Action Coalition, and Donna Tisdale), the County of San Diego Department of Planning and Land Use, Howard Cook, and Denis Trafecanty (see http://www.cpuc.ca.gov/environment/info/Dudek/ECOSUB/AppxG_CommentsRcd_vol1.pdf and http://www.cpuc.ca.gov/environment/info/Dudek/ECOSUB/AppxG_CommentsRcd_vol2.pdf and http://www.cpuc.ca.gov/environment/info/Dudek/ECOSUB/AppxG_CommentsRcd_vol3.pdf accessed through <http://cpuc.ca.gov/environment/info/dudek/ECOSUB/ScopingReport.html>).

SOIL RESOURCES (and related impacts on vegetation, fauna, water quality, and visual resources)

One concern about the Draft EIR/EIS that I would like to more fully address here is the evaluation of the project's impact on soil resources. Erosion, degradation, and loss of soil are all linked to many other environmental impacts due to reduction of habitat, reduction and alteration of vegetation, visual resources due to scarring of the landscape, and the hydrology and water quality.

Soil erosion has long been identified as one of the most serious long-term impacts on the landscape related to wind farms in arid and semi-arid regions of the western U.S. As described by well-known soil erosion experts, these impacts are particularly severe for thin erodible soils that are characteristic of most California wind farm locations (Wilshire and Prose, 1987). Such soils are the dominant type in the Tule Wind Project and many of the related projects (see Table D.13-1 in Draft EIR/EIS, Section D.13, p.7-8 and accompanying text).

According to the Draft EIR/EIS, the California Environmental Quality Act (CEQA) statutes and guidelines apply to both project construction and project operation (D.13-22). However, although impacts on soil erosion that are related to construction (and decommissioning) of the project are addressed in the Draft EIR/EIS, impacts are not addressed related to operation and maintenance activities. Also not considered are impacts resulting from unplanned accidents and abandonment.

The project also would disturb a huge area of the soil surface, amounting to about 938 acres, including 665 acres permanently disturbed. Environmental impacts to soil resources *per se* are not directly addressed, especially as they relate to visual changes in the project area. In addition, I have some concerns about the adequacy of planning for intense rain events.

Each of these topics is detailed below.

Soil erosion resulting from operations and maintenance activities. Operations and maintenance activities that could impact soil erosion include the normal ongoing use of service and access roads, ongoing vegetation management along the access roads and around the turbine pads (including regular

herbicide applications for fire suppression), and other likely but infrequent events such as firefighting activities and removal and replacement of dysfunctional turbines and other project elements.

Ongoing operational activities can have severe impacts on soil erosion due to normal runoff as well as to less frequent high-intensity storms along access roads. In wind farms developed in the Tehachapi Mountains in the 1980s, extensive soil erosion resulted from access roads, as vividly pictured in Wilshire et al.'s 2008 book *The American West at Risk: Science, Myths, and Politics of Land Abuse and Recovery* (p. 343) or shown on-line at <http://www.theamericanwestatrisk.com/photos.html> (Photo #11). Erosional gullying from ongoing operations and maintenance has resulting impacts on the amount and kind of vegetation cover and hence local fauna, and can also impact the local hydrology, decreasing water quality and increasing the potential for flooding downstream. Also affected is the aesthetic character of the area.

Paul Gipe, a long-time wind-energy advocate and author of numerous books promoting wind energy, wrote an article in 2003 titled "Erosion Gullies in the Tehachapi Pass: An Example of Improper Wind Development" in which he details the wind-energy industry's very poor record on soil erosion control. In that article, he shows numerous photographs of the irreversible damage to the landscape from improperly handled soil erosion. This damage results not just from construction activities, but from operations. He states, "maintaining erosion-control structures is essential to fighting erosion" and "Once gullies form, they need treatment immediately, or else erosion will accelerate exponentially during subsequent storms." Access roads are one of the major sources of such erosion and the subject of many geologic studies, as detailed in Chapter 5 of Wilshire et al.'s 2008 book.

In summary, impacts from the ongoing operations and maintenance of the wind turbines need to be evaluated in the Final EIR/EIS, and an appropriate mitigation program designed and implemented.

Suggested additions to the Final EIR/EIS

Impact: Erosion would be triggered or accelerated due to operation, maintenance, and inspection activities. This impact needs to be evaluated in the final EIS.

Mitigation measure: Erosion Control and Sediment Transport Control Plan. Another "Erosion Control and Sediment Transport Control Plan" should be crafted and included in the Final EIR/EIS, covering ongoing operations and maintenance activities for the duration of any project activities.

Soil erosion from abandonment. Soil erosion in abandoned wind farms has also been a long-recognized problem in California. Thousands of abandoned wind turbines litter the California landscape, with resulting soil erosion from unmaintained access roads and unmonitored soil erosion controls. According to Paul Gipe, as described above, in an on-line article titled "Removal and Restoration Costs in California: Who Will Pay?", the unfunded liability of removing obsolescent and abandoned wind turbines and reclaiming and restoring sites was (as of 1997-2003) \$60-100 million, with taxpayers ultimately liable for

costs on public lands, such as those that are under the jurisdiction of the BLM (<http://www.wind-works.org/articles/Removal.html>).

Although not planned, various situations are foreseeable that might result in abandonment, including major fires with resultant damage to the turbines, bankruptcy of the company (or subsidiary) owning the turbines, serious malfunctions of the turbines, unplanned technological obsolescence, etc. Abandonment of wind farms reduces many of their undesirable features (such as avian deaths, operational noise, fire hazards, etc.) but leaves behind visual blight and hazards to the soil surface, with attendant potential effects to vegetation, fauna, watershed quality, and air quality.

Abandonment would have impacts in most respects similar to decommissioning, requiring major efforts to prevent soil erosion and restore the vegetation and soil surface, as outlined in the Draft EIR/EIS at D.13 p. 25-26, including removal of the turbine towers and ancillary structures together with habitat restoration. But with abandonment, the company may be unable (or unwilling) to complete the work satisfactorily. Thus, in view of the number of abandoned wind turbines in the state – and the cost to the taxpayer to remove them and restore the soil – a third-party or reclamation bond seems needed to guarantee performance.

In summary, impacts from the possible abandonment of constructed facilities need to be evaluated in the Final EIR/EIS, and an appropriate mitigation program designed and implemented, preferably including a reclamation bond.

Suggested additions to the Final EIR/EIS:

Impact: Erosion would be triggered or accelerated due to abandonment of turbines. This impact needs to be evaluated in the final EIR/EIS.

Mitigation measure: Abandonment Plan. An “Abandonment Plan” should be crafted and included in the Final EIR/EIS, creating a third-party or reclamation bond or guarantee to cover all aspects of decommissioning (removal of turbine pads, removal of access roads, soil decompaction, and vegetation restoration after construction equipment). This plan is also related to visual resources, habitat restoration and biological resources, and fire hazards.

Soil degradation and loss. Proposed project construction and operation (as well as decommissioning and abandonment) activities effectively remove or severely degrade a considerable amount of the soil surface in the area. From descriptions in the Draft EIR/EIS, the soil surface will be disturbed during construction by the building of staging areas, structure sites, and temporary spur roads as well as the more permanent construction of access roads, transmission lines, and turbine pads. Around these will be a zone of de-vegetation for fire control, and barbed wire to prevent unauthorized access.

According to the section on Biological Resources in the Draft EIR/EIS, the acreage involved in temporary and permanent losses of native vegetation is 149.6 acres for the ECO Substation Project, 707.1 acres for the Tule Wind Project, and 8-9 acres for the ESJ Gen-Tie Project, for a total of about 865 acres. Of this, approximately 596 acres would be permanent vegetation loss. All areas that are disturbed by construction activities to the extent of causing temporary or permanent vegetation loss

seem logically to also have significant soil degradation (at a minimum) and loss (where permanent construction removes or covers it). According to the section on Water Resources, 938 acres of soil would be impacted, 665 acres permanently (Draft EIR/EIS, p. D.12-23).

This huge loss of the soil surface seems to me to be an impact in and of itself, irrespective of its direct and indirect impacts on the hydrology and vegetation. Desert soils are notoriously fragile, and their restoration is also extremely slow compared to soils in many other environments. This would be especially true of the relatively thin soils classed as “severely erodible” that comprise as much as 90% of the soils the Tule Wind Project. However, though indirect mitigation is included in the Mitigation Measures BIO-1a through BIO-1g for the vegetation cover, soil loss except by erosion is not directly evaluated in the Draft EIR/EIS.

In summary, the impact from the major removal of soil surface needs to be evaluated in the Final EIR/EIS, and a mitigation program designed and implemented if appropriate.

Suggested additions to the Final EIR/EIS:

Impact: Soil surface would be removed and permanently degraded due to project construction, operations, and decommissioning activities. This impact needs to be directly evaluated in the final EIR/EIS and mitigation measures designed and implemented if appropriate.

Simulation of impacts on visual resources. Visual simulations included in Section D.3 only represent the turbines and a few other project elements at the ECO Substation, but these simulations apparently do not include access roads, transmission lines, or other project elements. These elements represent a relatively large amount of ground surface – about 595 acres of permanent vegetation loss, and 665 acres of permanent soil surface loss. In the visual resources section, a more accurate assessment of the impact of the projects should include the presence of the large turbine pads, the maintenance roads to the various sites and around each turbine and pad, the areas around both pads and roads that are planned to be de-vegetated for fire control, and the barbed wire fences surrounding all these features. Each of these adds to the impact on visual resources in the area.

Suggested additions to the Final EIR/EIS:

Revised simulations showing all project elements, including turbine pads, transmission lines, access roads, de-vegetated areas around project elements, and barbed wire fencing.

10-year rain event. One item in the Tule Wind Project Applicant Proposed Measures (APM) drew my attention. According to APM-TULE-HYD-1, the applicant proposes a culvert design to meet a 10-year rain event (p. B-149) whereas the applicant is requesting a minimum 30-year right-of-way grant (p. B-85). In 30 years, the likelihood of a 10-year rain event is nearly 96%, and the likelihood of even a 100-year rain event is 26%. Both such likelihoods are quite high for preventing soil erosion over the life of the project, and the Final EIR/EIS should contain hydrologic control measures to meet much higher standards to prevent major soil loss after storms.

In conclusion, I have many serious concerns about these proposed projects, and support the “No Action” or “Do Not Construct” alternative. For the Final EIR/EIS, more attention to issues about soil resources, erosion, loss, and degradation would be helpful.

Thank you for your thoughtful attention to my comments.

Sincerely yours,

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REFERENCES

Gipe, P., 2003a, Erosion Gullies in the Tehachapi Pass: An Example of Improper Wind Development: <http://www.wind-works.org/articles/TehErosion.html>

Gipe, P., 2003b, Removal and Restoration Costs in California: Who Will Pay?: <http://www.wind-works.org/articles/Removal.html>

Wilshire, H. G., J. E. Nielson, and R. W. Hazlett, 2008, *The American West at Risk: Science, Myths, and Politics of Land Abuse and Recovery*. Oxford University Press, 2008, 619 p.

Wilshire, H. and D. Prose, 1987, Wind Energy Development in California, USA: *Environmental Management*, v. 11, no. 1, pp. 13-20.