UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

NOV 0 1 2010

Dr. Jerry Pell
Office of Electricity Delivery and Energy Reliability,
OE-20
U.S. Department of Energy,
Washington, DC 20585

Subject: Draft Environmental Impact Statement (DEIS) for Energia Sierra Juarez U.S. Transmission Line Project, San Diego County, California [CEQ# 20100373]

Dear Mr. Pell,

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

Energia Sierra Juarez U.S. Transmission, LLC (ESJ) has submitted a Presidential permit request to the Department of Energy for the construction, operation, maintenance, and connection of either a 230 kilovolt (kV) or a 500-kV electric transmission line that would cross the international border between the U.S. and Mexico in the vicinity of Jacumba, CA in eastern San Diego County, CA. The transmission line would be 1.7 miles in length (0.65 miles in the U.S.) and would transmit up to 1,250 megawatts (MW) of wind-generated electricity from the proposed Energia Sierra Juarez Wind Project (ESJ Wind Project) near the La Rumerosa area in Mexico. The DEIS evaluates a 230-kV Double Circuit transmission line Alternative, a 500-kV Single Circuit Alternative, and the No Action Alternative.

201-1 EPA supports 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 minimizing the generation of greenhouse gases, and we acknowledge the need for transmission to carry the power generated. While EPA is pleased with certain aspects of this Project, including efforts to minimize water use and ground water consumption; consideration and avoidance of culturally significant resources; and efforts to reduce the potential fire hazard the project presents; we have a number of concerns regarding the proposed project and its connected actions. We have enclosed our detailed comments, which describe our concerns about biological resources, air quality and mitigation measures. Based on our review, we have rated the DEIS as *Environmental Concerns – Insufficient Information* (EC-2). Please see the enclosed "Summary of EPA Rating Definitions."

RESPONSE TO 201-1: Comment noted.

201-2

It is EPA's understanding that the Energia Sierra Juarez Wind Project would be constructed, operated, and maintained in Mexico and is not, itself, the subject of any federal action subject to the requirements of NEPA; however, it appears to be dependent on the DOE permitting of the ESJ U.S. Transmission Line and the construction and operation of the East County (ECO) Substation switchyard on Bureau of Land Management lands. Thus, the impacts that the construction and operation of the wind park in Mexico will have upon the United States are considered relevant to the DOE's approval or denial of the ESJ U.S. Transmission Line project Presidential Permit request. While the DEIS contains a brief discussion of the impacts of the ESJ Wind project to the United States, more detailed information is required in order to assess the full extent of those impacts. We recommend that the Final Environmental Impact Statement (FEIS) include more detailed information regarding impacts to biological resources; in particular, raptors, migratory birds, and bats. We also recommend that the FEIS expand upon the measures that will be implemented by ESJ Wind to ensure maximum avoidance of bird and bat strikes.

We appreciate the opportunity to review this DEIS. When the FEIS is published, please send a copy to the address above (Mail Code: CED-2). If you have any questions, please contact Carter Jessop, the lead reviewer for this project, at (415) 972-3815 or jessop.carter@epa.gov, or me at (415) 972-3521.

Sincerely,

Tom Kelly

for Kathleen M. Goforth, Manager
Environmental Review Office

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

RESPONSE TO 201-2: DOE agrees that the potential impacts that ESJ Wind project would have on the U.S. are relevant to the DOE's decision to issue the Presidential permit. As such the EIS includes an analysis of the potential impacts of the ESJ Wind project on the U.S. These potential impacts are discussed for each discipline area in Section 3.

Additional analysis of potential biological resources impacts to the U.S. related to the ESJ Wind project has been added in Section 3.1 of the EIS. Refer to response to comment 201-3 for additional discussion of potential biological resource impacts of the ESJ Wind project on the U.S.

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

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

U.S. EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR THE ENERGIA SIERRA JUAREZ U.S. TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA, NOVEMBER 1, 2010

Biological Resources

EPA is concerned about the potential impact to biological resources of the United States that may result from the construction and operation of the ESJ Wind project in Mexico; which is integrally tied to the Energia Sierra Juarez (ESJ) U.S. Transmission project. Specifically, EPA is concerned about potential impacts to sensitive wildlife species, particularly migratory bird and bat species. The DEIS contains a brief discussion of the anticipated impacts of the ESJ Wind project; however this discussion is vague and incomplete. It does not include any species-specific information, nor does it attempt to qualitatively or quantitatively establish the severity of the anticipated impacts. 201-3

Recommendation:

- EPA recommends that the FEIS include a thorough analysis of the anticipated impacts to biological resources in the United States that would result from the ESJ Wind project. In addition, we recommend that the FEIS discuss how the ESJ Wind project will comply with the Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (BGEPA)

The DEIS identifies two components of the East County (ECO) Substation Project as connected actions related to the ESJ U.S. Transmission project: the ECO Substation switchyard and SWPL loop-in. Section 4.0 of the DEIS summarizes the contents of two environmental analyses that considered the impacts of these actions. The Sunrise Powerlink Revised Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS) included an assessment of the potential impacts of the proposed ECO Substation and SWPL loop-in as connected actions to the Sunrise Powerlink project, and the San Diego Gas and Electric company recently completed a "Proponent's Environmental Assessment (PEA)" of the ECO Substation Project as part of its permit application submitted to the California Public Utilities Commission. The DEIS indicates that the PEA and RDEIR/SDEIS differ in their determination of the significance of impacts regarding the permanent removal of vegetation and the extent of impacts to sensitive species. Without a more comprehensive environmental analysis, it is difficult to determine the full extent of impacts and what mitigation may be required under federal, state or local guidelines. 201-4

Recommendation:

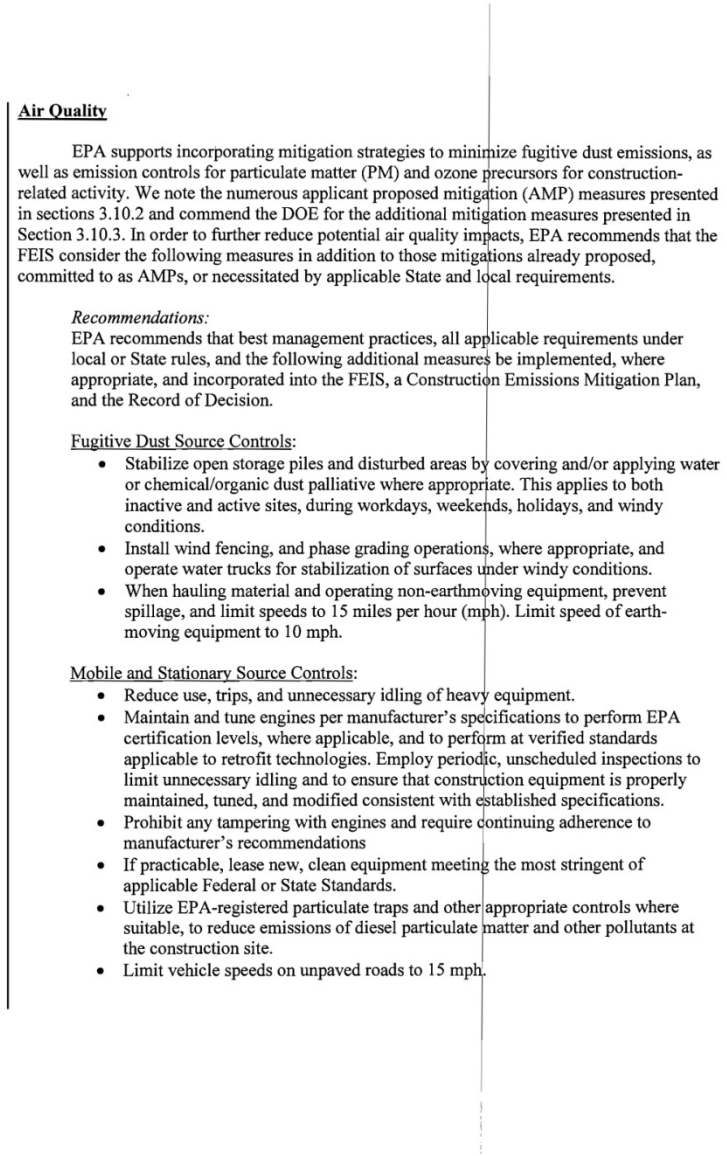
- The FEIS should more completely and consistently characterize the impacts associated with the ECO Substation. The FEIS should include a discussion of all mitigation measures that would be implemented to reduce impacts to biological resources, including the site and extent of any compensatory mitigation that may be required.

RESPONSE TO 201-3: Additional analysis of potential biological resources impacts to the U.S. related to the ESJ Wind project has been added in Section 3.1 of the EIS.

EIS Section 3.1 (Biological Resources) is expanded in response to comments to include further discussion of potential impacts to avian species, and potential cross-border impacts. The MBTA and BGEPA are U.S. statutes that do not apply to actions outside U.S. jurisdiction. However, migratory birds, including golden eagles, are protected by international treaties. The Mexican government is a signatory to at least one such treaty and is responsible for addressing impacts to this species within Mexico.

Refer to response to comment 108-8 for a summary of ongoing research on California condor and eagle populations in the ESJ Wind project area.

RESPONSE TO 201-4: The analysis of potential biological resources impacts related to the ECO Substation switchyards and SWPL loop-in has been updated to incorporate relevant information from the October 2011 EIR/EIS prepared by the CPUC and BLM for the ECO Substation project. Refer to Section 4.1.1 of the EIS.



Air Quality

EPA supports incorporating mitigation strategies to minimize fugitive dust emissions, as well as emission controls for particulate matter (PM) and ozone precursors for construction-related activity. We note the numerous applicant proposed mitigation (AMP) measures presented in sections 3.10.2 and commend the DOE for the additional mitigation measures presented in Section 3.10.3. In order to further reduce potential air quality impacts, EPA recommends that the FEIS consider the following measures in addition to those mitigations already proposed, committed to as AMPs, or necessitated by applicable State and local requirements.

Recommendations:
EPA recommends that best management practices, all applicable requirements under local or State rules, and the following additional measures be implemented, where appropriate, and incorporated into the FEIS, a Construction Emissions Mitigation Plan, and the Record of Decision.

Fugitive Dust Source Controls:

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing, and phase grading operations, where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage, and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

Mobile and Stationary Source Controls:

- Reduce use, trips, and unnecessary idling of heavy equipment.
- Maintain and tune engines per manufacturer's specifications to perform EPA certification levels, where applicable, and to perform at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications.
- Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations
- If practicable, lease new, clean equipment meeting the most stringent of applicable Federal or State Standards.
- Utilize EPA-registered particulate traps and other appropriate controls where suitable, to reduce emissions of diesel particulate matter and other pollutants at the construction site.
- Limit vehicle speeds on unpaved roads to 15 mph.

201-5

RESPONSE TO 201-5: The EPA's recommended fugitive dust source control measures have been reviewed and compared to the recommendations in the EIS. As noted in EIS Section 3.10.2, the project is required to comply with San Diego Air Pollution Control District (SDAPCD) Rule 55 – Fugitive Dust Control (adopted June 24, 2009; effective December 24, 2009). A Dust Control Plan would be prepared and filed in advance of construction in accordance with SDAPCD guidelines pursuant to Rule 55. As shown in the table below, the specific dust control measures provided in this rule are essentially equivalent to the EPA's recommended measures.

The EPA's recommended mobile and stationary source control measures have been reviewed and compared to the recommendations in the EIS. As shown in the table below, these measures are essentially equivalent to EIS Mitigation Measures Air Quality-1 (use low-emission construction equipment), Air Quality-2 (minimize vehicle idling), Air Quality-3 (encourage carpooling), and an aspect of SDPACD Rule 55 Dust Control Plan (limit vehicle speeds to 15 mph on unpaved roads).

Regarding PM_{10}, the EIS air quality emissions estimates presented in Section 3.10 and Appendix F are revised based on further analysis of PM_{10} impacts since publication of the Draft EIS. The analysis is now consistent with the estimates provided in the applicant's March 4, 2011 letter to the California Public Utilities Commission. In this letter, ESJ provides a refined analysis of PM_{10} emissions by applying the new EPA method for calculating paved road dust emissions (EPA January 2011, AP-42 Chapter 13.2.1),

Administrative controls:

- Identify all commitments to reduce construction emissions and incorporate these reductions into the air quality analysis to reflect additional air quality improvements that would result from adopting specific air quality measures.
- Meet EPA diesel fuel requirements for off-road and on-highway; and where appropriate use alternative fuels such as natural gas and electric.
- Develop construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow.
- Identify sensitive receptors in the project area, such as children, elderly, and infirm, and specify the means by which you will minimize impacts to these populations. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.

201-5

Mitigation

201-6 EPA commends the Department of Energy (DOE) for the inclusion of additional mitigation measures that supplement the applicant proposed mitigation (AMP) for each affected resource area. We feel that the proposed measures would benefit the environment and would serve to advance the goals of environmental responsibility and stewardship. We recommend that these measures be included in the FEIS and committed to in the Record of Decision as conditions for the issuance of the Presidential Permit.

and by reducing the number of off-road miles travelled by heavy trucks hauling excess soil from the site to a landfill during a peak day (as compared to the Draft EIS analysis). Based on that revised analysis, the resulting peak daily PM_{10} emissions (the sum of Combustion Particulate PM_{10} and Fugitive Dust PM_{10}) are reduced from 286 lb. to 88 lb., and thus would fall below the local agency impact threshold of 100 lb/day (see EIS Table 3.10-5 for applicable thresholds). The revised emissions estimates are presented in EIS Section 3.10, Tables 3.10-6, 3.10-7, and 3.10-8, as well as corresponding tables in Appendix F. The revised emissions tables and the ESJ March 4, 2011 letter are provided in EIS Appendix F (Air Quality Calculations and Summary Tables) for reference.

The EPA's recommended administrative controls have been reviewed and compared to the recommendations in the EIS. As shown in the table below, the EPA's recommendation to meet EPA diesel fuel requirements for off-road and on-highway, and where appropriate use alternative fuels such as natural gas and electric equipment, is essentially equivalent to aspects of Mitigation Air Quality-1 (Use Low-Emission Construction Equipment). The recommendation to avoid traffic interference would be addressed through a Traffic Control Plan that would be required in accordance with County of San Diego standards. EPA's recommendation to locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners will be addressed by the fact that there are no sensitive receptors or buildings in close proximity to the construction work areas. Based on this comparison of EPA's recommended air quality practices to the EIS recommended

mitigations and the SDAPCD Dust Control Plan and other local regulatory requirements, no additional air quality mitigations are indicated.

EPA Recommended Air Quality Mitigation	Corresponding Regulatory Requirements and EIS Additional Identified Mitigation
Fugitive Dust Source Controls:	
Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.	SDAPCD Rule 55 Dust Control Plan: Water or non-toxic soil stabilizers would be applied to all unpaved access roads, parking areas, and staging areas with sufficient frequency to maintain an effective level of soil moisture or cohesion while avoiding excessive water application. Soil stabilizers would be applied to inactive construction areas on an as-needed basis. Vegetative ground cover would be planted in disturbed areas as soon as possible following construction.
Install wind fencing, and phase grading operation, where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.	SDAPCD Rule 55 Dust Control Plan: Sites would be pre-watered 48 hours in advance of clearing and the amount of disturbed area would be reduced where possible in order to conserve water. Construction grading would be prohibited on days when the wind gusts exceed 25 mph (40 kilometers per hour [kph]) to the extent feasible to control fugitive dust and reduce water consumption. Exposed stockpiles of soil and other excavated materials would be contained within perimeter silt fencing, watered, treated with soil binders, or covered as necessary.
When hauling material and operating non-earthmoving equipment, prevent spillage, and limit speeds to 15 miles per hour (mph). Limit speed of earthmoving equipment to 10 mph.	SDAPCD Rule 55 Dust Control Plan: All trucks hauling soil and other loose material would be pre-moistened and covered or maintain at least 2 feet (0.6 m) of freeboard. Vehicle speeds would be limited to 15 mph

	(24 kph) on unpaved roads. Paved access roads would be machine-swept daily if visible soil material is carried onto adjacent public roads or streets. If necessary, trucks and equipment would be washed upon exiting the job site and before entering public roads or streets.
Mobile and Stationary Source Controls:	
Reduce use, trips, and unnecessary idling of heavy equipment.	*Additional Mitigation Air Quality-2: Minimize Vehicle Idling* To the extent feasible and when safe to do so, unnecessary construction vehicle idling time should be minimized. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel-powered vehicles, have extended warm-up times following start-up that limit their availability for use following start-up. Where such diesel-powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. ESJ should apply a "common sense" approach to vehicle use; if a vehicle is not required for use immediately or continuously for construction activities, its engine would be shut off. Construction foremen should include briefings to crews on vehicle use as a part of pre-construction conferences including a discussion of "common sense" regarding vehicle use. *Additional Mitigation Air Quality-3, Encourage Carpooling*, recommends that if suitable park-and-ride facilities are available in the vicinity of the alternative corridors, construction workers should be encouraged to carpool to the job site to the extent feasible. The ability to develop an effective carpool program for the Project would

	depend upon the proximity of carpool facilities to the job site, the geographical commute departure points of construction workers, and the extent to which carpooling would not adversely affect worker arrival time and the project's construction schedule.
Maintain and tune engines per manufacturer's specifications to perform EPA certification levels, where applicable, and to perform at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications.	*Additional Mitigation Air Quality-1, Use Low-Emission Construction Equipment*, recommends that construction equipment should be maintained in accordance with the manufacturer specifications and ESJ should use low-emission equipment (described below). All off-road construction equipment and portable equipment diesel engines not registered under the CARB Statewide Portable Equipment Registration Program, that have a rating of 50 horsepower (hp) or more, would meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, Sec. 2423(b)(1) unless that engine is not available for a particular item of equipment. In the event a Tier 2 engine is not available for any off-road engine larger than 100 hp, that engine would be equipped with a Tier 1 engine. If any engine larger than 100 hp does not meet Tier 1 standards, that engine should be equipped with a catalyzed diesel particulate filter (soot filter), unless the engine manufacturer indicates that the use of such devices is not practical for that particular engine type. ESJ should substitute small electric-powered equipment for diesel- and gasoline-powered construction equipment, where feasible.
Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations.	*Additional Mitigation Air Quality-1, Use Low-Emission Construction Equipment*, discussed above, requires that construction equipment be maintained in accordance

	with the manufacturer specifications.
If practicable, lease new, clean equipment meeting the most stringent of applicable Federal or State Standards.	*Additional Mitigation Air Quality-1, Use Low-Emission Construction Equipment,* discussed above, recommends that all off-road construction equipment and portable equipment diesel engines not registered under the CARB Statewide Portable Equipment Registration Program, that have a rating of 50 horsepower (hp) or more, would meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, Sec. 2423(b)(1) unless that engine is not available for a particular item of equipment. These requirements reflect currently adopted standards for construction equipment.
Utilize EPA-registered particulate traps and other appropriate controls where suitable, to reduce emissions of diesel particulate matter and other pollutants at the construction site.	*Additional Mitigation Air Quality-1, Use Low-Emission Construction Equipment*, discussed above, includes a recommendation that if any engine larger than 100 hp does not meet Tier 1 standards, that engine should be equipped with a catalyzed diesel particulate filter (soot filter), unless the engine manufacturer indicates that the use of such devices is not practical for that particular engine type.
Limit vehicle speeds on unpaved roads to 15 mph.	SDAPCD Rule 55 Dust Control Plan, requires that vehicle speeds be limited to 15 mph (24 kph) on unpaved roads.
Administrative controls:	
Identify all commitments to reduce construction emissions and incorporate these reductions into the air quality analysis to reflect additional air quality improvements that would result from adopting specific air quality measures.	The measures listed here were incorporated into the EIS construction emissions estimates.
Meet EPA diesel fuel requirements for off-road and on-highway; and where appropriate use alternative fuels such as natural gas and electric.	Additional Mitigation Air Quality-1: Use Low-Emission Construction Equipment, discussed above, includes a recommendation that all off-road

	construction equipment and portable equipment diesel engines not registered under the CARB Statewide Portable Equipment Registration Program, that have a rating of 50 horsepower (hp) or more, would meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines unless that engine is not available for a particular item of equipment. Mitigation Air Quality-1 also recommends that ESJ should substitute small electric-powered equipment for diesel- and gasoline-powered construction equipment, where feasible.
Develop construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow.	A Traffic Control Plan will be developed and implemented during construction and long-term maintenance and operations, in accordance with County of San Diego standard requirements. Traffic interference and traffic flow reductions are not anticipated due to the rural project location and low traffic volumes on Old Highway 80.
Identify sensitive receptors in the project area, such as children, elderly, and infirm, and specify the means by which you will minimize impacts to these populations. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.	There are no sensitive receptors or buildings in close proximity to the construction work areas.

RESPONSE TO 201-6: The Final EIS incorporates the applicant-proposed measures and additional mitigation measures, as described throughout the EIS and summarized in Section 2.7 (Applicant-Proposed Measures Applicable to All Alternatives) and Table 2-3 (Summary of Impacts by Resource Area). Measures incorporated within the project's design are not considered mitigation measures. If they reduce a potentially significant impact, they eliminate the

potential for that significant impact, since the "measure" is now an integral component of the Project. The Record of Decision (ROD) will reflect that the applicant-proposed measures are incorporated into, and are intrinsic to, the project description. In developing the ROD, DOE will consider the additional mitigation measures as deemed appropriate.

RESPONSE TO 202-1: The comment is noted.

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Pacific Southwest Region
1111 Jackson Street, Suite 520
Oakland, California 94607

IN REPLY REFER TO:
ER# 10/800

Filed Electronically

29 October 2010

Dr. Jerry Pell
Principal NEPA Document Manager
Office of Electricity Delivery and Energy Reliability (OE-20)
U.S. Department of Energy
1000 Independence Avenue, SW.
Washington, DC 20585

Subject: **Review of the USDOE Draft Environmental Impact Statement (DEIS) for Energia Sierra Juarez US Transmission Line Project (DOE/EIS-0414) San Diego County, CA**

Dear Dr. Pell:

202-1 The Department of the Interior has received and reviewed the subject document and has no comments to offer.

Thank you for the opportunity to review this project.

Sincerely,

Patricia Sanderson Port

Patricia Sanderson Port
Regional Environmental Officer

cc:
Director, OEPC
Staff Contact, OEPC

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

OFFICE OF THE COMMISSIONER
UNITED STATES SECTION

October 6, 2010

Dr. Jerry Pell
NEPA Document Manager
U.S. Department of Energy,
Office of Electricity Delivery and Energy Reliability
OE-20
Washington, DC 20585

Dear Dr. Pell:

203-1 Thank you for providing a copy of the draft Environmental Impact Statement (EIS) on the Energia Sierra Juarez U.S. Transmission Line Project (DOE EIS-0414) on September 7, 2010. The EIS reviews potential environmental impacts from the construction and operation of an energy transmission line and substation. The United States Section, International Boundary and Water Commission (USIBWC) has reviewed the draft EIS and does not anticipate the proposed action will impact upon the projects of the USIBWC.

203-2 We do feel, however, that the cumulative impacts from the various projects being developed and current projects in place using wind farm energy production do constitute an environmental hazard to avian mortality. We understand that major migration patterns may not be present in the area but feel that the surveys performed were not adequate to document resident bird populations and alternative migration pathways. This region possesses a temperate climate year round and therefore, possesses large bird populations throughout the year. USIBWC is of the opinion that although the proposed action will be located and constructed in Mexico, the impacts require an assessment through the NEPA process and all cumulative impacts should be adequately assessed.

Thank you again for the opportunity to review and comment on the draft EIS. We look forward to reviewing the final EIS and record of decision when it becomes available. If you have any questions, please call me at (915) 832-4749, or Mr. Wayne Belzer at (915) 832-4703.

Sincerely,

John L. Merino, P.E.
Principal Engineer

The Commons, Building C, Suite 310 • 4171 N. Mesa Street • El Paso, Texas 79902
(915) 832-4100 • (FAX) (915) 832-4190 • http://www.ibwc.state.gov

RESPONSE TO 203-1: The comment is noted.

RESPONSE TO 203-2: Additional analysis of potential biological resources impacts to the U.S. related to the ESJ Wind project has been added in Section 3.1 of the EIS. EIS Section 5.3 is updated with additional discussion of potential cumulative project impacts to avian wildlife and other biological resources. The analysis of potential impacts related to the ESJ Wind project in Mexico is limited in scope to those impacts that have a potential to impact the U.S.

Pell, Jerry

From: Jose Nunez [Jose.Nunez@ibwc.gov]
Sent: Tuesday, November 02, 2010 5:20 PM
To: Pell, Jerry
Cc: Duane Price; John Merino; Russell Frisbie
Subject: Re: Concurrence Request, Energia Sierra Juarez U.S. Transmission Line Project
Attachments: Letter, DOE to DOState, Final Copy for JLMerino, IBWC.pdf

Dr. Pell:

The USIBWC acknowledges receipt of a copy of your request, dated October 21, 2010, to DOS for their concurrence on the proposed Energia Sierra Juarez Transmission Line Project. Recommend that you make the proponent aware that a permit is also required from our agency before construction of this project commences.

204-1 At a minimum, the USIBWC requires that engineering drawings be submitted to our attention for review and approval prior to beginning any construction near the international boundary. These drawings must show the location of each component in relation to the international boundary and the monuments. The USIBWC requires that all structures be off-set from the international boundary by a minimum of 3 feet and allow a clear line-of-sight between any affected monuments.

For more information regarding our permit requirements, please ask them to contact Mr. Duane Price, our Realty Officer. He can be reached at either (915) 832-4139 or via email Duane.Price@ibwc.gov. Thanks for making us aware of this project.

José A. Nuñez, P.E.
Supervisory Civil Engineer
IBWC, U.S. Section
Headquarters
(915) 832-4710
(915) 433-0680 Cell

>>> "Pell, Jerry" <Jerry.Pell@hq.doe.gov> 10/21/2010 11:30 AM >>>
John,

Attached for your information and consideration is a copy of the request for Department of State concurrence on the Energia Sierra Juarez Transmission Line Project that I sent today to Mr. Stephen J. Gallogly, State Department Director, International Energy & Commodities Policy.
Please let me know if I can provide anything further.

Dr. Jerry Pell, CCM
Principal NEPA* Document Manager
Permitting, Siting, and Analysis (OE-20) Office of Electricity Delivery and Energy Reliability U.S. Department of Energy Washington, DC 20585 Tel. 202-586-3362 Fax 202-318-7761 Cell 240-529-3553

*National Environmental Policy Act
[cid:image002.jpg@01CB7123.F7549260]

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RESPONSE TO 204-1: Section 3.15 (Services and Utilities) is revised to discuss this requirement, and the requirement is added to Table 8-1. The applicant has been advised of these engineering design requirements, and the requirement to obtain a permit from IBWC before construction commences.

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STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Cathleen Cox
Acting Director

November 1, 2010

Dr. Jerry Pell
U.S. Department of Energy
Office of Electricity Delivery & Energy Reliability, OE-20,
U.S. Dept of Energy
Washington D.C, DC 20585

Subject: Energia Sierra Juarez U.S. Transmission Line Project
SCH#: 2010094007

Dear Dr. Jerry Pell:

The State Clearinghouse submitted the above named Draft EIS to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on October 29, 2010, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

301-1

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

RESPONSE TO 301-1: The comment is noted.

Document Details Report
State Clearinghouse Data Base

SCH# 2010094007
Project Title Energia Sierra Juarez U.S. Transmission Line Project
Lead Agency U.S. Department of Energy

Type EIS Draft EIS

Description The DOE proposed Federal action is the granting of a Presidential permit to Energia Sierra Juarez U.S. Transmission, LLC, for the construction, operation, maintenance, and connection of either a 230-kilvolt (kV) or a 500-kV electric transmission line that would cross the U.S.-Mexico border in the vicinity of Jucumba, California, in eastern San Diego County. The proposed line would be constructed on either lattice towers or steel monopoles. The interconnection for the transmission line to the U.S. transmission grid system to the existing Southwest Powerlink would be provided by SDG&E at its proposed Eco Substation switchyard facility.

Lead Agency Contact

Name Dr. Jerry Pell
Agency U.S. Department of Energy
Phone 202-586-3382 **Fax**
email
Address Office of Electricity Delivery & Energy Reliability, OE-20,
City U.S. Dept of Energy **State** DC **Zip** 20585
Washington D.C

Project Location

County San Diego
City
Region
Lat / Long 32° 37' 16.50" N / 116° 07' 05.26" W
Cross Streets Old Highway 80
Parcel No. 661-090-04, 661-050-04
Township **Range** **Section** **Base**

Proximity to:

Highways Old Hwy 80, I-8
Airports no
Railways no
Waterways Carrizo Creek
Schools no
Land Use Undeveloped open space/General Rural (S92)/Multiple Rural Use

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Forest Land/Fire Hazard; Geologic/Seismic; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Colorado River Board; Department of Conservation; Department of Fish and Game, Region 5; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 11; Regional Water Quality Control Board, Region 7; Department of Toxic Substances Control; California Energy Commission; Native American Heritage Commission; Public Utilities Commission; State Lands Commission

Date Received 09/15/2010 **Start of Review** 09/15/2010 **End of Review** 10/29/2010

Note: Blanks in data fields result from insufficient information provided by lead agency.

NATURAL RESOURCES AGENCY ARNOLD SCHWARZENEGGER, GOVERNOR

DEPARTMENT OF CONSERVATION

Managing California's Working Lands

DIVISION OF LAND RESOURCE PROTECTION

801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 324-0850 • **FAX** 916 / 327-3430 • **TDD** 916 / 324-2555 • **WEBSITE** conservation.ca.gov

November 1, 2010

Jerry Pell, Ph.D., CCM, Environmental Scientist/Project Manager
U.S. Department of Energy
Office of Electricity Delivery and Energy Reliability
OE-20
Washington, D.C. 20585

Subject: Draft Environmental Impact Statement (EIS) Energia Sierra Juarez (ESJ) U.S. Transmission Line Project, SCH# 2010094007, San Diego County

Dear Dr. Pell:

The California Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Environmental Impact Study for the project referenced above. The Division monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and other agricultural land conservation programs.

Project Description

302-1 The U.S. Department of Energy proposed Federal Action in the granting of a Presidential permit to Energia Sierra Juarez (ESJ) U. S. Transmission, LLC, for the construction, operation, maintenance, and connection of a 230-kilvolt (kV) or a 500-kV electric transmission line. The proposed line would be constructed on either lattice towers or steel monopoles crossing the U.S.-Mexican border in the vicinity of Jacumba, California in eastern San Diego County. The San Diego Gas & Electric Company will provide the interconnection for the transmission line to the U.S. transmission grid system for the ESJ project. The EIS has determined that the project will have no impacts on agricultural resources. None of the project site is under a Williamson Act contract, nor does it involve the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. As such, the Department has no comment on this project.

Thank you for the opportunity to comment on this EIS. If you have questions on our comments, or require technical assistance on agricultural land conservation in California, please contact Jacquelyn Ramsey, Environmental Planner, at (916) 323-2379.

Sincerely,

Dan Otis
Program Manager
Williamson Act Program

The Department of Conservation's mission is to balance today's needs with tomorrow's challenges and foster intelligent, sustainable, and efficient use of California's energy, land, and mineral resources.

RESPONSE TO 302-1: The comment is noted.

STATE OF CALIFORNIA - THE NATURAL RESOURCES AGENCY ARNOLD SCHWARZENEGGER, Governor

COLORADO RIVER BOARD OF CALIFORNIA
770 FAIRMONT AVENUE, SUITE 100
GLENDALE, CA 91203-1068
(818) 500-1625
(818) 543-4685 FAX

October 27, 2010

EIS Clear 10/29/10 ℓ.

RECEIVED
OCT 29 2010
STATE CLEARING HOUSE

State Clearinghouse
1400 Tenth Street
P.O. Box 3044
Sacramento, CA 95812-3044

Regarding: SCH# 2010 094 007: Notice of Completion & Environmental Document Transmittal for a Draft Environmental Impact Statement for Energia Sierra Juarez U.S. Transmission Line Project, Old Highway 80, in the vicinity of Jacumba, in eastern San Diego County, California

To Whom It May Concern:

303-1 The Colorado River Board of California (CRB) has received and reviewed a copy of Notice of Completion & Environmental Document Transmittal for a Draft Environmental Impact Statement for Energia Sierra Juarez U.S. Transmission Line Project, Old Highway 80, in the vicinity of Jacumba, in eastern San Diego County, California.

At this juncture, the CRB has determined that it has no comments regarding the Notice. However, the project proponent is suggested to obtain the necessary permits for groundwater supply due to groundwater use during construction and report those groundwater wells drilling and logging to the Department of Water Resources.

If you have any questions, please feel free to contact me at (818) 500-1625.

Sincerely,

for Gerald R. Zimmerman
Acting Executive Director

RESPONSE TO 303-1: The EIS is updated at Section 2.4 to include a description of ESJ's proposed groundwater extraction from an existing non-potable groundwater well. Section 3 (Affected Environment, Impacts, and Mitigation) is also updated to include discussions of potential impacts associated with the proposed groundwater use. DOE has advised the applicant of the need to obtain groundwater permits as appropriate, and to report groundwater well drilling and logging to the Department of Water Resources, if a new well is constructed. EIS Section 3.11 (Water Resources) is revised to discuss this requirement. The requirement is also added to Table 8-1 (List of Potentially Required Permits / Approvals).

Linda S. Adams
Secretary for
Environmental Protection

Department of Toxic Substances Control

Maziar Movassaghi
Acting Director
5796 Corporate Avenue
Cypress, California 90630

Arnold Schwarzenegger
Governor

October 27, 2010

Mr. Jerry Pell, Ph. D., CCM
Environmental Scientist
U.S. Department of Energy
Office of Electricity Delivery and Energy Reliability, OE-20
1000 Independence Avenue SW
Washington, DC 20585

NOTICE OF PREPARATION (NOP) FOR A DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE ENERGIA SIERRA JUAREZ U.S. TRANSMISSION LINE PROJECT (SCH# 20100940074), SAN DIEGO COUNTY

Dear Dr. Pell:

The Department of Toxic Substances Control (DTSC) has received your submitted Notice of Preparation for a draft Environmental Impact Statement (EIS) for the above-mentioned project. The following project description is stated in your document: "The Department of Energy (DOE) proposed Federal action in the Draft EIS is the granting of a Presidential permit to Energia Sierra Juarez U.S. Transmission, LLC (ESJ), for the construction, operation, maintenance, and connection of either a 230-kilovolt (kV) or a 500-kV electric transmission line that would cross the U.S. –Mexico border in the vicinity of Jacumba, California, in eastern San Diego County. The ESJ-U.S. would construct either a double-circuit 230-kV transmission line or a single-circuit 500-kV electric transmission line to connect the Imperial Valley-Miguel segment of the Southwest Powerlink (SWPL) 500-kV transmission line and provide up to 1250 megawatt (MW) of energy from renewable generators to be located in the general vicinity of La Rumorosa, Northern Baja California, Mexico. Both the double-circuit 230-kV and single-circuit 500-kV facilities would require connection to a new substation that would be built in the U.S. by San Diego Gas and Electric Company (SDG &E) as parts of its East County (ECO) Substation Project. The proposed transmission line would have a total length of approximately 1.65 miles (2.65 kilometer [km], including both the U.S. and Mexico portions of the line. The proposed line would be constructed on lattice towers or steel monopoles, extending south from the point of interconnection with SWPL for about 0.65 mile (1.05 km) to the U.S. –Mexico international border. The ESJ Wind project in Mexico

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would be constructed in phases, with up to 52 wind turbines constructed in Phase I, resulting in up to 130 MW of power (assuming 2.5 MW per turbine)".

Based on the review of the submitted document DTSC has the following comments:

304-1

1) The EIS should evaluate whether conditions within the Project area may pose a threat to human health or the environment. Following are the databases of some of the regulatory agencies:

- National Priorities List (NPL): A list maintained by the United States Environmental Protection Agency (U.S.EPA).
- Envirostor (formerly CalSites): A Database primarily used by the California Department of Toxic Substances Control, accessible through DTSC's website (see below).
- Resource Conservation and Recovery Information System (RCRIS): A database of RCRA facilities that is maintained by U.S. EPA.
- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS): A database of CERCLA sites that is maintained by U.S.EPA.
- Solid Waste Information System (SWIS): A database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.
- GeoTracker: A List that is maintained by Regional Water Quality Control Boards.
- Local Counties and Cities maintain lists for hazardous substances cleanup sites and leaking underground storage tanks.
- The United States Army Corps of Engineers, 911 Wilshire Boulevard, Los Angeles, California, 90017, (213) 452-3908, maintains a list of Formerly Used Defense Sites (FUDS).

304-2

2) The EIS should identify the mechanism to initiate any required investigation and/or remediation for any site within the proposed Project area that may be contaminated, and the government agency to provide appropriate regulatory oversight. If necessary, DTSC would require an oversight agreement in order to review such documents.

304-3

3) Any environmental investigations, sampling and/or remediation for a site should be conducted under a Workplan approved and overseen by a regulatory agency that has jurisdiction to oversee hazardous substance cleanup. The findings of any investigations, including any Phase I or II Environmental Site Assessment

RESPONSE TO 304-1: A Phase 1 Environmental Site Assessment was completed by the applicant's consultant (AECOM 2009). Results of this assessment are summarized in Section 3.8 Public Health and Safety, at Section 3.8.1.1, and the Phase 1 Environmental Site Assessment is provided in EIS Appendix B. The assessment included the entire 360-acre (146-hectare) parcel area on which the alternative corridors and access roads are proposed. According to the report preparer, the assessment was performed in conformance with the general scope and limitations of American Society for Testing and Materials (ASTM) Standard Practice E 1527-05 for ESAs. Based on DOE's independent review of the Phase 1 assessment, and DOE's site visits to the property during preparation of this EIS, DOE agrees with the conclusions of the applicant's report regarding past uses of the property.

RESPONSE TO 304-2: Mitigation Measure Public Health-1 (evaluate contaminated sites) would minimize potential impacts to worker and public health and safety from releases of previously unidentified contaminated areas within the corridor by requiring that construction workers be trained to identify contaminated soil and that ESJ follow specific procedures in the event that contaminated soils are encountered. Specifically, step 3 of Mitigation Measure Public Health-1 states that, should an investigation reveal high levels of hazardous materials, health and safety risks would be mitigated according to County of San Diego Certified Unified Program Agency or Regional Water Quality Control Board regulations or requirements. This would include site-specific Health and Safety Plans, Work Plans, and/or Remediation Plans.

Mr. Jerry Pell, Ph. D., CCM
October 27, 2010
Page 3

304-3 Investigations should be summarized in the document. All sampling results in which hazardous substances were found above regulatory standards should be clearly summarized in a table. All closure, certification or remediation approval reports by regulatory agencies should be included in the EIS.

304-4 4) If buildings, other structures, asphalt or concrete-paved surface areas are being planned to be demolished, an investigation should also be conducted for the presence of other hazardous chemicals, mercury, and asbestos containing materials (ACMs). If other hazardous chemicals, lead-based paints (LPB) or products, mercury or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies.

304-5 5) Future project construction may require soil excavation or filling in certain areas. Sampling may be required. If soil is contaminated, it must be properly disposed and not simply placed in another location onsite. Land Disposal Restrictions (LDRs) may be applicable to such soils. Also, if the project proposes to import soil to backfill the areas excavated, sampling should be conducted to ensure that the imported soil is free of contamination.

304-6 6) Human health and the environment of sensitive receptors should be protected during any construction or demolition activities. If necessary, a health risk assessment overseen and approved by the appropriate government agency should be conducted by a qualified health risk assessor to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment.

304-7 7) If the site was used for agricultural, livestock or related activities, onsite soils and groundwater might contain pesticides, agricultural chemical, organic waste or other related residue. Proper investigation, and remedial actions, if necessary, should be conducted under the oversight of and approved by a government agency at the site prior to construction of the project.

304-8 8) If it is determined that hazardous wastes are, or will be, generated by the proposed operations, the wastes must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). If it is determined that hazardous wastes will be generated, the facility should also obtain a United States Environmental Protection Agency Identification Number by contacting (800) 618-6942. Certain hazardous waste treatment processes or hazardous

Appropriate oversight agencies are identified, including the County of San Diego Certified Unified Program Agency or Regional Water Quality Control Board.

RESPONSE TO 304-3: Refer to response to comment 304-2. Mitigation Measure Public Health-1 (evaluate contaminated sites) provides for preparation of site-specific Health and Safety Plans, Work Plans, and/or Remediation Plans, as appropriate, by qualified specialists.

RESPONSE TO 304-4: No buildings, other structures, asphalt or concrete-paved surface areas are planned to be demolished.

RESPONSE TO 304-5: The provisions in Mitigation Public Health-1 (evaluate contaminated sites) are intended to address potential future excavations and the use of imported soil. The mitigation is updated to include a provision to ensure that imported soil is free of contamination.

RESPONSE TO 304-6: EIS Section 3.8.1.1 summarizes the results of the Phase 1 Environmental Site Assessment. As noted above, and in the EIS, there are a low number of people in the construction area, and no demolition is planned. Therefore, a health risk assessment is not required by a local agency.

304-8 materials, handling, storage or uses may require authorization from the local Certified Unified Program Agency (CUPA). Information about the requirement for authorization can be obtained by contacting your local CUPA.

304-9 9) DTSC can provide cleanup oversight through an Environmental Oversight Agreement (EOA) for government agencies that are not responsible parties, or a Voluntary Cleanup Agreement (VCA) for private parties. For additional information on the EOA or VCA, please see www.dtsc.ca.gov/SiteCleanup/Brownfields, or contact Ms. Maryam Tasnif-Abbasi, DTSC's Voluntary Cleanup Coordinator, at (714) 484-5489.

If you have any questions regarding this letter, please contact me at rahmed@dtsc.ca.gov, or by phone at (714) 484-5491.

Sincerely,

Greg Holmes
Unit Chief
Brownfields and Environmental Restoration Program

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044
state.clearinghouse@opr.ca.gov

CEQA Tracking Center
Department of Toxic Substances Control
Office of Environmental Planning and Analysis
P.O. Box 806
Sacramento, California 95812
ADelacr1@dtsc.ca.gov

CEQA # 3016

RESPONSE TO 304-7: According to the studies described in Section 3.8.1.1, the site has not been previously used for agricultural, livestock or related activities. A Phase 1 Environmental Site Assessment was completed by the applicant's consultant (AECOM 2009). Results of this assessment are summarized in Section 3.8 Public Health and Safety, at Section 3.8.1.1, and the Phase 1 Environmental Site Assessment is provided in EIS Appendix B. The assessment included the entire 360-acre (146-hectare) parcel area on which the alternative corridors and access roads are proposed. According to the report preparer, the landowner indicated during an interview that "there have been no commercial or industrial uses of the subject property, including agricultural use" (page 4-1, Section 4.1 in AECOM 2009).

Based on DOE's independent review of the Phase 1 assessment, and DOE's site visits during preparation of this EIS, DOE agrees with the conclusions of the applicant's report regarding past uses of the property.

RESPONSE TO 304-8: Project operations would entail periodic maintenance of the transmission towers (or monopoles) and conductors. Such activities are not expected to generate substantial quantities of hazardous wastes, and will not require onsite storage or treatment of wastes. The EIS at Section 3.8 is updated to include this clarification, and to reference the applicable hazardous materials handling and waste laws and regulations.

RESPONSE TO 304-9: The comment is noted.

ERIC GIBSON
DIRECTOR

County of San Diego

DEPARTMENT OF PLANNING AND LAND USE

5201 RUFFIN ROAD, SUITE B, SAN DIEGO, CALIFORNIA 92123-1666
INFORMATION (858) 694-2960
TOLL FREE (800) 411-0017
www.sdcounty.ca.gov/dplu

November 24, 2010

Dr. Jerry Pell
Office of Electricity Delivery and Energy Reliability (OE-20)
U.S. Department of Energy
1000 Independence Avenue, SW.
Washington, DC 20585
email: Jerry.Pell@hq.doe.gov
facsimile: 202-318-7761

Energia Sierra Juarez Transmission Line Environmental Impact Statement Comments (DOE/EIS-0414)

Dear Dr. Pell:

The County of San Diego (County) has reviewed the Draft Environmental Impact Statement (EIS) published September 17, 2010 in the Federal Register. The County appreciates the Department of Energy's (DOE) request to participate as a Cooperating Agency and this opportunity to provide comments and make specific requests regarding the proposed development and environmental review. As you are aware, the County has a separate discretionary permitting and environmental review process currently underway that will address the specific issues of concern with the components of the project we have land use jurisdiction over. The comments provided in the attachment to this letter address the comments made by the County in previous letters, general deficiencies of the EIS, and potential conflicts with the ongoing environmental review that the County is partaking with the California Public Utilities Commission (CPUC) related to this project.

The Energia Sierra Juarez U.S. Transmission Line Project (ESJ) is required to comply with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), for the issuance of the County Major Use Permits and the DOE Presidential Permit. In accordance with CEQA Section 15221, the County should use this Environmental Impact Statement (EIS) in-lieu of preparing its own Environmental Impact Report (EIR). In order for this document to be adequate for the County to rely on for its discretionary actions, this EIS would have to comply with the

provisions of the State and County CEQA Guidelines. Because NEPA does not require separate discussion of mitigation measures or growth inducing impacts, these points of analysis would need to be added, supplemented, or identified before this EIS could be utilized by the County as an equivalent to an EIR.

The County of San Diego appreciates the opportunity to participate in the environmental review process for this project. We look forward to receiving future environmental documents related to this project or providing additional assistance at your request. If you have any questions regarding these comments, please contact the County Project Manager Patrick Brown at (858) 694-3011 or e-mail Patrick.Brown@sdcounty.ca.gov.

Sincerely,

for

ERIC GIBSON
Director, Department of Planning and Land Use

Attachments: EIS Comment Spreadsheet

Email cc:
Alberto Abreu, Director Project Development, Sempra Generation, 101 Ash Street, HQ14A San Diego, CA 92101
Jeff, Murphy, Deputy Director, Department of Planning and Land Use M.S.O650
Patrick Brown, Project Manager, Department of Planning and Land Use, M.S. O650
LeAnn Carmichael, Planning Manager, Department of Planning and Land Use, M.S. O650

11/23/2010 **ATTACHMENT A**: ESJ US Generation Tie-Line Project 1
Department of Energy EIS 0414, County of San Diego Comments

	Section		Subsection, Paragraph, Sentence	Comment or Issue
305-1	1	Introduction	1.3 Pg. 1-8	The project objectives should be updated as follows, " stated objective is for the proposed transmission line is to transport only renewable electrical power generate by the ESJ Wind Power project in Mexico..."
305-2	2	General		As communicated during the NOI process, the County of San Diego, Land Use and Environmental Group, has developed Guidelines for Determining Significance (Guidelines) that are used to assist in determining environmental impacts in the unincorporated portions of the County. The current EIS incorporates these guidelines for only one resource area - Visual Resources. The County recommends the EIS utilize the Guidelines for each applicable resource area in order to adequately evaluate and mitigate for environmental impacts to the unincorporated County or County facilities.
305-3	3	Introduction	Pg. 1-13 and 14:	Sunrise Powerlink (SRPL) as a Connected Action: The response provided by Sempra doesn't answer the technical question as to how the project could be connected without the SRPL. The letter provided by Sempra makes unsubstantiated conclusion without any technical backup. The applicant should discuss the technical logic behind "Special Protection Schemes" and "Low Cost Incremental Generation," as it relates to the projects ability to interconnect to the existing Southwest Powerlink (SWPL).
305-4	4	Introduction	Pg. 1-13 and 14:	The EIS does not describe the Sempra Application for the Groundwater Extraction Major Use Permit in any detail. The Groundwater project is a connected action and should be fully discussed within this EIS.
305-5	5	Range of Alternatives	Pg. 2-1	The EIS does not present a reasonable range of alternatives. Pursuant to NEPA, a reasonable range would include alternatives, aside from the proposed action, that would both satisfy the purpose and need and avoid or minimize significant environmental impacts. The ESJ EIS includes three alternatives: Alternative 1, No Action Alternative; Alternative 2, Double Circuit 230-KV Transmission Line (designated as the Applicant's preferred project); and Alternative 3, Single-Circuit 500-KV Transmission Line. The EIS is flawed in that it treats the double circuit and the single circuit transmission lines as both an option under the proposed action and as alternatives to the proposed action. The Single-Circuit 500-KV Transmission Line Alternative does not meet the reasonable range standard as it is more impactive and would therefore have increased impacts over the Applicant's preferred project, the Double Circuit 230-KV Transmission Line. A reasonable range of alternatives would put forth alternatives that would *reduce* impacts rather than increase impacts under the proposed action (*Roosevelt Campobello International Park Commission v. EPA,* 684 F 2d 1041 (1st Cir. 1982).
305-6	6	Range of Alternatives	Section 2.4-5 Pg. 2-1	CFR 1502.14 Alternatives including the proposed action: DOE is required to rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives, which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated. The EIS does not evaluate a reasonable range of alternatives, nor does the EIS provide a reasonable amount of alternatives that have been screened out. The EIS only screen out one alternative (The Undergrounding). The EIS should consider more alternatives and should provide a list of feasibility factors based on cost, logistics, technology, social, environmental, and legal factors. Also, the EIS does not include reasonable alternatives not within the jurisdiction of the lead agency DOE.

RESPONSE TO 305-1: The requested change is made to Section 1.3. This issue is also addressed in the Draft EIS at Section 1.1.2, footnote 6, which indicates, in part: *"According to Sempra's August 28, 2009, letter to DOE, ESJ requests that the import capacity in the Presidential permit be limited to the physical capacity of the transmission line (1,250 MW)* ***and that power on this line be limited to renewable energy projects****."* [emphasis added] The citation in footnote 6 is from page 2, paragraph 5 of the applicant's August 28, 2009 letter to DOE. This letter is available at the project website: http://esjprojecteis.org/docs/DOE_Presidential_Permit_clarification.pdf

This point is stated again at EIS Section 1.5.1, which states: *"ESJ has indicated to DOE that the proposed electrical transmission line is intended to be used only for renewable generation. Accordingly, any alternative future use of the transmission corridor would require a new or revised Presidential permit application to be filed with DOE and would be subject to a separate NEPA review. Therefore, the possible use of the line for non-renewable energy is outside the scope of this EIS."*

As stated in the EIS, should the application for a Presidential permit be approved, the permit would be conditioned on this provision.

In its comment letter to DOE (comment 404-1, provided herein), ESJ reiterated its previous communication to DOE that the import capacity of the transmission line in the Presidential permit would be limited to the physical capacity of the line (1,250 MW) and that power on this line be limited to renewable energy projects.

11/23/2010 **ATTACHMENT A**: ESJ US Generation Tie-Line Project 2
Department of Energy EIS 0414, County of San Diego Comments

		Section	Subsection, Paragraph, Sentence	Comment or Issue
305-7	7	Range of Alternatives	Section 2.4-5 Pg. 2-1	NEPA guidelines require the consideration of a reasonable range of alternatives, defined as alternatives that are realistic (not speculative) that may be feasibly carried out based on technical, economic, and environmental factors (40 CFR 1502.1 et seq.). NEPA requires that the EIS fully considered any alternative that has the potential to avoid or substantially lessen any of the significant environmental effects of the project. The following are alternatives that should be considered. The County is willing to work with DOE to consider the following Alternatives and a possible screening criteria. 1. No Project Alternative: 2. Monopole Alternative: No reductions to visual • 230kV Double Circuit, 500 kV Single Circuit 3. Lattice Tower Alternative: Reduces Visual impacts. • 230kV Double Circuit, 500kV Single Circuit 4. Underground Alternative: Reduces Fire, Biological, and Visual impacts • 230kV Double Circuit, 500kV Single Circuit 5. Alternative Locations: Unknown reductions • Mexico Reroute using existing infrastructure possibly an alternate location along US Mexico Border 6. ECO-Substation Shift 700' East: Reduces Cultural Resources • Same as indicated in alternatives 2-4
305-8	8	Alternatives Considered but Dismissed	Subsection S.7.2, page S-11	Underground Transmission Line. The EIS concludes the construction of an underground transmission line to not be a reasonable alternative and provides no further analysis. However, given the substantial benefit that would result from underground transmission lines to areas of public health and safety, community character, aesthetics, and fire and fuels management, the County requests a NEPA level cost-benefit analysis of this potential alternative. The EIS should not consider costs when evaluating impacts. The County would like DOE to reconsider the underground alternative.
305-9	9	General: CEQA Compliance	NA	The ESJ project is required to comply with CEQA and NEPA for the issuance of the Major Use Permits and the Presidential Permit. In accordance with CEQA Section 15221, the County should use this EIS if it were certified before the East County Substation EIR/EIS. In order for this document to be adequate for the County to use for its discretionary actions, this EIS would have to comply with the provisions of the State and County CEQA Guidelines. Because NEPA does not require separate discussion of mitigation measures or growth inducing impacts, these points of analysis will need to be added, supplemented, or identified before this EIS could be used by the County as an EIR. The County does not intend to use the DOE EIS for its discretionary actions, but it appears that this EIS may be completed substantially sooner than the aforementioned East County Substation EIR/EIS. DOE and the applicant may consider revising or supplementing this EIS as mentioned, so the County could use the document. The County's comments in this letter do not construe the necessary changes that would be required to comply with CEQA Section 15221. A separate review and comment period would need to be provided to the County to complete such review.
305-10	10	Mitigation Measures	NA	To ensure that environmental effects of the proposed action are fairly assessed, the EIS should discuss the probability of the mitigation measures being implemented by the Cooperating Agency (NEPA Section 1502.16(h). The enforceability of mitigation measures is questionable. For example, the Air Quality mitigation measures described in Section 3.10.3 Air Quality # 3 is an inadequate mitigation measure because it is not a specific, tangible item that could be implemented. To encourage carpooling is to "strive" to achieve rather than actually resulting in a physical change. Revise all the mitigation measures to be adequate and feasible.

RESPONSE TO 305-2: The County of San Diego's CEQA guidelines are considered in impacts assessment for certain disciplines with quantitative thresholds (e.g. air quality, noise). However, the document is not intended to satisfy all of the County CEQA requirements, and thus the Draft EIS analysis did not necessarily document the analysis of impacts relative to the County's impact thresholds and guidelines. DOE carefully reviewed the County's Guidelines for Determining Significance for each applicable resource area and confirmed that there are no material differences in the EIS impact assessment methodology that would lead to different conclusions. Section 3 is expanded to provide additional discussion of County thresholds.

RESPONSE TO 305-3: DOE has determined that the Sunrise Powerlink project is not a connected action to the ESJ U.S. Transmission Line project. The CEQ definition of connected action (40 CFR 1508.25(1)) states, in part, that actions are connected if they:

(i) Automatically trigger other actions which may require environmental impact statements.

(ii) Cannot or will not proceed unless other actions are taken previously or simultaneously.

(iii) Are interdependent parts of a larger action and depend on the larger action for their justification.

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	Section		Subsection, Paragraph, Sentence	Comment or Issue
305-11	11	Project Operations	Section 2.4.3, page 2-10	The County recommends the EIS rectify the recommendations regarding the installation of lighting for the proposed towers. While the FAA has determined the height of the towers to be acceptable and would not require lighting, the EIS also states the U.S. Border Patrol may request lighting to be installed. The placement and use of lighting on the towers would potentially cause indirect impacts to wildlife. However, if lighting is not proposed, the towers may cause potential hazards to the U.S. Border Patrol operations. The EIS must clearly state and analyze whether or not the proposed towers would include lighting.
305-12	12	Biological Resources	Section 3.1.1.6 Special Status Wildlife Species	The County observed evidence and testimony in the Public Hearings that there is a potential for the Peninsular Bighorn Sheep, which is a federally-listed endangered and state-listed threatened/fully protected species to be present within the project site and area. The DOE should request US Fish and Wildlife Service to re-evaluate the possibility that the species' critical habitat may be shifting, the potential for presence on the project site, and any additional direct or indirect impacts this species.
305-13	13	Biological Resources	Section 3.1.1.7 Special Status Wildlife Species	The US Border Fence is a barrier for wildlife movement. A portion of the project parcels are located in the mountainous terrain that is not occupied by the border fence. Therefore, this area could be considered a wildlife corridor for Peninsular Bighorn Sheep movement between the United States and Mexico. The EIS should reevaluate the occurrence and movement of the species within the project area.
305-14	14	Biological Resources	Section 3.1.2, Environmental Impacts	The EIS does not adequately analyze impacts to avian species. The EIS based the lack of presence of major migration corridors on the general characteristics of the landforms and the absence of extensive wetlands and riparian areas. The presence of avian species and potential impacts to them should be based on accepted biological survey methods rather than assumptions regarding topography. Nonetheless, the EIS concluded the project would result in "direct mortality of cross-border migratory birds due to collisions with transmission lines and wind turbines" without providing potential mitigation measures. The EIS goes on to describe potential environmental protection measures under the authority of the Mexican government (the requirement of avian and bat monitoring studies). Merely performing studies does not reduce the effects of the project. The EIS should identify specific mitigation measures that would reduce the potential effects to the Migratory Birds and raptors. DOE should ensure that these measures are adequate and/or feasible.
305-15	15	Biological Resources	Section 3.1.3 Mitigation Measures	The following Biological Mitigation needs to be added to the project as indicated in the Biological Resource report provided by the County: (1) Provide for Mitigation of the direct biological impacts by either habitat compensation or conservation for the permanent impacts to native vegetation communities. (2) Conduct pre-construction nesting bird surveys, for the California Horned Lark and Loggerhead shrike, or any bother bird subject to the MBTA. Implement all appropriate avoidance measures for identified nesting birds.
305-16	16	Visual	Section 3-58	Summary: The use of the lattice tower is preferable over a monopole design. The County prefers the lattice tower design. This design should be the preferred alternative for the DOE Records of Decision.
305-17	17	Visual	Section 3.2.3 Mitigation Measures	The lattice or monopole towers should be painted a light tan or desert color to blend with the topography better. This has been done on other desert transmission lines that can be seen from Interstate 15 north between Riverside and Barstow, CA.

The ESJ U.S. Transmission Line project is not dependent on Sunrise because the ESJ U.S. Transmission Line project will interconnect to the grid using the Southwest Powerlink via a loop-in from the ECO substation (i.e., not Sunrise Powerlink). Further, Sunrise Powerlink project construction is underway and will be completed regardless of whether or not the ESJ U.S. Transmission Line project goes forward. The EIS considers the Sunrise Powerlink project in the cumulative impact assessment. The applicant's previous written explanation to DOE regarding the relationship between the ESJ U.S. Transmission Line and Sunrise Powerlink projects (ESJ letter to DOE dated May 30, 2008) is discussed in Section 1.5.1.2 and footnote 10.

Further input related to Sunrise Powerlink was provided by Sempra Generation during preparation of the Final EIS (Sempra Generation's July 1, 2011 letter is provided on the project website at: http://www.esjprojecteis.org/docs/Sempra_Response_to_DOE_Questions_2011-07-01.pdf).

RESPONSE TO 305-4: The EIS is updated at Section 2.4 to include a description of ESJ's proposed use of a groundwater well during construction. Section 3 is also updated to include a discussion of potential impacts associated with the proposed groundwater use.

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	Section		Subsection, Paragraph, Sentence	Comment or Issue
305-18	18	Land Use	Section 3.3.2.3 Pg. 3-66-70	Zoning and Planning Consistency: The General Plan Land Use Policy 2.4, Multiple Rural Use (18) states, "...that a **public** improvement project may be approved even when there are identified adverse environmental impacts if the County of San Diego decision-makers adopt findings that demonstrate that the adverse impacts have been mitigated to the greatest extent feasible and that the project is necessary to protect the public health and safety." The ESJ Project is not a Public Utility nor is it considered to be a public project. Sempra is a private entity. Adverse environmental impacts have been analyzed in the EIS; therefore the project is not consistent with this policy. Because the EIS identifies a conflict with land use plan or policies, then the lead agency must determine the significance of the conflict. Unless specifically precluded by other laws from causing or contributing to a conflict with this particular policy, the lead agency may proceed with the proposed action despite the potential conflict. However, the Record of Decision should reflect the issue, discuss the availability of mitigation measures (demonstrate mitigation has been proposed to the greatest extent feasible) and explain the lead agency's decision to override the land use plans or policies for the area.
305-19	19	Land Use	Section 3.3	The Land Use Section does not discuss the County of San Diego General Plan Update, which has since been to the Board of Supervisors for two public hearings, and has been continued to December 8, 2010. The County requests that the Land Use Section incorporate an analysis of the General Plan Update to provide the DOE decisions makers a broad view of the proposed land use policies that may supersede the existing plan goals and policies. The General Plan Update may be in affect before the Record of Decision is made public.
305-20	20	Cultural Resources	Section 3.5.3 Mitigation Measures	The EIS should require a cultural resource construction grading monitoring and potential data recovery program to be conducted by a County of San Diego Qualified consultant. The construction crew should not be responsible for monitoring for potential sensitive cultural resources. See the County of San Diego Guidelines for Determining Significance and the Report Format and Content requirements. http://www.sdcounty.ca.gov/dplu/docs/Cultural_Report_Format.pdf. and http://www.sdcounty.ca.gov/dplu/docs/Cultural_Guidelines.pdf
305-21	21	Noise	Section 3.6.2.2 Environmental Impacts Pg. 3-97	The Project does not analyze the potential impacts to the US from the Wind Turbine modulation and low frequency noise. The nearest sensitive receptor is .75 miles away from the nearest turbine located within the US. The EIR/EIS should provide noise analysis and quantifiable data to demonstrate that low frequency noise will not create a noise impact on existing sensitive receptors. The Following paper should be considered as a methodology for determining the impacts from the Baja Wind Project: ("The 'How To' Guide to sitting Wind Turbines to Prevent Health Risks From Sound" Version 2.1 dated October 28, 2008 prepared by George W. Kamperman and Richard R. James). Additionally the American Wind Energy Association Method may be calculated in addition to the Kamperman Method.
305-22	22	Transportation and Traffic	Section 3.7	The EIS should include the Traffic Control Plan (TCP) as an APM.
305-23	23	Transportation Air Traffic Safety	Section 3.7 Pg. 3-107	The EIS mitigation T-1 should also include coordination with CALFIRE (The San Diego Rural Fire Protection District).
305-24	24	Air Traffic Safety	Section 3.7	The EIS should address the potential impact from the wind tower/turbines built to up to 431 feet to airport operations in the U.S. Currently, the EIS addresses aviation impacts due to the development of the transmission lines, however is silent regarding impacts in the U.S. from related activities in Mexico (development of wind towers). Potential impacts could be the effects of the wind turbines on military and civilian radar or potential flight paths.
305-25	25	Fire Safety	Section 3.9.2	The conclusions in the EIS that the introduction of the project would only be a minor to moderate impact on Fire Safety is not accurate. The portion of the unincorporated county that the project is proposed is considered to be Very High Fire hazard designation. The fire fighting infrastructure and man power is relatively low in comparison to other areas within the county. The introduction of this use within this high fire hazard area makes the risk to human life and safety an unavoidable major and permanent impact. Although mitigation has been proposed, the County does not agree that it lowers the level and significance of the effect.

RESPONSE TO 305-5: DOE has identified a full range of reasonable alternatives as required by NEPA. The purpose and need for DOE's action is to respond to the ESJ request for a Presidential permit. DOE has identified and assessed multiple alternatives that respond to this purpose and need.

In its "40 Questions" guidance, the CEQ addressed the question of whether an EIS prepared in connection with an application for a permit must rigorously analyze and discuss alternatives that are outside the capability of the applicant, or whether it can be limited to reasonable alternatives that can be carried out by the applicant. CEQ's response advised:

> *In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.*

DOE considered this guidance in identifying alternatives for analysis. The identified alternatives are based on information from the applicant, scoping comments, and DOE's own review of the proposal. As indicated in Section 1.3, the applicant's stated objective for the proposed transmission line is to transport electrical power generated by the ESJ Wind project in Mexico to the U.S. The EIS analyzes multiple alternatives that respond to the applicant's

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	Section		Subsection, Paragraph, Sentence	Comment or Issue
305-26	26	Fire Safety	Section 3.9.3 Mitigation	The EIS should require as a mitigation measure, a Fire Service Development Agreement with the Rural Fire Protection District. This mitigation measure would ensure that the fire services would be available to adequately serve the project.
305-27	27	Air Quality and Climate Change	Section 3.10	Use of the Proposed Transmission Line for Non-Renewable Energy Projects: The applicant "Sempra Generation" indicated at the public hearings that they provided documentation to DOE that the proposed transmission line would only be used for transmitting renewable energy. The County concurs with Sempra that the lines should only be used for such purpose because it is foreseeable that the ESJ transmission line could be utilized to transport energy from other nonrenewable resources, such as natural gas. The Presidential Permit Record of Decision should specifically be conditioned to only be used for renewable energy, specifically wind energy from Northern Baja because all practicable means to avoid or minimize environmental harm should be considered (40 CFR 1505.2.c).
305-28	28	Air Quality and Climate Change	Section 10.2.3	The measures mention in this section should be made a mitigation measure to reduce the impacts from fugitive dust. Also, any soil stabilizer needs to be a permeable material.
305-29	29	Air Quality and Climate Change	Section 3.11	The EIS concludes the project would have a quantifiable positive effect on the environment over the long-term since greenhouse gas (GHG) and criteria emissions from fuel combustion would be avoided because the project would only transmit clean renewable energy (EIS, page 3-146). The EIS should identify that the project is to only transmit renewable energy as a mitigation measure. This would ensure that the GHG emissions would be mitigated by avoidance in accordance with 40 CFR 1508.20. Failure to implement this mitigation measure would not meet the objectives of the EIS and could result in increased impacts to the unincorporated county because the emissions from potential additional fossil fuel power plants in Mexico could increase greenhouse gas emissions, affect climate change, and adversely impact air quality and resources in the San Diego County. If not mitigated, the EIS should evaluate the resulting GHG emissions that could be created by a maximum of 1250 megawatts of fossil fuel based generation.
305-30	30	Water Resources	Section 3.11	Surface and groundwater hydrologic features do not cease at the international border. The Hydromodification Analysis should include the entire international drainage area to adequately analyze runoff and storm water flows from grading and construction in both the US and Mexico (see EIS Figure 3.11-1). Furthermore, the conclusions on page 3-158 (Impacts in the U.S. due to Related Activities in Mexico), do not account for potential impacts of flooding or flash flooding due to development of the proposed action in Mexico. The EIS states that "no surface water features traverse the U.S. Mexico border in the project area." However, there is no evidence that surveys were conducted across the border for development of the proposed action in Mexico. Figure 3.11-2 illustrates the survey boundaries, the extent of which end approximately 100 feet into Mexico.
305-31	31	Water Resources	3.11.1.2	The groundwater analysis does not analyze the direct effects to the Jacumba Valley Aquifer and groundwater basin because it does not consider the Groundwater extraction Major Use Permit (Connected Action) that the County is concurrently processing. The County can provide the groundwater investigation reports that conclude that there would be no impact to a minor impact to the water basis in Jacumba.
305-32	32	Minor Editorial Comment	Page 2-15	EIS inconsistently states the frequency of required fire clearing as both once per year and twice per year. The County recommends clarifying that this would occur twice per year as required by the Rural Fire Protection District, which is consistent with recommendations from the FPP letter report.
305-33	33	Minor Editorial Comment	Page 2-24	The EIS incorrectly references Figure 2-8 as providing a simulated view of the ECO Substation. Figure 2-8 does not provide a simulated view of the ECO Substation nor is there such a view in the EIS. The EIS should be corrected accordingly.
305-34	34	Minor Editorial Comment	Page 2-27	The EIS incorrectly references Figure 2-7 as providing a simulated view of the proposed wind towers.

objective, in addition to the alternative of no action. The applicant's preferred alternative at the time of the draft EIS was the 230-kV design. The 500-kV design is a valid and reasonable alternative for accomplishing the objective. Additionally, it has been necessary for the applicant to consider this option as a contingency because the 230-kV design may not be viable pending the outcome of the ECO Substation design. DOE's analysis includes possible routing variations for both designs. Revised routes are considered in the final EIS due to a proposed change in the location of the ECO Substation. DOE considered the option of an underground line, but did not conduct detailed analysis of this option because it concluded (Section 2.8.3) that undergrounding was not a reasonable alternative.

Note that under NEPA, alternatives to an applicant proposal are not limited to only those that appear to reduce environmental impacts.

RESPONSE TO 305-6: Refer to response to comment 305-5 for discussion of the basis for the selection of the project alternatives analyzed in the EIS. As indicated in Section 1.2, the purpose and need for DOE's action is to respond to the ESJ request for a Presidential permit. The alternatives considered are responsive to this purpose and need. The EIS has not evaluated alternatives based on any jurisdictional criterion.

RESPONSE TO 305-7: Refer to response to comment 305-5 for discussion of the basis for the selection of the project alternatives analyzed in the EIS. The first four of the commenter's suggested alternatives were analyzed in the draft and final EIS.

	Section		Subsection, Paragraph, Sentence	Comment or Issue
305-35	35	Cumulative Projects	NA	The DOE should update the project cumulative project list within the Counties of San Diego and Imperial. The cumulative list should also include all proposed renewable energy projects that are within the Bureau of Lands Management (BLM) jurisdiction. The County will provide an updated list to DOE.

The fifth suggested alternative, the potential of a direct interconnection to Mexican transmission lines, specifically the WECC transmission corridor, has been considered, and it has been determined that this is not a reasonable alternative. Discussion of this alternative has been added to Section 2.8.1 in this final EIS. With regard to the commenter's sixth suggestion (new ECO Substation alignment), the EIS is updated at Section 2 (Proposed Action and Alternatives) to include this alignment as Alternative 4, as described with ESJ's May 2010 filing with the County of San Diego, and as described in the ECO Substation EIR/EIS. EIS Appendix B (Project Details) is updated to include new Grading Plans (applicant's engineering drawing set C09 through C16, excluding C-15) to illustrate the new alignment. ESJ has identified a 230-kV line on this revised alignment (referred to in this EIS as Alternative 4A) as its preferred alternative. Section 1 is revised to identify this as both the applicant's and DOE's preferred alternative.

RESPONSE TO 305-8: DOE has presented its analysis and conclusions regarding the undergrounding alternative in EIS Section 2.8.3. As discussed in Section 2.8.3, it is technically feasible to install transmission lines underground. However, utility experience with underground transmission lines is limited, particularly at higher voltages, and undergrounding is typically only used for relatively short distances in locations where there are major constraints on aboveground transmission. This alternative has the potential to reduce long-term impacts related to fire hazards, as well as visual and land use impacts. An underground line also would be more reliable, e.g., less susceptible to weather-related outages. However, this benefit is offset to some extent by the fact that a failure underground is relatively more difficult

to locate and repair. Further, these impact reductions would only occur for the less-than-one-mile transmission line between the U.S. border and the ECO Substation, and additional impacts would be incurred (e.g., construction of an underground transmission line would involve significantly greater ground disturbance for trenching, and associated long-term land scarring in the right-of-way throughout the entire length of the transmission line route). In the context of developing the ECO Substation and the ESJ Wind project in Mexico, these impacts would still occur, even with the undergrounding of the transmission line. The minimal reduction in impacts associated with the undergrounding of the less-than-one-mile transmission line (and removal of five poles/lattice towers) is not warranted given the increased short-term construction impacts and long-term impacts associated with the ECO Substation and ESJ Wind project development, both of which are connected by the ESJ U.S. Transmission Line project. Therefore, when compared to the proposed ESJ U.S. Transmission Line project, the undergrounding alternatives were not determined to be environmentally superior. In summary, the incremental benefits of undergrounding the ESJ U.S. Transmission Line project are disproportionate to the additional impacts, and would not create a substantial benefit to the environment in the context of the ECO Substation and ESJ Wind projects. Based on these considerations, DOE does not consider the construction of an underground transmission line to be a reasonable alternative, and no further analysis is provided in the EIS. This analysis is consistent with the analysis indicated in the ECO Substation EIR/EIS.

RESPONSE TO 305-9: The Final Environmental Impact Report / Environmental Impact Statement for the East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects was published in October 2011, thus predating the completion of this EIS. The intent of the EIS from its outset was to serve the purpose of the federal NEPA. DOE has not represented its intent as also addressing the CEQA requirements. The Final EIS does not necessarily comply with the County's CEQA needs. With regard to "separate discussion of mitigation measure" the EIS does include a discussion of mitigation measures throughout Section 3, and summarized in the EIS Summary. However, the EIS does not include a consolidated table of mitigations. It should be noted, however, that should the Record of Decision indicate approval of the project, the ROD would contain a separate mitigation statement. With regard to growth-inducing impacts, the EIS does not include this analysis. It also noted, however, that in accordance with CEQA Guidelines Section 15163, local agencies can prepare a Supplemental EIR if the EIS does not satisfy a particular guideline.

RESPONSE TO 305-10: ESJ has indicated that they are in agreement with the additional potential mitigation measures identified in this EIS (April 6, 2012 correspondence from ESJ to DOE); accordingly, DOE understands that the applicant would agree to inclusion of these measures in the Presidential permit, should the permit be issued. DOE expects that these mitigation measures, together with the applicant-proposed measures also identified in the EIS and applicable requirements, will provide protection for various environmental resources. This is further discussed in the various discipline assessments in EIS Section 3 (Affected Environment, Impacts, and Mitigation). If DOE decides to issue a Presidential permit, it will consider what, if any,

additional conditions related to mitigation should be included in that permit.

RESPONSE TO 305-11: ESJ has informed DOE that its staff met with the Border Patrol (Sempra 2011b). The agency's comments related to the potential lighting of the towers were directed to ESJ's potential use of helicopters on the U.S. side during construction or operation of the project (ESJ currently has no plans to use helicopters for the construction of the U.S. portion of the line). Based on the discussion between ESJ and Border Patrol, Border Patrol indicated no concerns or issues regarding tower lighting related to Border Patrol operations. Therefore, given ESJ's discussions with the Border Patrol and that the FAA has indicated that the towers do not require lighting, DOE expects that the towers would not be lighted. EIS Section 3.1 is updated to include this discussion. The EIS also includes a brief discussion of potential impacts to wildlife resulting from night lighting of towers, should it be required in the future by Border Patrol or other agency.

RESPONSE TO 305-12: Response to comment 108-7 provides additional discussion of Peninsular bighorn sheep, and EIS Section 3.1 (Biological Resources) is expanded in response to comments to include further discussion of potential impacts to bighorn sheep, including potential cross-border impacts. DOE's March 8, 2011 letter to USFWS indicates the outcome of consultation with the USFWS, including consultation on potential impacts of the ESJ U.S. Transmission Line project on Peninsular bighorn sheep. This letter is added to EIS Appendix C.9.

RESPONSE TO 305-13: Response to comment 108-7 provides additional discussion of Peninsular bighorn sheep.

EIS Section 3.1 (Biological Resources) is expanded in response to comments to include further discussion of potential impacts to bighorn sheep, including potential cross-border impacts.

RESPONSE TO 305-14: EIS Section 3.1 (Biological Resources) is expanded in response to comments to include further discussion of cross-border migration corridors. DOE is not in a position to initiate new "accepted biological survey methods," but has exhaustively surveyed the literature and has taken into account all available information on this subject. DOE is not in a position to require mitigation measures to be implemented in Mexico and does not have the detailed information necessary to describe potential mitigation measures there in detail. The EIS identifies some potential mitigation measures relevant to the wind project in Mexico. These are identified in the context of discussing the potential for impacts in the United States and for the information of the applicant and other parties that may be in a position to implement these measures. DOE reviewed a partial translation of the Mexican MIA permit (or La Manifestacion de Impacto Ambiental, modalidad regional [MIA-R]). The permit requires a baseline study (at least one year) of potential impacts to birds (including migratory species) and bats prior to the operation of the proposed wind farm. If the baseline study shows that birds and bats could be adversely impacted, the permit requires future mitigation to protect or minimize adverse impacts on these bird and bat populations.

RESPONSE TO 305-15: As described in Section 2.7 (Applicant-Proposed Measures) and Section 3.1 (Biological Resources), the EIS considers inclusion of the conservation easement and pre-construction nesting surveys for horned

lark and loggerhead shrike as being applicant-proposed measures. As such, the EIS incorporates these measures into the applicant's description of the proposed project. Implementation of these applicant-proposed measures, as described in the EIS at Section 2.7, including the conservation easement would provide adequate avoidance measures for identified nesting birds. The nest surveys ought to be effective in ensuring that appropriate nest protection measures are implemented during construction.

The conservation easement is intended to address long-term loss of habitat by virtue of preserving habitat that is functionally similar to, and at least as large as, the habitat that would be impacted by project construction.

RESPONSE TO 305-16: As discussed in Section 3.2 (Visual Resources), lattice towers have less impact on visual resources than monopoles. DOE will consider differences in the impacts in making a decision on the Presidential permit application.

RESPONSE TO 305-17: DOE considered this recommendation. Painting the towers would require significantly greater maintenance on these structures, which would lead to increased potential environmental effects such as VOC emissions from the use of architectural coatings, increased traffic and resultant potential effect on the environment, increased waste disposal of used painting materials and paint cans, etc. Further, given the existence of lattice towers immediately north of the ESJ U.S. Transmission Line project, distinguishing the ESJ U.S. Transmission Line project towers by painting them a different color would seem to increase their visual impact, not decrease it. Based on these considerations, the EIS

(Section 3.2 Visual Resources) Visual Resources Mitigation Visual-2 is revised to include a specification for "dulled metal finish and nonspecular conductors." ESJ has indicated to DOE that they would have no objection to this requirement, as it is consistent with the mitigation approach in the ECO substation EIR/EIS (Sempra Generation's July 1, 2011 letter is provided on the project website at: http://www.esjprojecteis.org/docs/Sempra_Response_to_DOE_Questions_2011-07-01.pdf).

RESPONSE TO 305-18: As stated in EIS Section 3.3 (Land Use), the EIS defers to the County on this issue. EIS Section 3.3 is revised to clarify that this policy is applicable to the project. Further analysis of this matter is beyond the scope of the EIS. DOE has no intention of overriding any state or local agency requirements, and trusts that local authorities will implement their regulatory processes as they deem appropriate.

RESPONSE TO 305-19: EIS Section 3.3 is revised to address the recently adopted (August 3, 2011) General Plan update.

Section 3.3 notes that certain land use policies have been revised by the recently adopted General Plan update which are relevant to the ESJ U.S. Transmission Line project. That section identifies and discusses one notable change in the General Plan that is relevant to the project: the General Plan land use designation for the ESJ U.S. Transmission Line project site and surrounding properties is proposed to be changed from General Plan Regional Category 1.4 Rural Development Area (RDA) and the Non-Urban Residential Land Use Designation of Multiple Rural Use to Rural Lands (RL-80); one dwelling unit per 80 acres. Based on the

updated General Plan, such a change would not materially affect the viability of the ESJ U.S. Transmission Line project or alter the type and severity of impacts identified in this EIS.

RESPONSE TO 305-20: The applicant has agreed to accept this requirement (Sempra Generation's July 1, 2011 letter is available on the project website: http://www.esjprojecteis.org/docs/Sempra_Response_to_DOE_Questions_2011-07-01.pdf). The applicant-proposed measures listed in Section 2.7 are revised to indicate that ESJ will implement cultural resource construction grading monitoring and a potential data recovery program, to be developed in accordance with the County of San Diego Guidelines for Determining Significance and the Report Format and Content requirements. The program would be conducted by a County of San Diego qualified consultant.

RESPONSE TO 305-21: Upon further consideration of this comment, the County of San Diego has acknowledged to DOE that the comment was in error. The County agrees with the EIS conclusion that the sound levels at the nearest noise sensitive receptor in the U.S. (i.e., residences located approximately 2.5 miles from the nearest turbine locations) would not be distinguishable.

RESPONSE TO 305-22: The applicant has agreed to accept this requirement (Sempra Generation's July 1, 2011 letter is available on the project website: http://www.esjprojecteis.org/docs/Sempra_Response_to_DOE_Questions_2011-07-01.pdf).The applicant-proposed measures listed in Section 2.7, and the EIS impact discussion at Section 3.7, are revised to indicate that ESJ will prepare a Traffic Control Plan in accordance with

County Planning standard requirements for projects of this nature.

RESPONSE TO 305-23: The EIS at Section 3.7 is revised to include coordination with CAL FIRE for Mitigation Measure Transportation-1: Consult With and Inform U.S. Border Patrol and CAL FIRE.

RESPONSE TO 305-24: Part of the Presidential permit process is a review by the U.S. Department of Defense (DOD). DOD has been made aware of the EIS, and they did not identify this as an issue of concern. DOD's January 12, 2011 letter is provided in Appendix G.

RESPONSE TO 305-25: EIS Section 3.9 is updated with additional discussion of potential fire impacts associated with the project, and the effectiveness of the applicant's proposed Fire Protection Plan (approved by County of San Diego) and other potential mitigations not identified by the applicant (i.e., Mitigation Fire-1 Construction Fire Protection Plan, Mitigation Fire-2 Coordinate with Emergency Fire Suppression Activities, and Mitigation Fire-3 Remove Hazards from Work Areas). The reference to mitigation that can reduce impacts is in the context of invasive weeds that could occur as a result of construction activity and long-term maintenance of the fuel management. This impact can be reduced with implementation of a Weed Control Plan, as discussed in the biological resources assessment (Section 3.1.2, and Section 3.2.3, Mitigation Biology-3). This issue is also discussed in Section 3.9.1.2.

RESPONSE TO 305-26: The list of potentially required permits (Table 8-1) includes the Fire Services Development Agreement. The EIS at Section 3.9 is clarified to indicate that the applicant executed a Development Agreement with

the RFPD on March 3, 2011, and that the Agreement was approved by the RFPD Board on April 5, 2011. Available documentation related to the Agreement has been added to Appendix B. The requirement to obtain an Agreement is not included as a mitigation because it is a standing requirement.

The applicant has also worked with the District to develop agreed upon mitigations for fire protection that the District agrees would adequately address fire risks posed by the project. The RFPD approved those recommended conditions and concluded that they adequately mitigate potential fire risk from the project and has sent them to the County of San Diego. RFPD's letter dated June 17, 2011 provides the approved mitigations. This letter is provided in Appendix B. Refer to responses to comments 306-1 through 306-10 for additional discussion of fire and fuels management issues.

RESPONSE TO 305-27: See responses 101-3 and 305-1 above. In its comment letter to DOE (comment 404-1, provided herein), ESJ reiterated its previous communication to DOE that the import capacity of the transmission line in the Presidential permit would be limited to the physical capacity of the line (1,250 MW) and agreed and confirmed that power on this line would be limited to renewable energy projects.

RESPONSE TO 305-28: The dust control requirements of the San Diego County Air Pollution Control District (SDAPCD Rule 55 – Fugitive Dust Control) are summarized at Section 3.10.2.3. These measures are considered adequate for the purpose of controlling dust emissions because the measures have been developed, tested, and refined on numerous previous projects, and have been proven effective. However, for the purpose of this EIS,

these measures are not considered mitigation because they are standard local agency requirements and intrinsic to the project proposal's need to comply with applicable regulatory requirements. The preference for permeable material when soil stabilizers are applied is noted.

RESPONSE TO 305-29: Refer to response to comment 305-1. This is not considered a mitigation measure because it is already an aspect of the applicant's project. The use of the transmission line for renewable energy is intrinsic to the applicant's purpose and need.

In its comment letter to DOE (comment 404-1, provided herein), ESJ reiterated its previous communication to DOE that the import capacity of the transmission line in the Presidential permit would be limited to the physical capacity of the line (1,250 MW) and that power on this line be limited to renewable energy projects.

RESPONSE TO 305-30: EIS Section 3.11.2.1 is revised to clarify that the EIS conclusion regarding the absence of surface water features that traverse the U.S.-Mexico border in the project area is based on review of publicly available aerial photography and topographic mapping for the project region both north and south of the border. A formal analysis of hydrologic conditions in Mexico was not performed because this area is outside the U.S. Based on a review of topography and landforms in this area, there is no apparent evidence of historical flash flooding or significant surface flows such that transmission facilities would be exposed to flood damage risks.

RESPONSE TO 305-31: EIS Section 2 and Section 3.11 (Water Resources) are updated to include a description of

the project's proposed use of groundwater from either the existing Jacumba Community Services District Well #6 or a new onsite well. Section 3.11 provides an analysis of potential impacts to the Jacumba Valley Aquifer and groundwater basin based on the County of San Diego's detailed analysis of potential groundwater impacts.

RESPONSE TO 305-32: EIS references to the frequency of vegetation maintenance (Draft EIS pages 2-9, 2-15, 3-30, and 3-129) are consistent with item 11 of the applicant's September 10, 2009 Fire Protection Plan (prepared by Hunt Research for ESJ, and provided in EIS Appendix B), which states at page 5, in relevant part:

"Prescribed defensible space would be maintained on at least an annual basis, prior to May 1, or more often as needed by the applicant."

San Diego Rural Fire Protection District's November 2, 2010 letter to ESJ indicates acceptance of this plan, but the letter does not address the conditions under which vegetation removal would be required more than one time annually. EIS Section 3.9 (Fire and Fuels Management) is revised to indicate that certain conditions could warrant vegetation clearing more than once annually (e.g., higher than normal annual rainfall). At a minimum, the applicant would maintain the vegetation to the height specified in the plan, and they would comply with the requirements of California Public Resource Code section 4292, which is the code section that governs power line fuel modification. The code specifies, in part, that a firebreak be maintained around transmission structures "…which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such pole or tower." The code does not prescribe a time frame. This code and other related

California codes are available online at: http://www.leginfo.ca.gov/cgi-bin/displaycode?section=prc&group=04001-05000&file=4291-4299.

RESPONSE TO 305-33: The reference to Figure 2-8 on page 2-24 is revised to reference Figure 4-1 in Section 4.1.2. Figure 4-2 provides a simulated view of the ECO Substation as developed by SDG&E.

RESPONSE TO 305-34: The reference to Figure 2-7 is revised to Figure 2-8. Figure 2-8 provides a schematic view of a typical wind turbine.

RESPONSE TO 305-35: EIS Table 5-1 and Figure 5-1 are revised to include additional renewable energy projects that are within the BLM jurisdiction, with certain exceptions, as discussed in the updated EIS Section 5.2.

Energy projects that have been added to the cumulative project discussion include:

- Manzanita Wind
- Jordan Wind
- Ocotillo Express
- Renewergy

Other projects have been excluded due to the lack of specific details. Comments received on the Draft EIS have not provided additional information that would alter the findings of the cumulative impacts analysis. With regard to media reports of wind development projects that may be under consideration to be constructed in Mexico and that would purportedly export electricity to the U.S., DOE notes that, to date, no other potential developers have applied for a Presidential permit for a transmission line that would cross

the international border region of Baja California, Mexico.

Pell, Jerry

From: Peggy McCarberg [peggy@eldredlaw.com]
Sent: Wednesday, November 03, 2010 12:09 PM
To: Pell, Jerry
Cc: Patrick.Brown@sdcounty.ca.gov; Cindy Eldred; Pell, Jerry
Subject: DOE/EIS-0414 Comment letter
Attachments: Ltr to DOE re Comments on DEIR (110210).pdf

Good morning. Attached you will find a letter from our office on behalf of our client, San Diego Rural Fire Protection District. The letter includes comments on the Energia Sierra Juarez U.S. Transmission Line Project Draft Environmental Impact Statement (DOE/EIS-0414). We believe that the comments of the Fire District should be seriously considered since the DEIS is replete with references to the potential for fire impacts and the project is located within the District's jurisdiction.

Please feel free to contact our office with any questions or comments. Thank you. Peggy

Peggy J. McCarberg
Attorney at Law

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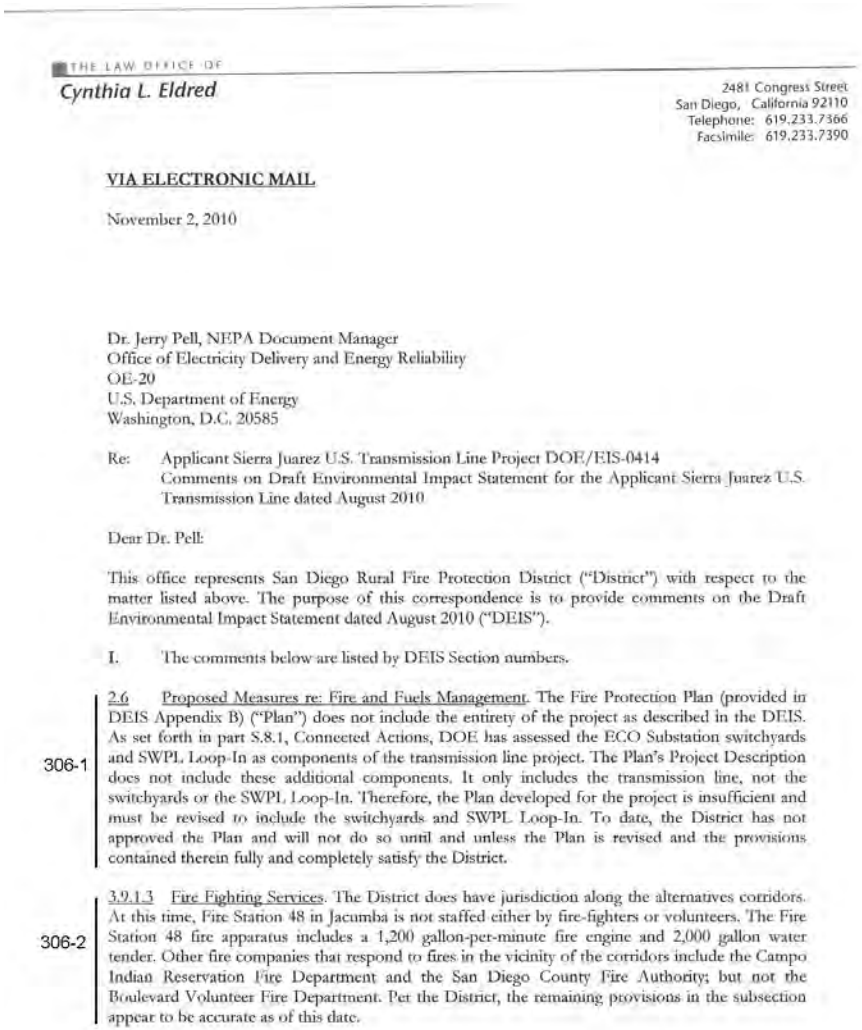

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VIA ELECTRONIC MAIL

November 2, 2010

Dr. Jerry Pell, NEPA Document Manager
Office of Electricity Delivery and Energy Reliability
OE-20
U.S. Department of Energy
Washington, D.C. 20585

Re: Applicant Sierra Juarez U.S. Transmission Line Project DOE/EIS-0414
Comments on Draft Environmental Impact Statement for the Applicant Sierra Juarez U.S. Transmission Line dated August 2010

Dear Dr. Pell:

This office represents San Diego Rural Fire Protection District ("District") with respect to the matter listed above. The purpose of this correspondence is to provide comments on the Draft Environmental Impact Statement dated August 2010 ("DEIS").

I. The comments below are listed by DEIS Section numbers.

306-1 2.6 Proposed Measures re: Fire and Fuels Management. The Fire Protection Plan (provided in DEIS Appendix B) ("Plan") does not include the entirety of the project as described in the DEIS. As set forth in part S.8.1, Connected Actions, DOE has assessed the ECO Substation switchyards and SWPL Loop-In as components of the transmission line project. The Plan's Project Description does not include these additional components. It only includes the transmission line, not the switchyards or the SWPL Loop-In. Therefore, the Plan developed for the project is insufficient and must be revised to include the switchyards and SWPL Loop-In. To date, the District has not approved the Plan and will not do so until and unless the Plan is revised and the provisions contained therein fully and completely satisfy the District.

306-2 3.9.1.3 Fire Fighting Services. The District does have jurisdiction along the alternatives corridors. At this time, Fire Station 48 in Jacumba is not staffed either by fire-fighters or volunteers. The Fire Station 48 fire apparatus includes a 1,200 gallon-per-minute fire engine and 2,000 gallon water tender. Other fire companies that respond to fires in the vicinity of the corridors include the Campo Indian Reservation Fire Department and the San Diego County Fire Authority; but not the Boulevard Volunteer Fire Department. Per the District, the remaining provisions in the subsection appear to be accurate as of this date.

RESPONSE TO 306-1: The impacts of the ECO Substation switchyard and loop-in are addressed in this EIS in accordance with the requirements of NEPA because those elements of the ECO substation project are a connected action for the ESJ U.S. Transmission Line project. However, neither DOE nor ESJ has responsibility or oversight authority for the development and operation of the ECO Substation. The scope of ESJ's Fire Protection Plan is limited to the ESJ U.S. Transmission Line project and does not address ECO Substation. It is expected that SDG&E will have a separate plan for its facilities. Such a plan is recommended in Mitigation FF-2 of the ECO Substation EIR/EIS. The separate plans can be coordinated and integrated at some point; however, the details of such coordination are beyond the EIS scope.

DOE notes that the June 17, 2011 letter from Cynthia L. Eldred, Esq., to CPUC and BLM on behalf of RFPD, confirms, among other items, that the District has approved the applicant's project-specific Fire Protection Plan. Based on this correspondence, DOE understands that the plan meets the District's needs for the ESJ U.S. Transmission Line project.

ESJ's March 4, 2011 comment letter to the CPUC and BLM regarding the ECO Substation/Tule Wind/ESJ Project Draft EIR/EIS includes a July 15, 2009 letter from the RFPD indicating that the RFPD has reviewed the fire protection plan submitted by the Hunt Research Corporation, and that the plan meets the objectives of the California Fire Code 2007 edition, as well as the Fire District's requirements for discretionary projects.

306-3 The Applicant is required by the County of San Diego to procure fire protection services for the project from the District. The District requires that the procurement be memorialized in a written agreement ("Agreement"). Negotiations with the Applicant have been ongoing since July 2009 and multiple versions of the Agreement have been exchanged between the parties. The last communication between the District and the Applicant with respect to the Agreement was in July 2010. On July 6, 2010, on behalf of the District, this office forwarded a copy of the draft Agreement to the Applicant. There has been no response to date from the Applicant with respect to that draft Agreement. This Agreement is separate and apart from the Fire Protection Plan discussed in the DEIS. Therefore, the scope of fire protection services anticipated to be provided by the District for the project is currently unknown and unresolved.

306-4 The County of San Diego requires that the Applicant submit to the County a will-serve letter stating that the District will provide services to the project. Please be aware that the District will not issue a fire and emergency services will-serve letter for the project until and unless all pending public safety issues have been resolved to the satisfaction of the District. A continued lack of response by the Applicant will delay the issuance of the mandatory will-serve letter.

306-5 3.9.3 Mitigation Measures. To date, the Applicant has not submitted to the District a draft copy of a Construction Fire Prevention Plan for review nor has there been any coordination effort on the part of the Applicant to date. The District agrees that such a plan is essential for the project.

306-6 4.1.9 Fire and Fuels Management. The District concurs with the Sunrise RDEIR/SDEIS conclusion that the proposed transmission line would create an obstacle to firefighting and wildfire containment thereby reducing the effectiveness of firefighting efforts in the immediate vicinity of the ECO Substation switchyards. There is a major potential for wildfire ignition and hazards to not only the environment but to firefighters.

306-7 9.0 List of Agencies Consulted. During the preparation of the DEIS, the District was not contacted or consulted despite the repeated references in the document to increased fire hazards and major permanent adverse impacts to fire-fighting ability during project operation (*see*, Table 2-3). It is hereby requested that the District be included in the future as an agency to be consulted with respect to all firefighting issues.

II. The District objects to the DEIR on the grounds that it is inadequate and fails to meet the goals of the National Environmental Policy Act (NEPA), as follows:

306-8 1. The DEIR fails to make clear that there is incomplete information available with respect to the proposed mitigation for the significant adverse impact of the major potential for wildfire ignition. Without such information, a reader cannot make an intelligent decision on the risk of project implementation nor assess the environmental impact of proposed agency decisions on the project.

306-9 2. The DOE must supplement the DEIR with critical information regarding the contents of: a) a revised Fire Protection Plan; b) a final Agreement for the provision of fire protection services for the project; c) a will-serve letter; and, d) a Construction Fire Prevention Plan.

Also attached is a November 25, 2009 letter from the San Diego County Fire Agency (SDCFA) in which the agency notes that all corrections identified in their July 8, 2009 incompleteness letter had been incorporated into the revised Fire Protection Plan dated September 10, 2009, and that the agency would will be in a position to accept the plan when the local fire authority does so. The RFPD's July 15, 2009 and June 17, 2011 letters, and the SDCFA's November 25, 2009 letter are included in Appendix B. ESJ's March 4, 2011 letter to CPUC and BLM is available online at: http://www.cpuc.ca.gov/environment/info/dudek/ecosub/E/05APP_03.04.11_SEMPRA%20(Abreu,A).pdf.

RESPONSE TO 306-2: Section 3.9.1.3 of the EIS is revised accordingly. Note that DEIS statistics were based on discussion with District representative in June 2009, as cited in the reference.

RESPONSE TO 306-3: Based on the District's June 17, 2011 letter to CPUC and BLM, DOE understands that the scope of fire protection services anticipated to be provided by the District for the project has been resolved. Specifically, the applicant entered into a development agreement with the District in March 2011 (approved by the District Board in April 2011); the District has approved the applicant's project-specific Fire Protection Plan; and the District and ESJ have agreed on specific mitigations that the District has approved for the project.

DOE notes additional correspondence on this issue since publication of the Draft EIS, including the RFPD's March 4, 2011 letter to CPUC and BLM (RFPD comments to the Draft EIR/EIS for ECO Substation, Tule Wind, and ESJ

306-9 The first three items are time-sensitive and must be accomplished in order to provide readers with adequate information to evaluate the proposed methods to address the most fundamental firefighting needs of the project. Despite the fact that a Construction Fire Prevention Plan will be necessary prior to the commencement of any project construction, a reader must have adequate information available to assess the proposed process to mitigate for the risks inherent in the construction phase of the project. The Applicant's failure to respond to the District in a timely manner suggests that it will also fail to provide adequate time to allow for the consideration and involvement of all appropriate agencies in the process to address construction fire risks and hazards.

306-10 3. The sections of the DEIR that address fire protection services must be supplemented and recirculated to correct the inadequacies of the current document and allow for readers' meaningful analysis. The current draft precludes meaningful analysis in violation of NEPA.

Very truly yours,

Cynthia L. Eldred, Esq.
THE LAW OFFICE OF CYNTHIA L. ELDRED

cc: San Diego Rural Fire Protection District
Patrick P. Brown, Project Planner, County of San Diego

U.S. Transmission Line projects [Draft EIR/EIS]), which indicates that ESJ and RFPD have entered into a Development Agreement with RFPD and SDCFA that, among other things, satisfies the RFPD's requirements for funding of fire inspections. According to the RFPD's letter (Exhibit A, "Modified Mitigation Measure" FF-3), ESJ will provide funding for the training and acquisition of firefighting equipment and services to RFPD/SDCFA to improve the response and firefighting effectiveness near electrical transmission lines (as well as wind turbines and other infrastructure associated with Tule Wind and ECO Substation project).

According to RFPD's Exhibit A, "Modified Mitigation Measure" FF-6, ESJ would pay a proportionate share of costs (in combination with Tule Wind project and ECO Substation project applicants) to fund locally based fire prevention personnel, including one full-time Fire Code Specialist II Position to enforce existing fire code requirements, including implementation of fuel management requirements (e.g., defensible space) in priority areas to be identified by the RFPD for the life of the project. In addition, ESJ, in combination with the ECO Substation and Tule Wind project applicants are to provide funding to allow RFPD to employ up to four volunteer/reserve firefighters as part-time code inspectors on a stipend basis for up to 90 days per year for the life of the project.

This letter also indicates that ESJ has obtained the District's approval of a project-specific Fire Protection Plan that, among other things, satisfies the RFPD's requirements for a customized fire protection plan for the project (Exhibit A, "Modified Mitigation Measure FF-4"). A copy of the approved plan is included in Appendix B, together with the

RFPD's June 17, 2011 and July 15, 2009 approval letters, and SCDFA's November 25, 2009 approval letter. (The approved plan and related agency correspondence are attached to ESJ's March 4, 2011 comment letter to the ECO Substation/Tule Wind/ESJ project Draft EIR/EIS. This correspondence is available online at: http://www.cpuc.ca.gov/environment/info/dudek/ecosub/E/05APP_03.04.11_SEMPRA%20(Abreu,A).pdf).

According to the RFPD's letters, the District concludes that ESJ U.S. Transmission Line project will have adequately mitigated the increased probability of wildfire through timely satisfaction of mitigation measures contained in the EIR/EIS, the applicants' respective development agreements, and the respective, project-specific Fire Protection Plans. Further, the District concludes that through satisfaction of the mitigation measures in the EIR/EIS, implementation of the project design features described in the DEIR/DEIS where applicable, and satisfaction of the respective development agreements and respective project-specific Fire Protection Plans, the ESJ U.S. Transmission Line project will not significantly obstruct fire protection activities and that ESJ has adequately addressed the additional fire risks posed by its respective project. The RFPD's March 4, 2011 letter is available online at: http://www.cpuc.ca.gov/environment/info/dudek/ecosub/B/02STALOC_03.04.11_Law%20Office%20Cynthia%20Eldred%20(SDRFPD).pdf.

ESJ has indicated in its July 1, 2011 letter to DOE (Sempra 2011b; provided on the project website: http://www.esjprojecteis.org/docs/Sempra_Response_to_DOE_Questions_2011-07-01.pdf) that it will conform with the terms outlined above. EIS Section 3.9 is revised to clarify that the Development Agreement and will-serve

letter are required, and this section provides an updated status of the applicant's discussions with the RFPD.

RESPONSE TO 306-4: Based on the discussion above, DOE understands that ESJ will comply with the Development Agreement and other specific requirements of the District. EIS Section 3.9 is revised to clarify that the will-serve letter is required, and this section provides an updated status of the applicant's discussions with the RFPD. The District's June 17, 2011 letter to CPUC and BLM regarding the ECO Substation Draft EIR/EIS mitigations, which addresses various requirements of the District for the ESJ U.S. Transmission Line project, is provided in Appendix B.

RESPONSE TO 306-5: The applicant has indicated that it intends to complete the Construction Fire Plan prior to project construction. The Rural Fire Protection District has issued revised recommended fire protection mitigations specific to the ESJ U.S. Transmission Line project. These mitigations provide detailed criteria for matters to be addressed in the plan which must be approved by the Fire District prior to start of construction. The agreed-upon mitigation requires that the applicant provide a draft plan for the District's review and approval at least 90 days prior to start of construction. RFPD's letter dated June 17, 2011 is provided in Appendix B.

The elements of the construction fire protection plan required by RFPD, and agreed to by ESJ, are very similar to the mitigation measures identified in the EIS (Section 3.9.3). The table below compares the elements in the RFPD's required construction fire protection plan and the mitigations identified in this EIS.

Construction Fire Protection Plan Elements Required by San Diego County RFPD	EIS Mitigation Related to Construction Fire Protection
Develop and implement a Construction Fire Prevention/ Protection Plan. ESJ shall develop a Construction Fire Prevention/Protection Plan for the ESJ Gen-tie line Project and monitor construction activities to ensure implementation and effectiveness of the plan. The Plan reviewer shall be the Rural Fire Protection District (RFPD). ESJ shall provide a draft copy of this plan to the RFPD at least 90 days before the start of any construction activities. The final plan will be approved by the RFPD prior to the initiation of construction activities and provided to the applicant for implementation during all construction activities. At minimum, the plan will include the following: ▪ Applicable components of the SDG&E Wildland Fire Prevention and Fire Safety Electric Standard Practice (2009) ▪ Procedures for minimizing potential ignition vegetation clearing fuel modification establishment parking requirements smoking restrictions hot work restrictions ▪ Identification of an on-site Fire Coordinator and definition of their responsibilities ▪ Identification of appropriate fire suppression equipment on site at all times work is occurring ▪ The applicable requirements of the	Fire-1: Develop and Implement a Construction Fire Prevention Plan ESJ should develop a multi-agency Construction Fire Prevention Plan for the project and monitor construction activities to ensure implementation and effectiveness of the Plan. Plan reviewers should include the County of San Diego Rural Fire Protection District and CAL FIRE. The Rural Fire Protection District has issued revised recommended fire protection mitigation measures specific to construction of the ESJ U.S. Transmission Line project. These mitigation measures provide detailed criteria for matters to be addressed in the plan which must be approved by the Fire District prior to start of construction. The agreed-upon mitigation requires that the applicant provide a draft plan for the District's review and approval at least 90 days prior to start of construction. ESJ should implement the Fire Prevention Plan during all construction and maintenance activities. All construction work should follow the Fire Prevention Plan guidelines and commitments, and Fire Prevention Plan contents should be incorporated into the construction contracting agreements. Primary Fire Prevention Plan enforcement implementation responsibility should remain with ESJ. At a minimum, Fire Prevention Plan contents should include the requirements of Title 14 of the California Code of Regulations (CCR), Article 8 #918 "Fire Protection," all components of the Sempra Utilities Wildland Fire Prevention and Fire Safety Guide (2007), and the elements listed below:

California Code of Regulations (CCR), Title 14, Article 8, Section 918 (b) "Fire Protection" for private land portions ▪ On-site access road widths as provided in a Fire Protection Plan approved by the RFPD. ▪ Emergency response and reporting procedures ▪ Emergency contact information ▪ Worker education materials; kick-off and tailgate meeting schedules ▪ Other information as provided by the Rural Fire Protection District Additional restrictions will include the following: ▪ During the construction phase of the project, the applicant shall implement ongoing fire patrols. The applicant shall maintain fire patrols during construction hours and for one (1) hour after end of daily construction, and hotwork. ▪ ESJ shall comply with County Code Title 9 regarding brush management. ESJ and/or its contractor shall clear brush and dead and decaying vegetation from the work area prior to starting construction and/or maintenance work. The work area includes only those areas where personnel are active or where equipment is in use or stored, and may include portions of the transmission ROW, construction laydown areas, pull sites, access roads, parking pads, and any other sites adjacent to the ROW where personnel are active or where equipment is in use or stored.	▪ During construction of the project, ESJ should conduct fire patrols during the fire season as defined each year by local, state, and federal fire agencies. These dates vary from year to year, generally occurring from late spring through dry winter periods. ▪ In addition to CCR Title 14, 918.1(a), (b), and (c), ESJ should update in writing the Fire Suppression Resource Inventory, including the 24-hour contact information and onsite fire suppression equipment, tools, and personnel list on a quarterly basis and provide it to the State fire agencies. ▪ During Red Flag Warning events, as issued daily by the National Weather Service, all construction and maintenance activities should cease. However, an exception would be made for transmission line testing: a transmission line may be tested, one time only, if the loss of another transmission facility could lead to system instability or cascading outages. Utility and contractor personnel should be informed of changes to the Red Flag event status as stipulated by CAL FIRE. ▪ All construction crews and inspectors should be provided with radio and cellular telephones that are operational along the entire length of the approved route to allow for immediate reporting of fires. Communication pathways and equipment should be tested and confirmed operational each day prior to initiating construction activities at each

▪ Combustible storage and trash shall be properly stored in a clear area with fuel modification around it, and be away from turbines and the substation. Such storage shall be orderly and be removed from the site as soon as possible. ▪ Provision of maps indicating the location of the site. Fire Suppression Resource Inventory: The applicant shall update in writing the 24-hour contact information and on-site fire suppression equipment, tools, and personnel list on a quarterly basis and provide it to the Rural Fire Protection District. ▪ Red Flag Warning restrictions: During Red Flag Warning events, as issued daily by the National Weather Service in State Responsibility Areas (SRAs) all non-essential, non-emergency construction and maintenance activities shall cease or be required to operate under a Hot Work Procedure. ▪ The applicant and contractor personnel shall be informed of changes to the Red Flag event status as stipulated by the RFPD and CAL FIRE. ▪ All construction crews and inspectors shall be provided with radio and/or cellular telephone access that is operational throughout the project area to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction activities at each construction site. All fires shall be reported to the fire agencies with	construction site. ▪ All ignitions which result in a fire should be reported to the County of San Diego Rural Fire Protection District immediately. ▪ Each crew member should be trained in fire prevention, initial attack firefighting, and fire reporting. Each member should carry at all times a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. ▪ Information on contact cards should be updated and redistributed to all crew members as needed prior to the initiation of construction activities on the day the information change goes into effect. Outdated cards should be destroyed. ▪ Each member of the construction crew should be trained and equipped to extinguish small fires to prevent them from growing into more serious threats. Each crew member should at all times be within 100 yards (90 m) of a vehicle containing equipment necessary for fire suppression as outlined in the final Construction Fire Prevention Plan. Fire-2: Coordinate with Emergency Fire Suppression Activities ESJ should ensure that personnel and construction equipment do not create obstructions to firefighting equipment or crews, and that personnel comply with the following in consultation with fire agencies: ▪ Onsite ESJ and contractor personnel should coordinate fire suppression

jurisdiction in the project area immediately upon detection. ▪ Each crew member shall be trained in fire prevention, initial attack firefighting, and fire reporting. Each member shall carry at all times a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on contact cards shall be updated and redistributed to all crew members as needed, and outdated cards destroyed, prior to the initiation of construction activities on the day the information change goes into effect. ▪ Each member of the construction crew shall be trained and equipped to extinguish small fires with hand-held fire extinguishers in order to prevent them from growing into more serious threats. Each crew member shall at all times be within 100 yards of a vehicle containing equipment necessary for fire suppression as outlined in the final Construction Fire Prevention/Protection Plan. ESJ shall fully implement the plan during all construction and maintenance activities. All construction work on ESJ Gen-tie line Project shall follow the approved Construction Fire Prevention/Protection Plan guidelines and commitments and plan requirements are to be incorporated into the standard construction contracting agreements for the construction of the ESJ Gen-tie line Project. Primary plan enforcement implementation responsibility shall remain with ESJ and be monitored by the Rural Fire Protection District.	activities through the active Fire Incident Commander. ▪ Emergency ingress and egress to construction-related access roads should remain unobstructed at all times. ▪ Construction in the work area should cease in the event of a fire within 1,000 feet (305 m) of the work area. The work area includes the transmission line right-of-way, construction laydown areas, pull sites, access roads, and any other sites adjacent to the right-of-way where personnel are active or where equipment is in use or stored. Fire-3: Remove Hazards from Work Areas ESJ should clear brush and dead and decaying vegetation from work areas prior to starting construction and/or maintenance work. Work areas include only those areas where personnel are active or where equipment is in use or stored, and may include portions of the transmission line right-of-way, construction laydown areas, pull sites, access roads, parking pads, and other sites adjacent to the right-of-way where personnel are active or where equipment is in use or stored. Cleared dead and decaying vegetation should either be removed or chipped and spread on the right-of-way in piles no higher than six inches (15 cm).

RESPONSE TO 306-6: This impact is acknowledged and discussed in Section 3.9. As noted in response to comment 306-3, DOE understands that ESJ has entered into a Development Agreement with RFPD and SDCFA that, among other things, satisfies the RFPD's requirements for funding of fire inspections. DOE notes that according the RFPD's June 17, 2011 letter to CPUC and BLM regarding the ECO Substation Draft EIR/EIS, the District concludes that through satisfaction of the mitigation measures in the ECO Substation EIR/EIS (as revised by RFPD), implementation of the project design features described in the ECO Substation EIR/EIS where applicable, and satisfaction of the development agreement and project-specific Fire Protection Plan, the ESJ U.S. Transmission Line project will not significantly obstruct fire protection activities and that ESJ has adequately addressed the additional fire risks posed by its project.

RESPONSE TO 306-7: DOE consulted with the District by telephone during preparation of the Draft EIS, and the Draft EIS reflects data obtained from the District. Local agency contacts such as the District were cited throughout the Draft EIS and listed in Section 10 References. As noted on draft EIS page 10-6, District representative K. Custeau was contacted on 29 June 2009. Section 9 (Consultation and Coordination) is revised to include local agency contacts.

RESPONSE TO 306-8: EIS Section 3.9 is updated with additional discussion of potential fire impacts associated with the project, and the effectiveness of the applicant's proposed Fire Protection Plan (approved by County of San Diego) and other potential mitigations not identified by the applicant (i.e., Mitigation Fire-1 Construction Fire Protection Plan, Mitigation Fire-2 Coordinate with

Emergency Fire Suppression Activities, and Mitigation Fire-3 Remove Hazards from Work Areas). DOE notes that the June 17, 2011 letter from Cynthia L. Eldred, Esq., on behalf of RFPD, confirms that the applicant has entered into a development agreement with the District; indicates that the District has approved the applicant's project-specific Fire Protection Plan; provides a list of mitigations that the District has approved for the project; and concludes that the applicant will have adequately mitigated for the increased probability of wildfire through timely satisfaction of the mitigation measures, the development agreement, and the project-specific Fire Protection Plan. The letter also concludes that, through satisfactory implementation of these measures, the project will not significantly obstruct fire protection activities and that the applicant has adequately addressed any additional fire risks posed by the project. This letter and other documentation related to the RFPD review process are provided in Appendix B. According to a July 1, 2011 letter from Sempra, the applicant has agreed to implement the RFPD requirements. This letter is available on the project website at: http://www.esjprojecteis.org/docs/Sempra_Response_to_DOE_Questions_2011-07-01.pdf. This matter will be noted in the Record of Decision.

RESPONSE TO 306-9: The following documents are provided in the Appendix B of the EIS:

- July 15, 2009 letter from RFPD (David Nissen, Division Chief) to County of San Diego Department of Planning and Land Use, indicating acceptance of the Fire Protection Plan (the date of the Fire Protection Plan that was reviewed is not indicated)

- September 10, 2009 Fire Protection Plan prepared by Hunt Research for ESJ.
- November 25, 2009 letter from San Diego County Fire Authority (Paul Dawson, Fire Marshal) to County of San Diego Department of Planning and Land Use, indicating acceptance of the September 10, 2009 Fire Protection Plan
- County of San Diego Department of Planning and Land Use Form 399W, Project Water Availability Form, signed by the Jacumba Community Services District on July 8, 2010
- June 17, 2011 from Cynthia L. Eldred, Esq., on behalf of RFPD. This letter confirms that the applicant has entered into a development agreement with the District; indicates that the District has approved the applicant's project-specific Fire Protection Plan; and provides a list of mitigations that the District has approved for the project.

The Construction Fire Protection Plan is included in this EIS as a potential mitigation measure. However, the plan itself was not yet prepared by the applicant at the time of publication of this Final EIS. According to the RFPD's approved mitigations, the applicant must provide the plan to the RFPD for review and approval at least 90 days prior to the start of construction.

RESPONSE TO 306-10: Refer to the responses above. Relevant revisions to Section 3.9 have been made to reflect the District's comments, and it is DOE's understanding that the applicant is currently in satisfaction of the RFPD's fire protection requirements.

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VIA EMAIL AND U.S. MAIL

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U.S. Department of Energy
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Re: Comments of Backcountry Against Dumps, The Protect Our Communities Foundation, East County Community Action Coalition and Donna Tisdale on the United States Department of Energy's Energia Sierra Juarez U.S. Transmission Line Project Draft Environmental Impact Statement (DOE/EIS-0414)

Dear Dr. Pell:

Introduction

On September 17, 2010 the United States Department of Energy ("DOE") published its Notice of Availability of Draft Environmental Impact Statement and Public Hearings for the Proposed Energia Sierra Juarez U.S. Transmission Project ("NOA") pursuant to the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 *et seq.* 75 Fed. Reg. 57005. The NOA solicited written comments on the Draft Environmental Impact Statement ("DEIS") for the proposed federal action of granting a Presidential permit (OE Docket Number PP-334) for the U.S. portion of the Energia Sierra Juarez Transmission Line Project ("ESJ Gen-Tie Project" or "Project"), which includes development of a double-circuit 230-kV or single-circuit 500-kV transmission line that would connect the planned 1,250 MW La Rumorosa wind energy project ("ESJ Wind Project") in Baja California, Mexico with San Diego Gas & Electric's ("SDG&E") existing Southwest Powerlink transmission line ("SWPL") at the proposed ECO Substation and expanded Boulevard Substation in Jacumba, California. The ESJ Gen-Tie Project would be developed, owned and operated by Energia Sierra Juarez U.S. Transmission, LLC ("ESJ," formerly Baja Wind U.S. Transmission, LLC), a subsidiary of Sempra Energy ("Sempra").

Pursuant to the NOA, Backcountry Against Dumps ("BAD"), The Protect Our Communities Foundation ("POC"), East County Community Action Coalition ("ECCAC") and Donna Tisdale (collectively, "Conservation Groups") submit these comments on the DEIS for the ESJ Gen-Tie Project. Conservation Groups respectfully request that DOE address the issues we raise.

Discussion

A. Purpose and Need

An EIS must specify the "underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13. This requirement is not hollow. Instead, the EIS must show that a need for the proposed action actually exists in order to guide evaluation of alternatives; mere conclusory statements will not suffice. *Rankin v. Coleman*, 394 F.Supp. 647, 656-57 (E.D.N.C. 1975) (holding an EIS inadequate because, among other things, it failed to cite and discuss factual studies to "show the need for the 'ultimate' five-lane [highway] facility"). The statement of need must be supported by evidence, and the agency bears the burden of "insur[ing] the professional . . . [and] scientific integrity" of both the statement and its supporting evidence. 40 C.F.R. § 1502.24; *see also North Carolina Alliance for Transportation Reform, Inc. v. U.S. Department of Transportation*, 151 F.Supp.2d 661, 688 (M.D.N.C. 2001) (holding that the agency violated NEPA by purposefully including in the EIS "significantly overstated estimates of traffic projections" to support the statement of need for the proposed roadway project).

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Furthermore, these requirements and duties do not disappear when an applicant instead of the agency itself has proposed the action under consideration. While the agency "cannot completely ignore [the] applicant's objectives," it retains the ultimate "responsibility for defining the objectives of [and need for the] action." *Colorado Environmental Coalition v. Dombeck*, 185 F.3d 1162, 1175 (10th Cir. 1999); *cf. Sierra Club v. Alexander*, 484 F.Supp. 455, 469 (N.D.N.Y. 1980) (agency must exercise "independent judgment" when using developer's data to ascertain a project's likely environmental impacts), *aff'd*, 633 F.2d 206 (2d Cir. 1980). Here, DOE violated NEPA by providing cursory and conclusory statements of purpose and need for the ESJ Gen-Tie Project, and by failing to independently verify ESJ's assertions of need for the Project.

First, the DEIS defines the purpose and need for the project too narrowly and cursorily. To wit, the DEIS states that the "purpose and need for DOE's action is to respond to the [ESJ] request for a Presidential permit." DEIS 1-6. This is unduly narrow, for it does not even address the need for the *actual* Project, i.e. the transmission line connecting the ESJ Wind Project (and potentially other electricity generation sources) in Mexico with SDG&E's electrical grid in the United States. The EIS must specify the "*underlying* purpose and need to which the agency is responding," not just reiterate that the agency is responding to a request for a permit. 40 C.F.R. § 1502.13 (emphasis added).

Second, the DEIS' subsequent description of ESJ's objectives in pursuing the Project does not qualify as an adequate statement of purpose and need either. The DEIS describes ESJ's objectives as reducing dependence on fossil fuel-fired generation plants, improving the region's ability to meet its energy needs and assisting utilities in meeting the renewable portfolio standards ("RPS") specified in California Executive Order S-14-08. DEIS 1-8. However, in

RESPONSE TO 401-1: The purpose and need for DOE's action is to respond to the ESJ request for a Presidential permit. DOE's role is limited to deciding whether to issue a Presidential permit. Strategies for meeting RPS requirements are beyond the scope of this EIS. Discussion of the alternative of transmission on WECC Path 45 has been added to the EIS in Section 2.8.1.

contravention of NEPA, the DEIS provides no independent verification or evidentiary support to show that the needs asserted by ESJ actually exist. *See Rankin, supra*, 394 F.Supp. at 656-557. For one, it has failed to show a need for additional energy generation, now or in the foreseeable future.[1] Furthermore, it has failed to show why large wind projects and long-distance transmission lines are needed for utilities to meet the RPS requirements. *See, e.g.,* California Public Utilities Commission ("PUC") Decision D.08-12-058 at 285 (2008), *available at* http://www.cpuc.ca.gov/environment/info/aspen/sunrise/D08-12-058.pdf (finding that SDG&E could meet the 20 percent RPS more economically by expanding local renewable source power generation).[2]

Lastly, the DEIS does not explain why there is a need for the Project when it is eminently feasible to transmit electricity produced in the La Rumorosa area along existing transmission lines that are already interconnected directly to the SDG&E electrical grid and have at least 800 MW of spare transmission capacity[3] – a number that could likely be doubled if the lines were reconductered with composite conductors.[4] These transmission lines are jointly owned and operated by SDG&E and the Comisión Federal de Electricidad ("CFE") and comprise one tie connecting CFE's Tijuana Uno Substation to SDG&E's Miguel Substation and one joining CFE's La Rosita Substation with SDG&E's Imperial Valley Substation. Together, the ties are called Western Electricity Coordinating Council ("WECC") Path 45.

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In sum, DOE has failed to properly define and explain the Project's purpose and has

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[1] Note that even if there were a projected capacity shortfall, it would be significantly delayed by SDG&E's California Public Utilities Commission-authorized procurement of 530 MW of local capacity. Final Environmental Impact Report/Environmental Impact Statement for the Sunrise Powerlink Transmission Project ("SPTL FEIS") at A-9, *available at* http://www.cpuc.ca.gov/environment/info/aspen/sunrise/toc-feir.htm.

[2] For a more detailed explanation of how and how much distributed energy generation could be harnessed, see Bill Powers, "San Diego Smart Energy 2020: The 21st Century Alternative," October 2007, *available at* http://www.sdsmartenergy.org/11-oct-07_SD_Smart_Energy_2020_exec-summary_FINAL1.pdf. Among other things, this study shows that SDG&E could feasibly increase its nameplate system capacity through the addition of local photovoltaics by potentially more than 2,000 MW.

[3] *See* California Energy Commission Report No. CEC-600-2008-004, "Challenges and Opportunities to Deliver Renewable Energy from Baja California Norte to California" ("CEC Report"), June 2008, prepared by KEMA Inc. and Bates-White, LLC, *available at* http://www.energy.ca.gov/2008publications/CEC-600-2008-004/CEC-600-2008-004.PDF.

[4] *See* Bill Powers, "San Diego Smart Energy 2020: The 21st Century Alternative," October 2007, pp. 54-55.

401-1 entirely failed to provide evidentiary support for its and ESJ's assertions of a need for the Project.

B. Scope of the DEIS and Connected Actions

NEPA requires that connected actions be considered together in the same EIS. *See* 40 C.F.R. § 1508.25; *Thomas v. Peterson*, 753 F.2d 754, 758-759 (9th Cir. 1985). Connected actions are those that (1) "[a]utomatically trigger" other actions potentially requiring EISs; (2) "cannot or will not proceed unless other actions are taken previously or simultaneously;" or (3) are "interdependent parts of a larger action and depend on the larger action for their justification." 40 C.F.R. § 1508.25. Courts commonly apply an "independent utility" test to "determine whether multiple actions are so connected as to mandate consideration in a single EIS." *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 969 (9th Cir. 2006). In applying this test, courts have consistently "held that approval of access roads across federal lands requires federal agencies to analyze impacts of the road as well as the activities for which the road is being constructed." *Sierra Club v. U.S. Department of Energy*, 255 F.Supp.2d 1177, 1184 (D. Colo. 2002) (holding that a road easement granted by the Department of Energy was connected for NEPA purposes to the mining activities it enabled); *see also Thomas, supra*, 753 F.2d at 758-59 (holding that a road approved for construction by the Forest Service was connected to the timber sales that could not proceed without it).

401-2 Here, the situation is analogous to the construction of access roads across federal lands to enable other projects to proceed. The ESJ Gen-Tie Project is being constructed to allow the power generated by the ESJ Wind Project (and/or other energy generation projects) in Mexico to access SDG&E's electrical grid. Given that the Project (or some other similar project requiring approval from DOE) is the only means through which the ESJ Wind Project could transmit the power it would generate, the ESJ Gen-Tie Project is a "but-for" cause of the ESJ Wind Project and must be considered and analyzed as a connected action under NEPA. *Border Power Plant Working Group v. Department of Energy*, 260 F.Supp.2d 997 (S.D. Cal. 2003). However, while it describes some of the ESJ Wind Project's projected impacts in the U.S., the DEIS never recognizes the project as a connected action or fully analyzes it as such. The only two projects analyzed as connected actions are the ECO Substation and the SWPL loop-in. DEIS section 4.

Furthermore, the DEIS fails to analyze the Sunrise Powerlink Transmission Line ("SPTL") as a connected action, reasoning that it is an "independent" action. DEIS 1-14. Neither does it consider the Boulevard Substation upgrades or the proposed transmission line connecting it with the ECO Substation to be connected actions. DEIS 1-5. DOE's failure to analyze these projects as connected actions violates NEPA because the ESJ Gen-Tie Project would not have independent utility without the construction and operation of all three of them. *Cf. Thomas, supra*, 753 F.2d at 758-61; *Sierra Club v. U.S. Department of Energy, supra*, 255 F.Supp.2d at 1184-85.

With respect to the connectedness of the SPTL, it is true that the energy transmitted from

RESPONSE TO 401-2: Potential impacts in the U.S. resulting from the ESJ Wind project in Mexico are addressed throughout Section 3, rather than in Section 4. Each discipline-specific subsection of Section 3 considers the potential for the ESJ Wind project to result in impacts in the U.S. Potential impacts are identified in several resource areas. Impacts in the U.S. from the ESJ Wind project related to migratory birds/golden eagles are addressed in Section 3.1; impacts in the U.S. from the ESJ Wind project related to visual resources are addressed in Section 3.2; and impacts in the U.S. from the ESJ Wind project related to fire and air quality are addressed in Sections 3.9 and 3.10, respectively. Impacts in Mexico are outside the scope of analysis under NEPA, except to the extent that they result in impacts in the U.S.

Refer to response to comment 108-4 for discussion of how connected actions are identified and for information related to Sunrise Powerlink. The ECO Substation transmission line and Boulevard Station upgrades have independent utility from the ESJ U.S. Transmission Line project, and the ESJ U.S. Transmission Line project does not depend in any way on those projects.

Mexico by the ESJ Gen-Tie Project would be carried to load centers via the SWPL and not the SPTL. However, the Project could not proceed without completion of the SPTL. The reason for this is simple. As the SPTL environmental impact statement acknowledges, the SWPL "currently has limited available capacity, but if [the SPTL] is approved and constructed, some electricity currently carried by the SWPL would be transmitted via [the SPTL] making more capacity available on the SWPL" and thus allowing it to carry electricity transmitted to it via the ESJ Gen-Tie Project. Draft Environmental Impact Report/Environmental Impact Statement for the SPTL ("SPTL DEIS") at B-118, *available at* http://www.cpuc.ca.gov/environment/info/aspen/sunrise/toc-deir.htm. It is for this very same reason that the PUC and United States Bureau of Land Management ("BLM") considered the ESJ Gen-Tie Project as a connected action in their SPTL EIS. *See* SPTL FEIS at ES-36. Here then, DOE must analyze the SPTL – and the Boulevard Substation upgrades and proposed transmission line connecting it with the ECO Substation – as a connected action.

401-2

C. Alternatives

NEPA requires agencies to rigorously explore and objectively analyze a reasonable range of alternatives. *City of Carmel-by-the-Sea v. U.S. Department of Transportation*, 123 F.3d 1142, 1155 (9th Cir. 1997). The reasonable range of alternatives required by NEPA should include a "reasonable number of examples covering the full range of alternatives." CEQ Forty Questions, No. 1b. Furthermore, an agency may not limit its consideration to only those alternatives it believes it has the authority to implement. Rather, the alternatives should be wide-ranging and include options that may require additional approvals or participation by others. *Sierra Club v. Lynn*, 502 F.2d 43, 62 (5th Cir. 1974); *see also Alaska Wilderness Recreation and Tourism Ass'n v. Morrison*, 67 F.3d 723, 729 (9th Cir. 1995). And even for those alternatives "eliminated from detailed study," the agency must at least "briefly discuss the reasons for their having been omitted." 40 C.F.R. § 1502.14(a).

401-3

Here, contrary to NEPA's mandate, the DEIS fails to evaluate a reasonable range of alternatives. In addition to no action, the only alternatives analyzed in detail are a double-circuit 230-kV transmission line and a single-circuit 500-kV transmission line. This in no way approximates the "full range of alternatives" DOE is required to assess. CEQ Forty Questions, No. 1b. The DEIS does not evaluate – or even acknowledge the existence of – numerous viable and reasonable alternatives that would reduce the Project's environmental impacts. Among others, DOE should have and must now consider the three alternatives described below.

First, DOE should evaluate the possibility of limiting any Presidential permit it issues for the ESJ Gen-Tie Project to only allow transmission of power from renewable energy projects, i.e. non-fossil fuel-based and non-nuclear-based power projects. Placing such a condition in the Presidential permit would not only be feasible and environmentally beneficial, it has already been supported by the Project proponent, ESJ, and its parent corporation, Sempra. *See* DOE, "Energia Sierra Juarez Transmission Line Project: Scoping Report," September 22, 2009, at 5, *available at*

RESPONSE TO 401-3: Refer to response to comment 305-1 for a discussion of transmission of power from renewable energy projects. In its comment letter to DOE (comment 404-1, provided herein), ESJ reiterated its previous communication to DOE that the import capacity of the transmission line in the Presidential permit would be limited to the physical capacity of the line (1,250 MW) and that power on this line would be limited to renewable energy projects.

Refer to response to comment 305-5 for discussion of the basis for the selection of the project alternatives analyzed in the EIS. Refer to responses to comments 101-8 and 305-7 and Section 2.8.1 for a discussion of the potential use of WECC Path 45.

As is explained in text added to Section 1.5.1.2, distributed energy alternatives, such as small scale solar panel applications in urban settings, are outside the scope of the EIS because they do not respond to DOE's purpose and need.

http://www.esjprojecteis.org/documents.htm. According to Sempra's August 28, 2009 letter to DOE, ESJ requests that power transmitted via the Project be limited to renewable energy projects. DEIS 1-6, n.6. Sempra's request is laudable and feasible, and DOE should effectuate it.

Furthermore, unless and until DOE incorporates a renewable energy only condition into the Presidential permit for the Project, it may not claim that "the ESJ U.S. Transmission Line project would have a quantifiable positive effect on the environment over the long-term since [greenhouse gas] and criteria emissions from fuel combustion would be avoided." DEIS 3-146. Without a guarantee that the Project would only transmit non-fossil fuel-based electricity, it is a misrepresentation to claim the Project would have the associated benefits of doing so, which NEPA does not sanction.

401-3

Second, DOE should examine the alternative of transmitting the ESJ Wind Project power from the La Rumorosa area along existing CFE and SDG&E lines (the WECC Path 45) instead of through a newly constructed generation tie (the ESJ Gen-Tie Project) and substation (the ECO Substation and expanded Boulevard Substation). As discussed in the Purpose and Need section of these DEIS comments, the CFE lines are already interconnected directly to the SDG&E electrical grid and have at least 800 MW of spare transmission capacity. Furthermore, the amount of spare capacity could likely be doubled if the lines were reconductered with composite conductors. While CFE would charge a small wheeling fee for use of its lines, it could be reduced in exchange for ESJ reconductering the lines. And, in any case, ESJ would be saving on construction costs by not building the Project. This alternative is eminently feasible and would likely have far fewer environmental impacts that the proposed Project.

Third and finally, DOE should consider the alternative of providing and promoting increased distributed generation in the urban load centers that would receive the power conveyed along the ESJ Gen-Tie Project's transborder transmission line. Expanding distributed generation would serve much the same purposes as the Project, including increased electricity generation and supply of renewable energy. Further, this alternative is feasible, as the California Renewable Energy Transmission Initiative ("RETI") has determined that there are up to 27,500 MW of potential statewide generation in small-scale (1 - 20 MW projects on less than 160 acres) photovoltaic facilities. California RETI, "Phase 1B Final Report," January 2009, pp. 1 to 12, *available at* http://www.energy.ca.gov/reti/documents/index.html.

Furthermore, developing distributed generation facilities would have fewer environmental impacts and be far less expensive that constructing and operating new wind farms, a trannsborder transmission line and multiple substations to import electricity from Mexico. As PUC Commissioner John Bohn has acknowledged, "[u]nlike other generation sources, [distributed generation] projects can get built quickly and without the need for expensive new transmission lines. And . . . these projects are extremely benign from an environmental standpoint, with neither land use, water, [n]or air emission impacts." PUC, Press Release, "CPUC Approves

Edison Solar Roof Program," June 18, 2009, *available at* http://docs.cpuc.ca.gov/published/News_release/102580.htm. Moreover, distributed generation facilities pose a significantly lower risk of shut-offs and damage from wildfire, and thus would improve electrical reliability.

401-3

D. Environmental Impacts

NEPA requires federal agencies to take a "hard look" at the environmental impacts of proposed major federal actions and provide a "full and fair discussion" of those impacts. 40 C.F.R. § 1502.1; *see also National Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 733 (9th Cir. 2001). This requirement includes analyzing the impacts of connected actions. 40 C.F.R. § 1508.25; *Thomas v. Peterson*, 753 F.2d 754, 758-759 (9th Cir. 1985). In addition, agencies must consider the international impacts of their proposed actions where applicable. *See, e.g., Hirt v. Richardson*, 127 F.Supp.2d 833 (W.D. Mich. 1999); *National Organization for Reform of Marijuana Laws v. United States Department of State*, 452 F.Supp. 1226, 1232-1233 (D.D.C. 1978); *cf.* Exec. Order No. 12114, 44 Fed. Reg. 1957 (1979), reprinted in 42 U.S.C.A. § 4321 app.

401-4

Here, the DEIS fails to adequately analyze numerous environmental impacts, as described below. Furthermore, the DEIS does not consider *any* of the Project's environmental impacts in Mexico, as NEPA requires. *See* DEIS 1-5, 1-6, 1-13. DOE must correct these failures and omissions.

1. Fire Impacts

As the DEIS recognizes, "[b]ecause of the presence of dense, dry fuels and periodic Santa Ana winds, southern California has been characterized as having one of the most fire-prone landscapes in the world." DEIS 3-122. Nonetheless, while the DEIS discusses some aviation safety impacts, it does not discuss the harm that could befall planes responding to wildfire. DEIS 2-33, 2-35. This impact would likely be very significant and must be fully analyzed by DOE.

401-5

For example, the Project would create a substantial hazard for low-flying spotter and bomber aircraft that apply aerial retardant. It would be impossible to see the transmission lines in the smoke filled skies, and either pilots would be forced to risk their lives by flying when the lines were not clearly visible or aerial fire suppression would be stymied. When combined with the extreme limitations power lines put on ground firefighting attacks (DEIS 3-128), the huge risks associated with aerial firefighting efforts would make large fires in the Project area virtually uncontrollable.

To mitigate these impacts, DOE should at the very least require ESJ to coordinate with aerial fire response teams in the formulation of its Construction Fire Prevention Plan. DEIS 3-130. But that is not all. DOE should require ESJ to prepare an operations fire prevention plan as

RESPONSE TO 401-4: As described further in the responses below and throughout this Final EIS, a full and fair analysis is provided in accordance with applicable NEPA guidelines. Connected actions are defined and analyzed, and cross-border impacts are addressed within each subsection of EIS Section 3. Impacts that occur within Mexico are outside the scope of the NEPA analysis.

RESPONSE TO 401-5: EIS Section 3.7 (Transportation and Traffic) and 3.9 (Fire and Fuels Management) are revised to discuss potential limitations on aerial fire-fighting efforts due to the presence of the transmission lines. Mitigation Transportation-1 (coordination with Border Patrol) is revised to include an additional requirement for coordination with CAL FIRE. An operations fire protection plan is presented in Appendix B. Refer to responses to comments 306-1 through 306-10 for additional discussion of fire-fighting issues.

well, since most of the fire risks caused and exacerbated by the Project would occur during operation, not construction. And as a part of that plan, DOE should require ESJ to coordinate with SDG&E (on transmission line shutdown protocols), Mexican fire authorities and the various local and state firefighting bodies in the Project area. DOE was remiss in not considering these measures in the DEIS.

401-5

2. Biological Resources Impacts

There are numerous inadequacies in the DEIS' analysis of the Project's biological resources impacts. First, while DOE has commenced informal consultation with the United States Fish and Wildlife Service ("FWS") under the federal Endangered Species Act, 16 U.S.C. § 1531 *et seq.*, the consultation is not complete and was not properly incorporated into the DEIS. *See* DEIS Appendices C.7, C.8. DOE should have prepared either a biological evaluation or a biological assessment prior to publication of the DEIS, to make the information available for public review. Since it has not yet done so, DOE will be required to prepare a supplemental DEIS if the information presented in the biological assessment or evaluation is "significant" and indicates new or changed biological impacts or circumstances. 40 C.F.R. § 1502.9(c)(1). And in any case, DOE must complete its section 7 consultation before publication of the final EIS for the Project.

401-6

Second, the DEIS uses an inappropriately high significance threshold (60 dBA) for noise impacts to wildlife, particularly birds, and accordingly fails to recognize potentially significant noise impacts. ESJ has a goal, included in an applicant-proposed mitigation measure, to reduce property line noise to 60 dBA hourly L_{eq}, with the assumption that noise levels below 60 dBA would not cause substantial impacts. DEIS 2-13, 3-20. As discussed below, this assumption is untenable. The threshold for significance is substantially lower for some sensitive avian species. Nonetheless, the evidence does not show that noise levels surrounding the Project – at least the 500 kV alternative – would remain below even that high threshold. The DEIS notes that the property line dBA during operation would be no greater than 38.8 with the 500-kV line. DEIS 2-33. However, during foul weather events, the property line dBA for the 500-kV line would be between 46.3 and 66, depending on the conductor configuration chosen. DEIS 3-99. Further, construction noise levels would be much greater. The "sound levels associated with individual pieces of equipment would generally range from 70 to 90 dBA" and "[m]aximum instantaneous construction noise levels would generally range from 80 to 90 dBA at 50 feet" from the edge of the construction right-of-way. DEIS 3-93.

401-7

Moreover, even if the Project's noise levels were kept below the 60 dBA threshold, birds in the area, including the special-status California horned lark and loggerhead shrike, would still be negatively impacted. Expert testimony from Dr. Travis Longcore, given in the PUC proceeding on the SDG&E's application for a certificate of public convenience and necessity for the SPTL and annexed as Exhibit 1 hereto, shows that the threshold for significant negative impacts on bird species similar to the California horned lark and loggerhead shrike is much lower

RESPONSE TO 401-6: The information that would normally be included in a Biological Assessment is embodied in the EIS. DOE has concluded informal consultation with the USFWS. Text is updated in Section 3.1 to reflect those discussions, and correspondence is listed in Table 9-1 and provided in Appendix C.9.

RESPONSE TO 401-7: Section 3.1 discusses the potential for impacts on wildlife from project-related noise. The maximum allowable sound level of 60dBA would apply to the project's construction when noise would occur only for short periods of time. In contrast, the referenced Exhibit 1 is focused on long-term continuous noise sources (i.e., traffic), and is not readily transferable to short-term sporadic construction noise. Longer-term operation noise sources would be minor, sporadic coronal discharges and occasional maintenance activities. Estimated sound levels during coronal discharges from the action alternatives are listed in EIS Tables 3.6-3 (Alternative 2), 3.6-4 (Alternative 3), and 3.6-5 (Alternatives 4A and 4B). Sound levels during occasional maintenance activities would be the same as or less than the initial construction (see Table 3.6-2), and for a shorter duration than initial construction. Noise reduction measures that would be required for initial construction would also be implemented during maintenance.

401-7

than 60 dBA. After summarizing studies of other small passerine birds, like the California horned lark, loggerhead shrike, least Bell's vireo and southwestern willow flycatcher, Dr. Longcore concludes that "[f]rom the published literature . . . a reasonable threshold based on similar species for least Bell's vireo and southwestern willow flycatcher would be 40 dB(A) or below." Phase II Direct Testimony of Travis Longcore on Behalf of the Center for Biological Diversity and the Sierra Club (attached to these comments as Exhibit 1), p. 12. He then goes on to discuss empirical data from California "indicating with certainty that territory occupancy is reduced by sound levels in the 50 - 60 Db(A) range" for the southwestern willow flycatcher (*id.* at 13), which is similarly susceptible to noise impacts as the California horned lark and loggerhead shrike since all three species are "small songbirds that rely on hearing songs to attract mates and defend territories." *Id.* at 12.

These noise impacts on birds must be taken particularly seriously given that the California horned lark and loggerhead shrike are both special-status species with a "high potential to occur" on the Project site. DEIS 3-23. Unless the Project's noise levels are reduced much below 60 dBA, DOE's conclusion that impacts to the California horned lark and loggerhead shrike would be "minor" are unsupported. DEIS 3-24. To the contrary, the impacts on these imperiled species would likely be major and adverse.

401-8

Third, the DEIS fails to recognize and evaluate the significance of the fact that the Project and the associated ESJ Wind Project would be located adjacent to and, in some places, on top of an international migration corridor for the Peninsular bighorn sheep ("PBS"). According to the project description (DEIS 1-2), the ESJ Wind Project and ESJ Gen-Tie Project transmission route would be located directly adjacent to and/or overlap with the Peninsular Ranges of Mexico, an area which FWS views as "the *only possible route* for a natural connection with other bighorn sheep populations for the [distinct population segment of sheep] in the U.S." 74 Fed.Reg. 17288, 17311 (2009) (emphasis added). For example, the two Mexican lease areas where the subsequent phases of the ESJ Wind Project would occur are situated on the Sierra de Juarez and Cordillera Molina mountain ranges, both of which are part of the Peninsular Ranges of Mexico. DEIS 1-2. Thus, both the ESJ Gen-Tie Project and the ESJ Wind Project have the potential to substantially impact PBS genetic diversity and long-term population viability in the U.S.

401-9

Fourth, with respect to the endangered Quino Checkerspot Butterfly ("QCB"), the DEIS should have, but does not, include a survey for *Collinsia concolor*, *Antirrhinum coulterianum*, and *Plantago patagonica*, which Dr. Gordon Pratt, a QCB expert, has recently identified as significant food plants for QCB larvae. Although FWS added *Collinsia concolor* to its QCB survey protocols in 2009, it has not added the other two plants and, in any case, the surveys done for the ESJ Gen-Tie Project used FWS' outdated 2002 protocol. DEIS 3-15, Appendix C.1. Furthermore, there is no indication that *any* of these plants were independently surveyed as part of the QCB survey for the ESJ Gen-Tie Project. *See* DEIS Appendix C.1. While the QCB surveys done for the Project in 2008 and 2009 list plants observed on the survey site and do not mention *Collinsia concolor*, *Antirrhinum coulterianum* or *Plantago patagonica*, it is unlikely the

RESPONSE TO 401-8: Refer to response to comment 108-8 for discussion of Peninsular bighorn sheep populations and migration patterns.

RESPONSE TO 401-9: The study results (Appendix C.1 of the EIS) indicate that neither Quino checkerspot butterfly nor the host plants used during the species' larval stage were observed during the surveys, although nectar sites for butterflies were identified throughout the survey area. The studies conducted for the project conform to current adopted protocol, and are therefore considered adequate for the purpose of reaching a finding of no impact. The ECO Substation EIR/EIS indicates a similar conclusion for the ESJ U.S. Transmission Line project site.

401-9 surveying biologists were looking for them given that they have only recently been documented as QCB food sources. The Project site must be surveyed for these plants, with the results presented to the public during the environmental review period for the Project.

401-10 Fifth and finally, the use of helicopters for Project construction is noted as a potentiality, but there is no discussion of the impacts of using helicopters. DEIS 2-8. If helicopters would indeed be used, DOE must analyze and present to the public their impacts on, among other things, PBS.

3. Air Quality, Greenhouse Gas Emissions and Climate Change

The DEIS' discussion and analysis of climate change impacts is inadequate. First, the DEIS entirely omits an analysis of the climate change impacts of disturbing alkaline desert areas, such as the area in which the Project would be located. This is unacceptable given the recent studies showing that undisturbed alkaline desert areas, such as the Mojave Desert and La Rumorosa area, sequester carbon dioxide in surprising quantities. *See* Richard Stone, "Have Desert Researchers Discovered a Hidden Loop in the Carbon Cycle?," *Science*, Vol. 320, pp. 1409-10, June 13, 2008, *available at* http://www.ecostudies.org/press/Schlesinger_Science_13_June_2008.pdf.

401-11 Furthermore, the DEIS makes unfounded assumptions about the source of electricity to be transmitted via the Project, and thus potentially underestimates the Project's criteria pollutant and greenhouse gas emissions in a substantial way. The DEIS assumes that the Project would only transmit electricity produced "without burning carbon-based (or any other) fuel," and calculates the reduction in criteria pollutant and greenhouse gas emissions associated with producing 1,250 MW of electricity from wind (or other non-carbon fuel) instead of natural gas, coal or biomass. DEIS 3-146. Based on this assumption and calculation, the DEIS concludes that "the ESJ U.S. Transmission Line project would have a quantifiable positive effect on the environment over the long-term since [greenhouse gas] and criteria emissions from fuel combustion would be avoided." DEIS 3-146. Without a guarantee that the Project would only transmit non-fossil fuel-based electricity, however, it is a misrepresentation to claim the Project would have the associated benefits of doing so. NEPA does not sanction the representation of such wishful thinking as fact. Before it can make such assertions, DOE must condition the issuance of the Presidential permit on the requirement that only power from non-fossil fuel-based projects be transmitted via the Project.

4. Water Supply

401-12 Project construction alone would require 780,000 gallons of water. DEIS 2-9, 3-157. Still, the DEIS states that "[b]ecause the total water requirement of 2.4 acre-feet (2,950 cubic m) would be less than 0.1 percent of the estimated annual groundwater recharge of 2,700 acre-feet/year (3.3 million cubic m/year), project water use would not impact the locally available

RESPONSE TO 401-10: Potential use of helicopters for construction is addressed in the assessment of potential air pollution emissions (see Table 3.10-6). The EIS is revised in Section 3.1 to address potential impacts of helicopter use during construction on biological resources. In general, such impacts would be very short-term (up to 3 days for the installation of 3 to 5 lattice towers or monopoles).

RESPONSE TO 401-11: A discussion of the potential CO_2 sequestration capacity of alkaline soils and related project impacts is incorporated into the EIS at Section 3.10, and the citation is added to the EIS references.

Refer to response to comment 305-1 for a discussion of the project applicant's previous commitment to limit the project to the transmission of only renewable energy and the restriction that would be included in the Presidential permit, if issued. In its comment letter to DOE (comment 404-1, provided herein), ESJ reiterated its previous communication to DOE that the import capacity of the transmission line in the Presidential permit would be limited to the physical capacity of the line (1,250 MW) and that power on this line be limited to renewable energy projects. As presently proposed and stated in the EIS, DOE has been assured by the applicant that the project would transmit only renewable energy. This will be reflected in the Record of Decision and the Presidential permit would be conditioned on this provision, should it be issued.

water supply." DEIS 2-36. This reasoning, however, is incomplete for at least two reasons.

First, since the water extraction would occur in a small area, its impacts may not be trivialized by averaging them over the entire project area. The DEIS states that the water would either be trucked in from groundwater wells in Jacumba or Alpine, or would come from a new "temporary" groundwater well constructed somewhere on the Project site if no existing supply is available. DEIS 3-157. The DEIS' discussion of operational water use is similarly vague, merely stating that it would be negligible and "may be obtained from the same source used during construction." DEIS 2-10. Without location information, it is impossible to assess, for example, whether the Project's groundwater extraction will interfere with existing wells.

401-12

Second, the DEIS does not discuss how much total recharge is needed to maintain sustainable or current groundwater storage levels. The mere fact that recharge is currently greater than *anthropogenic* extraction, does not also mean that recharge is greater than or equal to the total groundwater losses from the basin due to seepage (into surface waters, other groundwater basins, or inaccessible subterranean strata), plant usage and other losses.

Without more specificity regarding where the Project would obtain its water supplies and more detailed information on the characteristics of the Jacumba Valley Groundwater Basin (or other basins from which the Project would extract groundwater), it is impossible for the public or the decisionmakers to fully understand and weigh the Project's water supply impacts. NEPA requires more.

5. Visual and Aesthetic Impacts

The DEIS states that the "ESJ U.S. project alternative corridors would not be visible from any residential viewpoints; therefore, these viewers are not reflected in any of the selected KOPs." DEIS 3-33. This statement is untrue. For example, the alternative corridors and the connected projects would be visible from multiple residential vantage points, including the (purportedly unoccupied) residence located 1,600 feet west of the construction area for the 230-kV route (DEIS 2-32), the two additional nearby residences described in the noise impact section of the DEIS (DEIS 2-91), and others. In contrast, the DEIS recognizes that the first residence "could be occupied in the future" and specifically analyzes how the Project's noise will impact it and the other two identified nearby residences, even classifying the first home as a "noise-sensitive receptor." DEIS 3-91. The DEIS' complete lack of analysis of the visual impacts on the three identified nearby homes is thus all the more inexplicable and unacceptable. DOE must address the visual impacts of the Project on the three identified homes and other nearby residences.

401-13

6. Conservation Initiatives

401-14

The DEIS entirely fails to consider the impacts of the ESJ Gen-Tie Project on the region's

RESPONSE TO 401-12: The EIS is updated at Section 2.4 to include further discussion of ESJ's planned groundwater extraction from an existing non-potable groundwater well. Section 3.11 (Water Resources) is also updated to include a discussion of potential impacts associated with the proposed groundwater use. The results of a County of San Diego groundwater analysis are provided in Appendix B, and summarized in Section 3.11. This analysis indicates that proposed use of the groundwater from Jacumba Community Services District Well #6, located on the eastern edge of Jacumba, would not compromise groundwater resources in the project area. A copy of the project water availability form (County of San Diego Department of Planning and Land Use Form 399W, signed by the Jacumba Community Services District on July 8, 2010) is provided in Appendix B.

RESPONSE TO 401-13: The EIS at Section 3.2 is revised to acknowledge the visual impacts of the project on the three identified homes cited in the noise impact assessment. In general, the facility structures would be visible from these residences to varying extents. However, the visual assessment methodology, which is accepted by the County of San Diego, relies on the identification of – and views from – key observation points, such as segments of U.S. Highway 8 and the Table Mountain recreational area. Individual residences are located within the areas that correspond with some of the KOPs analyzed.

conservation initiatives. DOE should have and must now evaluate those impacts. Most specifically, DOE should analyze the Project's impacts on the proposed binational park that is the ultimate goal of the Las Californias Binational Conservation Initiative. Both the ESJ Gen-Tie Project and the ESJ Wind Project, as well as the other associated projects like the ECO and Boulevard Substations, would be or already are located directly adjacent to the potential site of the binational park, which would link Parque Constitución de 1857 in Mexico (just south of the La Rumorosa area) with BLM lands, the Cleveland National Forest, and Anza-Borrego Desert State Park wilderness areas in San Diego County. Given that the ESJ Gen-Tie Project and the numerous connected and cumulative actions are likely to greatly increase development pressures in the region and have major biological and aesthetic impacts, including habitat fragmentation, they could seriously hinder the creation of the park - or at least reduce its size. This could occur in at least two ways: making land acquisition and consolidation more costly and difficult, and reducing the attractiveness of some areas for inclusion in the park. This is a readily foreseeable potential impact of the ESJ project. DOE violated NEPA by not analyzing this impact in the DEIS.

401-14

7. Air Traffic Safety

The DEIS discusses some aviation safety impacts, but does not discuss the harm that could befall planes responding to wildfire, e.g. retardant or water dropping planes. DEIS 2-33, 2-35. It merely mentions the "minor potential for adverse impacts to air traffic safety with U.S. Border Patrol's aircraft patrol along the U.S.-Mexico border. And the only mitigation measure identified to reduce aviation impacts would be to "provide written notification to all U.S. Border Patrol aircraft working in the county stating when and where the new transmission lines and towers are to be erected; provide project location and design details; and resolve any potential issues related to their ground and aerial operations." DEIS 3-107, 3-110. ESJ must coordinate in a like manner with the fire responders in the area (e.g. the San Diego County Fire Authority, the County of San Diego Rural Fire Protection District and the CAL FIRE San Diego Unit), as well as with recreational and other plane operators who would also be forced to avoid the new transmission lines. Because of the viability and necessity (for safety) of such coordination with other aviators, DOE's failure to include it as a mitigation measure is unacceptable.

401-15

The DEIS further fails to adequately analyze the Project's aviation impacts by improperly basing its conclusion of minimal aviation impacts on the fact that the project received a "Determination of No Hazard to Air Navigation" from the Federal Aviation Administration" for each of the proposed tower locations. As the determinations also state: "Any height exceeding 170 feet [51.8 m] above ground level . . . will result in a substantial adverse effect and would warrant a Determination of Hazard to Air Navigation." DEIS 2-10. Despite this warning, the DEIS notes that ESJ may well put lighting on the towers/poles to fulfill a request by the U.S. Border Patrol "to avoid potential hazards to [the Border Patrol's] aviation operations." DEIS 2-10, n.6. Installation of that lighting would mean that the towers/poles – whose base height would be between 150 and 170 feet (DEIS 2-4) – would increase in height to over 170 feet and would

RESPONSE TO 401-14: Potential cumulative impacts of the proposed action on biological resources are addressed in Section 5.3.1. This section of the EIS is revised to acknowledge potential cumulative project impacts on the Las Californias Binational Conservation Initiative. The Initiative's ongoing efforts could be impacted to the extent that the presence of wind and other development projects, and associated impacts to native habitats and habitat linkages could reduce the conservation value of certain targeted conservation properties. Potential impacts include hindering the creation of new conservation properties or a reduction in the size of conservation lands by making land acquisition and consolidation more costly and difficult, and by reducing the attractiveness of some areas for inclusion in the conservation program.

RESPONSE TO 401-15: EIS Section 3.7 (Transportation and Traffic) and 3.9 (Fire and Fuels Management) are revised to discuss potential limitations on aerial fire-fighting efforts due to the presence of the transmission lines. Mitigation Transportation-1 (coordination with Border Patrol) is revised to include an additional requirement for coordination with CAL FIRE. This will ensure proper planning for future fire responses.

Potential impacts to recreational and other plane operators are discussed in EIS Section 3.7. According to the Jacumba Airport Land Use Compatibility Plan, structures such as cell phone towers, wind turbines and transmission lines are compatible land uses (i.e., they would not interfere with aircraft) when located at least 1,500 feet (457 meters) beyond either end of the runway (San Diego County

401-15 thus "warrant a Determination of Hazard to Air Navigation." DEIS, 2-10. Thus, this impact was not thoroughly analyzed. These lights also pose unexamined impacts on migratory birds, whose flight patterns may be disturbed by artificial lighting.

8. Growth Inducing and Indirect Impacts

401-16 DOE did not and must now evaluate the Project's substantial growth-inducing and other indirect and cumulative impacts. For example, the EIS must address the likelihood of and impacts from the future use of the Project's transboundary transmission line to carry electricity generated from fossil fuels, such as liquefied natural gas ("LNG"). Unless DOE disapproves ESJ's Presidential permit application or places a condition in the permit prohibiting the transmission over the line of fossil fuel-based electricity, there is a distinct possibility that a new *gas-fired* power plant would be built in the vicinity of the La Rumorosa area and transport its electricity output to the U.S. via the ESJ Gen-Tie Project transmission line and ECO and Boulevard Substations. This possibility is made all the more likely by the Project's proximity to Sempra's Gasoducto Bajanorte LNG pipeline and a new water line that runs through Sempra's leased land just inside Mexico, directly south of the proposed site for the ECO Substation and Boulevard Substation expansion. The LNG pipeline runs from Sempra's Baja LNG import terminal, through which Sempra will receive LNG from Indonesia pursuant to a long-term contract.

Conclusion

401-17 The ESJ Gen-Tie Project is a stepping stone to a massive expansion of electrical transmission facilities in and around San Diego County that will have significant individual and cumulative impacts. Nonetheless, DOE has failed to show a need for the Project, did not adequately analyze the Project's environmental impacts – or those of the connected actions – in the DEIS and ignored numerous feasible alternatives that would substantially reduce the Project's impact. This is unacceptable under NEPA, and must be swiftly rectified. Conservation Groups respectfully request that DOE address the issues we raise.

Respectfully submitted,

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Regional Airport Authority 2006). The proposed project would be located approximately 3 miles (4.8 km) east of the Jacumba Airport; therefore, the project would not interfere with aircraft activity.

DOE acknowledges that the lighting could be placed on the towers/poles in response to a request by the U.S. Border Patrol. If this occurs on the 230-kV transmission lines or monopoles (150 feet; 46 m), then the total height of the structures would not exceed 170 feet (52 m). If this occurs on the 500-kV transmission lines or monopoles (170 feet; 52 m), then the total height of the structures would exceed 170 feet (52 m) in height. However, such placement of the lights would be for the sole purpose of reducing aviation hazards, and FAA would be advised of the proposed lighting. The EIS also notes that from a visual resource perspective, the lattice towers are preferable to the monopoles.

Section 3.1 is revised to include a discussion of potential impacts to wildlife, including migratory birds, whose flight patterns may be disturbed by artificial lighting, and ground-foraging wildlife, should aviation lights be installed.

RESPONSE TO 401-16: Refer to response to comment 305-1 for a discussion of transmission of power from only renewable energy projects.

RESPONSE TO 401-17: Refer to responses to comments 401-1 through 401-16.

List of Exhibits

1. Phase II Direct Testimony of Travis Longcore on Behalf of the Center for Biological Diversity and the Sierra Club. March 12, 2008. Submitted to the California Public Utilities Commission in the matter of the application of San Diego Gas & Electric Company for a Certificate of Public Convenience and Necessity for the Sunrise Powerlink Transmission Project.

EXHIBIT 1

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

In the Matter of the Application of San Diego Gas & Electric Company (U 902-E) for a Certificate of Public Convenience and Necessity for the Sunrise Powerlink Transmission Project	Application 06-08-010 (Filed August 4, 2006)

PHASE II DIRECT TESTIMONY OF TRAVIS LONGCORE ON BEHALF OF THE CENTER FOR BIOLOGICAL DIVERSITY AND THE SIERRA CLUB

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Dated: March 12, 2008

TESTIMONY OF TRAVIS LONGCORE, PH.D.

My name is Travis Longcore. I have been retained to provide written and oral testimony on the biological impacts of the proposed Sunrise Powerlink Transmission Project with special emphasis on avian collision and electrocution and other impacts to birds. I am currently Research Assistant Professor of Geography at the University of Southern California Center for Sustainable Cities where I am Director of Urban Ecological Research. I am also Science Director of The Urban Wildlands Group, a Los Angeles-based conservation nonprofit. I have taught for seven years at UCLA for the Department of Geography, Institute of the Environment, and Department of Ecology and Evolutionary Biology. Courses taught include Environmental Impact Assessment, Bioresource Management, Ecology, and Field Ecology.

For the past ten years I have consulted on land use issues, providing expert opinion on the compliance of proposed projects with various laws, including the California Environmental Quality Act, National Environmental Policy Act, California Coastal Act, Endangered Species Act, and Migratory Bird Treaty Act. In this capacity I have reviewed dozens of environmental reports and evaluated the quality of their biological resources analysis. I have expertise in the scientific literature describing avian collisions with structures, particularly with lighted communication towers, but also with wind turbines and other structures. Further information about my background can be found in the attached curriculum vitae.

This testimony is based on the Draft Environmental Impact Report/Environmental Impact Statement and Proposed Land Use Plan Amendment ("DEIR/EIS"), peer-reviewed scientific articles that are cited herein, assumptions predicated on these sources, and expert opinion supported by these facts and assumptions.

Collision Impacts

The DEIR/EIS does not provide adequate data to describe and mitigate the impacts resulting from avian collisions with the proposed power transmission lines. Guidance for identifying and mitigating impacts from collisions is available (APLIC 1994) and the DEIR/EIS claims that the project will follow these guidelines in designing and siting towers. "The applicant shall install the transmission lines utilizing Avian Power Line Interaction Committee standards for collision-

reducing techniques as outlined in "Mitigating Bird Collisions with Power Lines: The State of the Art in 1994'" (p. D.2-147). APLIC is a well-respected utility-supported organization that is run by the Edison Electric Institute, which is the research arm of the utilities. The authors of the APLIC guidelines include a U.S. Fish and Wildlife Service biologist, a respected ornithologist from Clemson University, and a retired electrical engineer from a utility company (APLIC 1994). They received input from a broad range of electric utility companies and the resulting guidelines are widely accepted by the industry. A comparison of these guidelines and the DEIR/EIS reveals, however, that these techniques have not been utilized in the siting and design of towers for this project.

It deserves mention that avian collisions with power lines can be reduced through tower design and siting decisions, but collisions cannot be eliminated (Alonso et al. 1994; Brown and Drewien 1995; Janss and Ferrer 1998). Even a single tower can kill many birds in a single night under adverse conditions, as was shown by a 100-foot unlighted communication tower on a ridge in West Virgina that killed 75 birds in a single night (Wylie 1977). This type of blind collision can occur during the day as well (Emerson 1904; Bevanger 1998; Janss 2000). Even after following all possible mitigation measures currently available, avian collisions will continue to occur with power lines. For this reason, site planning is critically important to minimize impacts of new routes. As summarized by Janss (2000), "Because mitigation measures only reduce collision mortality, but do not solve it, adequate route planning of power lines is especially important."

APLIC (1994) provides the following guidance on route planning:

- Keep lines distant from areas where birds are taking off or landing (e.g., wetlands).
- Keep lines below the height of vegetation (in forests).
- Avoid topographic features that concentrate migratory birds (e.g., mountain passes, river valleys).
- Orient lines parallel to primary flight patterns.
- Minimize the horizontal distribution of lines by placing them all at the same height rather than stacked at different heights. This is especially important because the majority of collisions occur with the overhead ground wire, which is typically smaller than other wires and virtually invisible to birds in flight.

Obviously a certain amount of field reconnaissance is necessary to gather the information needed to follow these guidelines. APLIC (1994) provides an entire chapter describing methods to observe birds in power line corridors and to evaluate the presence of birds for potential new corridors. They conclude:

> "All items that could affect the success of the project must be considered and evaluated before the line is built. In general, the purpose of preconstruction studies is to obtain information on bird flight altitudes, directions of flight, intensity of movement, species composition, and temporal variations in flight activity in and about the corridor. Day-time and night-time observations should be made by individuals who can identify birds correctly and gather quantitative data in a systematic fashion" (APLIC 1994).

The DEIR/EIS, despite claiming to follow the APLIC guidelines as part of mitigation measure B-10a, does not show any evidence that project applicants have done so in planning the route and designing the towers.

Some effort is made in the DEIR/EIS to identify migratory pathways for birds. These pathways are shown on several figures (D.2-1, D.2-2, D.2-3). The source given for these pathways is two email communications between a staff member at the San Diego Natural History Museum and consultants for the proposed project (p. D 2-540). The applicant has an obligation under the APLIC guidelines to collect data regarding the distribution, behavior, species composition, and collision susceptibility of the birds that will encounter all portions of the proposed project. Unfortunately, the DEIR/EIS incorrectly claims that it is not possible to know how many birds or what species might be impacted by the proposed projects (D.2-146 and repeated several times thereafter). To the contrary, the APLIC guidelines identify many techniques to evaluate the bird use of areas in route planning. These include: daytime and nighttime visual observation using tools to measure distance and altitude of birds (ohnometers and theodolites), closed circuit television recordings, night vision tools such as image intensifiers, forward looking infra-red devices, and radar. In fact, radar techniques were developed to detect birds specifically to evaluate the risk of new transmission lines in 1978 (Kerschgen et al. 1984). These tools can be used to develop a reasonable assessment of the quantity and general species composition of birds that might be at risk of collision. Examples of such efforts are available in the published literature. Williams et

al. (2001) used radar, visual observations, and a ceilometer to describe birds migrating through a mountain pass. Mabee and colleagues have described bird numbers and altitude of flight using radar at proposed wind power sites (Mabee and Cooper 2004; Mabee et al. 2006). Others have used nocturnal flight calls to identify passing migrants (Farnsworth et al. 2004; Farnsworth and Russell 2007).

It is common for energy projects that may impact migratory birds to include detailed studies of bird migration using a combination of visual observation and radar investigation as part of the environmental review process. The APLIC guidelines cite three such examples (James 1980; McKernan et al. 1982; Gauthreaux 1991). A cursory Internet search reveals many other examples of pre-construction monitoring of birds for potential impacts, including reference to a study of "bird migration in relationship to a proposed powerline and proposed mitigation" by the Golden Valley Electric Association in Alaska, and numerous studies of risk to birds from wind power projects (Mabee and Cooper 2004; Mabee et al. 2006). There are consulting firms that specialize in such studies, offering services such as "monitor rates of nocturnal and diurnal bird migration/movements" and "identify migration and movement corridors for birds" (www.abrinc.com). For projects with potential impacts from avian collision, fieldwork using radar and other techniques is common (Kerlinger et al. 1984; Cooper et al. 1991; Harmata et al. 1999; Deng and Frederick 2001; Gauthreaux and Belser 2003; Mabee and Cooper 2004; Mabee et al. 2006).

Although the DEIR/EIS should rely on data gathered in the field at proposed transmission line sites to assess the collision risk of potential structures, it is remarkable that the DEIR/EIS contains no data from San Diego Gas & Electric regarding collisions (or electrocutions) of birds at existing high voltage transmission lines. Given the environmentally oriented operating procedures described in the DEIR/EIS, it would seem that SDG&E personnel would have collected data regarding collision events (incidental observations made by maintenance staff) or electrocution events resulting in power outages. Other utilities collect such data, especially on electrocutions, because they result in service interruptions (APLIC 1994, 2006). Although such data are rarely collected by systematic surveys, they would at least give an indication of the patterns of species vulnerability to collision and electrocution in the project area at existing transmission lines.

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Absent data from original studies or incidental observations from SDG&E at existing lines, potential mortality and vulnerable species must be discerned from the scientific literature. Although most migrants travel at altitudes greater than the tops of the proposed towers (Able 1970; Bellrose 1971), a certain proportion of migrants is found nearer the ground, especially during inclement weather or daytime migration (APLIC 1994). Mabee and Cooper (2004) found that at two locations in Oregon, 12–14% of spring migrants were flying below 100 m (328 feet). For a fall migration in West Virgima, 12.7% of birds flew below 100 m (Mabee et al. 2006). These studies show that at given times birds are migrating at an altitude where they could collide with powerlines (e.g., below 100 m).

Ornithologists have identified characteristics that make certain bird species especially vulnerable to collisions (Bevanger 1994; Savereno et al. 1996; Bevanger 1998; Janss 2000). Rails, coots, and cranes (Gruiformes) are most frequently recorded birds killed at powerlines (Bevanger 1998). Other groups at risk include waterbirds and diving birds such as ducks (Anseriformes) and loons (Gaviformes), which also have high "wing loading," which means that their wings are small relative to their weight (Bevanger 1998). These species are unable to maneuver to avoid powerlines, especially in low visibility conditions. Many shorebirds (Scolopacidae) are collision victims, partially because they encounter many lines in their long migratory routes (Bevanger 1998). Aerial predators, such as swifts, many raptors, and even gulls, are at risk because they spend so much time in flight that they have an increased probability of colliding with wires than other species that fly less (Bevanger 1998; Janss 2000).

Collision mortality is of particular concern for species that are in decline (Bevanger 1998; Janss 2000). Usually such species are identified as "sensitive" or are formally listed as threatened or endangered species. For those bird species identified as sensitive in the DEIR/EIS, many fall into groups that are susceptible to collision with power lines. These include the raptors (Cooper's hawk, golden eagle, long-eared owl, ferruginous hawk, Swainson's hawk, northern harrier, white-tailed kite, prairie falcon, bald eagle), common loon, greater sandhill crane, least bittern, and long-billed curlew. Also at risk are all smaller migratory species, which are killed in collisions but are much more difficult to locate under wires than larger species.

The DEIR/EIS fails to recognize the hazard posed to resident and migratory birds of the Salton

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Sea and the agricultural fields to the south of it. The proposed northern route would pass along and through the western edge of the agricultural zone and within two miles of the Salton Sea itself. The agricultural fields are even more important than the Salton Sea itself to many wading birds (cattle egret, white-faced ibis, sandhill crane) and shorebirds (mountain plover, whimbrel, long-billed curlew) (Shuford et al. 2002), yet the DEIR/EIS does not recognize the increased risk of mortality posed by a new transmission line through this essential habitat. Furthermore, the DEIR/EIS does not identify the risk of constructing a power line across San Felipe Creek, less than 1.5 miles from wetland habitats on the southwestern edge of the Salton Sea. This area is identified as supporting particular concentrations of colonial waterbirds (Shuford et al. 2002). Because of the proximity to wetland habitats associated with the Salton Sea and the rather extensive marsh and stream habitats along San Felipe Creek and San Sebastian Marsh, birds can be expected to move between the Salton Sea and the San Sebastian Marsh. These will include members of the very groups of birds that are at high risk of collision with power lines. Indeed, the earliest records of power line mortalities are derived from exactly this situation, where power lines are located between and adjacent to wetland habitats (Emerson 1904).

The DEIR/EIS should consider impacts to sensitive bird species at the Salton Sea from collision with the Imperial Valley Link (Table 1). These species have morphological characteristics that predispose them to collisions with power lines (Bevanger 1998; Janss 2000) and the DEIR/EIS fails to identify many of them as being impacted by the proposed power line.

Table 1. Sensitive species associated with Salton Sea and agricultural lands (Shuford et al. 2002) that are vulnerable to collision with power lines (Emerson 1904; McNeil et al. 1985; Bevanger 1998; Janss 2000). Status is indicated as California Bird Species of Special Concern (BSSC), federal Birds of Conservation Concern (BCC), and listing status under state and federal endangered species acts.

Species	Status
brown pelican	Federally endangered
American white pelican	California BSSC, Federal BCC
American bittern	Federal BCC
least bittern	California BSSC, Federal BCC

greater sandhill crane	California threatened, Fully Protected Species
lesser sandhill crane	California BSSC
white-faced ibis	Federal BCC
wood stork	California BSSC
fulvous whistling-duck	California BSSC
black rail	California Threatened, Federal BCC
Yuma clapper rail	Federal Endangered
greater sandhill crane	State Threatened, Fully Protected Species
long-billed curlew	Federal BCC

Collision with power lines is the principal cause of death for sandhill cranes (California Department of Fish and Game 1994), which are threatened and fully protected species in California. Collisions occur during migration and when power lines are found in feeding areas (Krapu et al. 1984; Windingstad 1988). The construction of major power lines within known feeding areas south of the Salton Sea would constitute a significant impact to sandhill cranes, which the DEIR/EIS overlooks entirely.

Part of the risk to waterfowl from power lines is that waterfowl rarely fly under power lines but rather attempt to gain altitude and fly over them (Morkill and Anderson 1991). This makes them vulnerable, especially when they see transmission lines and gain altitude, only to collide with the nearly invisible ground wire above the energized lines (Morkill and Anderson 1991). Marking ground wires is consequently a common mitigation technique (APLIC 1994; Brown and Drewien 1995; Janss and Ferrer 1998).

The proposed aboveground transmission line routes would be a permanent hazard to resident and migratory birds. Far greater field data must be conducted to describe this risk, but it is probably significant in most of the undeveloped regions of the project area. The proposed project design, as far as it is revealed in the DEIR/EIS, does not minimize those impacts, nor does it follow the APLIC recommendations to do so.

1. *Keep lines distant from areas where birds take off or land.* The Imperial Valley Link

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cuts through habitat highly utilized by wintering birds (agricultural lands) and between wetland habitats. The Anza-Borrego Link, Central Link, and Inland Valley Link traverse habitats where dense populations of birds live and through which many species migrate. No mitigation for the Imperial Valley Link is even proposed.

2. *Keep lines below the height of vegetation.* This minimization measure is not available for the proposed project because the vegetation types through which the lines would pass are not forested.

3. *Avoid topographic features that concentrate migratory birds.* Although the proposed routes do not follow ridgelines, they do follow valley floors, which can also concentrate migrants. Furthermore, no data were collected to describe the movement of birds across the various project areas so no conclusions can be reached whether migratory pathways have been avoided.

4. *Orient lines parallel to primary flight patterns.* No studies were conducted to determine these flight patterns, but the extent of the project guarantees that this recommendation cannot be followed throughout.

5. *Minimize horizontal distribution of lines.* The proposed project fails to follow this recommendation. The 500 kV tower design includes two ground wires at the top of the tower with the main circuits hanging below. In areas with the 69/92 kV underbuild the towers include three heights of wires spread over 60–70 feet (Figure B-19). All of the steel pole towers show circuits at several heights (B-16 to B-18) rather than at the same height. None of these designs are consistent with the APLIC (1994) recommendations because they spread the wires over a vertical area of 60–80 feet. If all cables were to be at one level, one change in altitude would allow birds to avoid them (Janss 2000). The current designs therefore do not minimize collision risk to birds.

Mitigation Measure B-10a further suggests the use of diversion devices for a portion of the project in the Imperial Valley and Anza-Borrego links. Diversion devices can reduce mortality of birds by 50% and sometimes 75% (Morkill and Anderson 1991; Alonso et al. 1994; Brown and Drewien 1995; Janss and Ferrer 1998). Such a reduction is an improvement, but certainly does

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not represent reduction of the significant impact to a less than significant level given the miles of lines to be installed and the vulnerable species known to live and migrate near these lines. Appropriate studies of these transmission corridors following the APLIC (1994) guidelines would allow for an adequate description of additional risk to birds from collisions with the proposed lines but these studies have not been conducted. Sufficient data are not presented in the DEIR/EIS to support the claim that impacts to birds from collision with the proposed transmission lines would be mitigated to a less than significant level and indeed, collisions could result in take of federal and state protected species.

Electrocution Impacts

Electrocution by power lines is a significant source of mortality for some bird species to the extent that population density and distribution is altered (Sergio et al. 2004). The DEIR/EIS describes a project that will consist of large transmission lines, while most mortality from electrocution derives from smaller distribution lines where the separation between wires is smaller (Lehman 2001; APLIC 2006). The proposed project also involves relocation of a 69 kV distribution line along the Central Link of the project (p. D.2-144). Although the DEIR/EIS argues that the electrocution risk will be the same as before, this relocation makes the relocated distribution line part of the project and therefore impacts must be identified, minimized, and mitigated. The project also does not fully account for the collision risk posed by the 69 or 92 kV underbuilds along several project links. The depictions of such structures (Figure B-19) do not provide measurements of the distances between the energized conductors and between the innermost conductor and the steel structure. The renderings are apparently not to scale, but it seems possible that the underbuild lines might be close enough to allow for electrocution of birds.

The DEIR/EIS does not discuss the potential of "streamers" to cause flashovers on power lines. "Streamers" are long streams of bird excrement that can span energized conductors and other line structures. A flashover is a fault that originates on the energized conductor and travels through the streamer to the structure (APLIC 2006). These may cause power outages and occasionally bird mortalities (APLIC 2006). The DEIR/EIS should discuss this potential problem relative to the tower designs proposed for the project.

Transmission Towers as Perches

The construction of transmission towers across areas that have few natural perches can dramatically alter the distribution of raptors and ravens (Knight and Kawashima 1993; Knight et al. 1993). For example, a study of raptor habitat use and density following construction of a 230 kV transmission line with 75-foot towers across open prairie in Colorado showed a significant increase in raptor density within 1,300 feet (0.4 km) of the towers (Stahlecker 1978), essentially changing the distribution of raptors across the landscape. Although towers were 1.5% of the available perches, they accounted for 81% of raptor perch sites (Stahlecker 1978). Such artificial concentration of predaceous species by power lines has been confirmed in other studies (Knight and Kawashima 1993) can have adverse impacts on prey species (Lammers and Collopy 2007).

The DEIR/EIS acknowledges that transmission towers would provide additional nest sites for red-tailed hawks but asserts that the number of red-tailed hawks would be controlled by prey availability (p. D.2-148). This argument does not, however, account for the altered distribution of raptors within the landscape that results from transmission tower construction (Stahlecker 1978). This impact is in fact significant because of the concentration of predator activity in certain areas and its effects on sensitive species. The DEIR/EIS offers no mitigation for this impact.

The mitigation proposed for increased density of ravens associated with transmission towers is to develop a raven control plan for Anza-Borrego State Park and in habitat for desert tortoise and flat-tailed horned lizard (MM B-11a, b). Ongoing lethal control of ravens, as implied by the text of the mitigation measure, is far less desirable than avoiding such impacts. Undergrounding lines along existing roads would avoid this impact entirely.

Noise

The analysis in the DEIR/EIS of the impacts of increased noise from construction and operations on sensitive bird species relies on the faulty assumption that they are not affected by noise levels less than 60 dB(A). The DEIR/EIS applies this standard to least Bell's vireo, southwestern willow flycatcher, California gnatcatcher, and other species. Least Bell's vireo was located along the proposed route in the Anza Borrego Link (Yaqui Well) and Central Link (assumed present at MP 101), while southwestern willow flycatcher is assumed present along the Central Link (MP

101). These species were located or assumed present along soveral of the alternative routes as well.

The 60 dB(A) threshold for impacts on avian species was established in 1991 by a study conducted for the San Diego Association of Governments in which "it was theoretically estimated that noise levels in excess of 60 dB(A) Leq in [Least Bell's] vireo habitat would mask the bird's song, subsequently reducing the reproductive success of this species during their breeding season...." (County of San Diego 2000). This study, on which the U.S. Fish and Wildlife Service apparently based its acceptance of the 60 dB(A) threshold as well, to our knowledge has never been published or peer reviewed. The DEIR/EIS refers to Bowles and Wisdom (2005) as a source for the standard but this published abstract of a conference paper questions, and does not support, the use of the 60 dB(A) standard.

Since 1991, scientific understanding of the effects of noise on birds has improved greatly, with studies published that present heuristic and mathematical models that quantify the pattern of impacts caused by noise (Hill 1990; Reijnen and Foppen 1994; Reijnen et al. 1996; Reijnen et al. 1997; Forman et al. 2002, Peris and Pescador 2004, Slabbekoorn and Ripmeester 2008). Rather than relying on undocumented research nearly two decades old, it is incumbent upon the applicant to incorporate the best and most up-to-date scientific evidence of the impacts of noise on breeding birds in the environmental analysis of the proposed project.

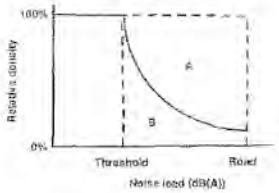

Figure 1. Threshold model for relative breeding density of birds plotted against traffic noise, where T is the threshold value and R the value at the roadside [or other noise source]. The decrease factor of the density = area of A/(area of A + B). Caption and figure reproduced from Reijnen et al. (1995).

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In the late 1990s, a group of Dutch ecologists investigated the effects of traffic noise on breeding bird density. Of 45 bird species investigated in woodlands in The Netherlands, 33 showed significantly depressed breeding density near roads. All species in the small passerine families Sylviidae, Fringillidae, and Emberizidae were affected by noise (Reijnen et al. 1997). This research also showed that noise effects followed a threshold model (Reijnen et al. 1995). This means that up to a certain noise level, no decrease in density is observed. When noise increases beyond that threshold level, bird density decreases dramatically in the area between the location at which that threshold is met and the road (Figure 1). The decreased density over the area with noise greater than the threshold level ranges from 30% to 100% and is known as the "decrease factor" (Reijnen and Foppen 1995; Reijnen et al. 1995). These two variables, the threshold and the decrease factor, describe the impact of road noise on breeding birds. Empirical measurement of the threshold value in woodlands shows that for all bird species combined the threshold value is 42–52 dB(A), with individual species exhibiting thresholds as low as 36 dB(A) and as high as 58 dB(A) (Reijnen and Foppen 1995; Reijnen et al. 1995). Furthermore, years with overall low population densities showed lower threshold levels. This information can be used to evaluate the impacts of noise from the proposed project from construction, maintenance, and operation (corona noise).

The least Bell's vireo and southwestern willow flycatcher are small songbirds that rely on hearing songs to attract mates and defend territories. Habitat for both species would be impacted by noise from the proposed project (Figs. Ap8C-06, Ap8C-10). The studies of road noise from Europe include similar small songbirds that use acoustical communication. The threshold levels for two European warbler species (*Phylloscopus sibilatrix* and *Phylloscopus trochilus*) are 26 dB(A) and 39 dB(A), with decrease factors of 0.61 and 0.38, meaning breeding density was diminished to ~40–60% of undisturbed levels (Reijnen et al. 1995). From the published literature, therefore, a reasonable threshold based on similar species for least Bell's vireo and southwestern willow flycatcher would be 40 dB(A) or below. Data from California support this conclusion. In 1999, Haas recorded sound levels (one hour A-weighted Leq) at 87 locations in the vicinity of the southwestern willow flycatcher colony along the San Luis Rey River in the vicinity of the Lake Henshaw Dam. The study site harbors the most robust and stable southwestern willow flycatcher colony in California. Sampling locations were established along the river; 100 meters

(the approximate average length of a southwestern willow flycatcher territory within the colony) separated each location. The territories were nearly identical in all habitat characteristics except sound level. Of these territories, 44 were occupied by either a pair of flycatchers (n = 42) with a nest, a solitary male (n = 1), or a solitary female (n = 1). Using sound as the independent variable, and occupancy as the response variable, I completed a logistic regression on these data. The results were highly significant ($p < 0.0001$, $r^2 = 0.49$), indicating with certainty that territory occupancy is reduced by sound levels in the 50–60 dB(A) range.

A conclusion that noise impacts on sensitive bird species such as southwestern willow flycatcher and least Bell's vireo start below 50 dB(A) is robust. Thresholds for other bird species have been determined to be in the 40–50 dB(A) range (Reijnen et al. 1997). The 60 dB(A) threshold currently used by the DEIR/EIS will be ineffective at eliminating noise impacts, and in fact noise at the 50–60 dB(A) level could deter breeding activity altogether for some species. According to the DEIR/EIS, corona noise from the 500 kV transmission line would increase arabient noise levels within the project right of way to 52 dB(A) along a number of project links under certain weather conditions (Table D.8-13). Noise from construction and maintenance activities would also increase noise levels for sensitive bird species. These impacts should be evaluated with a lower threshold that is based on the published scientific literature rather than the unsubstantiated 60 dB(A) threshold.

Helicopter Disturbance

The DEIR/EIS discloses that 111 towers will be built using helicopters to deliver materials (p. B-84) and furthermore describes complete inspection of the system using helicopters on at least an annual basis (p. D.2-149). Yet the DEIR/EIS only describes helicopter disturbance within the context of impacts to Peninsula bighorn sheep (p. D.2-114). The DEIR/EIS gives no limits to the frequency of helicopter flyovers for the lines (p. D.8-18). Many other wildlife groups are affected by helicopter disturbance than bighorn sheep (Efroymson and Suter 2001), and the DEIR/EIS does not contain a complete discussion of the impacts of helicopter disturbance on these groups. Efroymson and Suter (2001) summarized the literature on the effects of military overflights on wildlife and found thresholds for impacts to wildlife from rotary-wing aircraft for raptors, waterfowl, and ungulates. For example, flights within 15 km can disturb waterfowl,

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which only sometimes become habituated to such disturbance (Efroymson and Suter 2001). Raptors can similarly be disturbed and while some species can become habituated (such as red-tailed hawks, which are known for habituating to human activity) other species may abandon an area that has been disturbed by helicopter overflights (Andersen et al. 1989). The DEIR/EIS uses a mitigation approach for golden eagles that limits disturbance from helicopters (and other noise sources) to the period outside of breeding season when within 4,000 feet of a nest site (Mitigation Measure B-7h). This measure is not sufficient to protect golden eagles from adverse impacts. Scientific literature on this subject is clear, "The presence of humans detected by a raptor in its nesting or hunting habitat can be a significant habitat-altering disturbance even if the human is far from an active nest" (Richardson and Miller 1997). Regardless of distance, a straightline view of disturbance affects raptors, and an effective approach to mitigate impacts of disturbance for golden eagles involved calculation of viewsheds using a three dimensional GIS tool and development of buffers based on this (Camp et al. 1997; Richardson and Miller 1997). The DEIR/EIS assumes that impacts to golden eagles can be avoided by a 4,000-foot buffer from nest sites, but this approach will not avoid disturbance to hunting habitat or line-of-sight impacts from nest sites, regardless of distance. Helicopters will be a chronic intrusion into areas that currently have no such artificial disturbance.

Electromagnetic Fields

The DEIR/EIS contains an electromagnetic field (EMF) management plan, but places undeveloped land as the lowest priority for implementation of low-cost measures to reduce EMFs (Appendix 7, p. 6). This approach ignores the adverse impacts of EMFs on wildlife that have been documented in the scientific literature.

Birds are closely associated with powerlines through perching, nesting on supporting structures, and exposure to EMFs in habitats below and adjacent to lines (Fernie and Reynolds 2005). An experimental study exposed America kestrel (a raptor found along the project route) to electromagnetic fields equivalent to being under a 735 kV transmission line (Fernie et al. 2000). The pairs exposed to EMFs had higher fertility but poorer hatching success (Fernie et al. 2000). Behavior was affected as well, with pairs exposed to EMFs maintaining higher activity levels.

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Such activity is not desirable during nesting when reductions in activity levels are associated with egg-laying and protection of eggs (Fernie and Reynolds 2005).

A German study showed increased egg size in one species nesting under a 100 kV power line, decreased egg size in another species, and no difference in two other species (reported in Fernie and Reynolds 2005). A review of studies of embryonic development found that most studies (88%) found adverse effects resulting from exposure to EMFs similar to that experienced by nesting under power lines (Fernie and Reynolds 2005). Exposure to EMFs also has been shown to inhibit production of the hormone melatonin, which helps to regulate seasonal behaviors such as nesting, molt, and migration (Fernie et al. 1999). Even though relatively few studies of the effects of EMFs on birds have been completed, "much of the research has found that EMF exposure has generally affected birds, and most of the effects have been adverse" (Fernie and Reynolds 2005). The DEIR/EIS errs in failing to consider the impacts of EMFs on birds and other wildlife and consequently fails to identify significant adverse impacts to bird habitat across the aboveground portions of the proposed transmission line.

Fragmentation Impacts

The proposed project will have impacts to native ecosystems that extend well beyond the footprint of the transmission towers and associated road infrastructure. These impacts are not adequately described in the DEIR/EIS. One such mechanism is through "bottom-up" effects whereby invertebrate communities are disrupted, which then affects other wildlife. Disturbance of natural scrub and chaparral communities will promote the invasion of alien insect species, such as the Argentine ant (*Linepithema humile*). The deleterious effect of Argentine ants on native arthropods is well documented; many studies report a decrease in arthropod diversity as Argentine ant abundance increases (Erickson 1971; Cole 1983; Human and Gordon 1996, 1997; Holway 1998a; Kennedy 1998). The proposed project will promote invasion of Argentine ants by providing two conditions that increase invasion: a water source (Holway 1998b; Human et al. 1998; Holway and Suarez 2006) and increased disturbance (Human et al. 1998). These are provided in the form of watering for dust suppression (D.2-165), washing of insulators on towers (B-98), and by construction and maintenance activities. Argentine ants invade far beyond dis-

turbed areas and water sources and into surrounding undisturbed habitats, with increased abundance documented to a distance of up to 650 feet (Suarez et al. 1998).

The proposed project will also involve destruction of habitat as part of the fuels management program (p. D.15-64). Community level analysis indicates that arthropod species composition will change and overall diversity will decrease when native habitats are subjected to fuel modification. Disturbed coastal sage scrub sites have fewer arthropod predator species such as scorpions and trap-door spiders, and are dominated by exotic arthropods such as Argentine ants, European earwigs (*Forficula auricularia*), pillbugs and sowbugs (*Armadillidium vulgare* and *Porcellio* sp.), and the sowbug killer (*Dysdera crocata*) (Longcore 2003). These changes in arthropod species diversity will have resonating impacts on vertebrates that use arthropods as prey species. Suarez et al. show that coast horned lizards prefer native ants (*Pogonomyrmex* and *Messor* spp.) as their food source and suffer when these species are eliminated by invading Argentine ants (Suarez et al. 1998).

Disturbance associated with road building and vegetation clearance promotes the invasion of plant species already associated with residential development. Alien plant species found in southern California wildlands are largely associated with disturbed areas, including cleared areas (Rundel 2000). This relationship between invasive exotics and disturbance is found throughout California and in other Mediterranean regions (Kotanen 1997; Rundel 1998). The understories of areas subject to fuel modification are rapidly dominated by invasive exotic grasses and forbs. As described by Keeley, "Prefire fuel manipulations such as fuel breaks produce conditions that favor weedy aliens and thus act to increase the alien presence, increase the movement of aliens into wildlands, and increase seed sources capable of invading after fire" (Keeley 2002). Incidentally, this increases fire frequency as well (Minnich and Dezzani 1998).

As discussed extensively in the literature (Mooney et al. 1986; Minnich and Dezzani 1998; Rundel 1998), invasive plant species can profoundly affect ecosystem structure and function by modifying fire regimes, nutrient cycling, and erosion patterns. The roads, towers, and associated fuel modification will affect an area far greater than the footprint of these activities themselves by promoting the invasion of exotic plants and animals into wildlands.

Inadequacy of Analytical Approach

The presentation of significant impacts categorized by impact class and associated mitigation measures without the necessary studies is a hallmark of the DEIR/EIS. In numerous instances the DEIR/EIS makes conclusions about the severity of impacts based on incomplete information and defers the surveys necessary to gather this information until after project approval. An environmental disclosure document fails if it simply acknowledges vague significant impacts but does not actually provide information about the scope and nature of those impacts. This information is critical because it is needed for the public and decisionmakers to determine if mitigation measures can offset the impacts, whether impacts can be avoided, and whether it is tolerable to approve the project even though the significant impacts remain. The non-specific approach characterized by the entire DEIR/EIS denies the public and decisionmakers knowledge of the actual extent of the impacts on biological resources. For example, the DEIR/EIS acknowledges that the development of a project in Mexico near La Rumorosa would create a significant impact from the collision of birds with turbines (p. D.2-263) but provides no further detail on the scope of this impact or the species that are likely to be involved, save for a general species list (p. D.2-248). It might have been possible, based on site surveys and comparison with other wind projects, to predict that the project would kill around 815 birds per year (using the equation in the caption of Figure 1 of Barclay et al. 2007 as a rough approximation, assuming 125 440-foot tall turbines). This number could include golden eagles and other sensitive species. Collision mortality would be a significant impact that cannot be mitigated, which is the same conclusion reached in the DEIR/EIS, but such descriptions of magnitude would allow decisionmakers to weigh whether the overall benefit of the proposed project would be greater than the significant impacts it would have.

Another example illustrates the need for more specificity in the impact analysis. The DEIR/EIS provides no estimate of the number of birds that might collide with the transmission wires or what species they might be. Absent the field surveys necessary to describe such risks, the scientific literature provides some guidance. Janss and Ferrer (1998) found 43 birds in 20 surveys conducted over two years with some spans marked with diverters during the second year on 4.5 km of 380 kV line on lattice towers through scrubland, grassland, and agricultural lands in Spain, equaling 1.7 birds per mile per year. Approximately 30% of these birds were common cranes

Of the several routes running south down Route 79 from the Lake Henshaw area, the Santa Ysabel SR79 Underground option is superior because it avoids the fragmentation and habitat loss associated with the aboveground route and its access roads.

Farther along in the Coastal Link, the Los Penasquitos Canyon Preserve and Mercy Road Alternative is an underground route that is worse than the proposed project because it disturbs existing preserve areas. This raises an additional question for the evaluation of project impacts. The DEIR/EIS reports on the compliance of various routes with federal, state, and local land use plans. It is not evident, however, whether the project would involve construction and impacts in areas that were set aside as mitigation in previous CEQA or NEPA documents. Many of the developments in San Diego County were approved based on assumptions about the protection of habitats set aside within and adjacent to the developments in addition to off-site mitigation sites.

The southern transmission route is superior to the northern route because it follows an existing transmission line through much of the inland reaches, then follows Interstate 8 through the mountains. By staying close to existing development and disturbance sources this route is somewhat less damaging than the northern route. The DEIR/EIS, however, identifies Modified Route D as part of its "environmentally superior" southern route. From a biological perspective, Route D is worse than the Interstate 8 alignment because it is longer, destroys more native vegetation, and would disturb an additional golden eagle nest site and additional least Bell's vireo habitat. The only reason the DEIR/EIS identifies Modified Route D as superior is because of reduced visual impacts, but this choice comes at the expense of biological resources.

Wind Development

The DEIR/EIS contains a description of impacts and mitigation measures for the development of a wind power generation project to be located at an undetermined site in northern Mexico near La Rumorosa. The DEIR/EIS does not describe the exact route for the transmission line either in Mexico or the United States or the location of the wind turbines. This portion of the DEIR/EIS fails to meet common standards for provision of a complete and consistent project description. It furthermore fails to show adherence to the State of California's guidelines for design and siting of wind facilities to reduce impacts to birds and bats (California Energy Commission 2007).

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These guidelines identify the need to collect one or more years of field data on bird and bat populations for projects located in areas that may impact special status species (California Energy Commission 2007, p. 9). The DEIR/EIS simply cannot support any conclusions about the proposed project element without conducting the necessary field studies.

The description of the impacts of wind development contains the assertion that taller towers would decrease raptor mortality at the La Rumorosa site (D.2-262). However, recent research has shown that turbine height is weakly and positively correlated with bird mortality, and taller turbines kill exponentially more bats than shorter turbines (Barclay et al. 2007). Bat mortality at wind projects is a grave conservation concern (Kunz et al. 2007; Arnett et al. 2008) and recent research should be incorporated into the DEIR/EIS to identify and avoid these impacts.

Conclusion

The absence of detail about the magnitude and species-specific context of impacts is a pervasive problem with the DEIR/EIS. The logical and factual basis upon which evaluation of mitigation and minimization measures rests is absent in many instances. Useful comparative information from other similar projects that might help quantify impacts is missing. In sum, the DEIR/EIS is insufficient because it fails to identify significant impacts that will result from the project, it fails to provide adequate descriptions of the identified significant impacts and their mitigation measures, and it lacks the analytical connective reasoning to place impacts to biological resources in context.

I declare under penalty of perjury this testimony is, to the best of my knowledge, true and correct.

/s/ Dr. Travis Longcore

Dr. Jerry Pell, NEPA Document Manager
Office of Electricity Delivery and Energy Reliability, OE-20
U.S. Department of Energy
Washington, DC 20585

Via email: Jerry.Pell@hq.doe.gov

Dear Dr. Pell,

SUBJECT: Comments on Energia Sierra Juarez U.S. Transmission Line Project DEIS (DOE/EIS-0414)

The San Diego Audubon Society is supportive of the intention to increase the use of alternative energy sources such as solar and wind, but is concerned that the proposed project does not adequately consider impacts to wildlife as well as the cumulative impacts resulting from the various energy projects listed in Section 5 of the Draft Environmental Impact Statement. Specifically, we are concerned about impacts to migratory birds including raptors, neo-tropic migrants, and winter season avian visitors that may result from the construction of this transmission line and the construction and operation of the wind power facilities and power lines in Mexico that will be facilitated by this transmission line.

Insufficient Biological Data

402-1 We would like to see information detailing the survey methodology included in the final EIS and expect that a comprehensive survey approach is utilized including radar monitoring to assess nighttime migration and monitoring at different times of the year and day to capture seasonal variability in avian populations.

402-2 There is also a concern that this project site is located within an inland avian flyway. Because the transmission line project site is located between two important bird areas (Laguna Mountains and the Sierra de Juarez) that are characterized by high ridgelines, foraging raptors and other migrants may be severely impacted. Indeed, the project location is a potential and presumed avian corridor of birds moving from north to south along the cross-border ridgeline. In fact, according to observations by local ornithologists (SD Birds Yahoo Group), Jacumba and In-ko-pah villages are locally recognized migrant traps due to the presence of seasonal water resources, agricultural influences, and springtime wildflowers. For these reasons, we'd like the data that informed the determination that the project site is not located within a known migratory corridor or flyway to be made available in the Final EIS.

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RESPONSE TO 402-1: Section 3.1 has been revised to include additional information about potential impacts to birds. DOE relied primarily on literature reviews to ascertain whether the project site is a known bird migration corridor. Additionally, as discussed in text added to Section 3.1.1.6, DOE used findings of golden eagle nest surveys performed for the ECO Substation/Tule Wind EIR/EIS. DOE did not find any information in publicly available literature that would indicate that the ESJ U.S. Transmission Line project is located in a known bird migration corridor. As stated in Section 3.1.2.3, published sources indicate that bird migration along the east side of the San Diego County mountains is most concentrated in the canyons and valleys that lead from northwest to southeast, such as Grapevine Canyon in Anza Borrego Desert State Park and San Felipe Valley.

DOE has based its EIS evaluation on available and credible scientific information, including general indicators of habitat values in Mexico from publicly available literature, aerial photography, and summary results from an ongoing golden eagle and California condor study in the ESJ Wind project region. The EIS now contains a more robust analysis and discussion of impacts in the U.S. to the local area population of golden eagles, as well as updated information related to studies of California condors by the San Diego Zoo in Section 3.1 of the document. As discussed in response to comment 108-8, the San Diego Zoo's Institute for Conservation Research has been conducting golden eagle and California condor studies in the ESJ Wind project region. Discussion of the San Diego Zoo's research program as of January 2012, as well as the ICR's conclusions and recommendations, are provided in Section 3.1.

Fostering the protection and appreciation of birds, other wildlife and their habitats...

Impacts to Golden Eagles & Other Raptors

402-3 We are concerned with impacts to raptors and specifically, Golden Eagles, since this project site is located within a known wintering location and is immediately adjacent (located within one mile) to at least one confirmed breeding location for this species (Unitt, 2004, San Diego County Bird Atlas). The Golden Eagle has the largest territory and the lowest population density of any San Diego County bird. Currently, electrocution on power lines is the largest source of mortality for this species. This project also encroaches onto foraging habitat and results in the loss of ten acres of foraging habitat that will not be re-vegetated after construction. Furthermore, this habitat loss will directly impact San Diego black-tailed jackrabbit populations, the principal prey of the eagles and whose numbers are already suppressed due to drought. Impacts to the Golden Eagle and appropriate mitigation are not mentioned in this document and we would therefore like to see detailed information on how these impacts will be mitigated in the final review document.

Connected Actions & Impacts to Migrating Wildlife

402-4 We consider the Energia Sierra Juarez wind project to be an indirect impact of this project. We are concerned that construction of the proposed ESJ wind project and the associated transmission line will result in large numbers of deaths of raptors and migratory birds in Mexico. These birds migrate and/or forage on both sides of the border. Thus these losses in Mexico are likely to significantly impact local populations. For instance, studies show that Golden Eagle and Condor juveniles are often attracted to novel items placed in their range. Once these birds reach maturity their hunting patterns are fixed, but they are more likely to roam into unknown areas when they're young. For these reasons among others, the USFWS has recommended a minimum 6-mile buffer between Golden Eagle nests and turbines (USFWS Comments on Summit Ridge Wind project).

402-5 The transmission line project and the connected Energia Sierra Juarez wind project may impede use by Condors, who may re-colonize the area. According to the San Diego County Bird Atlas (Unitt, 2004), Condors could be seen regularly in San Diego County in the 1800s and nested in the County's foothills and mountains. The transmission line and the wind power projects are located within the historical breeding and foraging range of the California Condor and so there is a concern that these wind and transmission line projects would kill Condors that are and will be re-colonizing the area.

Cumulative Impacts Need to be Addressed

402-6 The ESJ Transmission Line Project is one of seven (this number includes the ESJ wind project which is not included in this cumulative analysis but should be since it is a connected action that will have a significant effect on migratory wildlife) energy projects that have been developed or are proposed for development in the region of influence for migratory birds. This fact, coupled with the fact that we are still learning about the real

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Radar and other techniques for monitoring nighttime bird migration could be appropriate for investigating bird behavior in the vicinity of the proposed wind turbines in Mexico, both before turbines are sited and after they are installed and operating.

RESPONSE TO 402-2: The EIS at Section 3.1 acknowledges that habitats within the project area provide suitable protective cover, foraging, migration, and breeding habitat for a variety of animals, including resident and migratory birds. Although high ridgelines have value for migrating raptors and the Jacumba and In-Ko-Pah villages may attract migratory birds due to their seasonal water resources, agriculture, and spring wildflowers, these conditions are not present at the ESJ U.S. Transmission Line project location, supporting DOE's judgment that the project location is not part of a known bird migration corridor. DOE did not find any further information in available literature that indicates that the ESJ U.S. Transmission Line project is located in a known bird migration corridor.

RESPONSE TO 402-3: The EIS is revised to acknowledge that 10 acres of foraging habitat would be impacted, with a corresponding impact to the resident San Diego black-tailed jackrabbit populations, the principal prey of the eagles. This reduction in habitat will occur in a small area relative to the surrounding available undeveloped foraging area, and the applicant has committed to a long-term conservation easement of similar or better habitat value.

costs and impacts to wildlife that are caused by these industrial-scaled energy projects, necessitates the need for a rigorous analysis, monitoring program, and information sharing mechanism among projects. Therefore, we would like to see a protocol in place that would facilitate the sharing of monitoring data among projects considered in the cumulative effects analysis so that any cumulative impacts can be identified and addressed in a timely and effective manner. We are very concerned with the inadequate analysis that is being performed for the wind project on the Mexican side. Since the projects are interdependent, analysis of those impacts need to be fully identified as Indirect and Cumulative impacts of this project.

402-6

Mitigation

Mitigation measures for biological resources are inadequate and inadequately described in the draft review document. A worker training that includes "protection measures for sensitive resources" will be carried out, but the DEIR does not identify what these measures of protection are – an implementation plan for these protection measures needs to be included in a final review document. Also, this document solely addresses mitigation measures to be taken during the construction phase and does not include any measures that would be taken during the operational phase of the project. For instance, if the line is found to significantly negatively impact raptors and other avian populations in the area, how will these impacts be reduced? A plan for minimizing risks to wildlife and biological resources throughout the life span of this project must be added to this document. There must be a protocol in place that monitors and identifies losses and ensures additional and adaptive mitigation measures will be devised and implemented should avian and other wildlife populations be negatively impacted during project operations. Quantitative thresholds should be identified for implementing those measures, reducing operations, or for removing the project if those thresholds cannot be met.

402-7

Alternatives

Lastly, we urge that the Department of Energy fully considered the array of project alternatives that exist, on both sides of the border. It may make more sense economically, environmentally, and politically to re-string the Mexican 'Path 45' transmission line that runs from Mexicali to Tijuana with sufficient capacity to support current demands.

402-8

We also urge that the location of the wind turbines in Mexico be based on minimizing impacts to wildlife during construction and operation and not just on wind speed and ease of construction.

402-9

While we are very much in favor of alternative energy projects that lessen our dependence on fossil fuel sources and reduce greenhouse gas emissions, we are not supportive of fast-track projects that place our wildlife and shared natural heritage at risk.

858-273-7800 • 4010 Morena Blvd., Suite 100, San Diego, C CA 92117 • Fax 858-273-7601 • www.sandiegoaudubon.org

Section 3.1 is revised to include additional information regarding the risk of electrocution from transmission lines of larger avian species such as eagles and condors. The Avian Power Line Interaction Committee (APLIC) (http://www.aplic.org/) publishes avian protection guidelines, including a "Suggested Practices" manual. The most current (2006) version of the Suggested Practices manual recommends 60 inches (152 cm) of horizontal separation and 40 inches (102 cm) of vertical separation between energized and non-insulated phase conductors and grounded components for protection of birds up to the size of eagles. The applicant has confirmed that its design will meet or exceed these separations.

As discussed in Section 3.1, APLIC's 2006 Suggested Practices indicates that, due to their larger wingspans, California condors require greater separations than eagles, but the report does not make specific recommendations on separation distances for condors. Application drawings provided in EIS Appendix B indicate that the phase separation on the ESJ U.S. Transmission Line project towers/monopoles (i.e., the minimum horizontal and vertical distances between energized conductors, or between energized conductors and grounded equipment such as the tower or pole structure), will be well in excess of 72 inches (183 cm). In addition, electrical industry standards (e.g., California Public Utility Commission General Order 95) generally require such distances for the voltages that are proposed. Application drawings provided in Appendix B indicate the dimensions on the relevant portions of the transmission structures.

We hope that the final EIR will more fully consider these risks and if approved, utilize this project as a model for minimizing risks to wildlife.

Sincerely,

Shannon Dougherty
Conservation Coordinator

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Based on these application materials, the phase separation will be adequate to address potential eagle and condor electrocution impacts. As such, even with a conservative estimate of condor wingspan, the additional margin above APLIC recommendations for eagles is likely to be adequate to avoid electrocution of condors, should any condors pass through the project area.

The EIS now contains a more robust analysis and discussion of impacts in the U.S. to the local area population of golden eagles, as well as updated information related to studies of California condors by the San Diego Zoo in Section 3.1 of the document. Refer to response to comment 108-8 for a summary of ongoing research on California condor and eagle populations in the ESJ Wind project area.

RESPONSE TO 402-4: EIS section 3.1.2.3 includes a discussion of potential biological resource impacts in the U.S. due to construction and operation of the ESJ Wind project in Mexico. Potential impacts due to avian mortality of migratory birds are acknowledged. Further analysis of these potential impacts is presented in Section 3.1.2.3 in response to this and other comments on the Draft EIS.

In preparing that analysis, DOE reviewed relevant and available information sources regarding buffers between golden eagle nests and turbines, including the USFWS Comments on Summit Ridge Wind project (USFWS 2010), recent draft guidelines from USFWS, and a January 2012 summary of results from Sempra's internal study conducted by San Diego Zoo regarding eagle nest locations and general quality of forage habitat in the wind turbine area (San Diego Zoo 2012). The EIS now contains a more robust analysis and discussion of impacts in the U.S. to the local area

population of golden eagles, as well as updated information related to studies of California condors by the San Diego Zoo in Section 3.1 of the document.

RESPONSE TO 402-5: The EIS now contains updated information related to studies of California condors by the San Diego Zoo in Section 3.1 of the document. The EIS at Section 3.1 acknowledges that the project site is within the range of the California condor (*Gymnogyps californianus*), and this was addressed in DOE's consultation with USFWS (refer to DOE's March 8, 2011 letter to USFWS, provided in Appendix C.10). This species is considered to have a very low probability of occurring in the project area based on limited distribution within its historic range and the absence of recent sightings in the ESJ U.S. Transmission Line project vicinity (with the exception of a 2007 sighting near Jacumba). The Avian Power Line Interaction Committee (APLIC) is a consortium of utility industry, wildlife resource agencies, conservation groups, and manufacturers of avian protection products. The APLIC publishes avian protection guidelines, including a "Suggested Practices" manual. The most current (2006) version of the Suggested Practices manual recommends 60 inches (152 cm) of horizontal separation and 40 inches (102 cm) of vertical separation between energized and non-insulated phase conductors and grounded components for protection of birds up to the size of eagles. The applicant confirmed that its design will meet or exceed these separations. However, the APLIC report indicates that, due to their larger wingspans, California condors require greater separations than eagles, but the report does not make specific recommendations on separation distances for condors. California condors have reported wingspans up to 118 inches (300 cm) (APLIC 2006). The applicant's design (see drawings provided in

Appendix B) provides for a minimum horizontal separation of 13 ft (132 inches) and a minimum vertical separation of 9 ft (108 inches) between conductors and structures, with larger separations between conductors. These separations should avoid electrocution of condors, should any condors pass through the project area.

Conformance with these design specifications will reduce the potential for condor electrocution. Therefore, construction and operation of the ESJ U.S. Transmission Line project is not expected to adversely affect California condors.

Response to comment 108-8 provides additional discussion of potential impacts to condors from proposed wind turbines in Mexico.

RESPONSE TO 402-6: The suggested long-term biological monitoring and information sharing program among multiple projects, potentially including protocols for mitigation of wildlife losses during wind project operations, would be a long-term program requiring coordination among the multiple sponsors of wind projects in the region, together with federal land managers, state agencies, and

local government. Since DOE lacks jurisdiction over any of the wind projects in the region, including the ESJ Wind project in Mexico, this suggested program is beyond DOE's jurisdiction and would be more appropriately implemented through State and local agencies.

EIS section 3.1.2.3 includes a more robust discussion of potential biological resource impacts in the U.S. due to related activities in Mexico. Further analysis of these potential impacts is presented in Section 3.1.2.3 in response

to this and other comments on the Draft EIS.

RESPONSE TO 402-7: Mitigation Biology-1 (Worker Training) is revised to clarify that a qualified biologist would provide the biological resources training to contractor personnel both prior to construction and prior to major (non-routine) repair and maintenance during operations. The mitigation indicates the general measures to be addressed in the training program. Additional specific measures (the implementation plan) would be developed by the qualified biological resources trainer.

The suggested monitoring and identification of wildlife losses, adaptive mitigation measures to be taken in the event that avian and other wildlife populations are negatively impacted, and thresholds for implementing these measures during wind project operations would be a long-term program requiring coordination among the multiple sponsors of wind projects in the region, together with federal land managers, state agencies, and local government. Since DOE lacks jurisdiction over any of the wind projects in the region, including the ESJ Wind project in Mexico, this suggested mitigation program is beyond DOE's jurisdiction and would be more appropriately implemented through State and local agencies.

RESPONSE TO 402-8: See response to comment 305-7. The alternative transmission route suggested by the commenter is now discussed in Section 2.8.1.

RESPONSE TO 402-9: DOE lacks jurisdiction over the design and location of the ESJ Wind project.

Desert Protective Council
P.O. Box 3635
San Diego, CA. 92163

Dr, Jerry Pell, NEPA Document Manager
Office of Electricity Delivery and Energy Reliability,
OE-20
U.S. Department of Energy
Washington, DC 20585

VIA email to Jerry.Pell@hq.doe.gov

November 1, 2010

Dear Dr. Pell,

On behalf of the Desert Protective Council (DPC), thank you for the opportunity to submit comments on the Draft Environmental Impact Statement of the Energia Sierra Juarez (ESJ) U.S. Transmission Line Project.

The Desert Protective Council is a 56-year-old non-profit membership organization. Our mission is to protect and preserve the unique natural, cultural, historical and recreational values of our southwest deserts and to educate children and adults to a better understanding of the deserts. We are presently focusing our conservation efforts on the Imperial County desert and the adjacent high desert and juniper woodland/scrub habitats of Eastern San Diego County, which provide forage area and migration corridors for the Peninsular Bighorn Sheep.

The Desert Protective Council supports the Department of Energy's choice of Alternative One-The No Action Alternative for the ESJ Transmission line project for the following reasons:

403-1 1. The Desert Protective Council is very concerned about the direct temporary and long-term major impacts to important wildlife habitat and to human communities in the vicinity from the construction and operation of the transmission line and the project's contribution to the cumulative impacts from the several other industrial energy proposals and transmission lines in the vicinity.

403-2 2. This transmission line project's delivery of wind energy entirely produced in Mexico into the United States via Sempra Energy's environmentally destructive infrastructure to serve the California market will undermine the push toward more efficient, cost-effective and more environmentally sound in-basin energy solutions and point-of-use roof-top and distributed renewable energy development.

403-3 3.The ESJ Transmission line Draft EIS fails to adequately address impacts to and mitigation for permanent loss of foraging habitat for the Peninsular Bighorn Sheep. Neither are the impacts to the migration corridors for the bighorn sheep adequately addressed.

RESPONSE TO 403-1: Additional information concerning potential impacts to wildlife habitat is provided in Section 3.1 (Biological Resources) and Section 5 (Cumulative Impacts); this information is summarized in various responses.

RESPONSE TO 403-2: As is explained in text added to Section 1.5.1.2, distributed energy alternatives, such as small scale solar panel applications in urban settings, are outside the range of reasonable alternatives analysis because they do not respond to DOE's purpose and need.

RESPONSE TO 403-3: The loss of potential forage habitat is acknowledged in the EIS. The applicant's proposed conservation easement is an appropriate measure to address long-term loss of habitat because it would ensure that an area of equivalent size and equivalent or greater forage value is preserved in open space as that impacted by project construction.

Response to comment 108-7 provides additional discussion of Peninsular bighorn sheep population, migration patterns, and migration corridors. DOE's March 8, 2011 letter to USFWS indicates the outcome of consultation with the USFWS, including consultation on potential impacts of the ESJ U.S. Transmission Line project on Peninsular bighorn sheep. This letter is added to EIS Appendix C.

RESPONSE TO 403-4: The EIS discusses this potential loss of habitat that supports birds protected under the MBTA and BGEPA resulting from Phase 1 and future phases (See Section 3.1.2.3). Refer to response to comment 201-3 for additional discussion of MBTA and BGEPA issues.

403-4 | 4. The construction of Phase One of the wind turbines could impact up to 7,500 acres of chaparral, pine forest and possibly some desert habitat in Mexico that may support bird species protected under the Migrating Bird Treaty Act. Future development phases could potentially increase the impact to migrating birds.

403-5 | 5.The large swath of disturbed land introduces the potential for the introduction of non-native, invasive plant species, which will increase the potential for the spread of wildfires and will adversely affect adjacent native plant habitats.

403-6 | 6. The Draft EIS proposed conservation easement area is tiny and inadequate to compensate for the large swath of ground which will be disturbed by the construction of the ESJ Transmission line.

403-7 | 7. The Desert Protective Council understands the fact that the ESJ Transmission project is part of extensive energy infrastructure development planned and occurring in the mountains of Baja California. The unique diversity of flora and fauna of the Sierra Juarez and the Sierra San Pedro Martir, including 404 species of invertebrates, 11 amphibians, 58 reptiles, 75 mammals and 260 species of birds, including protected golden and bald eagles in the Sierra Juarez, make them among the most important forests left in Mexico. We oppose projects that jeopardize these last intact Mexican forests, which are intimately connected with our Eastern San Diego County and Western Imperial County wild habitats.

403-8 | 8. Impacts to unknown and yet-to-be-surveyed cultural resources have not been adequately analyzed.

403-9 | 9. The DPC is very concerned with the serious multiple ongoing sources of wildfire ignitions from the cumulative presence of overhead transmission lines associated with the alternative actions discussed in the Draft EIS. This project adds to the risk of wildfires in rugged areas where vegetation is extremely flammable and fire is extremely difficult to fight. The consideration of the potential for devastating fires to some of the most pristine habitat left in San Diego County and in Mexico alone should be reason enough for the Department of Energy to choose the No Action Alternative. From Page S-34 of the Executive Summary for this project: "Implementation of the Fire Protection Plan proposed by ESJ-US would reduce the probability of igniting a wildfire and reduce the impacts of fires when they occur: however, the potential for ignition would remain. Therefore the ESJ-US Transmission Line project would have a major and unavoidable contribution to this cumulative impact." The Desert Protective Council urges the DOE to reject a project that would bring such risk to the vulnerable habitats and human communities of Mexico and the San Diego backcountry.

403-10 | 10. This project will add to the cumulative permanent impacts to the visual resources of the San Diego backcountry. Basically these projects will destroy the character of the San Diego backcountry. This area is one of the last remaining areas of southern California which is largely uncluttered by human industrial infrastructure. We treasure the dark skies and the beauty of vast expanses of open space and the knowledge that this habitat is home to unique plants and animals of the vulnerable chaparral community. This is part of our national natural heritage. This

RESPONSE TO 403-5: This potential impact is discussed in EIS Section 3.1.2.1. Under Mitigation Biology-3 (Weed Control Plan), ESJ would prepare and implement a weed control plan that describes the weed control measures during the pre-construction, construction, long-term operations phases. The measures would be developed by qualified individuals in consultation with appropriate agencies (e.g., the County of San Diego Agriculture Commissioner's Office and the California Invasive Plant Council) and would include several elements designed to minimize this potential impact.

RESPONSE TO 403-6: As discussed in Section 3.1, County of San Diego Guidelines require mitigation of any impacts to the Sonoran Mixed Woody Scrub habitat type at a ratio of 1:1 and mitigation of impacts to Peninsular Juniper Woodland and Scrub habitat type at a 3:1 ratio. Accordingly, ESJ has proposed that either 12.48 acres (5.1 ha) or 14.0 acres (4.72 ha) be placed into a conservation easement, depending on which access road option is selected. The larger of these acreages would be used if access road Option B is selected. In comparison, as noted in EIS Table 2-3, the maximum total disturbed acreage for the revised 230-kV Route (the applicant's preferred alternative) with access road option B would be 9.78 acres (3.93 ha), and the maximum total disturbed acreage for the revised 500-kV Route with access road option B would be 10.83 acres (4.36 ha). The conservation easement is expected to be effective in addressing long-term loss of habitat because it would preserve habitat that is functionally similar to, and at least as large as, that impacted by project construction. The size dimensions and location of the Conservation easement was also determined by the County of San Diego to be reasonable and appropriate to offset potential impacts from

403-10 project, in conjunction with the other planned energy infrastructure in the area will adversely and permanently impact the lovely visual character of the area and cause industrialization of the San Diego backcountry. It will adversely affect the renowned high-quality recreational experience of adjacent BLM public lands with view blockages and creation of a skyline.

403-11 11. The potential for transmission structure failure or damage from seismic activity on one of the myriad geologic faults in the area has not been sufficiently acknowledged and addressed. This is a serious and real possibility and could increase the potential for wildfires as well as interrupt electricity transmission, not to mention destroying the entire transmission infrastructure.

Once again, thank you for considering these comments of the Desert Protective Council and including them in the public record for the Energia Sierra Juarez Transmission Project. Please keep us on your mailing list for all future meetings and notices about this project.

Sincerely,

Nick Ervin
President of the Board of Directors
Desert Protective Council

transmission line construction in the U.S., in accordance with applicable County guidelines. The conservation easement discussed in Section 3.1 for Alternatives 2 and 3 would also be applied under the Alternative 4, with the required size of the easement determined from the acreages of different vegetation types affected.

RESPONSE TO 403-7: The EIS at Section 3.1.2.3 acknowledges the potential habitat values of the ESJ Wind project development area in the context of potential impacts to species in the U.S. The discussion in Section 3.1.2.3 of potential impacts in the U.S. from the ESJ Wind project in Mexico has been expanded. Potential cumulative impacts of the proposed action on biological resources are addressed in Section 5.3.1.

RESPONSE TO 403-8: The applicant has proposed several measures that are consistent with established protocol for cultural resource impact avoidance and mitigation. These measures are listed in EIS Section 2.7 and discussed further in Section 3.5 (Cultural Resources). As discussed in response to comment 305-20, the applicant-proposed measures are revised to indicate that ESJ would implement a cultural resource construction grading monitoring and a potential data recovery program, to be developed in accordance with the County of San Diego Guidelines for Determining Significance and the Report Format and Content requirements. The program would be conducted by a County of San Diego Qualified consultant. A Native American representative will be invited to monitor earthwork.

As discussed in response to comment 201-6, the EIS incorporates the applicant-proposed measures and additional mitigation measures, as described throughout the EIS and

summarized in Section 2.7 (Applicant-Proposed Measures Applicable to All Alternatives) and Table 2-4 (Summary of Impacts by Resource Area). Measures incorporated within the project's design are not considered mitigation measures. If the measures reduce a potentially significant impact, they eliminate the potential for that significant impact, since the "measure" is now an integral component of the Project. The Record of Decision will incorporate the additional mitigation measures and reflect that the applicant-proposed measures are incorporated into the project description. Section 106 consultation efforts are on-going as of this writing.

RESPONSE TO 403-9: Refer to response to comments 306-1 through 306-10 for an updated discussion of fire protection measures that have been incorporated into the project. Potential cumulative impacts of the proposed action on fire and fuels management are addressed in Section 5.3.9.

RESPONSE TO 403-10: The EIS visual impact assessment (Section 3.2) acknowledges and describes the scenic resource values of the project area, including the value of dark skies and the applicability of County of San Diego Guidelines for Determining Significance for Dark Skies and Glare (available online at http://www.sdcounty.ca.gov/dplu/docs/Dark_Skies_Guidelines.pdf). The discussion in Section 5.3.2 of cumulative impacts to visual resources is also expanded in the final EIS to address visual resource impacts. Refer to the response to comment 501-1 for additional discussion of impacts to dark skies.

RESPONSE TO 403-11: Seismic-induced impacts (e.g., wildfire risk, service interruption) are addressed in Section 3.12.2.3. As noted in that section, no active faults are

present nearby; the nearest active faults are located near Julian and Elsinore, California, approximately 15 miles (24 km) north and 10 miles (16 km) north-northeast, respectively, and geological maps indicate the presence of two inactive buried faults located adjacent to the corridors. Although both of the inactive faults are relatively short, the proposed transmission line could experience moderate to high groundshaking during a large earthquake associated with one of the major faults in the region (such as the magnitude 7.2 earthquake which occurred southeast of the corridor on April 4, 2010). Although such seismically-induced groundshaking could damage project facilities, overhead transmission lines and their support structures are designed for dynamic loading under variable wind conditions that generally exceed earthquake loads. This inherent design feature tends to minimize the potential for damage to structures from groundshaking related to earthquakes. Further, overhead transmission lines consist of a system of support structures and interconnecting wire that is inherently flexible, and industry experience has demonstrated that these facilities generally do not experience significant damage due to earthquakes (CPUC/BLM 2008a). The potential for an earthquake to cause significant damage to project facilities is considered minor based on these design features and due to the distance to active faults, but the potential for impact would occur over the life of the project. Refer to Section 3.9 (Fire and Fuels Management) and responses to comments 306-1 through 306-10 for discussion of mitigation measures that will be required by the County of San Diego to reduce impacts from wildfires that could be caused by the project transmission lines.

Sempra Generation

Joseph H. Rawley
Vice President
Project Development

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November 1, 2010

Dr. Jerry Pell
NEPA Document Manager
Office of Electricity Delivery and Energy Reliability (OE-20)
1000 Independence Avenue
U. S. Department of Energy
Washington, D. C. 20585

Re: Comments on Draft Environmental Impact Statement for the Energia Sierra Juarez U. S. Transmission Line

Dear Dr. Pell:

The following comments are submitted by Energia Sierra Juarez U. S. Transmission Line, LLC ("ESJ-U.S.") concerning the Draft Environmental Impact Statement for the Energia Sierra Juarez U. S. Transmission Line. The document thoroughly evaluates the potential environmental effects of the proposed project and reasonable alternatives. Comments below are provided for clarification of some matters covered in the analysis.

1. Use of Line for Renewable Projects

404-1 Some commenters at the DOE hearings on the DEIS raised questions concerning whether the Generator-tie Line could be used for transmission of power generated from fossil fuel generation. ESJ U. S. previously communicated with DOE on May 28, 2010 requesting that the import capacity of the proposed Generation-tie Line in the Presidential Permit be limited to the physical capacity of the Generator-tie line (1250 MW) and that power on this line be limited to renewable energy projects. ESJ hereby reiterates this request.

2. Biology Issues

404-2 Some comments were also made during the DOE hearings concerning possible effects of the proposed generation tie-line on wildlife. Some additional information concerning these topics is presented below:

RESPONSE TO 404-1: The comment is noted.

RESPONSE TO 404-2: The comment is noted.

a. Big Horn Sheep

Some commenters noted that Big Horn Sheep had been observed in the area, although where exactly these observations occurred was not apparent. The DEIS summarizes communications with the U. S. Fish and Wildlife Service and conclusions that there is a very low probability of the species using the Project area. The DEIS does acknowledge that vegetation clearing within the right-of-way and the main access road would result in permanent impacts to potential forage material for the species; however, the designated critical habitat and known bighorn sheep populations are approximately 2 miles (3.2 km) from the proposed right-of-way (Figure 3.1-2), and it is unlikely the bighorn sheep will occur along the gen-tie route corridor or access road. ESJ project personnel (including environmental consultants) have never sighted a bighorn sheep in the gen-tie route during the three years they have been frequently visiting the area. This is not surprising, given the high amount of human traffic in this area including by recreational shooters, the border patrol and others. Reports of sightings by commenters could be included in the FEIS, particularly if it were possible to demonstrate that they actually occurred along or near the Generation-tie line route alternatives. However, the fact that commenters assert that sheep have been observed in the area (although it is not clear that these sightings have occurred along the ESJ U.S. Generator-tie Line routes) does not change the fundamental conclusions of the DEIS based upon information provided by the USFWS and DOE consultants.

404-2

b. Migration routes

A commenter contended that the area of the generation tie-line is a "known" avian migration route. The commenter provided no documentary proof of this assertion. The DEIS finds that "[b]ased on the general characteristics of the landforms within and near the ESJ U.S. project alternative corridors, and the contiguous landforms south of the border, it appears that the proposed transmission line segment in Mexico and the ESJ Wind project Phase 1 turbines would not be located within known major migration corridors or habitats such as extensive wetlands and riparian areas that would support large concentrations of birds." However, the DEIS does point out that "nonetheless, cross-border migratory birds will traverse the border in the project area to various degrees (e.g., raptors often follow ridgelines), and thus the potential exists for Phase 1 and future phase operation of the ESJ Wind project to result in direct mortality of cross-border migratory birds due to collisions with transmission lines and wind turbines." (DEIS , page 3-27). Thus, the fact that some migration may occur is included in the DEIS, though the conclusion is still valid that the area is not a major migration route.

Should you have any questions or comments on the application please contact Alberto Abreu, the project Director at 619-696-2121.

Sincerely yours,

Joseph H. Rowley
Vice President, Project Development

Cc: A. Abreu

State Building and Construction Trades Council of California

ROBERT L. BALGENORTH
PRESIDENT

JAMES W. KELLOGG
SECRETARY-TREASURER

Chartered by
BUILDING AND CONSTRUCTION TRADES DEPARTMENT
AFL - CIO

January 31, 2011

The Honorable Steven Chu, Secretary
U.S. Department of Energy
The Forrestal Building
1000 Independence Avenue SW
Washington, DC 20585

RE: Sempra Energy (Baja Wind U.S. Transmission, LLC) Application
Docket Number PP-334 — OPPOSE

Dear Secretary Chu:

405-1

I write on behalf of the California Building and Construction Trades Council, AFL-CIO, to express our strong opposition to Sempra Energy's application on behalf of Baja Wind U.S. Transmission, LLC, (known as Energia Sierra Juarez U.S. Transmission, LLC) for a Federal permit to build a transmission line from Northern Baja California, Mexico, to San Diego County, California.

This transmission project directly undermines President Obama's efforts to create quality employment opportunities for U.S. workers and reduce the high unemployment rate. These cross-border transmission lines would enable Sempra to build energy plants in Mexico and import electricity into the United States. Approving this application would result in the exportation of jobs from the U.S. construction sector which is experiencing a 35 percent unemployment rate in California.

We strongly support U.S. policy to reduce its dependence on foreign sources of energy by heavily investing into rebuilding our nation's infrastructure. Developing our energy infrastructure within our borders will provide for a better economic future and strengthen our national security. In addition, allowing this project to move forward would severely undermine U.S. environmental and labor laws.

In closing, we respectfully urge you to reject Sempra Energy's application for a cross-border application permit in accordance with the President's policies on energy, environmental and labor. Thank you for your consideration.

Sincerely,

Robert L. Balgenorth
President

RLB:mb
opeiu#29/afl-cio

cc: U.S. Senator Dianne Feinstein
U.S. Senator Barbara Boxer
U.S. Representative Bob Filner
U.S. Representative Henry Waxman
Mike Monroe, Building and Construction Trades Department

1225-8th Street, Suite 375 · Sacramento, CA 95814 · (916) 443-3302 · FAX (916) 443-8204

RESPONSE TO 405-1: Refer to response to comment 103-1.

UnionYes

Lorena Gonzalez
Secretary-Treasurer/CEO

Mickey Kasparian
President

San Diego and Imperial Counties Labor Council

February, 7, 2011

VIA U.S. MAIL

The Honorable Steven Chu
Secretary
U.S. Department of Energy
The Forrestal Building
1000 Independence Avenue, SW
Washington, DC 20585

Subject: ***Presidential Permit for Energia Sierra Juarez U.S. Transmission, LLC (Docket Number PP-334) – OPPOSE***

Dear Secretary Chu:

On behalf of the approximately 192,000 members of San Diego and Imperial Counties Labor Council and their families, I write in opposition to Sempra Energy's application on behalf of Baja Wind U.S. Transmission, LLC (now known as Energia Sierra Juarez U.S. Transmission, LLC) for a Presidential Permit (Docket Number PP-334) to construct a cross-border transmission line between northern Baja Mexico and San Diego County.

The transmission project proposed in this application would undermine several goals of President Obama's Administration. Specifically:

406-1

1. **It would facilitate the export of American jobs**: Sempra's cross-border transmission lines would enable the company to build energy projects in Mexico and import the energy into Southern California instead of building them here where the power is being used. This moves our economy in the wrong direction at a time when we should be creating jobs here in the United States.

3737 Camino del Rio South, Ste. 403 | San Diego, CA 92108 | (619) 228-8101 | www.unionyes.org

RESPONSE TO 406-1: Refer to response to comment 103-1.

2. **It would increase the United States' dependence on imported energy**: The Administration has emphasized the need for America to become energy independent. Approving cross-border transmission lines to import energy from Mexico into California is the exact opposite of the President's stated goal. Our nation's economic future and security depends on developing energy infrastructure within our own borders.

3. **It would undermine American environmental and labor laws**: A core component of President Obama's campaign platform was his commitment to a green economy that could usher in a new period of environmental and economic prosperity. Construction of a cross-border transmission line will undermine the President's vision by enabling Sempra Energy to deliver energy to California from foreign facilities not built to our labor or environmental standards.

406-1

4. **It would hamper efforts to revitalize California's Imperial County**: With approximately 30 percent unemployment, Imperial County features the highest jobless rate in the entire United States. However, Imperial County's vast resources and prime location has the potential to churn out 2,400 Megawatts of renewable energy. That potential shows Imperial County can become a solution for the Southwest's energy needs and, in turn, be the key for turning around the county's economy. The Obama Administration cannot give up on Imperial County.

If we are to reclaim America's middle class, we need to eliminate opportunities for corporations to offshore our jobs, exploit workers and raid natural resources. For these reasons, we respectfully request that you reject Sempra's application for a cross-border Presidential Permit.

Sincerely,

Lorena Gonzalez
Secretary-Treasurer and CEO

CC: Sen. Barbara Boxer, CA
Sen. Dianne Feinstein, CA
Sen. Jeff Bingaman, Chair, Senate Energy and Natural Resources Committee
Rep. Bob Filner, CA -51
Anthony Como, Director, Permitting and Siting, U.S. Department of Energy

The aft Guild
An Open, Active, Vital, Member-Driven Organization.
San Diego & Grossmont-Cuyamaca Community Colleges
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San Diego, California 92108
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www.aftguild.org

February 7, 2011

The Honorable Steven Chu
Secretary
U.S. Department of Energy
The Forrestal Building
1000 Independence Avenue, SW
Washington, DC 20585

Dear Secretary Chu:

On behalf of the approximately 5,000 members of Local 1931 of the American Federation of Teachers, I write in opposition to Sempra Energy's application on behalf of Baja Wind U.S. Transmission, LLC (now known as Energia Sierra Juarez U.S. Transmission, LLC) for a Presidential Permit (Docket Number PP-334) to construct a cross-border transmission line between northern Baja Mexico and San Diego County.

The transmission project proposed in this application would undermine several goals of President Obama's Administration. Specifically:

It would facilitate the export of American jobs: Sempra's cross-border transmission lines would enable the company to build energy projects in Mexico and import the energy into Southern California instead of building them here where the power is being used. This moves our economy in the wrong direction at a time when we should be creating jobs here in the United States. 407-1

It would increase the United States' dependence on imported energy: The Administration has emphasized the need for America to become energy independent. Approving cross-border transmission lines to import energy from Mexico into California is the exact opposite of the President's stated goal. Our nation's economic future and security depends on developing energy infrastructure within our own borders.

It would undermine American environmental and labor laws: A core component of President Obama's campaign platform was his commitment to a green economy that could usher in a new period of environmental and economic prosperity. Construction of a cross-border transmission line will undermine the President's vision by enabling Sempra Energy to deliver energy to California from foreign facilities not built to our labor or environmental standards.

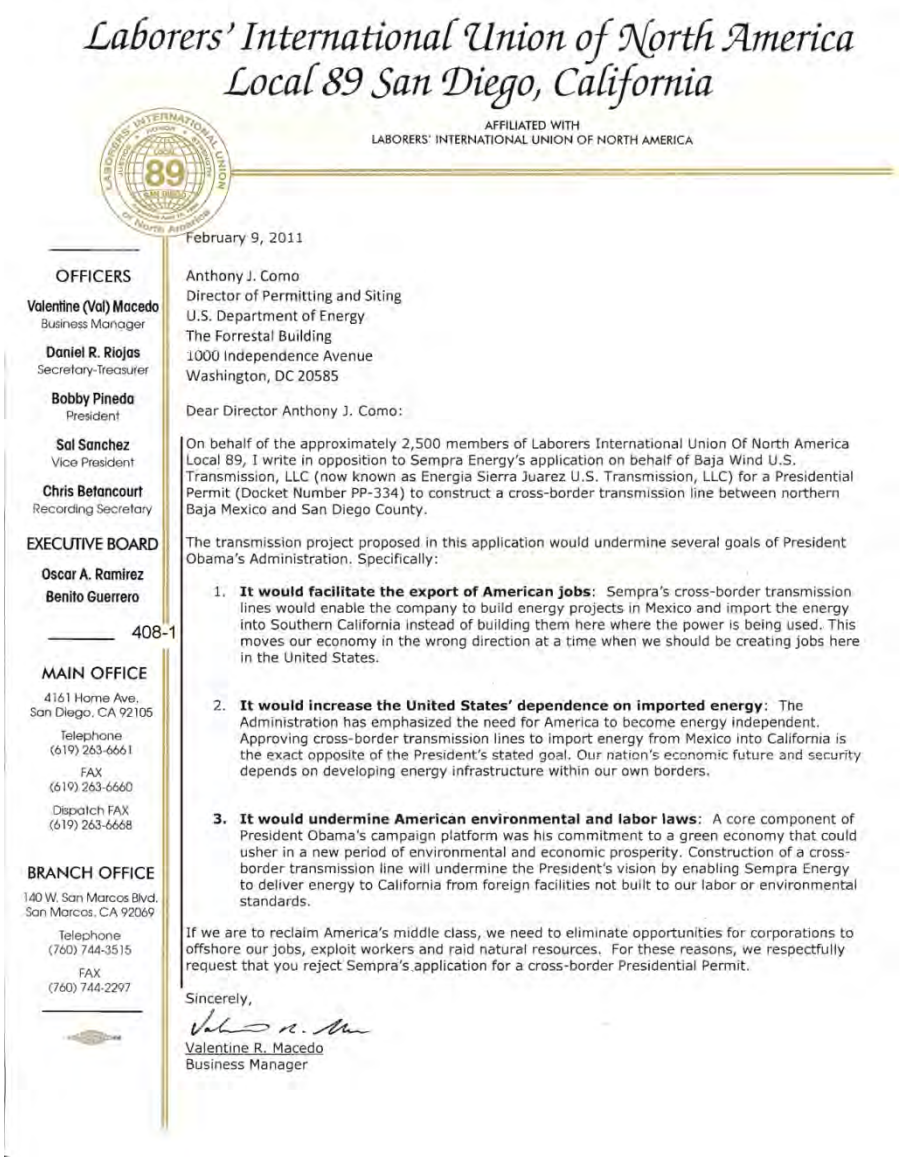
RESPONSE TO 407-1: Refer to response to comment 103-1.

407-1 If we are to reclaim America's middle class, we need to eliminate opportunities for corporations to offshore our jobs, exploit workers and raid natural resources. For these reasons, we respectfully request that you reject Sempra's application for a cross-border Presidential Permit.

Sincerely,

Jim Mahler, President
AFT Guild, Local 1931

CC: Senator Barbara Boxer
Senator Dianne Feinstein
Senate Energy and Natural Resources Committee Chair Senator Jeff Bingaman
Congressman Bob Filner, 51st Congressional District
Anthony Como, Director, Permitting and Siting, U.S. Department of Energy



Laborers' International Union of North America
Local 89 San Diego, California

AFFILIATED WITH
LABORERS' INTERNATIONAL UNION OF NORTH AMERICA

February 9, 2011

OFFICERS
Valentine (Val) Macedo
Business Manager
Daniel R. Riojas
Secretary-Treasurer
Bobby Pineda
President
Sal Sanchez
Vice President
Chris Betancourt
Recording Secretary

EXECUTIVE BOARD
Oscar A. Ramirez
Benito Guerrero

408-1

MAIN OFFICE
4161 Home Ave.
San Diego, CA 92105
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FAX
(619) 263-6660
Dispatch FAX
(619) 263-6668

BRANCH OFFICE
140 W. San Marcos Blvd.
San Marcos, CA 92069
Telephone
(760) 744-3515
FAX
(760) 744-2297

Anthony J. Como
Director of Permitting and Siting
U.S. Department of Energy
The Forrestal Building
1000 Independence Avenue
Washington, DC 20585

Dear Director Anthony J. Como:

On behalf of the approximately 2,500 members of Laborers International Union Of North America Local 89, I write in opposition to Sempra Energy's application on behalf of Baja Wind U.S. Transmission, LLC (now known as Energia Sierra Juarez U.S. Transmission, LLC) for a Presidential Permit (Docket Number PP-334) to construct a cross-border transmission line between northern Baja Mexico and San Diego County.

The transmission project proposed in this application would undermine several goals of President Obama's Administration. Specifically:

1. **It would facilitate the export of American jobs**: Sempra's cross-border transmission lines would enable the company to build energy projects in Mexico and import the energy into Southern California instead of building them here where the power is being used. This moves our economy in the wrong direction at a time when we should be creating jobs here in the United States.

2. **It would increase the United States' dependence on imported energy**: The Administration has emphasized the need for America to become energy independent. Approving cross-border transmission lines to import energy from Mexico into California is the exact opposite of the President's stated goal. Our nation's economic future and security depends on developing energy infrastructure within our own borders.

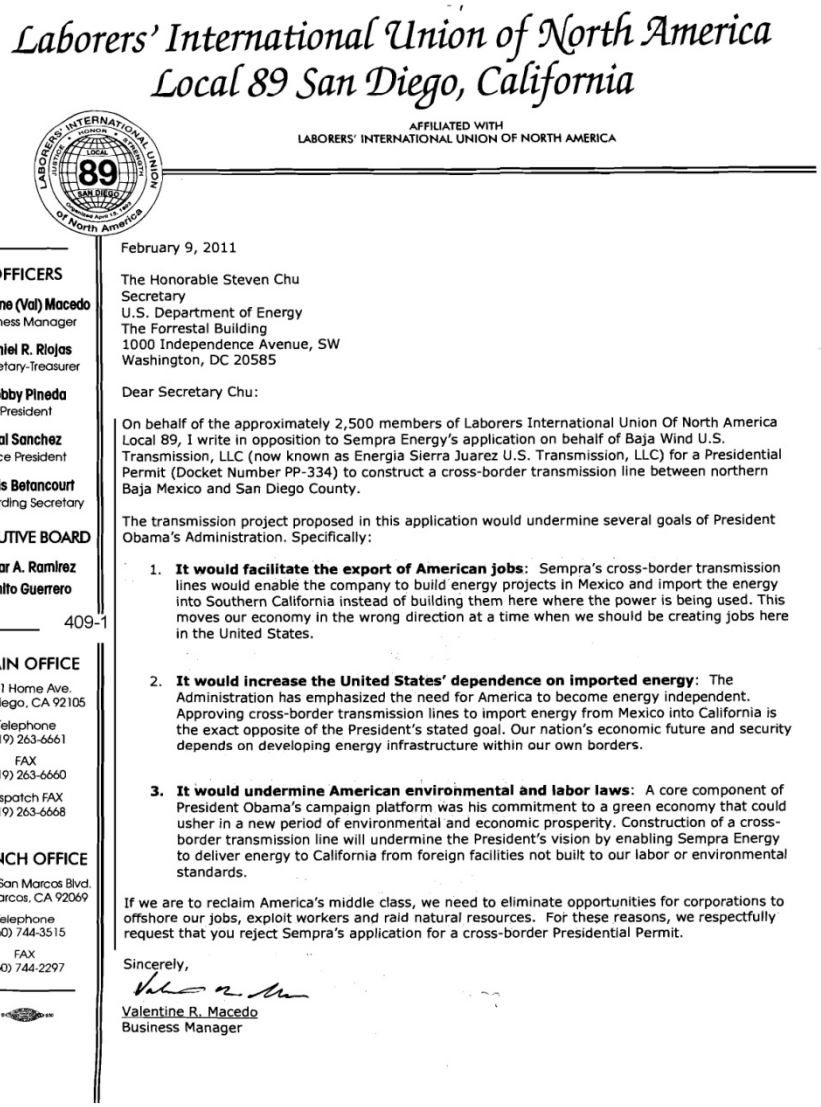
3. **It would undermine American environmental and labor laws**: A core component of President Obama's campaign platform was his commitment to a green economy that could usher in a new period of environmental and economic prosperity. Construction of a cross-border transmission line will undermine the President's vision by enabling Sempra Energy to deliver energy to California from foreign facilities not built to our labor or environmental standards.

If we are to reclaim America's middle class, we need to eliminate opportunities for corporations to offshore our jobs, exploit workers and raid natural resources. For these reasons, we respectfully request that you reject Sempra's application for a cross-border Presidential Permit.

Sincerely,

Valentine R. Macedo
Business Manager

RESPONSE TO 408-1: Refer to response to comment 103-1.



Laborers' International Union of North America
Local 89 San Diego, California

AFFILIATED WITH
LABORERS' INTERNATIONAL UNION OF NORTH AMERICA

February 9, 2011

The Honorable Steven Chu
Secretary
U.S. Department of Energy
The Forrestal Building
1000 Independence Avenue, SW
Washington, DC 20585

Dear Secretary Chu:

On behalf of the approximately 2,500 members of Laborers International Union Of North America Local 89, I write in opposition to Sempra Energy's application on behalf of Baja Wind U.S. Transmission, LLC (now known as Energia Sierra Juarez U.S. Transmission, LLC) for a Presidential Permit (Docket Number PP-334) to construct a cross-border transmission line between northern Baja Mexico and San Diego County.

The transmission project proposed in this application would undermine several goals of President Obama's Administration. Specifically:

1. **It would facilitate the export of American jobs**: Sempra's cross-border transmission lines would enable the company to build energy projects in Mexico and import the energy into Southern California instead of building them here where the power is being used. This moves our economy in the wrong direction at a time when we should be creating jobs here in the United States.

2. **It would increase the United States' dependence on imported energy**: The Administration has emphasized the need for America to become energy independent. Approving cross-border transmission lines to import energy from Mexico into California is the exact opposite of the President's stated goal. Our nation's economic future and security depends on developing energy infrastructure within our own borders.

3. **It would undermine American environmental and labor laws**: A core component of President Obama's campaign platform was his commitment to a green economy that could usher in a new period of environmental and economic prosperity. Construction of a cross-border transmission line will undermine the President's vision by enabling Sempra Energy to deliver energy to California from foreign facilities not built to our labor or environmental standards.

If we are to reclaim America's middle class, we need to eliminate opportunities for corporations to offshore our jobs, exploit workers and raid natural resources. For these reasons, we respectfully request that you reject Sempra's application for a cross-border Presidential Permit.

Sincerely,

Valentine R. Macedo
Business Manager

409-1

OFFICERS
Valentine (Val) Macedo
Business Manager
Daniel R. Riojas
Secretary-Treasurer
Bobby Pineda
President
Sal Sanchez
Vice President
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BRANCH OFFICE
140 W. San Marcos Blvd.
San Marcos, CA 92069
Telephone
(760) 744-3515
FAX
(760) 744-2297

RESPONSE TO 409-1: Refer to response to comment 103-1.

Painters & Allied Trades
DISTRICT COUNCIL 36
GRANT MITCHELL
Business Manager
DRYWALL FINISHERS, FLOORLAYERS, GLAZIERS, PAINTERS, TRADESHOW & SIGNCRAFT

February 10, 2011

The Honorable Steven Chu
Secretary
U.S. Department of Energy
The Forrestal Building
1000 Independence Avenue, SW
Washington, DC 20585

Dear Secretary Chu:

On behalf of the approximately *10,500* members of the Painters and Allied Trades District Council 36, I write in opposition to Sempra Energy's application on behalf of Baja Wind U.S. Transmission, LLC (now known as Energia Sierra Juarez U.S. Transmission, LLC) for a Presidential Permit (Docket Number PP-334) to construct a cross-border transmission line between northern Baja Mexico and San Diego County.

The transmission project proposed in this application would undermine several goals of President Obama's Administration. Specifically:

410-1

1. **It would facilitate the export of American jobs**: Sempra's cross-border transmission lines would enable the company to build energy projects in Mexico and import the energy into Southern California instead of building them here where the power is being used. This moves our economy in the wrong direction at a time when we should be creating jobs here in the United States.

2. **It would increase the United States' dependence on imported energy**: The Administration has emphasized the need for America to become energy independent. Approving cross-border transmission lines to import energy from Mexico into California is the exact opposite of the President's stated goal. Our nation's economic future and security depends on developing energy infrastructure within our own borders.

3. **It would undermine American environmental and labor laws**: A core component of President Obama's campaign platform was his commitment to a green economy that could usher in a new period of environmental and economic prosperity. Construction of a cross-border transmission line will undermine the President's vision by enabling

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2333 N. Lake Ave. Unit H Altadena, CA 91001 (800) 841-4366 (626) 584-9925 fax (626) 584-1949

RESPONSE TO 410-1: Refer to response to comment 103-1.

Sempra Energy to deliver energy to California from foreign facilities not built to our labor or environmental standards.

410-1

If we are to reclaim America's middle class, we need to eliminate opportunities for corporations to offshore our jobs, exploit workers and raid natural resources. For these reasons, we respectfully request that you reject Sempra's application for a cross-border Presidential Permit.

Sincerely,

Matt Kriz
San Diego Political Director

CC: : Senator Barbara Boxer
Senator Dianne Feinstein
Senate Energy and Natural Resources Committee Chair Senator Jeff Bingaman
Congressman Bob Filner, 51st Congressional District
Anthony Como, Director, U.S. Department of Energy
Grant Mitchell
Bob Lessin
Harry Cook

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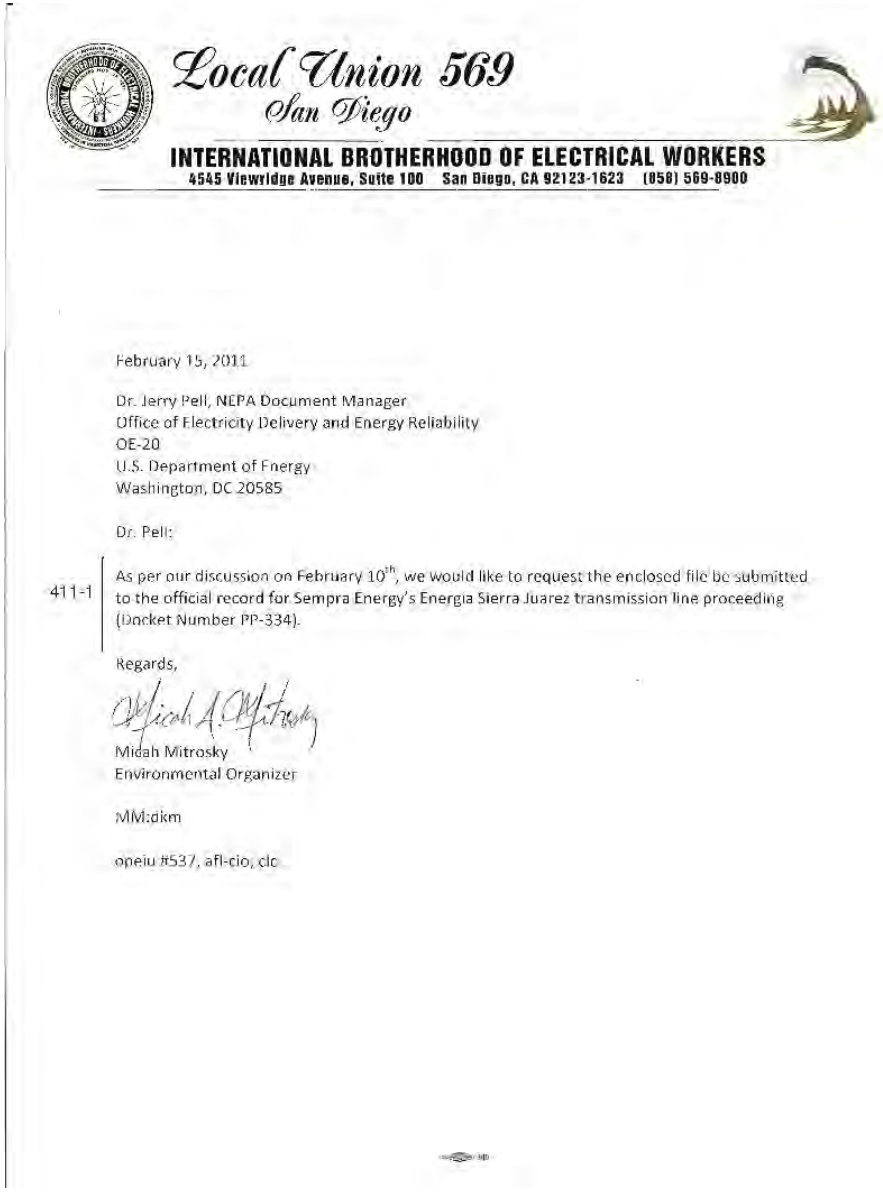


Local Union 569
San Diego

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS
4545 Viewridge Avenue, Suite 100 San Diego, CA 92123-1623 (858) 569-8900

February 15, 2011

Dr. Jerry Pell, NEPA Document Manager
Office of Electricity Delivery and Energy Reliability
OE-20
U.S. Department of Energy
Washington, DC 20585

Dr. Pell:

411-1 As per our discussion on February 10th, we would like to request the enclosed file be submitted to the official record for Sempra Energy's Energia Sierra Juarez transmission line proceeding (Docket Number PP-334).

Regards,

Micah A. Mitrosky

Micah Mitrosky
Environmental Organizer

MM:dkm

opeiu #537, afl-cio, clc

RESPONSE 411-1: The IBEW comment letter and numerous individual commenters expressed concerns that the project would facilitate the export of American jobs (particularly union electrical worker jobs in San Diego and Imperial Counties), increase the U.S. dependence on foreign energy, and undermine American environmental and labor laws. Potential socioeconomic impacts associated with short-term jobs from the ESJ U.S. Transmission Line project are addressed in EIS Section 3.13. However, the topics of labor policy and California energy policy are outside the scope of the NEPA process. DOE will consider comments on these topics as well as all other comments received in this proceeding in the course of evaluating the Presidential permit application. Refer to response to comment 103-1 for additional discussion of the purpose and need for DOE's action; and ESJ's stated objective for the proposed transmission line.

The following individuals provided comments on post cards that were attached to the IBEW letter (a "*" is indicated where the person's name was not legible):

Christin Rivera	Skyler Littlefield	David Wallace
Nicholas & Alex Aurora	Chris Wood	Michael Becker
Richard & Shirley Jacob	Mara Davis	Robert Gadson
Alex Valdez	Christopher M. Smith	Francisco Gonzales
Tammy Spinks	Francisco Jimenez	Ramon Villa
Matt Churchill	Christian Serna	Angela Ramirez
Chad Barsoom	Douglas West	Lucy M. Hernandez
Ken Collier	*	Carolina Villa
Brian Moore	Grant McMurray	Aide Monguia*
Jared Strong	Logan *	Dean Betzold
Charles Brown	Adam *	Tim Elms
Greg Postus*	Jason Rupp	Ken *

Reginald Williams	Jon Leese	Jane Bausa
Ben Thiessen	Christopher Howell	Leo Loomis
Chuck D. Castillo	Sam Far*	Bill Freeman
Eliseo Nunez	Wayne Ghrig*	*
Phil San Martin	Michelle Kuy*	Geshalem Perez
Eloy Bazan	Elizabeth Newman	Carol Ann Flanagan
Michael Wilborn	Vitantas Bugvilionis	Erica Moore
Mike Sundberg	Alberto Urrer	Virginia Toth*
Dan Fink*	Jim Miller	Michael Flaherty
Michael Kroll	Fred *	Joan Raymond
Anthony Virzi	Lorena Gonzalez	Anthony Saavedra*
Steve Grierson	Vincent Anderson	Dennis McNaney
John Carrington	Larissa Gilbert	Isaac Carbajal
Adrian Layva	Ahshawn James	Mike Giamanco
Michael Rossknecht	Carlos Sainz	David Lacombe
Milan Mandill*	Logan Everich	Richard McCoy
Doyle S. Morrison	Victor Manuel Garcia	Clint Boltz
Frank Arellano	Danny Crimmey	Victor Almazan
Miles Bailey	Amy Robershaw	Cory Smith
Anthony W. Freitas	Luke Eisele	Dann Rivera
Robert Bertucci	Vernell Clark	Sin Khounborin*
Kevin Rodill	Timothy Eujeral*	Alex Desa
Christopher Schroeder	Rodolfo Rodriguez	Jason Gold
Brandon Collier	Liuna	Chris English
Jeremy Pribyl*	Brian Miller	Jeremy Graham
Brent Master	Rob York	Alex Yepis
Sal Maces	Terry Hunt	Anthony Lovins
Brian Dawson	John R*	Josh Archie
Ryan Springer	Tim Galloway	Mark DiPari
Eric Biddlecome	Allan*	Gerald Hunter
Shannon R. Strasner	Timothy Ramos*	Erik Gibbs
Mark Britt	Marlon Sanchez	Glenn A. Wallis Sr.
Christopher Chestnut	Ben Ruckle	Sergio Bernal
Nick Reznik	Ron Maynard	Miguel Paz
Chase Beck	Jose Magana	John Sherrell
*	Blake Jaime	Christopher Gudmundson

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS,

900 Seventh Street, NW
Washington, DC 20001
202.833.7000
http://www.ibew.org

EDWIN D. HILL
International President

LINDELL K. LEE
International Secretary-Treasurer

August 17, 2010

The Honorable Steven Chu
Secretary
U.S. Department of Energy
The Forrestal Building
1000 Independence Avenue SW
Washington, DC 20585

Dear Secretary Chu:

On behalf of the approximately 725,000 members of the International Brotherhood of Electrical Workers (IBEW), I write in opposition to Sempra Energy's application on behalf of Baja Wind U.S. Transmission, LLC (now known as Energia Sierra Juarez U.S. Transmission, LLC) for a Presidential Permit (Docket Number PP-334) to construct a cross-border transmission line between northern Baja Mexico and San Diego County, California.

The transmission project proposed in the application would undermine several stated goals of President Obama. Specifically:

411-1

1. **It would facilitate the export of American jobs.** Sempra's cross-border transmission lines would enable the company to build energy projects in Mexico and import electricity into the United States instead of building them here where the energy is being used. This moves our economy in the wrong direction at a time when we should be creating jobs in the U.S.

2. **It would increase the United States' dependence on foreign energy.** The Administration has emphasized the need for America to become energy independent. Approving a cross-border transmission line to import energy from Mexico is the exact opposite of the President's stated goal. Our nation's economic future and security depends on developing energy infrastructure within our own borders.

3. **It would undermine American environmental and labor laws.** A core component of President Obama's campaign was his commitment to a green energy economy that would usher in a period of environmental advancement and economic prosperity. Construction of a cross-border transmission line will undermine the President's vision by enabling Sempra Energy to deliver electricity to the United States from foreign facilities not built to American labor or environmental standards.

411-1

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS.

If we are to reclaim America's middle class our nation must eliminate opportunities for corporations to export our jobs, exploit workers, or raid natural resources. For these reasons, I respectfully request that you reject Sempra Energy's application for a cross-border Presidential Permit.

Sincerely yours,

Edwin D. Hill
International President

EDH:lgd
Copy to President Barack Obama
Senator Dianne Feinstein
Senator Barbara Boxer
Senate Energy and Natural Resources Committee Chair Jeff Bingaman
Representative Bob Filner
House Energy and Commerce Committee Chair Henry Waxman
Director of Permitting and Siting for DOE, Anthony J. Como

RESPONSE 412-1: Refer to response to comment 103-1.

SOUTH BAY
AFL-CIO
LABOR
COUNCIL

412-1

February 15, 2011

The Honorable Steven Chu
Secretary
U.S. Department of Energy
The Forrestal Building
1000 Independence Avenue SW
Washington, DC 20585

Dear Secretary Chu:

On behalf of the 110,000 working families of the South Bay AFL-CIO Labor Council, I urge you not to approve Sempra Energy's application on behalf of Baja Wind U.S. Transmission, LLC (now known as Energia Sierra Juarez U.S. Transmission, LLC) for a Presidential Permit (Docket Number PP-334) to construct a cross-border transmission line between northern Baja Mexico and San Diego County, California.

In his recent State of the Union address, President Obama recognized the urgency of "this generation's Sputnik moment" and announced an ambitious initiative to pursue clean energy goals that will reinvigorate the American economy. The transmission project proposed in the application would undermine the Administration's laudable efforts.

1. **It would facilitate the export of American jobs.** Sempra's cross-border transmission lines would enable the company to build energy projects in Mexico and import electricity into the United States instead of building them here where the energy is being used. This moves our economy in the wrong direction at a time when we should be creating jobs in the U.S.

2. **It would increase the United States' dependence on foreign energy.** The Administration has emphasized the need for America to become energy independent. Approving a cross-border transmission line to import energy from Mexico is the exact opposite of the President's stated goal. Our nation's economic future and security depends on developing energy infrastructure within our own borders.

3. **It would undermine American environmental and labor laws.** President Obama has emphasized his commitment to a green energy economy that would usher in a period of environmental advancement and economic prosperity. Construction of a cross-border transmission line will undermine the President's vision by sourcing energy from facilities not built to American labor or environmental standards.

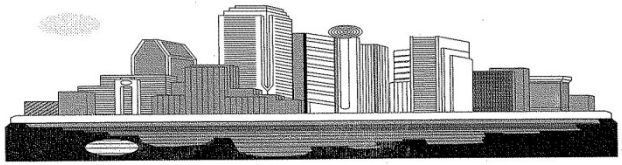
If we are to reclaim America's middle class our nation must eliminate opportunities for corporations to export our jobs, exploit workers, or harm our global environmental heritage. For these reasons, I respectfully request that you reject Sempra Energy's application for a cross-border Presidential Permit.

Sincerely,

Cindy Chavez
Executive Officer

CC: Senator Dianne Feinstein
Senator Barbara Boxer

2102 ALMADEN ROAD, SUITE 107 SAN JOSE, CA 95125
P 408 266.3790 F 408 266.2653 http://www.atwork.org



San Diego County Building & Construction Trades Council, AFL-CIO

February 15, 2011

The Honorable Steven Chu, Secretary
U.S. Department of Energy
The Forrestal Building
1000 Independence Avenue SW
Washington, DC 20585

RE: Sempra Energy (Baja Wind U.S. Transmission, LLC) Application
Docket Number PP-334- OPPOSE

Dear Secretary Chu,

I write on behalf of San Diego County Building & Construction Trades Council, AFL-CIO, to express our strong opposition to Sempra Energy's application on behalf of Baja Wind U.S Transmission, LLC, (known as Energia Sierra Juarez U.S. Transmission, LLC) for a federal permit to build a transmission line from Northern Baja California, Mexico to San Diego County, California.

This transmission directly undermines President Obama's efforts to create quality employment opportunities for U.S. workers and reduce the high unemployment rate. These cross-border transmission lines would enable Sempra to build energy plants in Mexico and import electricity into the United States. Approving this application would result in the exportation of jobs from the U.S construction sector which is experiencing a 35 percent unemployment rate in California.

413-1

We strongly support U.S. policy to reduce its dependence on foreign sources of energy by heavily investing into rebuilding our nation's infrastructure. Developing our energy infrastructure within our borders will provide for a better economic future and strengthen our national security. In addition, allowing this project to move forward would severely undermine U.S environmental and labor laws.

In closing, we respectfully urge you to reject Sempra Energy's application for a cross-border application permit in accordance with the President's policies on energy, environmental, and labor. Thank you for your consideration.

Sincerely,

Tom Lemmon
Business Manager

cc: U.S. Senator Dianne Feinstein
U.S. Senator Barbara Boxer
U.S. Representative Bob Filner
U.S. Representative Henry Waxman

3737 Camino del Rio So. Suite 202, San Diego, CA 92108 Telephone: (619) 521-2914 Fax (619) 521-2917

RESPONSE 413-1: Refer to response to comment 103-1.

February 16, 2011

Dr. Jerry Pell, NEPA Document Manager
Office of Electricity Delivery and Energy Reliability
OE-20
U.S. Department of Energy
Washington, DC 20585

RE: Docket Number PP – 334, Presidential Permit by Sempra Energy to Construct a Cross-Border Transmission Line

Environmental Health Coalition requests that our attached letter be submitted into the official file for this proceeding.

Sincerely,

Nicole Capretz
Director, Green Energy/Green Jobs Campaign
Environmental Health Coalition

2727 Hoover Avenue, Suite 202 • National City, CA 91950
619.474.0220 • 619.474.1210 fax • www.environmentalhealth.org

RESPONSE 414-1: Refer to response to comment 103-1.

October 11, 2010

Steven Chu
Secretary
US Department of Energy
The Forrestar Building
1000 Independence Ave, SW
Washington, DC 20585

RE: Docket Number PP – 334, Presidential Permit by Sempra Energy to Construct a Cross-Border Transmission Line

Environmental Health Coalition is a 30-year old environmental and social justice organization working to empower people, organize communities and achieve justice in low-income communities of color. We are writing in opposition to Sempra Energy's application for a Presidential Permit to construct a cross-border transmission line between northern Baja Mexico and San Diego County.

The transmission project proposed in this application would undermine several goals of President Obama's Administration. Specifically:

1. It would facilitate offshoring American jobs: Sempra's cross-border transmission lines would enable the company to build energy projects in Mexico and import the energy into the United States instead of building them here where the power is being used. This moves our economy in the wrong direction at a time when we should be creating jobs in the U.S.

414-1

2. It would increase the United States' dependence on imported energy: The Administration has emphasized the need for America to become energy independent. Approving a cross-border transmission line to import energy from Mexico is the exact opposite of the President's stated goal. Our nation's economic future and security depends on developing energy infrastructure within our own borders.

3. It would undermine American environmental and labor laws: A core component of President Obama's campaign was his commitment to a green economy that would usher in a period of environmental advancement and economic prosperity. Construction of a cross-border transmission line will undermines the President's vision by enabling Sempra Energy to deliver electricity to the United States from foreign facilities not built to American labor and environmental standards.

414-1 If we are to reclaim America's middle class, our nation must eliminate opportunities for corporations to export our jobs, exploit workers or raid natural resources. For these reasons, we respectfully request that the Department of Energy reject Sempra Energy's application for a cross-border Presidential Permit.

Thank you for your consideration.

Sincerely,

Nicole Capretz
Director
Green Energy/Green Jobs Campaign
Environmental Health Coalition

2727 Hoover Avenue, Suite 202 • National City, CA 91950
619.474.0220 • 619.474.1210 fax • www.environmentalhealth.org

RESPONSE 415-1: Refer to response to comment 103-1.

3727 Camino del Rio South, Suite 100
San Diego, CA 92108
Phone: 619-584-5744
www.OnlineCPI.org

February 18, 2011

The Honorable Steven Chu
Secretary
U.S. Department of Energy
The Forrestal Building
1000 Independence Avenue SW
Washington, DC 20585

Dear Secretary Chu:

The Center on Policy Initiatives is a San Diego, California non-profit advocating for social and economic justice for working families. As the Construction Careers Director, I write in opposition to Sempra Energy's application on behalf of Baja Wind U.S. Transmission, LLC (now known as Energia Sierra Juarez U.S. Transmission, LLC) for a Presidential Permit (Docket Number PP-334) to construct a cross-border transmission line between northern Baja Mexico and San Diego County, California.

The transmission project proposed in the application would undermine several stated goals of President Obama which CPI and our members strongly agree with:

415-1

1. **We need to focus on the creation of jobs in America.** Extremely high unemployment persists on the California-Mexico border in Imperial County (28.3%). Investment should benefit Americans.

2. **We need to focus on domestic energy production.** Our nation's economic future and security depends on developing energy infrastructure within our own borders.

3. **Californians overwhelmingly vote for the environment.** In November 2010, nearly 6 million Californians (61.6%) voted to against Proposition 23 and saved our greenhouse gas law, AB 32. It is clear that the citizens want clean energy that meets strict environmental standards. Mexico does not require the high standards that Californians expect.

415-1 We must rebuild America's middle class and not allow opportunities for corporations to export our jobs, exploit workers, or raid natural resources. For these reasons, I respectfully request that you reject Sempra Energy's application for a cross-border Presidential Permit.

Sincerely yours,

Corinne Wilson
Construction Careers Director
Center on Policy Initiatives
San Diego, California

Copy to:
Senator Dianne Feinstein
Senator Barbara Boxer

RESPONSE TO 416-1: The comment is noted.

ADAMS BROADWELL JOSEPH & CARDOZO
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
520 CAPITOL MALL, SUITE 350
SACRAMENTO, CA 95814-4721
TEL: (916) 444-6201
FAX: (916) 444-6209
rpurchia@adamsbroadwell.com

SO. SAN FRANCISCO OFFICE
601 GATEWAY BLVD., SUITE 1000
SO. SAN FRANCISCO, CA 94080
TEL: (650) 589-1660
FAX: (650) 589-5062

DANIEL L. CARDOZO
THOMAS A. ENSLOW
TANYA A. GULESSERIAN
JASON W. HOLDER
MARC D. JOSEPH
ELIZABETH KLEBANER
RACHAEL E. KOSS
ROBYN C. PURCHIA

OF COUNSEL
THOMAS R. ADAMS
ANN BROADWELL

March 16, 2011

BY EMAIL AND U.S. MAIL

Dr. Jerry Pell
NEPA Document Manager
Office of Electricity Delivery and Energy Reliability, OE-20
U.S. Department of Energy
Washington, DC 20585
Email: Jerry.Pell@hq.doe.gov

Re: Comments on Sempra Generation's Application to the Department of Energy for a Presidential Permit for the Energia Sierra Juarez Gen-Tie Project

Dear Dr. Pell:

We are writing on behalf of the International Brotherhood of Electrical Workers, Local 569 ("Local 569") and its members to comment on Sempra Generation's ("Applicant") application for a Presidential Permit for the Energia Sierra Juarez Gen-Tie Project ("Project"). The Project requires a Presidential Use Permit from the Department of Energy ("DOE") and a Major Use Permit from San Diego County to connect the ESJ Wind Farms in northern Baja California, Mexico to the existing Southwest Power Link Transmission Line through the ECO Substation.[1] The ESJ Wind Farms were granted a conditional approval from Mexico's environmental ministry, Secretaria de Medio Ambiente y Recursos Naturales ("SEMARNAT"). SEMARNAT's approval of the ESJ Wind Farms may still be challenged administratively. 416-1

Local 569 has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for business and industry to expand in the region, and by making it less desirable for businesses to locate and people to live there. Indeed,

[1] See U.S. Dept. of Energy, Energia Sierra Juarez U.S. Transmission Line Project, Draft Environmental Impact Statement, Aug. 2010, p. S-3 (hereafter DEIS).

2269-010d

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continued degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduce future employment opportunities. In this case, the Project would also cause significant adverse socioeconomic impacts to Imperial and San Diego Counties and the southern California regional economy by facilitating the development of large-scale renewable energy projects in Mexico. These socioeconomic impacts, including the loss of employment opportunities, would in turn result in physical changes to the environment, such as urban decay and blight.

416-1

For the reasons discussed in detail below, the DOE may not legally approve the Presidential Permit for the Project. The DOE has failed to demonstrate that approval of the Project is consistent with the public interest.

I. THE LEGAL REQUIREMENTS FOR ISSUANCE OF THE PRESIDENTIAL PERMIT HAVE NOT BEEN MET

Pursuant to the Federal Power Act of 1935, the Department of Energy Organization Act of 1977 and Executive Order 10485 as amended by Executive Order 12038, before a Presidential Permit may be issued, the action must be found to be consistent with the public interest. The two criteria used by the DOE to determine if a proposed project is consistent with the public interest are:

1. Environmental Impact – The National Environmental Policy Act ("NEPA") requires that federal agencies give due consideration to the environmental consequences of their actions. Pursuant to NEPA, the DOE must determine the environmental impacts associated with issuing or denying a Presidential Permit. Regulations codified at 10 CFR 205.321, 205.328, 205.329 and 1021 et seq. specifically delineate the DOE's steps in the NEPA process.

416-2

2. Impact on Electric Reliability – the DOE considers the effect that the proposed project would have on the operating reliability of the U.S. electric power supply system; i.e., the ability of the existing generation and transmission system to remain within acceptable voltage, loading and stability limits during normal and emergency conditions. The standards the DOE applies include the standards of the North American Electric Reliability Council and the standards of the member regional councils that are formulated by the utilities themselves.

2269-010d

RESPONSE TO 416-2: DOE's decision-making process for Presidential permits is discussed in response to comments 101-1 and 101-3.

416-2

Approval of the Presidential Permit at issue would not be consistent with the public interest for two reasons. First, the DOE has not complied with the requirements of NEPA because it did not take a hard look at all of the Project's environmental impacts and did not coordinate with San Diego County to prepare a single, consistent environmental review document. As a result, the Project may cause significant adverse impacts on the environment that have not been addressed. Second, development of the U.S. transmission line as proposed may impact electric reliability.

II. DOE HAS FAILED TO PREPARE A DEIS THAT FULLY COMPLIES WITH NEPA

416-3

The DEIS prepared by the DOE failed to comply with NEPA's requirements. First, the DEIS does not contain a hard look at all of the Project's environmental impacts or propose feasible measures to reduce or avoid these impacts. In addition, the DOE failed to comply with NEPA guidance and issue a joint environmental review document that also complies with the California Environmental Quality Act ("CEQA") to support San Diego County's issuance of a Major Use Permit. The DOE, therefore, has not ensured that the Project will comply with the public interest by evaluating and mitigating all potential environmental effects of the Project.

A. The DOE failed to take a hard look at the Project's impacts

416-4

NEPA has two basic requirements, neither of which the DEIS satisfies. First, NEPA requires that agencies take a "hard look" at the environmental consequences of a proposed action.[2] Second, NEPA review makes information on the environmental consequences of a proposed action available to the public, which may then offer its insight to assist the agency's decision-making.[3]

In an EIS, an agency must consider every significant aspect of a proposed action.[4] An EIS's discussion of environmental impacts forms the scientific and analytic basis for comparison of the alternatives.[5] The discussion of impacts must

[2] *Robertson v. Methow Valley Citizens Council* (1989) 490 U.S. 332, 350; *Dubois v. U.S. Dept. of Agriculture* (1996) 102 F.3d 1273, 1284.
[3] See *Robertson, supra*, 490 U.S. at 350; *Dubois, supra*, 102 F.3d at 1284.
[4] *Baltimore Gas and Electric Co. v. Natural Resources Defense Council* (1983) 462 U.S. 87, 97; *Dubois, supra*, 102 F.3d at 1286.
[5] 40 C.F.R. § 1502.16; *Dubois, supra*, 102 F.3d at 1286.

2269-010d

RESPONSE TO 416-3: DOE has endeavored to prepare this EIS in accordance with the requirements of NEPA, including the CEQ regulations at 40 CFR 1500-1508 and DOE's own NEPA regulations at 10 CFR 1021. Refer to the responses to comments 416-18 and 416-19 for information on the relationship between this EIS and the County of San Diego's review under CEQA.

RESPONSE TO 416-4: DOE has endeavored to prepare this EIS in accordance with the requirements of NEPA. Indirect effects within the U.S. from the ESJ Wind project in Mexico are considered throughout Section 3.

include both "direct and indirect effects (secondary impacts) of a proposed project."[6] The impacts analysis must include a discussion of the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible or irretrievable commitments of resources which would be involved in the proposal should it be implemented.[7] An agency need not speculate about all conceivable impacts, but it must evaluate the reasonably foreseeable significant effects of the proposed action.[8] Reasonable foreseeability means that "the impact is sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision."[9]

416-4

Although the Council for Environmental Quality, charged with implementing NEPA, has stated that "NEPA requires agencies to include analysis of reasonably foreseeable transboundary effects of proposed actions in their analysis of proposed actions in the U.S.", the DOE has failed to take a hard look at the Project's foreseeable transboundary and local significant impacts.[10] Development of the ESJ Gen-Tie and ESJ Wind Farms will have significant transboundary and local effects on biological resources, hazards associated with wildfires, visual resources, air traffic safety and socioeconomics. Local 569 submitted comments on the Draft Environmental Impact Statement/Environmental Impact Report ("DEIS/EIR") that was prepared by the Bureau of Land Management ("BLM") and California Public Utilities Council ("CPUC") for the same Project. Local 569's comments on the DEIS/EIR are attached as Attachment A and are hereby incorporated as a part of this comment letter. The DOE must revise the DEIS and recirculate it for public comment.

[6] 40 C.F.R. 1502.16, subd. (a), (b); *Dubois, supra,* 102 F.3d at 1286; *Sierra Club v. Marsh* (1992) 976 F.2d 763, 767.
[7] 40 C.F.R. § 1502.16.
[8] *Sierra Club, supra,* 976 F.2d at 768.
[9] *Dubois, supra,* 102 F.3d at 1286 (citing *Sierra Club, supra,* 976 F.2d at 767).
[10] Council on Environmental Quality, Memorandum to Heads of Agencies on the Application of the National Environmental Policy Act to Proposed Federal Actions in the United States with Transboundary Effects (July 1, 1997) (Attachment B).

1. The Project may have significant impacts on biological resources in the United States

a) The Project may have significant impacts to California condors in the United States

The California condor is both a federal and State-listed endangered species, a California fully-protected species and is protected under the Migratory Bird Treaty Act.[11] Prohibitions under the Migratory Bird Treaty Act apply to birds in Mexico under international conventions between the United States and Mexico.[12] Although the United States Fish and Wildlife ("USFWS") listed the California condor as potentially occurring in the vicinity of the Project, the DOE concluded that because California condors are so rare within their historic range, construction of the Project is not expected to result in adverse effects. This conclusion is unsubstantiated and fails to take the requisite hard look at the Project's impacts to a species on the brink of extinction.

416-5

Development of the Project may impact California condors migrating to the United States from Baja California, Mexico. The Zoological Society of San Diego released a satellite map indicating the location fixes of a three-year-old female condor that was tracked moving north from the Baja release site across the United States/Mexico border.[13] The female condor was tracked in the area around La Rumorosa where the ESJ Wind Farms would be located, and entered the United States near the site of the ESJ Gen-Tie. This was the first record of a condor entering the United States from Baja California, and the first wild condor seen in San Diego County since 1910.[14]

Historically, California condors were found from British Columbia in the north to Baja California in the south.[15] As of March 31, 2010, there were only 169

[11] Fish & G. Code, § 3511, subd. (b)(5); Cal. Code Regs., tit. 14, § 670.5, subd. (a)(5)(A); 50 C.F.R. §§ 10.13, subd. (c)(1), 17.11.
[12] 50 C.F.R. § 10.13, subd. (a)(2); see also 16 U.S.C. § 712.
[13] The Zoological Society of San Diego, 2008 (Attachment C).
[14] Dudek, Environmental Impact Report/Environmental Impact Statement for East County Substation, Tule Wind, and Energia Sierra Juarez Gen-Tie Projects (Dec. 2010), p. D.2-52 (hereafter Draft EIS/EIR).
[15] H.T. Harvey and Associates, Presence and Movement of California Condors Near Proposed Wind Turbines, Ventana Wildlife Society, Nov. 15, 2007, p. 4 (hereafter HT Harvey and Associates, 2007) (Attachment D).

2269-010d

RESPONSE TO 416-5: Responses to comments 108-8 and 402-5 provide additional discussion of the California condor. DOE's March 8, 2011 letter to USFWS indicates the outcome of consultation with the USFWS, including consultation on potential impacts of the ESJ U.S. Transmission Line project on California condor. This letter is added to EIS Appendix C.

California condors recorded in the wild.[16] If the population of California condors increases – as is the objective of the breeding and release program – the species may at least forage over the site during the lifetime of the Project. Operation of the ESJ Wind Farms and the ESJ Gen-Tie, however, may impede California condor viability.

Studies have shown that California condors may be vulnerable to turbine strikes.[17] California condors exhibit behavior and physical features that may put them at high risk for wind turbine-related mortality. For example, condors' flapping flight is very clumsy making them less maneuverable around objects on the landscape.[18] In addition, because California condors are scavengers, they exhibit pronounced curiosity for novel objects in their environment and may, therefore, be attracted to wind turbines.[19] The San Diego Audubon Society has stated that "there is a concern that these wind and transmission line projects would kill condors that are and will be re-colonizing the area."[20]

416-5

Despite the sensitivity of the species and its recorded occurrence over the sites of the ESJ Wind Farms and ESJ Gen-Tie, the DEIS does not contain any analysis of the Project's potential impacts, nor does it propose any specific mitigation measures for the species. In addition, there is no indication that the Mexican government has proposed any measures to avoid or mitigate impacts to California condors besides requiring the Applicant to measure possible impacts to bird species ***after*** they occur.[21]

Although California condors currently have a limited distribution due to their extremely sensitive status, it is the hope that California condors may repopulate their historic range. The DOE must, therefore, take a hard look at the Project's impacts to this species and disclose any mitigation measures that may reduce or avoid the Project's impacts. If SEMARNAT has imposed any specific mitigation measures during its approval process, this must also be disclosed in the DEIS. Currently, there is no information in the record to ensure that impacts from the

[16] Draft EIS/EIR, p. D.2-52.
[17] HT Harvey and Associates, p. 5.
[18] *Ibid.*
[19] *Id.* at pp. 5-6.
[20] Letter from Shannon Dougherty, Conservation Chair, San Diego Audubon Society, to Dr. Jerry Pell, NEPA Document Manager, Office of Electricity Delivery and Energy Reliability, p. 2 (on file with the DOE).
[21] DEIS, p. 3-28.

416-5 Project to California condors may not be significant, or that the DOE's approval of the DEIS will comply with federal and State law.

b) The Project may have significant impacts on Peninsular bighorn sheep in the United States

As the DEIS recognizes, Peninsular bighorn sheep are a federally-endangered and California State-threatened and fully-protected species.[22] The species is known to exist in the region and critical habitat is only 2.3 miles northeast of the ESJ Gen-Tie area.[23] The DOE, nevertheless, asserted that construction of the ESJ Gen-Tie would only have minor impacts to bighorn sheep because "it is unlikely the bighorn sheep will occur along the transmission corridor or access road."[24] This conclusory assertion is unsubstantiated and fails to take into account the impacts of
416-6 development of the ESJ-Gen Tie and connected ESJ Wind Farms on populations of bighorn sheep.

According to the USFWS and California Department of Fish and Game ("CDFG"), Peninsular bighorn sheep are known to occur in the Sierra de Juarez mountains where the ESJ Wind Farms would be located.[25] San Diego County has also stated that while the U.S. Border Fence is normally a barrier for wildlife movement, a portion of the Project parcels are located in the mountainous terrain where the border fence is not present. Thus, according to the County, this area "could be considered a wildlife corridor for Peninsular Bighorn Sheep movement between the United States and Mexico."[26] The BLM and CPUC also acknowledged that Peninsular bighorn sheep migrate across the border to breed with other populations.[27]

[22] DEIS, p. 3-18; see also Fish & G. Code, § 4700, subd. (b)(2); Cal. Code Regs., tit. 14, § 670.5, subd. (b)(6)(I); 50 C.F.R. § 17.11.
[23] DEIS, p. 3-18.
[24] *Id.* at p. 3-25.
[25] Letter from Karen Goebel, Assistant Field Supervisor, U.S. Fish and Wildlife Service and Helen R. Birss, Environmental Program Manager, Cal. Dept. of Fish and Game, to Billie Blanchard, Cal. Public Utilities Com. and Lynda Kastoll, Bur. of Land Management, Aug. 25, 2008, Enclosure (Attachment E).
[26] Letter from Eric Gibson, Director, Dept. of Planning and Land Use, San Diego County, to Dr. Jerry Pell, Office of Electricity Deliverability and Energy Reliability, U.S. Dept. of Energy, Nov. 24, 2010, Attachment A, p. 3 (on file with the DOE); see also photographs of Bighorn sheep crossing rocky terrain in Attachment F.
[27] Draft EIS/EIR, p. D.2-59.

RESPONSE TO 416-6: Response to comment 108-7 provides additional discussion of Peninsular bighorn sheep population, migration patterns, and migration corridors. DOE's March 8, 2011 letter to USFWS indicates the outcome of consultation with the USFWS, including consultation on potential impacts of the ESJ U.S. Transmission Line project on Peninsular bighorn sheep. This letter is added to EIS Appendix C.

416-6

Despite the clear evidence that Peninsular bighorn sheep may move from areas affected by the Project to the United States, the DEIS fails to take a hard look at impacts to bighorn sheep, or propose any alternatives or measures that would mitigate such impacts. The DEIS must indicate what conditions SEMARNAT has imposed to reduce impacts to bighorn sheep from the ESJ Wind Farms component. Potential mitigation measures could include limiting construction activities outside of the lambing season and period of greatest water need.[28]

c) The Project may have significant impacts to Barefoot banded geckos in the United States

416-7

The Barefoot banded gecko is a California-threatened species, as well as a BLM designated sensitive species.[29] This species is secretive and is not easily detected; however, it is known from the eastern edge of the Peninsular Ranges from Palms to Pines Highway State Route 74 to the Baja California, Mexico border.[30] While the Draft EIS/EIR prepared by the BLM and CPUC for the same Project and the Recirculated Draft EIR/EIS prepared for the Sunrise Powerlink both recognize the potential for the gecko to occur on the Project site, the DEIS does not mention the species.[31]

Barefoot banded gecko may be present on the ESJ Wind Farms site and could cross the border in the mountainous terrain that is not occupied by the border fence and move into the United States. The DEIS must, therefore, evaluate whether Project conditions on the ESJ Wind Farms site will impact the Barefoot banded gecko and impede cross-border movement. Currently, the DOE has failed to take a hard look at all of the Project's impacts to the Barefoot banded gecko.

[28] See Sunrise Powerlink RDEIR/DEIS, Response to Comment Set F0006, F0006-2.
[29] Cal. Code Regs., tit. 14, § 670.5, subd. (b)(4)(B); Bur. of Land Management, Special Status Animals in Cal., Including BLM Designated Special Status Species <http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/pa/wildlife.Par.13499.File.dat/BLM%20Sensitive%20Animal%20Update%20SEP2006.pdf> (as of Mar. 3, 2011).
[30] Draft EIS/EIR, pp. D.2-40, D.2-148.
[31] *Id.* at pp. D.2-40, D.2-148; Aspen Environmental Group, Sunrise Powerlink Project Recirculated Draft EIR/ Supplemental Draft EIS (Oct. 2008), p. 2-30 (hereafter Sunrise Powerlink RDEIR/SDEIS).

2269-010d

RESPONSE TO 416-7: The EIS is updated at Section 3.1 to include a discussion of potential cross-border impacts to banded geckos. The loss of vegetation due to wind farm development in Mexico is not anticipated to result in impacts to the U.S. population of this species due to the distance between the wind turbine development and available habitat in the project area.

d) The Project may have significant impacts on Golden eagles in the United States

The Golden eagle is a State fully-protected species, a California Department of Forestry and Fire Protection-listed sensitive species and on the CDFG watch list, and federally protected under the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act and the Lacey Act.[32] Development of the Project may impact Golden eagle nests and foraging areas. The DEIS, however, does not disclose any of the Project's impacts to this species or propose any specific mitigation measures. Specifically, the DOE did not take a hard look at the specific impacts development of the ESJ Wind Farm may have on Golden eagles and incorrectly assumes that mitigation for the species does not have to be disclosed in the DEIS. The DOE must take a hard look at the Project's impacts to Golden eagles.

416-8

According to the BLM and CPUC, the Golden eagle has "high potential for foraging" over the ESJ Gen-Tie Project site.[33] As the DEIS recognizes, jackrabbits are present on the Project site, which serve as a primary source of prey for Golden eagles.[34] In addition, the Applicant contracted San Diego Zoo Conservation Research to conduct a full-scale survey throughout the planned ESJ Wind Farms site.[35] During the survey four nests were observed along with several Golden eagles.[36]

Because Golden eagles and nests were observed on the ESJ Wind Farms site, development of the ESJ Wind Farm may significantly impact Golden eagles in Mexico, as well as Golden eagles that may forage over land in the United States. For example, because Golden eagles are unlikely to nest within the immediate vicinity of wind turbines, construction of the ESJ Wind Farms may lead to nest abandonment.[37]

[32] Fish & G. Code, § 3511, subd. (b)(7); Cal. Forest Practice Rules, § 895.1; Cal. Dept. of Fish & Game, California Bird Species of Special Concern, 2006, Appendix 1, p. 57; 16 U.S. C. §§ 668, et seq.; 16 U.S.C. §§ 3371, et seq.; 50 C.F.R. § 10.13, subd. (c)(1).
[33] Draft EIS/EIR, p. D.2-105.
[34] DEIS, p. 3-17; see also Draft EIS/EIR, p. D.2-45.
[35] James Sheppard, *Golden Eagle Helicopter Survey* (Mar. 23, 2009) <http://blogarchives.sandiegozoo.org/blog/2009/03/23/golden-eagle-helicopter-survey/> (as of Mar. 3, 2011) (hereafter Sheppard, 2009).
[36] *Ibid.*
[37] Draft EIS/EIR, p. D.2-175.

2269-010d

RESPONSE TO 416-8: The EIS is updated at Section 3.1 to include additional discussion of potential impacts to golden eagles. Response to comment 108-8 also provides discussion of the golden eagle.

Construction of the wind turbines may also lead to direct mortality of Golden eagles. The propensity of Golden eagles to seek out strong winds to gain elevation without expending much flying effort can bring the birds into proximity with wind turbines.[38] Finally, because Golden eagles can range hundreds of miles while foraging for their food, nest abandonment and mortality caused by development of the ESJ Wind Farms, could impact Golden eagles that normally forage over the United States.[39]

416-8 The DEIS recognizes that cross-border migratory birds will traverse the border in the Project area to various degrees, and, thus, the ESJ Wind Project may result in direct mortality to these birds.[40] However, the DEIS erroneously passes responsibility for analyzing and mitigating these impacts to the Mexican Environmental, Natural Resources and Fisheries Ministry. The DOE must take a hard look at the Project's impacts to Golden eagles and disclose any measures that could be taken to mitigate those impacts in the DEIS. Depending on the discussion of the Project's impacts in the DEIS, decision makers may conclude that allowing wind energy generated in Mexico to be imported to the United States would cause too many unchecked environmental impacts. Decision makers cannot make an informed choice, however, without a complete discussion of the Project's impacts to Golden eagles. The DEIS does not include a hard look or provide a complete discussion of the issue.

e) The Project may have significant impacts on Quino checkerspot butterfly

416-9 The Quino checkerspot butterfly is a federally-listed endangered species.[41] Although it is unclear whether focused, protocol-level surveys for this species were conducted on the ESJ Wind Farms site, the Sunrise Powerlink RDEIR/SDEIS concluded that Quino checkerspot butterfly may occur on the site.[42] In comments on the Sunrise Powerlink, the Center for Biological Diversity and the Sierra Club stated that the Quino checkerspot butterfly population in the United States is

[38] Sheppard, 2009.
[39] See *ibid*.
[40] DEIS, p. 3-28.
[41] 50 C.F.R. § 17.11.
[42] Sunrise Powerlink RDEIR/DEIS, p. 2-15.

RESPONSE TO 416-9: Section 3.1 is updated to include a discussion of potential cross-border impacts to the U.S. population of Quino checkerspot butterfly. The loss of vegetation due to wind farm development in Mexico is not anticipated to result in cross-border impacts to the U.S. population due to the distance between the wind turbine development area and the U.S. and the dispersed siting of the turbines.

416-9

linked to the population in Mexico and may depend on it for its health.[43] Thus, impacts to Quino checkerspot butterfly populations in Mexico may indirectly impact populations in the United States. The DOE must assess the likelihood that Quino checkerspot butterfly may occur on the site so that all Project impacts are disclosed and addressed.

f) The Project may have significant impacts on the goals of *Las Californias Binational Reserve Conservation Initiative*

416-10

The Nature Conservancy, the Conservation of Biology Institute and Pronatura prepared *Las Californias Binational Conservation Initiative* in 2004 to foster a shared conservation vision for the United States/Mexico border.[44] The border region is home to more than 400 endangered, threatened and sensitive species.[45] This sensitive area is being rapidly destroyed, however, by urbanization of the San Diego, Tijuana and Tecate regions and their adjacent suburbs.[46]

The *Initiative* and the importance of the area to biodiversity are not mentioned in the DEIS. Unchecked development of the Project may undermine the goals of *Las Californias Binational Conservation Initiative* and destroy biological resources in both the United States and Mexico. The DOE must take a hard look at the Project's potential impacts so that a complete picture of the Project's impacts to biodiversity can be understood.

[43] Letter from Steven Siegel, Staff Attorney, Center for Biological Diversity and Justin Augustine, Staff Attorney, Center for Biological Diversity, to CPUC/BLM re Recirculated draft environmental impact report/supplemental draft environmental impact statement for the Sunrise powerlink transmission project, Aug. 25, 2008, p. 4-810.
[44] See Pronatura, Conservation Biology Institute and the Nature Conservancy, *Las Californias Binational Conservation Initiative: A Vision for Habitat Conservation in the Border Region of California and Baja California*, Sept. 2004 (hereafter Las Californias Binational Conservation Initiative).
[45] *Id.* at p. 1.
[46] *Id.* at p. 3.

RESPONSE TO 416-10: Refer to response to comment 401-14 for a discussion of the project's potential effects on regional conservation initiatives, including the Las Californias Binational Conservation Initiative. The initiative is also addressed in EIS Section 5 (Cumulative Impacts).

2. The Project may have significant impacts to visual resources in the area

The DOE is required to analyze the Project's aesthetic and visual impacts under NEPA.[47] To take the requisite hard look at all of the Project's aesthetic and visual impacts, the DOE must accurately describe the affected environment.[48] The DOE did not describe the residences surrounding the Project site that may be negatively affected by the Project's impacts to visual resources.

In the DEIS's analysis of the Project's impacts to noise and air quality, the DOE identifies a mobile home located approximately 1,600 feet west of the proposed transmission line route.[49] According to the DEIS, the residence "appears" to be unoccupied based on "field observations."[50] The nature of the "field observations" is unclear, and the DEIS does not explain why the occupancy of the mobile home was not verified with a knock on the door. There are additional residences located approximately 0.4 miles northwest of the site, 290 feet south of I-8 and 1.4 miles northeast of the site. There are also residences located approximately 2 miles west of the site, near the intersection of Carrizo Gorge Road and Old Highway 80.[51]

416-11

The DEIS does not incorporate any of this information into the analysis of the Project's impacts to visual resources. Instead, the DEIS concludes without any evidence that "[t]he ESJ U.S. project alternative corridors would not be visible from any residential viewpoints."[52] This conclusion appears contradicted by other information in the DEIS itself, and does not qualify as the requisite hard look under NEPA. The DOE must describe the residences that may be affected by the Project's changes to visual resources and take a hard look at the significance of those impacts.

[47] 40 C.F.R. § 1508.8.
[48] 40 C.F.R. § 1502.15.
[49] DEIS, p. 3-135.
[50] *Id.* at pp. 3-91, 3-135.
[51] *Id.* at p. 3-91.
[52] *Id.* at p. 3-33.

RESPONSE TO 416-11: EIS Section 3.2 is revised to clarify the location of residences in proximity to the proposed project, and the corresponding Key Observation Points that provide representative views from these residential locations. The EIS acknowledges the potential visual impacts of the project on these viewpoints. In general, the facility structures would be visible from these residences to varying extents. However, the visual assessment methodology, which is accepted by the County of San Diego, relies on the identification of – and views from – key observation points, such as segments of U.S. Highway 8 and the Table Mountain recreational area. The selection of Key Observation Points is discussed in Section 3.2.1.2. Individual residences are located within the areas that correspond with some of the KOPs analyzed.

With regard to the mobile home observed near the project site, the EIS assessment assumes that the home could be occupied during construction and operation of the project. Therefore it is not necessary to verify the occupancy of the home at the time of the impact assessment.

3. The Project may have significant impacts associated with wildfire hazards in the United States

The DEIS recognizes that wildfires caused by the wind turbines in Mexico could have significant impacts on resources in the United States.[53] It fails to describe, however, design features that could be incorporated to reduce potential fire risks from the turbines. The DEIS simply states that "[i]t is not known whether the ESJ Wind project plans to incorporate these or other fire prevention control measures."[54] This statement does not constitute a hard look at the Project's impacts. Because the ESJ Wind Project has already received approval from the Mexican government, design features and mitigating conditions must be known. The DOE must describe the design features and mitigating conditions that will reduce potential impacts from wildfires.

416-12

4. The Project may have significant impacts to air traffic safety

While the DOE recognizes the need to address impacts on local air traffic in the DEIS, it does not take a hard look at all of the Project's potential impacts. For example, the DEIS recognizes potential impacts to air traffic associated with the Jacumba Airport and U.S. Border Patrol border monitoring, it does not recognize potential impacts to airborne fire-fighting systems. Air National Guard C-130s have been used to drop retardant on wildfires in southern California from an altitude of about 150 feet.[55] The 230-kV transmission lines would be supported on either 150-foot steel lattice towers or 150-foot steel monopoles.[56] The 500-kV transmission line would be supported on either 150-foot steel lattice towers or 170-foot monopoles.[57] Because construction of the steel lattice towers and steel monopoles under either alternative may impact airborne fire-fighting systems, the DOE must take a hard look at this impact and propose any feasible mitigation measures.

416-13

[53] *Id.* at p. 3-128.
[54] *Id.* at p. 3-129.
[55] U.S. Air Force Fact Sheet, Modular Airborne Fire Fighting System <http://www.af.mil/information/factsheets/factsheet_print.asp?fsID=10566&page=1> (as of Mar. 10, 2011) (Attachment G).
[56] DEIS, p. 2-2.
[57] *Id.* at p. 2-10.

2269-010d

RESPONSE TO 416-12: Section 3.9 (Fire and Fuels Management) has been augmented to provide more discussion of the effects of wind turbines in Mexico on wildfire risk in California. As discussed in Section 3.9.2.3, the EIS acknowledges that a wildfire could originate from the wind turbine development in Mexico and travel north across the U.S.-Mexico border. This situation could result from an incident associated with the ESJ Wind project transmission lines in the vicinity of the border, or as a result of a fire that originates in the wind turbine development area. Wind turbines can be the source of wildfire ignitions due to wind turbine collapse, power collection line failure, turbine malfunction or mechanical failure, and lightning- and bird-related incidents. The EIS notes that certain design features generally could be installed on individual wind turbines to reduce the probability of a fire, e.g., lightning arresters and thermal monitoring systems that detect temperature increases and automatically shut off the generating system above a critical thermal threshold.

DOE does not have information on whether the ESJ Wind project would incorporate these types of measures, and this is beyond the purview of the EIS. DOE reviewed a partial translation of the Mexican MIA permit (or La Manifestación de Impacto Ambiental, modalidad regional [MIA-R]). The permit requires a Fire Protection Plan to be prepared prior to construction in coordination with relevant agencies. The purpose of the plan would be to evaluate the likelihood of fire sources, identify preventive measures, and develop site-specific action plans in the event of a fire in the ESJ Wind project area. Burning is not permitted for land clearing. The EIS is revised to include this information. See also the response to comment 108-3.

5. Transmitting energy from the ESJ Wind Farms through the ESJ Gen-Tie may have potentially significant socioeconomic impacts to the United States

The DEIS fails to address the socioeconomic impacts of developing large-scale renewable energy projects in Mexico rather than in the United States and, more specifically, the DEIS fails to address the related socioeconomic effects caused by the ESJ Gen-Tie and East County Substation's facilitation of future renewable energy projects in Mexico, as opposed to development of this important burgeoning industry in Southern California. The DOE must revise the socioeconomic impact analysis in a DEIS that is recirculated to the public.

416-14

Under NEPA, the federal agency preparing an EIS must analyze social and economic impacts if they are interrelated with physical impacts.[58] Federal agencies have the additional responsibility to analyze a project's effects with respect to environmental justice.[59] Further, a Presidential Permit required for transmission must be "consistent with the public interest."[60] Thus, federal agencies have a heightened duty to consider the socioeconomic impacts that would be caused by a proposed project.

Renewable energy development in Mexico may supplant renewable energy development in the United States. According to a 2008 report prepared at the request of the California Energy Commission ("CEC"), the area of northern Mexico adjacent to the proposed ESJ Gen-Tie has the potential for thousands of megawatts of wind energy development alone.[61] There is substantial additional potential for solar and geothermal development.[62] The report reveals a strong interest by energy

[58] See 40 C.F.R. § 1508.14; see also, e.g., *Rochester v. U.S. Postal Service* (1976) 541 F.2d 967 (placing postal service center outside urban core could cause increased commuting, loss of inner-city jobs and moving to suburbs, leading to economic and physical downtown deterioration and downtown post office abandonment, all contributing to urban decay and blight).
[59] See Exec. Order No. 12898, 59 Fed. Reg. 7629 (Feb. 16, 1994); see also Dept. of Justice, *Guidance Concerning Environmental Justice* <http://www.justice.gov/archive/enrd/ejguide.html> (as of Mar. 3, 2011).
[60] Exec. Order No. 10485, § 1, 18 Fed. Reg. 5397 (Sept. 3, 1953) (as amended by Exec. Order No. 12114, 44 Fed. Reg. 1957 (Jan. 4, 1979)).
[61] KEMA Inc., Challenges and Opportunities to Deliver Renewable Energy from Baja California Norte to California, June 2008, p. 3 <http://www.energy.ca.gov/2008publications/CEC-600-2008-004/CEC-600-2008-004.PDF> (as of Mar. 11, 2011) (hereafter CEC Mexican Renewables Report).
[62] *Ibid.*

2269-010d

RESPONSE TO 416-13: EIS Section 3.7 (Transportation and Traffic) and 3.9 (Fire and Fuels Management) are revised to discuss potential limitations on aerial fire-fighting efforts due to the presence of the transmission lines. Mitigation Transportation-1 (coordination with Border Patrol) is revised to include an additional requirement for coordination with CAL FIRE. An operations fire protection plan is presented in Appendix B. This plan, which was accepted by the San Diego Rural Fire Protection District, states that aerial firefighting is not likely to be necessary in the ESJ U.S. Transmission Line project area due to the relatively flat terrain and available access. Refer to responses to comments 306-1 through 306-10 for additional discussion of fire-fighting issues. No additional mitigation measures are considered necessary.

RESPONSE TO 416-14: Refer to response to comment 103-1.

RESPONSE TO 416-15: Refer to response to comment 103-1.

industry representatives to develop these renewable energy resources for the purpose of exporting electricity to California.[63]

416-14 Because renewable energy jobs are critical to the health of San Diego and Imperial Counties' economies, facilitating renewable energy development in northern Mexico may cause adverse physical changes to the environment in the United States, such as urban decay and blight. Because urban decay is a potentially significant physical change to the environment, the DOE must analyze the socioeconomic impacts and propose any necessary mitigation measures.

a) Renewable energy development in northern Mexico may supplant development in California

Both the federal government and California have adopted polices, provided incentives and established goals to increase renewable energy development in the United States. One of the purposes behind the push for renewable energy generation in the United States is to foster economic growth and create employment opportunities in the United States. Federally, renewable energy generation is facilitated through federal tax credits and the American Recovery and Reinvestment Act. Another purpose that is often repeated is the desire to reduce United States dependence on foreign sources of energy.

416-15

In California, the Renewables Portfolio Standard ("RPS") sets some of the most ambitious renewable energy standards in the country. The RPS program, administered by the CPUC, the CEC and Air Resources Board, requires investor-owned utilities, electric service providers, publicly owned utilities and community choice aggregators to increase procurement from eligible renewable energy resources. In 2002, the Legislature established the original goal of 20% RPS by 2020 and in 2006 accelerated that goal. Since then, Governor Schwarzenegger increased that goal by Executive Order to 33% RPS by 2020. If enacted, pending legislation would codify the 33% RPS standard.[64]

Despite the federal incentives and State mandates, facilitating renewable energy development in Mexico may result in less renewable energy development in

[63] *Ibid.*
[64] See Sen. Bill No. x1 2, as introduced Feb. 1, 2011 < http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sbx1_2_bill_20110201_introduced.html> (as of Mar. 3, 2011); see also Sen. Bill No. 23, as introduced Dec. 6, 2010 <http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sb_23_bill_20101206_introduced.pdf> (as of March 3, 2011).

RESPONSE TO 416-16: Refer to response to comment 103-1.

the United States. First, on average, renewable energy is significantly more expensive to generate than energy derived from conventional fossil-fuel production.[65] Utilities, therefore, only procure the renewable energy capacity they are required to by law. In California, the RPS allows utilities to pass the increased costs of renewable energy along to retail consumers. Retailers do not have an incentive to procure renewable energy beyond the amount required to fulfill their RPS target. In this zero-sum game, the more renewable energy projects in Mexico
416-15 deliver electricity to satisfy California's RPS, the less demand there will be for additional renewable energy development in California.

Further, transmission capacity in Southern California and in the Project area is limited, even with the recently approved Sunrise Powerlink.[66] Thus, if more renewable and conventional energy projects built in Mexico use transmission in the United States, there will be less available transmission capacity for renewable energy development in the United States. The loss of domestic jobs to Mexico will adversely affect the regional economies in Imperial and San Diego Counties.

b) Renewable energy jobs are critical to the future health of San Diego County and especially Imperial County

As of December 2010, El Centro had the highest unemployment rate among
416-16 American cities, at 28.3%.[67] Unemployment rates for Imperial County as a whole are similarly well above State and national averages.

Renewable energy development presents one of the few areas of opportunity for economic development in Imperial County. The CPUC has recognized the tremendous potential for renewable energy projects in Imperial County and has adopted multiple orders intended to facilitate that development.[68]

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[65] See Div. of Ratepayer Advocates, *Green Rush: Investor-Owned Utilities' Compliance with the Renewables Portfolio Standard* (Feb. 2011), p. 7 <http://www.dra.ca.gov/NR/rdonlyres/0CB0B986-E93B-462A-BA62-804EDAE43B82/0/DRAReportPUBLICVERSIONFeb2011.pdf> (as of March 3, 2011).
[66] See CEC Mexican Renewable Report, pp. 27-32.
[67] See U.S. Bur. of Labor Statistics *Unemployment Rates for Metropolitan Areas* (Dec. 7, 2010) <http://www.bls.gov/web/metro/laummtrk.htm> (as of Mar. 3, 2011).
[68] See, e.g., Cal. Public Utilities Com., In the Matter of the Application of San Diego Gas & Electric Company (U 902 E) for a Certificate of Public Convenience and Necessity for the Sunrise Powerlink

416-16

Developing renewable energy projects in Imperial County has great potential to address the demand for renewable energy created by the RPS goals.[69] The ESJ Wind Farms in Mexico and approval of the ESJ Gen-Tie threaten this development by facilitating renewable energy projects in Mexico, where less stringent and protective environmental and labor standards may attract developers seeking to minimize costs.[70]

c) These adverse economic effects will result in blight and other physical changes in the environment

416-17

Developing the ESJ Wind Farms and approving the ESJ Gen-Tie may well lead to a downward economic spiral in the United States. Investment in a region rich in solar and wind resources can be expected to continue as long as there is an expectation that renewable energy projects will continue to be proposed in the area. In addition, renewable energy development would indirectly stimulate local economies through the "economic multiplier effect."[71]

If the ESJ Gen-Tie is approved and renewable energy development emerges in northern Mexico instead, market expectations will shift and investment may drop off sharply. With prolonged and potentially deepening economic conditions, city and county governments would receive less tax revenue with which to fund infrastructure maintenance and improvements and government services. Further, property values would continue to fall, among other economic impacts. These impacts would result in physical impacts, such as deteriorating roads, vacant neighborhoods and urban decay. The DEIS is required to consider these indirect physical changes that would result from the Project.

Transmission Project. Decision 08-12-058, pp. 63-68; see also Cal. Public Utilities Com., Decision Conditionally Accepting Procurement Plans for 2009 Renewables Portfolio Standard Solicitations and Integrated Resource Plan Supplements, Decision 09-06-018, §§ 4.1-4.2, 6.3.

[69] See Summit Blue Consulting, LLC, *Renewable Energy Feasibility Study* (Apr. 2008), pp. 14, 19-20, 22, 25 <http://www.ivedc.com/CMS/Media/IIDRenewableEnergyStudy_08.pdf> (as of March 3, 2011).

[70] See *Sempra Energy's Mexican (LNG) Unit, 'Energia Costa Azul' Facing Permanent Closure, States Landowner Ramon Eugenio Sanchez Ritchie* (PRNewswire, Feb. 8, 2011) <http://finance.yahoo.com/news/Sempra-Energys-Mexican-LNG-prnews-227471943.html?x=0&.v=1> (as of Mar. 11, 2011) (noting City of Ensenada's consideration of resolution to permanently shut down Costa Azul LNG Terminal Project Plant for alleged land use, public safety and environmental violations).

[71] See *id.* at pp. 26, 91.

RESPONSE TO 416-17: Potential socioeconomic impacts associated with short-term jobs from the ESJ U.S. Transmission Line project are addressed in EIS Section 3.13. Comments pertaining to the merits of the project with respect to labor policy ("jobs"), national energy policy, and California utility regulations are outside the scope of the NEPA process. DOE will consider these comments as well as all other comments received in that proceeding before making a final determination on the permit application.

B. The DOE must prepare one, consistent environmental review document with San Diego County

Under NEPA, if a project requires state approval, the federal agency must cooperate with state and local agencies "to the fullest extent possible to reduce duplication between NEPA and state and local requirements."[72] This includes the preparation of a joint federal and state environmental review document so that one document will comply with all applicable laws.[73] The Code of Federal Regulations specifies that the "DOE shall integrate the NEPA process and coordinate NEPA compliance with other environmental review requirements to the fullest extent possible."[74] Despite NEPA's express guidance, however, the DOE has not coordinated with the County of San Diego to prepare one document that complies with both NEPA and CEQA.

416-18

Preparation of a single Draft EIS/EIR is essential because the alternatives and mitigation measures proposed by the DOE's DEIS and BLM/CPUC's Draft EIS/EIR are inconsistent and in conflict. The inconsistencies between the two documents undermine the public review process because it is not apparent how the differences between the two documents will be reconciled. The CPUC, San Diego County and DOE may approve conflicting alternatives or impose conflicting mitigation measures.

1. The alternatives for the ESJ Gen-Tie proposed by the BLM and CPUC in the Draft EIS/EIR are inconsistent and in conflict with the alternatives proposed by the DOE in its Draft EIS

416-19

The BLM/CPUC and the DOE have proposed inconsistent and conflicting alternatives to the proposed ESJ Gen-Tie. Under NEPA, the alternatives analysis is considered the "heart" of the EIS.[75] Because the alternatives at issue here are inconsistent, the public cannot meaningfully evaluate the various alternatives or understand the basis of the agencies' choices. The DOE must work with San Diego County to revise the proposed alternatives so that agency decision making is based on a single, consistent document. The DOE may not support its Presidential Permit

[72] 40 C.F.R. § 1506.2, subd. (b).
[73] 40 C.F.R. § 1506.2, subd. (c).
[74] 10 C.F.R. § 1021.341, subd. (a).
[75] 40 C.F.R. § 1502.14.

RESPONSE TO 416-18: Refer to response to comment 305-9 for discussion of the purpose and intent of the EIS with respect to NEPA and CEQA. The intent of the EIS from its outset was to serve the purpose of the federal NEPA and DOE has not represented its intent as also addressing the CEQA requirements.

With regard to the preparation of a separate DOE NEPA document for the ESJ U.S. Transmission Line project, independent of the BLM's and CPUC's preparation of a joint NEPA and CEQA document for the Tule Wind, ECO Substation, and ESJ U.S. Transmission Line projects, it should be noted that the County of San Diego is a cooperating agency with DOE, and DOE is a cooperating agency with BLM. These cooperating agency relationships are commonly used and ensure a sufficient degree of inter-agency coordination such that information used in the analyses is consistent between the documents. However, this relationship does not necessarily require that the findings of the analyses be identical, provided that DOE's analysis conforms to NEPA and is adequately documented.

RESPONSE TO 416-19: Refer to response to comment 305-9 for discussion of the purpose and intent of the EIS with respect to NEPA and CEQA. The intent of the EIS from its outset was to serve the purpose of the federal NEPA and DOE has not represented its intent as also addressing the CEQA requirements.

for the ESJ Gen-Tie based on an analysis that is in conflict with San Diego County's review.

DOE only considered two action alternatives in its Draft EIS: a double-circuit 230-kV transmission line and a single-circuit 500-kV transmission line.[76] It dismissed an alternative transmission route from further analysis because the proposed location of the ECO Substation would make the distance of the route infeasible and impractical.[77] It also dismissed an underground transmission line alternative based on its determination that an underground failure can be more difficult to locate and repair, construction of an underground alternative would require greater ground disturbance and be more expensive and EMF exposure may be greater.[78] The 230-kV transmission line was identified as the preferred alternative.

416-19

The Draft EIS/EIR prepared by the BLM and CPUC proposed four alternatives, two of which included an underground transmission line and two of which included an overhead alternate route.[79] The overhead alternate route alternative was designated as the "environmentally superior alternative."[80] The BLM-Preferred Alternative, however, was an underground alternate route alternative.[81]

The Draft EIS/EIR's alternatives are alternatives that were expressly dismissed from further consideration by the DOE. In addition, each agency – San Diego County, the BLM and the DOE -- selected a potentially conflicting alternative. For example, it is possible that San Diego County could select a 500-kV overhead alternate alignment, the BLM could select a 500-kV underground alignment and the DOE could select a 230-kV overhead line. Because the DOE released the DEIS months before the BLM and CPUC released the Draft EIS/EIR, the agencies should have been on notice that these alternatives were considered infeasible by the DOE. Nowhere in the Draft EIS/EIR, however, is the inconsistency between the two alternatives analyses explained.

[76] DEIS, pp. S-4 to S-6, 2-2, 2-10.
[77] *Id.* at pp. S-11, 2-15, 2-17.
[78] *Id.* at pp. S-11 to 12, 2-17, 2-18.
[79] Draft EIS/EIR, pp. C-26 to 27.
[80] *Id.* at pp. E-30, E-32.
[81] *Id.* at p. E-34.

With regard to the preparation of a separate DOE NEPA document for the ESJ U.S. Transmission Line project, independent of the BLM's and CPUC's preparation of a joint NEPA and CEQA document for the Tule Wind, ECO Substation, and ESJ U.S. Transmission Line projects, it should be noted that the County of San Diego is a cooperating agency with DOE, and DOE is a cooperating agency with BLM. These cooperating agency relationships are commonly used and ensure a sufficient degree of inter-agency coordination such that information used in the analyses is consistent between the documents. However, this relationship does not require that the findings of the analyses be identical, and, by the same token, allows for the two separate documents to reach the same findings, provided that DOE's analysis conforms to NEPA and is adequately documented. The final EIS is responsive to the County's comments (see response to County of San Diego comments); whatever deficiencies that were identified are addressed.

416-19

It is impossible for the public to assess whether the alternatives to the ESJ Gen-Tie proposed in the Draft EIS/EIR are actually feasible. It is also impossible for the public to understand the basis behind San Diego County, the BLM and the DOE's choice of a preferred alternative. Because an adequate alternatives analysis is so critical to both a NEPA and CEQA analysis, the DOE and San Diego County must coordinate to produce a single alternatives analysis that will allow the public and decision makers to meaningfully evaluate alternatives to the proposed action.

2. The mitigation measures proposed by the BLM and CPUC in the Draft EIS/EIR are inconsistent and in conflict with the mitigation measures proposed by the DOE in its DEIS

The BLM/CPUC and the DOE have proposed inconsistent and contrary mitigation measures in their environmental documents. Under NEPA, a DEIS must include a discussion of the "means to mitigate adverse environmental impacts."[82] Mitigation measures must be discussed for all impacts, even those that by themselves would not be considered significant.[83]

416-20

The mitigation measures discussed by the BLM and CPUC in the Draft EIS/EIR are inconsistent with the mitigation measures discussed by the DOE in its DEIS. As a result of the inconsistencies, it is impossible for the public to conclude which mitigation measure will be adopted for the ESJ Gen-Tie. The DOE must work with San Diego County to revise the proposed mitigation measures so that the agencies rely on a single, consistent document to support their actions.

For example, while both the DEIS prepared by the DOE and the Draft EIS/EIR prepared by the BLM and CPUC propose acquisition of compensation land, the requirements for compensation land differs. The DOE DEIS will only compensate for land impacted by construction.[84] By contrast, the Draft EIS/EIR, proposes to compensate for all permanent impacts and allows compensation to include agency-approved land preservation or mitigation fee payment.[85] It also specifies that all habitat compensation and restoration on public lands must be located in areas designated for resource protection and management, and all

[82] 40 C.F.R. § 1502.16, subd. (h).
[83] Council on Environmental Quality, Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, Question 19(a).
[84] DEIS, p. 3-20.
[85] Draft EIS/EIR, p. D.2-129.

RESPONSE TO 416-20: Refer to response to comment 416-19 for discussion of consistency between the DOE EIS and the CPUC/BLM EIR/EIS.

habitat compensation and restoration on private lands must include long-term management and legal protection assurances.[86]

The DOE's DEIS assumes that the Applicant's plan to place an easement on a portion of the undeveloped property will be approved. If the plan is not approved, the DEIS asserts that "the ESJ-U.S. has sufficient land holdings in the project area to affect this change."[87] The DEIS then goes on to state that the Applicant has already developed a Conceptual Resource Management Plan, but does not include the Plan as an Appendix to the DEIS.

416-20 From two competing mitigation schemes set forth in DOE's DEIS and the Draft EIS/EIR, it is clear that the Applicant must compensate for permanent impacts to native vegetation. It is not clear, however, whether the Applicant must compensate for impacts that only occur during construction or all permanent impacts, or where the land would be put into easement and how it would be managed. If the Applicant has indeed prepared a Conceptual Resource Management Plan, this Plan must be attached to a single environmental document prepared by the DOE and San Diego County. In addition, the DOE must explain further how the mitigation plan would be assured, and cannot rely on the cryptic comment that the ESJ-U.S. has sufficient land holdings in the Project area. The inconsistencies between the two mitigation measures muddle a meaningful understanding of how the Applicant will reduce impacts to native scrub.

San Diego County and the DOE must work together to produce a single document that clearly sets forth definitive mitigation measures to reduce and avoid the impacts associated with the ESJ Gen-Tie.

III. THE PROJECT IS NOT CONSISTENT WITH THE PUBLIC INTEREST BECAUSE THE PROJECT MAY SIGNIFICANTLY IMPACT ELECTRIC RELIABILITY

416-21 In determining whether approval of the Presidential Permit is consistent with the public interest, the DOE must analyze whether the Project may impact electric reliability. Under standards articulated by the California Independent Service Operator ("CAISO"), the Project, as currently proposed, may impact electric

[86] *Id.* at p. D.2-130.
[87] DEIS, p. 3-20.

RESPONSE TO 416-21: The important issue of grid reliability is considered by DOE external to the NEPA process, in the course of evaluation of the application for the Presidential permit. The Presidential permit regulations (10 CFR 205.322 Application for Presidential Permit Authorizing the Construction) are available on the Internet at http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&rgn=div6&view=text&node=10:3.0.1.1.3.13&idno=10 (see §205.320 *et seq*). The following excerpt from these regulations describes the information required related to electricity reliability:

(3) Applications for the bulk power supply facility which is proposed to be operated at 138 kilovolts or higher shall contain the following bulk power system information:

(i) Data regarding the expected power transfer capability, using normal and short time emergency conductor ratings;

(ii) System power flow plots for the applicant's service area for heavy summer and light spring load periods, with and without the proposed international interconnection, for the year the line is scheduled to be placed in service and for the fifth year thereafter. The power flow plots submitted can be in the format customarily used by the utility, but the ERA requires a detailed legend to be included with the power flow plots;

reliability in the region. The DOE must, therefore, deny the Applicant's request for a Presidential Permit.

The CAISO grid planning standards specifies a limit of 1,150 MW of generation tripping for a single contingency.[88] Depending on other reliability criteria, however, the amount of generation that can be tripped for a specific project may be lower than the specified limit.[89] The Applicant has proposed three wind projects in Baja California, Mexico that would be transmitted over the ESJ Gen-Tie totaling 1,120 MW.[90] While the request is currently lower than the limit of 1,150 MW, approval of the ESJ Gen-Tie would allow ***up to*** 1,250 MW of renewable energy generated in Mexico to be transmitted to the United States.[91] This exceeds the CAISO limitation of 1,150 MW.

416-21 If the ESJ Gen-Tie will be a single-500 kV transmission line, the DOE must not approve the Presidential Permit unless transmission is limited to 1,150 MW to ensure compliance with CAISO grid planning standards and electric reliability in the region. If the ESJ Gen-Tie will be a double-230 kV transmission line, transmission must also be limited to the lesser of twice 1,150 MW or an amount the lines are typically capable of handling under normal conditions.

Because there are no such limitations on the carrying capacity of the ESJ Gen-Tie, the DOE must deny the Applicant's request for a Presidential Permit. The DOE cannot approve a Presidential Permit if approval would impact electric reliability in the region. Without compliance with CAISO standards, the Project may impact electric reliability and the public interest.

IV. CONCLUSION

416-22 The DOE must not approve the Project because it is not within the public interest. The DEIS prepared by the DOE does not comply with the requirements of NEPA, and, therefore, does not ensure that the Project would not significantly impact the environment. In addition, the Project as currently proposed would

[88] Cal. Independent Service Operator, Planning Standards, Feb. 7, 2002, p. 5, ISO G4 (hereafter CAISO); see also Cal. Independent Service Operator, Grid Planning Standards, Draft Revision 1, June 19, 2008, ISO G4.
[89] See CAISO, ISO G4.
[90] Draft EIS/EIR, p. F-5.
[91] *Ibid.*

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(iii) Data on the line design features for minimizing television and/or radio interference caused by operation of the subject transmission facilities;

(iv) A description of the relay protection scheme, including equipment and proposed functional devices;

(v) After receipt of the system power flow plots, the ERA may require the applicant to furnish system stability analysis for the applicant's system.

Additional information related to the Presidential permit process and regulations is available online at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&rgn=div6&view=text&node=10:3.0.1.1.3.13&idno=10

RESPONSE TO 416-22: The comment is noted.

416-22 impact electric reliability in southern California. The Presidential Permit must, therefore, be denied.

Local 569 and its members appreciate this opportunity to comment and appreciate the DOE considering our views.

Sincerely,

Robyn C. Purchia

RCP:cnh

Attachments:

Attachment A:	Local 569 Letter to the CPUC and BLM (without attachments)
Attachment B:	CEQ Memo to Heads of Agencies on Transboundary Effects
Attachment C:	The Zoological Society of San Diego Map of Condor Flight
Attachment D:	Presence and Movement of California Condors Near Proposed Wind Turbines
Attachment E:	USFWS and CDFG Letter
Attachment F:	Photographs of Peninsular bighorn sheep
Attachment G:	U.S. Air Force Fact Sheet

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March 4, 2011

BY EMAIL AND OVERNIGHT MAIL

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Re: Comments on the Draft Environmental Impact Statement and Draft Environmental Impact Report for the East County Substation/ Tule Wind/ Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fischer and Mr. Thomsen:

We are writing on behalf of the International Brotherhood of Electrical Workers, Local 569 ("Local 569") and its members to comment on the Energia Sierra Juarez Gen-Tie ("ESJ Gen-Tie") and connected Energia Sierra Juarez Wind Farms ("ESJ Wind Farms") portion of the East County ("ECO") Substation, Tule Wind and ESJ Gen-Tie Draft Environmental Impact Statement and Draft Environmental Impact Report ("Draft EIS/EIR"). The ESJ Gen-Tie and the ESJ Wind Farms together are referred to in this letter as the "Project."

The ESJ Gen-Tie requires a Presidential Use Permit from the Department of Energy ("DOE") and a Major Use Permit from San Diego County to connect the ESJ Wind Farms in northern Baja California, Mexico to the existing Southwest Power Link Transmission Line through the ECO Substation.[1] The ESJ Wind Farms were granted a conditional approval from Mexico's environmental ministry, Secretaria de Medio Ambiente y Recursos Naturales ("SEMARNAT"). SEMARNAT's approval of the ESJ Wind Farms may still be challenged administratively.

[1] Dudek, Environmental Impact Report/Environmental Impact Statement for East County Substation, Tule Wind, and Energia Sierra Juarez Gen-Tie Projects (Dec. 2010), pp. A-13, A-19, A-20, B-9 (hereafter Draft EIS/EIR).

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Local 569 has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for business and industry to expand in the region, and by making it less desirable for businesses to locate and people to live there. Indeed, continued degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduce future employment opportunities. In this case, the Project would also cause significant adverse socioeconomic impacts to Imperial and San Diego Counties and the southern California regional economy by facilitating the development of large-scale renewable energy projects in Mexico. These socioeconomic impacts, including the loss of employment opportunities, would in turn result in physical changes to the environment, such as urban decay and blight.

As explained more fully below, the Draft EIS/EIR does not comply with the National Environmental Policy Act ("NEPA") or the California Environmental Quality Act ("CEQA"). A Draft EIS/EIR must include a description and analysis of connected actions that are part of the whole of the action. The ESJ Wind Farms are connected to and part of the ESJ Gen-Tie Project. Nevertheless, the Bureau of Land Management ("BLM") and California Public Utilities Commission ("CPUC") did not describe the ESJ Wind Farms in the Draft EIS/EIR, and, therefore, failed to alert the public and decision makers of the Wind Farms' environmental consequences before they occur.

The BLM and the CPUC also failed to take a hard look or adequately analyze all of the potential impacts to the United States of the Project, as required by NEPA and CEQA. The Project may have significant impacts on biological resources, hazards associated with wildfires and socioeconomics in the United States that have not been disclosed or mitigated in the Draft EIS/EIR.

Finally, San Diego County and the DOE must rely on a single document to support their approvals of a Major Use Permit and Presidential Permit for the ESJ Gen-Tie. San Diego County's reliance on the Draft EIS/EIR prepared by the BLM and CPUC and the DOE's separate reliance on its own Draft EIS violates the express guidance of NEPA and CEQA. NEPA and CEQA strongly encourage State and federal agencies to prepare a single document to avoid duplication of materials and resources, as well as unnecessary delay.

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In this case, the separate environmental documents prepared for the Project demonstrate the need for a single analysis and illustrate the rationale for the NEPA and CEQA policies in favor of a single document. The Draft EIS/EIR prepared by the BLM and CPUC and the Draft EIS prepared by the DOE contain numerous inconsistencies and conflicting information and analysis. San Diego County and the DOE are not only duplicating resources and causing unnecessary delay, but potentially relying on inconsistent and conflicting alternatives and mitigation measures to minimize the ESJ Gen Tie's environmental impacts. This approach precludes a meaningful analysis of alternatives, impairs the enforceability of mitigation measures and undermines public disclosure and informed decision making.

For these reasons, the BLM and CPUC may not certify the Draft EIS/EIR without describing the ESJ Wind Farms, fully assessing all impacts of the proposed Project and recirculating a Revised Draft EIS/EIR to the public. San Diego County also may not rely on a deficient and inconsistent document to support its approval of a Major Use Permit for the ESJ Gen-Tie Project.

I. THE DRAFT EIS/EIR DOES NOT COMPLY WITH NEPA OR CEQA BECAUSE IT DOES NOT INCLUDE A COMPLETE DESCRIPTION OF THE ESJ WIND FARMS

To comply fully with NEPA and CEQA, the CPUC and BLM must describe the ESJ Wind Farms and disclose all potential impacts to the United States in a re-circulated EIS/EIR. Because the ESJ Wind Farms are "connected actions" to the ESJ Gen-Tie and part of the "whole of the action" under review, the CPUC and BLM have a legal duty to include a complete and accurate description of the ESJ Wind Farms component of the Project and to disclose and evaluate all potential impacts so that decision makers and the public are fully informed before harm is done to the environment.

A. The ESJ Wind Farms are "connected actions" and part of the "whole of the action" within the meaning of NEPA and CEQA

Under NEPA, proposals that are so closely related that they are, in effect, a single course of action must be reviewed in the same NEPA document.[2] Federal

[2] 40 C.F.R. 1502.4 subd. (a)

agencies may not chop or segment connected actions into small pieces to avoid application of NEPA, or avoid a more detailed assessment of a project's environmental impacts.[3]

Similarly, under CEQA, a "project" is defined broadly to encompass the "whole of an action."[4] As the Guidelines state, "the term 'project' has been interpreted to mean far more than the ordinary dictionary definition of the term."[5] Any activity "which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment" constitutes a "project" or the "whole of the action."[6] This includes, but is not limited to, "later phases of the project, and any secondary, support, or off-site features necessary for its implementation."[7]

In this case, the ESJ Gen-Tie is dependent on and connected to implementation of the ESJ Wind Farms in Mexico. The Draft EIS/EIR specifically states that the "primary objective" of the ESJ Gen-Tie is "to transmit approximately 1,200 MW of renewable energy from a wind farm project in northern Baja California, Mexico."[8] There is no other stated purpose for the ESJ Gen-Tie except to carry renewable energy generated in Mexico to the United States. Indeed, the BLM and CPUC expressly acknowledge the obligation to analyze impacts of the ESJ Wind Farms because they are connected to the proposed actions and part of the whole of the action.[9]

B. Because the ESJ Wind Farms are "connected actions" and part of the "whole of the action," the Draft EIS/EIR must include an accurate and complete description of the ESJ Wind Farms

An accurate, complete and consistent project description is necessary for the public and decision makers to understand the effects of the proposed action and its

[3] 40 C.F.R. 1508.25, subd. (a).
[4] Pub. Resources Code, §§ 21065, 21080, subd. (a); 14 Cal. Code Regs. (hereinafter "CEQA Guidelines"), §§ 15002, subd. (d), 15003, subd. (h), 15165, 15378, Appendix G.
[5] CEQA Guidelines, § 15002, subd. (d).
[6] Pub. Resources Code, § 21065.
[7] CEQA Guidelines, Appendix G.
[8] Draft EIS/EIR, p. A-13.
[9] *Id.* at p. ES-11.

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alternatives.[10] "A clear description results in more focused and meaningful public input and [CPUC and] BLM participation, a more complete identification of issues, development of reasonable alternatives, sound analysis and interpretation of effects, focused analysis and a sound and supportable decision."[11] "Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost . . . ."[12]

The courts interpreting NEPA have held that "[w]here the information in the initial EIS was so incomplete or misleading that the decisionmaker and the public could not make an informed comparison of the alternatives, revision of an EIS [was] necessary to provide a reasonable, good faith, and objective presentation of the subjects required by NEPA."[13] Similarly, courts applying CEQA requirements have repeatedly held that "[a]n accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR."[14]

The Draft EIS/EIR at issue here contains a cryptic and extremely generalized description of the ESJ Wind Farms. It simply states that ESJ U.S. Transmission, LLC, is proposing "several phases" of wind projects with buildout anticipated to generate approximately 1,250 MW.[15] In addition, the Draft EIS/EIR discloses that the ESJ Wind Farms are planned to interconnect with the ECO Substation through the ESJ Gen-Tie.[16] This vague description does not provide the public or decision makers with any of the information necessary to assess the Projects' impacts. There is no information regarding the location of the ESJ Wind Farms, the height of the turbines, the design of the wind farms and mitigation measures that have been imposed by the Mexican government.

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[10] See 40 C.F.R. §§ 1502.4, 1502.15; see also *Laguna Greenbelt v. U.S. Dept. of Transportation* (1994) 42 F.3d 517, 528-29 (reviewing plaintiff's claim that inconsistent definition resulted in misleading analysis of project's positive and negative effects).
[11] Bur. of Land Management, National Environmental Policy Act Handbook, Jan. 2008, p. 43 (hereafter NEPA Handbook); see *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 192-93.
[12] *County of Inyo v. City of Los Angeles, supra*, 71 Cal App 3d at 193.
[13] *Natural Resources Defense Council v. U.S. Forest Service* (9th Cir. 2005) 421 F.3d 797, 811 (citing *Animal Defense Council v. Hodel* (9th Cir. 1988) 840 F.2d 1432, 1439).
[14] *County of Inyo v. City of Los Angeles, supra*, 71 Cal.App.3d at 193.
[15] Draft EIS/EIR, p. 2-5.
[16] *Id.* at pp. A-15, B-9.

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A more complete description of the ESJ Wind Farms is contained in the Recirculated Draft EIR/Supplemental Draft EIS ("RDEIR/SDEIS") for the Sunrise Powerlink Project, even though the ESJ Wind Farms project was in an early planning stage at the time of the October 2008 Sunrise Powerlink document.[17] The Sunrise document stated that the ESJ Wind Farms would be installed on 7,500 acres along the eastern side of the Sierra de Juarez Mountains.[18] In addition, Ricardo Moreno, the Director of International Public Relations of Sempra Energy Mexico, stated the wind project would use 2.5 MW turbines for its first phase.[19] Because the ESJ Wind Farms project was in an early stage, however, the size and location of subsequent phases of the project had not been determined, nor had the specific design of the first phase been established.[20]

Because the ESJ Wind Farms have undergone environmental review and approval by SEMARNAT, more information regarding subsequent phases and the specific design of the Wind Farms should be available and must be included in the Draft EIS/EIR. Without information regarding the size and location of subsequent phases, as well as the specific design of the Wind Farms, the environmental impacts to sensitive biological resources, hazards related to wildfires and socioeconomics in the United States cannot be meaningfully assessed.

C. The BLM and CPUC must describe the ESJ Wind Farms so that the public and decision makers can meaningfully assess all of the Project's impacts

An EIS and EIR are intended to inform decision makers and the public about the potential, significant environmental impacts of a project before harm is done to the environment.[21] Under CEQA, an EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return."[22]

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[17] Cal. Public Utilities Com. and Bur. of Land Management, Recirculated Draft EIR/Supplemental Draft EIS Sunrise Powerlink Project, Oct. 2008, p. 2-4 (hereafter Sunrise Powerlink RDEIR/SDEIS).
[18] *Ibid.*
[19] *Ibid.*
[20] *Id.* at p. 2-8.
[21] CEQA Guidelines, § 15002, subd. (a)(1); *Berkeley Keep Jets Over the Bay Com. v. Bd. of Port Comrs. of the City of Oakland* (2001) 91 Cal.App.4th 1344, 1354 (hereafter *Berkeley Jets*); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810; *Robertson v. Methow Valley Citizens Council* (1989) 490 U.S. 332, 350; *Dubois v. U.S. Dept. of Agriculture* (1996) 102 F.3d 1273, 1284.
[22] *County of Inyo v. Yorty, supra*, 32 Cal.App.3d 795 at p. 810.

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Similarly, under NEPA, an EIS serves as a means of assessing "the environmental impact of proposed agency actions, rather than justifying decisions already made."[23] To fulfill these functions, the discussion of impacts in a Draft EIS/EIR must be detailed, complete and reflect "a good faith effort at full disclosure."[24]

The BLM and CPUC must provide an accurate and complete description of the ESJ Wind Farms component of the Project and must disclose all impacts associated with the ESJ Wind Farms if the agencies are to meet their legal obligation to consider the whole of the action under review. As discussed below, development of the ESJ Wind Farms may have numerous significant effects on sensitive biological species, impacts associated with wildfire hazards and socioeconomics in the United States that have not been adequately addressed.

II. THE DRAFT EIS/EIR DOES NOT CONTAIN A HARD LOOK OR ADEQUATELY ANALYZE ALL POTENTIAL PROJECT IMPACTS AS REQUIRED BY NEPA AND CEQA AND PROPOSE APPROPRIATE AND FEASIBLE MITIGATION MEASURES

A meaningful analysis and evaluation of all potentially significant environmental effects of a project is central to the purposes behind NEPA and CEQA. NEPA requires that agencies take a "hard look" at the environmental consequences of a proposed action.[25] A hard look is defined as a "reasoned analysis containing quantitative or detailed qualitative information."[26]

An EIS must provide a full and fair discussion of every significant impact, as well as inform decision makers and the public of reasonable alternatives which would avoid or minimize adverse impacts.[27] It should be "concise, clear, to the point, and supported by evidence that the agency has made the necessary environmental analyses."[28] A concise and clear EIS that is supported by evidence ensures that federal agencies are informed of environmental consequences *before* making decisions and that the information is available to the public.[29] As the

[23] 40 C.F.R. 1502.2, subd. (g).
[24] CEQA Guidelines, § 15151; 40 C.F.R. 1502.1.
[25] *Robertson v. Methow Valley Citizens Council, supra*, 490 U.S. at 350; *Dubois v. U.S. Dept. of Agriculture, supra*, 102 F.3d at 1284.
[26] NEPA Handbook, p. 56.
[27] 40 C.F.R. § 1502.1.
[28] *Ibid.*
[29] *Inland Empire Public Lands Council v. U.S. Forest Service* (1996) 88 F.3d 754, 758.

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Council on Environmental Quality explains in its regulations, "[e]nvironmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made."[30]

CEQA is also designed to inform decision makers and the public about the potential, significant environmental effects of a project.[31] To fulfill this function, the discussion of impacts in an EIR must be detailed, complete and "reflect a good faith effort at full disclosure."[32] An adequate EIR must contain facts and analysis, not just an agency's conclusions.[33] CEQA requires an EIR to disclose all potential direct and indirect, significant environmental impacts of a project.[34]

As discussed in detail below, the analysis presented by the Draft EIS/EIR fails to meet NEPA and CEQA legal standards. The Draft EIS/EIR fails to disclose and evaluate all potentially significant environmental impacts of the Project. Specifically, the Draft EIS/EIR fails to analyze the impacts the ESJ Wind Farms may have on sensitive biological resources, risks associated with wildfires and socioeconomics in the United States.

A. The Project may have significant impacts on sensitive biological resources in the United States

1. The Project may have significant impacts to California condors in the United States

The California condor is both a federal and State-listed endangered species, a California fully-protected species and is protected under the Migratory Bird Treaty Act.[35] Prohibitions under the Migratory Bird Treaty Act apply to birds in Mexico under international conventions between the United States and Mexico. The BLM and CPUC have failed to assess the Project's impacts to this highly-protected species and ensure compliance with the Endangered Species Act, the California Endangered Species Act and the Migratory Bird Treaty Act.

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[30] 40 C.F.R. § 1502.3, subd. (g).
[31] CEQA Guidelines, § 15002, subd. (a)(1).
[32] CEQA Guidelines, § 15151; *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 721-22.
[33] *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 568.
[34] Pub. Resources Code, § 21100, subd. (b)(1); CEQA Guidelines, § 15126.2, subd. (a).
[35] See Draft EIS/EIR, p. D.2-51.

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Development of the Project may impact California condors migrating to the United States from Baja California, Mexico. The Zoological Society of San Diego released a satellite map indicating the location fixes of a three-year-old female condor that was tracked moving north from the Baja release site across the United States/Mexico border.[36] The female condor was tracked in the area around La Rumorosa where the ESJ Wind Farms would be located, and entered the United States near the site of the ESJ Gen-Tie. This was the first record of a condor entering the United States from Baja California, and the first wild condor seen in San Diego County since 1910.[37]

Historically, California condors were found from British Columbia in the north to Baja California in the south.[38] As of March 31, 2010, there were only 169 California condors recorded in the wild.[39] If the population of California condors increases – as is the hope – the species could forage over the site during the lifetime of the ESJ Wind Farms. Operation of the ESJ Wind Farms and the ESJ Gen-Tie, however, may impede California condor viability.

Studies have shown that California condors may be vulnerable to turbine strikes.[40] California condors exhibit behavior and physical features that may put them at high risk for wind turbine-related mortality. For example, condors' flapping flight is very clumsy making them less maneuverable around objects on the landscape.[41] In addition, because California condors are scavengers, they exhibit pronounced curiosity for novel objects in their environment and may, therefore, be attracted to wind turbines.[42] The San Diego Audubon Society has stated that "there is a concern that these wind and transmission line projects would kill condors that are and will be re-colonizing the area."[43]

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[36] The Zoological Society of San Diego, 2008 (Attachment A)
[37] Draft EIS/DEIR, p. D.2-52.
[38] H.T. Harvey and Associates, Presence and Movement of California Condors Near Proposed Wind Turbines, Ventana Wildlife Society, Nov. 15, 2007, p. 4 (hereafter HT Harvey and Associates, 2007) (Attachment B).
[39] Draft EIS/DEIR, p. D.2-53.
[40] HT Harvey and Associates, p. 5
[41] *Ibid.*
[42] *Id.* at pp. 5-6.
[43] Letter from Shannon Dougherty, Conservation Chair, San Diego Audubon Society, to Dr. Jerry Pell, NEPA Document Manager, Office of Electricity Delivery and Energy Reliability, p. 2 (Attachment C).

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Despite the sensitivity of the species and its recorded occurrence over the sites of the ESJ Wind Farms and ESJ Gen-Tie, the Draft EIS/EIR does not contain any analysis of the Project's potential impacts, nor does it propose any specific mitigation measures for the species. In addition, there is no indication that the Mexican government has proposed any measures to avoid or mitigate impacts to California condors.

The CPUC and BLM must describe the location and design of the ESJ Wind Farms so that impacts to California condors may be disclosed and assessed by the public and decision makers. If SEMARNAT has imposed any mitigation measures during its approval process, this must also be disclosed in the Draft EIS/EIR. Currently, there is no information in the record to ensure that impacts from the Project to California condors will not be significant, or that the CPUC and BLM's approval of the Draft EIS/EIR for the ESJ Gen-Tie will comply with federal and State law. The BLM and CPUC must take a hard look at the ESJ Wind Farms' impacts to the California condor in a Revised Draft EIS/EIR.

2. The Project may have significant impacts to Peninsular bighorn sheep in the United States

As the Draft EIS/EIR recognizes, Peninsular bighorn sheep are a federally-endangered and California State-threatened and fully-protected species.[44] The BLM and CPUC's failure to describe ESJ Wind Farms in the Draft EIS/EIR has led to a failure to assess the overall Project's impacts to Peninsular bighorn sheep moving between Baja California, Mexico and the United States.

According to the United States Fish & Wildlife Service and California Department of Fish and Game ("CDFG"), Peninsular bighorn sheep are known to occur in the Sierra de Juarez mountains where the ESJ Wind Farms would be located.[45] San Diego County has also stated that while the U.S. Border Fence is normally a barrier for wildlife movement, a portion of the Project parcels are located in the mountainous terrain where the border fence is not present. Thus, according to the County, this area "could be considered a wildlife corridor for Peninsular

[44] Draft EIS/DEIR, p. D.2-56.
[45] Letter from Karen Goebel, Assistant Field Supervisor, U.S. Fish and Wildlife Service and Helen R. Birss, Environmental Program Manager, Cal. Dept. of Fish and Game, to Billie Blanchard, Cal Public Utilities Com. and Lynda Kastoll, Bur. of Land Management, Aug. 25, 2008, Enclosure (Attachment D).

Bighorn Sheep movement between the United States and Mexico.[46] The Draft EIS/EIR itself acknowledges that Peninsular bighorn sheep migrate across the border to breed with other populations.[47]

Despite the clear evidence that Peninsular bighorn sheep may move from areas affected by the Project to the United States and the Draft EIS/EIR's own recognition of that fact, the document fails to analyze all potential impacts on bighorn sheep, or propose any alternatives or measures that would mitigate such impacts. The Draft EIS/EIR must indicate what conditions SEMARNAT has imposed to reduce impacts to bighorn sheep from the ESJ Wind Farms component. Potential mitigation measures could include limiting construction activities outside of the lambing season and period of greatest water need.[48] The Draft EIS/EIR must also describe fencing on the ESJ Wind Farms site that could funnel or impede Peninsular bighorn sheep movement.

3. The Project may have significant impacts to Barefoot banded geckos in the United States

The Barefoot banded gecko is a California-threatened species, as well as a BLM designated sensitive species.[49] This species is secretive and is not easily detected; however, it is known from the eastern edge of the Peninsular Ranges from Palms to Pines Highway State Route 74 to the Baja California, Mexico border.[50] While the Draft EIS/EIR states that the Barefoot banded gecko has low potential to occur on the ESJ Gen-Tie site, the species may occur on the ESJ Wind Farms site and migrate to the United States. For example, the Sunrise Powerlink Project RDEIR/SDEIS assumes that the Barefoot banded gecko is present on the ESJ Wind Farms site.[51]

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[46] Letter from Eric Gibson, Director, Dept. of Planning and Land Use, San Diego County, to Dr. Jerry Pell, Office of Electricity Deliverability and Energy Reliability, U.S. Dept. of Energy, Nov. 24, 2010, Attachment A, p. 3 (Attachment E); see also photographs of Bighorn sheep crossing rocky terrain in Attachment F.
[47] Draft EIS/EIR, p. D.2-59.
[48] See Sunrise Powerlink RDEIR/DEIS, Response to Comment Set F0006, F0006-2.
[49] See Draft EIS/EIR, p. D.2-40; Bur. of Land Management, Special Status Animals in Cal., Including BLM Designated Special Status Species <http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/pdfs/wildlife.Par.13499.File.dat/BLM%20Sensitive%20Animal%20Update%20SEP2008.pdf> (as of Mar. 3, 2011).
[50] Draft EIS/EIR, pp. D.2-40, D.2-148.
[51] Sunrise Powerlink Project, RDEIR/SDEIS, p. 2-30.

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If Barefoot banded gecko are indeed present on the ESJ Wind Farms site, they could cross the border in the mountainous terrain that is not occupied by the border fence and move into the United States. The Draft EIS/EIR must, therefore, evaluate whether Project conditions on the ESJ Wind Farms site will impact the Barefoot banded gecko and impede cross-border movement. This evaluation may only be conducted, however, once a full description of the ESJ Wind Farms has been provided.

4. The Project may have significant impacts to Golden eagles in the United States

The Golden eagle is a State fully-protected species, a CDFG-listed sensitive species and on the CDFG watch list, and protected under the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act and the Lacey Act.[52] Sempra Energy contracted San Diego Zoo Conservation Research to conduct a full-scale survey and analysis of Golden eagle population characteristics, habitat use and movement behaviors throughout the planned ESJ Wind Farms site.[53] Researchers from San Diego Zoo Conservation Research surveyed the area for three days via helicopter.[54] During the survey four nests were observed along with several Golden eagles.[55]

Because Golden eagles and nests were observed on the ESJ Wind Farms site, development of the ESJ Wind Farm may significantly impact Golden eagles in Mexico, as well as Golden eagles that may forage over land in the United States. As the Draft EIS/EIR recognizes, it is unlikely that Golden eagles would nest within the immediate vicinity of wind turbines.[56] Construction of the ESJ Wind Farms could, therefore, lead to nest abandonment.

Construction of the wind turbines may also lead to direct mortality of Golden eagles. The propensity of Golden eagles to seek out strong winds to gain elevation without expending much flying effort can bring the birds into proximity with wind

[52] See Draft EIS/EIR, p. D.2-149.
[53] James Sheppard, *Golden Eagle Helicopter Survey* (Mar. 23, 2009) <http://blogarchives.sandiegozoo.org/blog/2009/03/23/golden-eagle-helicopter-survey/> (as of Mar. 3, 2011) (hereafter Sheppard, 2009).
[54] *Ibid.*
[55] *Ibid.*
[56] Draft EIS/EIR, p. D.2-175.

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turbines.[57] Finally, because Golden eagles can range hundreds of miles while foraging for their food, nest abandonment and mortality caused by development of the ESJ Wind Farms, could impact Golden eagles that normally forage over the United States.[58]

It is unclear whether Sempra has released the findings of the Golden Eagle Helicopter Survey to the public and decision makers. A search of documents on the DOE, CPUC and Sempra Web sites did not reveal the Survey. It is also unclear whether SEMARNAT has imposed any conditions on the Applicant to reduce impacts to Golden eagles. This information must be provided in a Revised Draft EIS/EIR that is released to the public. The current Draft EIS/EIR prepared by BLM and the CPUC fails to adequately analyze the potential impacts to this species of the ESJ Wind Farms and the ESJ Gen-Tie.

5. The Project may have significant impacts to the Quino checkerspot butterfly in the United States

The Quino checkerspot butterfly is a federally-listed endangered species.[59] Although it is unclear whether focused, protocol-level surveys for this species were conducted on the ESJ Wind Farms site, the Sunrise Powerlink RDEIR/SDEIS concluded that Quino checkerspot butterfly may occur on the site.[60] In comments on the Sunrise Powerlink, the Center for Biological Diversity and the Sierra Club stated that the Quino checkerspot butterfly population in the United States is linked to the population in Mexico and may depend on it for its health.[61] Thus, impacts to Quino checkerspot butterfly populations in Mexico may indirectly impact populations in the United States. The Draft EIS/EIR must describe the ESJ Wind Farms and assess the likelihood that Quino checkerspot butterfly may occur on the site so that the public and decision makers can assess the impacts.

[57] Sheppard, 2009.
[58] See *ibid.*
[59] Draft EIS/EIR, p. D 2-39.
[60] Sunrise Powerlink RDEIR/DEIS, p. 2-15.
[61] Letter from Steven Siegel, Staff Attorney, Center for Biological Diversity and Justin Augustine, Staff Attorney, Center for Biological Diversity, to CPUC/BLM re Recirculated draft environmental impact report/supplemental draft environmental impact statement for the Sunrise powerlink transmission project, Aug. 25, 2008, p. 4-810.

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6. The Project may have significant impacts on the goals of *Las Californias Binational Reserve Conservation Initiative*

The Nature Conservancy, the Conservation of Biology Institute and Pronatura prepared *Las Californias Binational Conservation Initiative* in 2004 to foster a shared conservation vision for the United States/Mexico border.[62] The border region is home to more than 400 endangered, threatened and sensitive species.[63] This sensitive area is being rapidly destroyed, however, by urbanization of the San Diego, Tijuana and Tecate regions and their adjacent suburbs.[64]

The *Initiative* and the importance of the area to biodiversity are not mentioned in the Draft EIS/EIR. Unchecked development of the Project may undermine the goals of *Las Californias Binational Conservation Initiative* and destroy biological resources in both the United States and Mexico. The BLM and CPUC must include a complete description of the Project and take a hard look at its potential impacts so that a complete picture of the Project's impacts to biodiversity can be understood.

B. The Project may have potentially significant impacts to the United States associated with wildfire hazards

The Draft EIS/EIR recognizes that wildfires caused by the wind turbines in Mexico could have significant impacts on resources in the United States.[65] It fails to describe, however, the location of the wind turbines and measures that will be taken to reduce potential fire risks from the turbines. The lack of information contained in the Draft EIS/EIR undermines a meaningful analysis of the Wind Farms' impacts.

There is a high risk of fire from wind turbine power generation. The Confederation of Fire Protection Associations ("CFPA") in Europe developed Guidelines to protect against wind turbine fires. In the Guidelines, CFPA states

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[62] See Pronatura, Conservation Biology Institute and the Nature Conservancy, *Las Californias Binational Conservation Initiative: A Vision for Habitat Conservation in the Border Region of California and Baja California*, Sept. 2004 (hereafter Las Californias Binational Conservation Initiative).
[63] *Id.* at p. 1.
[64] *Id.* at p. 3.
[65] Draft EIS/EIR, p. A-4.

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that fire damage may be caused by machinery breakdowns, electrical installations and resonant circuits.[66] The most frequent causes of wind turbine fires, however, are lightening strikes.[67] The risk of lightning strikes is elevated due to the exposed locations (often at a higher altitude) and the large height of the turbines.[68] If a turbine is struck by lightning it may cause damage to the turbine itself, secondary fires on the ground where the turbine is located and service interruption exposure.[69]

The ESJ Wind Farms would also be located in an area of high wildfire risk. In Mexico, wildfires can spread rapidly to the west and south, all the way to the Mexican coastal communities.[70] Despite the high risk of fire associated with the turbines themselves and due to the location of the ESJ Wind Farms, the Draft EIS/EIR only considers the impacts to Mexico from ignition caused by the Tule Wind turbines.[71] The Draft EIS/EIR does not assess whether ignition caused by the ESJ Wind Farms or other Project components could include loss of personal property, injury, or loss of life as well as environmental impacts in the United States.

The Draft EIS/EIR must describe the location of the turbines, any fire safety measures that have been imposed by SEMARNAT and any emergency response plans that are in place to avoid catastrophic wildfires. Without this information the BLM and CPUC cannot adequately analyze all impacts of the ESJ Wind Farms to the United States.

C. Transmitting energy from the ESJ Wind Farms through the ESJ Gen-Tie may have potentially significant socioeconomic impacts to the United States

The Draft EIS/EIR fails to address the socioeconomic impacts of developing large-scale renewable energy projects in Mexico rather than in the United States. The Draft EIS/EIR also fails to address the related socioeconomic effects caused by the ESJ Gen-Tie and East County Substation's facilitation of future renewable energy projects in Mexico, as opposed to development of this important burgeoning

[66] CFPA Europe, European Guideline, Wind turbines fire protection guideline, Guideline No. 22:2010F, Apr. 19, 2010, pp. 7-9 (hereafter Wind Turbine Fire Guidelines) (Attachment G).
[67] *Id.* at p. 10.
[68] *Ibid.*
[69] *Id.* at pp. 6-7.
[70] Draft EIS/EIR, p. D.15-24.
[71] *Id.* at pp. D.15-24 to 25.

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industry in Southern California. The BLM and CPUC must revise the socioeconomic impact analysis in a Draft EIR/EIS that is recirculated to the public.

Under CEQA, an EIR must identify and focus on the significant environmental impacts of a project. Specifically, the "[d]irect and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects."[72] Both direct and "reasonably foreseeable" indirect consequences must be considered when determining the significance of a project's environmental effect.[73] When the economic or social effects of a project cause a physical change, this change is to be regarded as a significant effect in the same manner as any other physical change resulting from the project.[74]

NEPA's requirement for analyzing socioeconomic impacts is similar to CEQA's. Under NEPA, the federal agency preparing an EIS must analyze social and economic impacts if they are interrelated with physical impacts.[75] Federal agencies have the additional responsibility to analyze a project's effects with respect to environmental justice.[76] Further, a Presidential Permit required for transmission must be "consistent with the public interest."[77] Thus, federal agencies have a heightened duty to consider the socioeconomic impacts that would be caused by a proposed project.

Renewable energy development in Mexico may supplant renewable energy development in the United States. Because renewable energy jobs are critical to the health of San Diego and Imperial Counties' economies, facilitating renewable energy development in northern Mexico may cause adverse physical changes to the environment in the United States, such as urban decay and blight. Because urban

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[72] CEQA Guidelines, § 15126.2, subd. (a).
[73] CEQA Guidelines, § 15064, subd. (d).
[74] CEQA Guidelines, § 15064, subd. (e); *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1205.
[75] See 40 C.F.R. § 1508.14; see also, e.g., *Rochester v. U.S. Postal Service* (1976) 541 F.2d 967 (placing postal service center outside urban core could cause increased commuting, loss of inner-city jobs and moving to suburbs, leading to economic and physical downtown deterioration and downtown post office abandonment, all contributing to urban decay and blight).
[76] See Exec. Order No. 12898, 59 Fed. Reg. 7629 (Feb. 16, 1994); see also Dept. of Justice, *Guidance Concerning Environmental Justice* <http://www.justice.gov/archive/ecurl/ejguide.html> (as of Mar. 3, 2011).
[77] Exec. Order No. 10485, § 1, 18 Fed. Reg. 5397 (Sept. 3, 1953) (as amended by Exec. Order No. 12114, 44 Fed. Reg. 1957 (Jan. 4, 1979)).

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decay is a potentially significant physical change to the environment, the CPUC and BLM must analyze the socioeconomic impacts and propose any necessary mitigation measures.

1. Renewable energy development in northern Mexico may supplant development in California

Both the federal government and California have adopted polices, provided incentives and established goals to increase renewable energy development in the United States. One of the purposes behind the push for renewable energy generation in the United States is to foster economic growth and create employment opportunities in the United States. Federally, renewable energy generation is facilitated through federal tax credits and the American Recovery and Reinvestment Act.

In California, the Renewables Portfolio Standard ("RPS") sets some of the most ambitious renewable energy standards in the country. The RPS program, administered by the CPUC, the California Energy Commission and Air Resources Board, requires investor-owned utilities, electric service providers, publicly owned utilities and community choice aggregators to increase procurement from eligible renewable energy resources. In 2002, the Legislature established the original goal of 20% RPS by 2020 and in 2006 accelerated that goal. Since then, Governor Schwarzenegger increased that goal by Executive Order to 33% RPS by 2020. If enacted, pending legislation would codify the 33% RPS standard [78]

Despite the federal incentives and State mandates, facilitating renewable energy development in Mexico may supplant renewable energy development in the United States. First, on average, renewable energy is significantly more expensive to generate than energy derived from conventional fossil-fuel production.[79] Utilities, therefore, only procure the renewable energy capacity they are required to by law. In California, the RPS allows utilities to pass the increased costs of

[78] See Sen. Bill No. x1 2, as introduced Feb. 1, 2011 < http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sbx1_2_bill_20110201_introduced.html> (as of Mar. 3, 2011); see also Sen. Bill No. 23, as introduced Dec. 6, 2010 <http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sb_23_bill_20101206_introduced.pdf> (as of March 3, 2011).

[79] See Div. of Ratepayer Advocates, *Green Rush: Investor-Owned Utilities' Compliance with the Renewables Portfolio Standard* (Feb. 2011), p. 7 <http://www.dra.ca.gov/NR/rdonlyres/0CB0B986-E83B-462A-BA62-804EDAE43B820/DRAReportPUBLICVERSIONFeb2011.pdf> (as of March 3, 2011).

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renewable energy along to retail consumers. Retailers do not have an incentive to procure renewable energy beyond the amount required to fulfill their RPS target. In this zero-sum game, the more renewable energy projects in Mexico deliver electricity to satisfy California's RPS, the less demand there will be for renewable energy development in California.

Further, transmission capacity in Southern California and in the Project area is limited, even with the recently approved Sunrise Powerlink. Thus, if more renewable and conventional energy projects built in Mexico use transmission in the United States, there will be less available transmission capacity for renewable energy development in the United States. The loss of domestic jobs to Mexico will adversely affect the regional economy in Imperial County and San Diego County.

2. Renewable energy jobs are critical to the future health of San Diego County and especially Imperial County

As of December 2010, El Centro had the highest unemployment rate among American cities, at 28.3%.[80] Unemployment rates for Imperial County as a whole are similarly well above State and national averages.

Renewable energy development presents one of the few areas of opportunity for economic development in Imperial County. The CPUC has recognized the tremendous potential for renewable energy projects in Imperial County and has adopted multiple orders intended to facilitate that development.[81]

Developing renewable energy projects in Imperial County has great potential to address the demand for renewable energy created by the RPS goals.[82] The ESJ Wind Farms in Mexico and approval of the ESJ Gen-Tie threaten this development by facilitating renewable energy projects in Mexico, where less stringent and

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[80] See U.S. Bur. of Labor Statistics *Unemployment Rates for Metropolitan Areas* (Dec. 7, 2010) <http://www.bls.gov/web/metro/laumetrk.htm> (as of Mar. 3, 2011).
[81] See, e.g., Cal. Public Utilities Com., In the Matter of the Application of San Diego Gas & Electric Company (U 902 E) for a Certificate of Public Convenience and Necessity for the Sunrise Powerlink Transmission Project, Decision 08-12-058, pp. 63-68; see also Cal. Public Utilities Com., Decision Conditionally Accepting Procurement Plans for 2009 Renewables Portfolio Standard Solicitations and Integrated Resource Plan Supplements, Decision 09-06-018, §§ 4.1-4.2, 6.3.
[82] See Summit Blue Consulting, LLC, *Renewable Energy Feasibility Study* (Apr. 2008), pp. 14, 19-20, 22, 25 <http://www.ivcde.com/CMS/Media/IIDRenewableEnergyStudy_08.pdf> (as of March 3, 2011).

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protective environmental and labor standards may attract developers seeking to minimize costs.

3. These adverse economic effects will result in blight and other physical changes in the environment

Developing the ESJ Wind Farms and approving the ESJ Gen-Tie may well lead to a downward economic spiral in the United States. Investment in a region rich in solar and wind resources can be expected to continue as long as there is an expectation that renewable energy projects will continue to be proposed in the area. In addition, renewable energy development would indirectly stimulate local economies through the "economic multiplier effect."[83]

If the ESJ Gen-Tie is approved and renewable energy development emerges in northern Mexico instead, market expectations will shift and investment may drop off sharply. With prolonged and potentially deepening economic conditions, city and county governments would receive less tax revenue with which to fund infrastructure maintenance and improvements and government services. Further, property values would continue to fall, among other economic impacts. These impacts would result in physical impacts, such as deteriorating roads, vacant neighborhoods and urban decay. The Draft EIR/EIS is required to consider these indirect physical changes that would result from the Project.

D. The BLM and CPUC must develop and impose appropriate and feasible mitigation measures to reduce or avoid the Project's impacts

Both NEPA and CEQA require that lead agencies address all potentially significant impacts through the enforceability of alternatives and mitigation measures that will avoid or minimize such impacts. An EIS must provide a full and fair discussion of every significant impact, as well as inform decision makers and the public of reasonable alternatives which would avoid or minimize adverse impacts.[84] Under CEQA, an EIR must not only discuss measures to avoid or minimize adverse impacts, but must ensure that mitigation conditions are fully enforceable through permit conditions, agreements or other legally binding

[83] *See id.* at pp. 26, 91.
[84] 40 C.F.R. § 1502.1

instruments.[85] A CEQA lead agency is precluded from making the required CEQA findings unless the record shows that all uncertainties regarding the mitigation of impacts have been resolved; an agency may not rely on mitigation measures of uncertain efficacy or feasibility.[86] This approach helps "insure the integrity of the process of decision by precluding stubborn problems or serious criticism from being swept under the rug."[87]

As discussed above, the failure of the BLM and CPUC to describe the ESJ Wind Farms in the Draft EIS/EIR precluded a meaningful analysis of all of the Project's impacts. The BLM and CPUC failed to take a hard look and appropriately analyze all of the Project's impacts to biological resources, hazards associated with wildfires and socioeconomics in the United States. The Project's impacts to the United States may be significant.

The BLM and CPUC must, therefore, identify all potentially significant impacts of the Project and impose measures to reduce or avoid the Project's impacts to resources in the United States.

III. SAN DIEGO COUNTY AND THE DEPARTMENT OF ENERGY MUST RELY ON A JOINT ENVIRONMENTAL REVIEW DOCUMENT THAT SATISFIES THE REQUIREMENTS OF BOTH NEPA AND CEQA TO SUPPORT THEIR APPROVALS OF THE ESJ GEN-TIE PROJECT

Under NEPA, if a project requires state approval, the federal agency must cooperate with state and local agencies "to the fullest extent possible to reduce duplication between NEPA and state and local requirements."[88] This includes the preparation of a joint federal and state environmental review document so that one document will comply with all applicable laws.[89] Similarly, under CEQA, State and local agencies are encouraged to use a federal EIS, if the previously prepared EIS complies with CEQA.[90]

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[85] CEQA Guidelines, § 15126.4, subd. (a)(2).
[86] *Kings County Farm Bur. v. County of Hanford* (1990) 221 Cal.App.3d 692, 727-28 (groundwater purchase agreement found to be inadequate mitigation because there was no record evidence that replacement water was available.)
[87] *Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 935
[88] 40 C.F.R. § 1506.2, subd. (b).
[89] 40 C.F.R. § 1506.2, subd. (c).
[90] CEQA Guidelines, § 15221, subd. (a).

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The CPUC and San Diego County must ensure that DOE's Draft EIS incorporates CEQA's requirements so that one document will comply with all applicable laws. Preparation of a single Draft EIS/EIR is essential because the alternatives and mitigation measures proposed by the DOE's Draft EIS and BLM/CPUC's Draft EIS/EIR are inconsistent and in conflict. The inconsistencies between the two documents undermine the public review process because it is not apparent how the differences between the two documents will be reconciled. The CPUC/San Diego County and DOE may select for approval two conflicting alternatives or impose conflicting mitigation measures.

1. The alternatives for the ESJ Gen-Tie proposed by the BLM and CPUC in the Draft EIS/EIR are inconsistent and contrary to the alternatives proposed by the DOE in its Draft EIS

The BLM/CPUC and the DOE have proposed inconsistent and contrary alternatives to the proposed ESJ Gen-Tie. Under NEPA, the alternatives analysis is considered the "heart" of the EIS.[91] CEQA also requires that an EIR provide a discussion of project alternatives that allow meaningful analysis and informed public participation.[92] Evaluation of alternatives should present the proposed action and all the alternatives in comparative form, clearly define the issues and provide a clear basis for choice among the options.

Because the alternatives analyses at issue here are inconsistent, the public cannot meaningfully evaluate the various alternatives or understand the basis of the agencies' choices. San Diego County must work with the DOE to revise the proposed alternatives so that agency decision making is based on a single, consistent document. The County may not support its Major Use Permit for the ESJ Gen-Tie based on an analysis that is in conflict with DOE's review.

DOE only considered two action alternatives in its Draft EIS: a double-circuit 230-kV transmission line and a single-circuit 500-kV transmission line.[93] It dismissed an alternative transmission route from further analysis because the proposed location of the ECO Substation would make the distance of the route

[91] 40 C.F.R. § 1502.14.
[92] *Laurel Heights Improvement Assn. v. Regents of Univ. of California* (1988) 47 Cal.3d 376, 405-04
[93] U.S. Dept. of Energy, Energia Sierra Juarez U.S. Transmission Line Project, Draft Environmental Impact Statement, Aug. 2010, p. S-4 to S-8 (hereafter DOE DEIS).

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infeasible and impractical.[94] It also dismissed an underground transmission line alternative based on its determination that an underground failure can be more difficult to locate and repair, construction of an underground alternative would require greater ground disturbance and be more expensive and EMF exposure may be greater.[95] The 230-kV transmission line was identified as the preferred alternative.

The Draft EIS/EIR prepared by the BLM and CPUC proposed four alternatives, two of which included an underground transmission line and two of which included an overhead alternate route.[96] The overhead alternate route alternative was designated as the "environmentally superior alternative."[97] The BLM-Preferred Alternative, however, was an underground alternate route alternative.[98]

The Draft EIS/EIR's alternatives are alternatives that were expressly dismissed from further consideration by the DOE. In addition, each agency – San Diego County, the BLM and the DOE -- selected a potentially conflicting alternative. For example, it is possible that San Diego County could select a 500-kV overhead alternate alignment, the BLM could select a 500-kV underground alignment and the DOE could select a 230-kV overhead line. Because the DOE released the Draft EIS months before the BLM and CPUC released the Draft EIS/EIR, the agencies should have been on notice that these alternatives were considered infeasible by the DOE. Nowhere in the Draft EIS/EIR, however, is the inconsistency between the two alternatives analyses explained.

It is impossible for the public to assess whether the alternatives to the ESJ Gen-Tie proposed in the Draft EIS/EIR are actually feasible. It is also impossible for the public to understand the basis behind San Diego County, the BLM and the DOE's choice of a preferred alternative. Because an adequate alternatives analysis is so critical to both a NEPA and CEQA analysis, the DOE and San Diego County must coordinate to produce a single alternatives analysis that will allow the public and decision makers to meaningfully evaluate alternatives to the proposed action.

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[94] *Id.* at p. S-11.
[95] *Id.* at pp. S-11 to 13.
[96] Draft EIS/EIR, p. C-25 to 27.
[97] *Id.* at pp. E-30, E-32.
[98] *Id.* at p. E-34.

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2. The Mitigation Measures proposed by the BLM and CPUC in the Draft EIS/EIR are inconsistent and in conflict with the Mitigation Measures proposed by the DOE in its Draft EIS

The BLM/CPUC and the DOE have proposed inconsistent and contrary mitigation measures in their environmental documents. Under NEPA, a Draft EIS must include a discussion of the "means to mitigate adverse environmental impacts."[99] Mitigation measures must be discussed for all impacts, even those that by themselves would not be considered significant.[100] While NEPA does not require agencies to actually adopt these mitigation measures, CEQA does mandate that agencies adopt feasible mitigation measures to lessen or avoid otherwise significant adverse impacts.[101]

The mitigation measures discussed by the BLM and CPUC in the Draft EIS/EIR are inconsistent with the mitigation measures discussed by the DOE in its Draft EIS. As a result of the inconsistencies, it is impossible for the public to conclude which mitigation measure will be adopted for the ESJ Gen-Tie. San Diego County must work with the DOE to revise the proposed mitigation measures so that the agencies rely on a single, consistent document to support their actions. The possibility that the DOE and the County may both rely on inconsistent measures to mitigate the Project's impacts creates a question about the enforceability of the measures. Under CEQA, a California agency may not rely on mitigation measures of questionable enforceability.

For example, while both the Draft EIS prepared by the DOE and the Draft EIS/EIR prepared by the BLM and CPUC propose acquisition of compensation land, the requirements for compensation land differs. The DOE states that to compensate for the loss of native scrub habitat that would be disturbed during construction, the Applicant would place a portion of the Project site under a conservation easement for preservation. According to the Draft EIS, the Applicant has proposed placing the easement on a portion of its property east of the

[99] 40 C.F.R. § 1502.16, subd. (h)
[100] Council on Environmental Quality, Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, Question 19(a).
[101] Pub. Resources Code, §§ 21002, 21081, subd. (a); CEQA Guidelines, §§ 15002, subd. (a)(3), 15021, subd. (a)(2), 15091, subd. (a)(1).

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transmission line that could be up to 15 acres in size.[102] The BLM and CPUC, however, state that to compensate for all permanent impacts to vegetation, combination habitat and restoration is required at a minimum of a 1:1 ratio or as required by the permitting agencies. The Draft EIS/EIR also requires that all habitat compensation and restoration on private lands include long-term management and legal protection assurances.[103]

From these two mitigation measures, it is clear that the Applicant must compensate for permanent impacts to native vegetation. It is not clear, however, whether the Applicant must compensate for impacts that only occur during construction or all permanent impacts, or where and how much land would be put into easement. There is also no provision in the Draft EIS prepared by the DOE that the compensation land will have long-term management and legal protection assurances.

Because CEQA requires agencies to rely on specific enforceable mitigation measures in their environmental review documents, San Diego County may not rely on these inconsistent mitigation measures to support its Major Use Permit. The Applicant and the public cannot know how much land must be compensated for if DOE only requires compensation land for construction impacts, but the BLM and CPUC require compensation land for all impacts. In addition, the Applicant cannot know whether to compensate land up to 15 acres or at a ratio of 1:1. If the Applicant's duties to mitigate are unclear, the public and the decision makers cannot meaningfully assess whether impacts to native vegetation have indeed been mitigated.

San Diego and the DOE must work together to produce a single document that properly lays out mitigation measures to reduce and avoid the impacts associated with the ESJ Gen-Tie.

IV. CONCLUSION

The BLM and CPUC have failed to produce an environmental review document that complies with NEPA and CEQA. The Draft EIS/EIR undermines public disclosure and informed decision making by failing to provide an accurate and complete description of the Project. The EIS/EIR also failed to take a hard look

[102] DOE DEIS, p. S-20.
[103] Draft EIS/EIR, pp. D.2-129 to 130.

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or adequately analyze all of the Project's potential impacts to the United States and impose all feasible and appropriate mitigation measures. In addition, the inconsistencies between the Draft EIS/EIR prepared by the BLM and CPUC and the Draft EIS prepared by the DOE preclude a meaningful analysis. A revised Draft EIS/EIR must be prepared to correct these deficiencies and recirculated for public comment.

Local 569 and its members appreciate this opportunity to comment and appreciate the BLM and the CPUC considering our views.

Sincerely,

Robyn C. Purchia

RCP:cnb

Attachments:
Attachment A: The Zoological Society of San Diego Map of Condor Flight
Attachment B: Presence and Movement of California Condors Near Proposed Wind Turbines
Attachment C: San Diego Audubon Letter
Attachment D: USFWS and CDFG Letter
Attachment E: San Diego County Letter
Attachment F: Photographs of Peninsular bighorn sheep
Attachment G: European Guideline: Wind turbines fire protection guideline

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EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
WASHINGTON, D.C. 20503

MEMORANDUM TO HEADS OF AGENCIES ON THE APPLICATION OF THE NATIONAL ENVIRONMENTAL POLICY ACT TO PROPOSED FEDERAL ACTIONS IN THE UNITED STATES WITH TRANSBOUNDARY EFFECTS

FROM: KATHLEEN A. MCGINTY
CHAIR

DATE: JULY 1, 1997

In recent months, the Council has been involved in discussions with several agencies concerning the applicability of the National Environmental Policy Act (NEPA) to transboundary impacts that may occur as the result of proposed federal actions in the United States. To set forth a consistent interpretation of NEPA, CEQ is today issuing the attached guidance on NEPA analysis for transboundary impacts. In it, we advise that NEPA requires analysis and disclosure of transboundary impacts of proposed federal actions taking place in the United States.

We recommend that agencies which take actions with potential transboundary impacts consult as necessary with CEQ concerning specific procedures, proposals or programs which may be affected.

COUNCIL ON ENVIRONMENTAL QUALITY GUIDANCE ON NEPA ANALYSES FOR TRANSBOUNDARY IMPACTS

JULY 1, 1997

The purpose of this guidance is to clarify the applicability of the National Environmental Policy Act (NEPA) to proposed federal actions in the United States, including its territories and possessions, that may have transboundary effects extending across the border and affecting another country's environment. While the guidance arises in the context of negotiations undertaken with the governments of Mexico and Canada to develop an agreement on transboundary environmental impact assessment in North America, [1] the guidance pertains to all federal agency actions that are normally subject to NEPA, whether covered by an international agreement or not.

It is important to state at the outset the matters to which this guidance is addressed and those to which it is not. This guidance does not expand the range of actions to which NEPA currently applies. An action that does not otherwise fall under NEPA would not now fall under NEPA by virtue of this guidance. Nor does this guidance apply NEPA to so-called "extraterritorial actions"; that is, U.S. actions that take place in another country or otherwise outside the jurisdiction of the United States[2]. The guidance pertains only to those proposed actions currently covered by NEPA that take place within the United States and its territories, and it does not change the applicability of NEPA law, regulations or case law to those actions. Finally, the guidance is consistent with long-standing principles of international law.

NEPA LAW AND POLICY

NEPA declares a national policy that encourages productive and enjoyable harmony between human beings and their environment, promotes efforts which will prevent or eliminate damage to the environment and biosphere, stimulates the health and welfare of human beings, and enriches the understanding of ecological systems.[3] Section 102(1) of NEPA "authorizes and directs that, to the fullest extent possible . . . . the policies, regulations and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in [the] Act."[4] NEPA's explicit statement of policies calls for the federal government "to use all practical means and measures . . . . to create and maintain conditions under which man and nature can exist in productive harmony . . . ."[5] In addition, Congress directed federal agencies to "use all practical means . . . . to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may . . . . attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences."[6] Section 102(2)(C) requires federal agencies to assess the environmental impacts of and alternatives to proposed major federal actions significantly affecting the quality of the human environment.[7] Congress also recognized the "worldwide and long-range character of environmental problems" in NEPA and directed agencies to assist other countries in anticipating and preventing a decline in the quality of the world environment.[8]

Neither NEPA nor the Council on Environmental Quality's (CEQ) regulations implementing the procedural provisions of NEPA define agencies' obligations to analyze effects of actions by administrative boundaries. Rather, the entire body of NEPA law directs federal agencies to analyze the effects of proposed actions to the extent they are reasonably foreseeable consequences of the proposed action, regardless of where those impacts might occur. Agencies must analyze indirect effects, which are caused by the action, are later in time or farther removed in distance, but are still reasonably foreseeable, including growth-inducing effects and related effects on the ecosystem,[9] as well as cumulative effects.[10] Case law interpreting NEPA has reinforced the need to analyze impacts regardless of geographic boundaries within the United States,[11] and has also assumed that NEPA requires analysis of major federal actions that take place entirely outside of the United States but could have environmental effects within the United States.[12]

Courts that have addressed impacts across the United States' borders have assumed that the same rule of law applies in a transboundary context. In Swinomish Tribal Community v. Federal Energy Regulatory Commission,[13] Canadian intervenors were allowed to challenge the adequacy of an environmental impact statement (EIS) prepared by FERC in connection with its approval of an amendment to the City of Seattle's license that permitted raising the height of the Ross Dam on the Skagit River in Washington State. Assuming that NEPA required consideration of Canadian impacts, the court concluded that the report had taken the requisite "hard look" at Canadian impacts. Similarly, in Wilderness Society v. Morton,[14] the court granted intervenor status to Canadian environmental organizations that were challenging the adequacy of the trans-Alaska pipeline EIS. The court granted intervenor status because it found that there was a reasonable possibility that oil spill damage could significantly affect Canadian resources, and that Canadian interests were not adequately represented by other parties in the case.

In sum, based on legal and policy considerations, CEQ has determined that agencies must include analysis of reasonably foreseeable transboundary effects of proposed actions in their analysis of proposed actions in the United States.

PRACTICAL CONSIDERATIONS

CEQ notes that many proposed federal actions will not have transboundary effects, and cautions agencies against creating boilerplate sections in NEPA analyses to address this issue. Rather, federal agencies should use the scoping process[15] to identify those actions that may have transboundary environmental effects and determine at that point their information needs, if any, for such analyses. Agencies should be particularly alert to actions that may affect migratory species, air quality, watersheds, and other components of the natural ecosystem that cross borders, as well as to interrelated social and economic effects.[16] Should such potential impacts be identified, agencies may rely on available professional sources of information and should contact agencies in the affected country with relevant expertise.

Agencies have expressed concern about the availability of information that would be adequate to comply with NEPA standards that have been developed through the CEQ regulations and through judicial decisions. Agencies do have a responsibility to undertake a reasonable search for relevant, current information associated with an identified potential effect. However, the courts have adopted a "rule of reason" to judge an agency's actions in this respect, and do not require agencies to discuss "remote and highly speculative consequences".[17] Furthermore, CEQ's regulation at 40 CFR 1502.22 dealing with incomplete or unavailable information sets forth clear steps to evaluating effects in the context of an EIS when information is unobtainable.[18] Additionally, in the context of international agreements, the parties may set forth a specific process for obtaining information from the affected country which could then be relied upon in most circumstances to satisfy agencies' responsibility to undertake a reasonable search for information.

Agencies have also pointed out that certain federal actions that may cause transboundary effects do not, under U.S. law, require compliance with Sections 102(2)(C) and 102(2)(E) of NEPA. Such actions include actions that are statutorily exempted from NEPA, Presidential actions, and individual actions for which procedural compliance with NEPA is excused or modified by virtue of the CEQ regulations[19] and various judicial doctrines interpreting NEPA[20]. Nothing in this guidance changes the agencies' ability to rely on those rules and doctrines.

INTERNATIONAL LAW

It has been customary law since the 1905 Trail Smelter Arbitration that no nation may undertake acts on its territory that will harm the territory of another state[21]. This rule of customary law has been recognized as binding in Principle 21 of the Stockholm Declaration on the Human Environment and Principle 2 of the 1992 Rio Declaration on Environment and Development. This concept, along with the duty to give notice to others to avoid or avert such harm, is incorporated into numerous treaty obligations undertaken by the United States. Analysis

of transboundary impacts of federal agency actions that occur in the United States is an appropriate step towards implementing those principles.

CONCLUSION

NEPA requires agencies to include analysis of reasonably foreseeable transboundary effects of proposed actions in their analysis of proposed actions in the United States. Such effects are best identified during the scoping stage, and should be analyzed to the best of the agency's ability using reasonably available information. Such analysis should be included in the EA or EIS prepared for the proposed action.

[1] The negotiations were authorized in Section 10.7 of the North American Agreement on Environmental Cooperation, which is a side agreement to the North American Free Trade Agreement. The guidance is also relevant to the ECE Convention on Environmental Impact Assessment in a Transboundary Context, signed in Espoo, Finland in February, 1991, but not yet in force.

[2] For example, NEPA does apply to actions undertaken by the National Science Foundation in the Antarctica. Environmental Defense Fund v. Massey, 986 F.2d 528 (D.C. Cir. 1993).

[3] 42 USC 4321.

[4] 42 USC 4332(1).

[5] 42 USC 4331(a).

[6] 42 USC 4331(b)(3).

[7] 42 USC 4332(2)(C).

[8] 42 USC 4332(2)(F).

[9] 40 CFR 1508.8(b).

[10] 40 CFR 1508.7.

[11] See, *for example*, Sierra Club v. U.S.Forest Service, 46 F.3d 835 (8th Cir. 1995); Resources Ltd., Inc. v. Robertson, 35 F.3d 1300 and 8 F.3d 1394 (9th Cir. 1993); Natural Resources Defense Council v. Hodel, 865 F.2d 288 (D.C. Cir. 1988); County of Josephine v. Watt, 539 F.Supp. 696 (N.D. Cal. 1982).

[12] See Sierra Club v. Adams, 578 F.2d 389 (D.C. Cir. 1978); NORML v. Dept. of State, 452 F.Supp. 1226 (D.D.C. 1978).

[13] 627 F.2d 499 (D.C. Cir. 1980).

[14] 463 F.2d 1261 (D.C. Cir. 1972).

[15] 40 CFR 1501.7. Scoping is a process for determining the scope of the issues to be addressed and the parties that need to be involved in that process prior to writing the environmental analyses.

[16] It is a well accepted rule that under NEPA, social and economic impacts by themselves do not require preparation of an EIS. 40 CFR 1508.14.

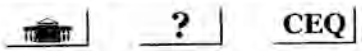
[17] Trout Unlimited v. Morton, 509 F.2d 1276, 1283 (9th Cir. 1974). See also, Northern Alaska Environmental Center v. Lujan, 961 F.2d 886, 890 (9th Cir. 1992); Idaho Conservation League v. Mumma, 956 F.2d 1508, 1519 (9th Cir. 1992); San Luis Obispo Mothers for Peace v. N.R.C., 751 F.2d 1287, 1300 (D.C. Cir. 1984); Scientists Institute for Public Information, Inc. v. Atomic Energy Commission, 481 F.2d 1079, 1092 (D.C. Cir. 1973).

[18] See Preamble to Amendment of 40 CFR 1502.22, deleting prior requirement for "worst case analysis" at 51 Federal Register 15625, April 25, 1986, for a detailed explanation of this regulation.

[19] For example, agencies may contact CEQ for approval of alternative arrangements for compliance with NEPA in the case of emergencies. 40 CFR 1506.11.

[20] For example, courts have recognized that NEPA does not require an agency to make public information that is otherwise properly classified information for national security reasons, Weinberger v. Catholic Action of Hawaii, 454 U.S. 139 (1981).

[21] *Trail Smelter Arbitration*, U.S. v. Canada, 3 UN Rep. Int'l Arbit. Awards 1911 (1941). The case involved a smelter in British Columbia that was causing environmental harm in the state of Washington. The decision held that "under principles of international Law, as well as the law of the United States, no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is described by clear and convincing injury." *Id.* at 1965). Also see the American Law Institute's Restatement of the Foreign Relations Law of the United States 3d, Section 601, ("State obligations with respect to environment of other States and the common environment").



PLANET ACTION
Managing the conservation of the California condor and its ecosystem in a changing climate
USA
San Diego
Tijuana
Baja CA, Mexico
Condor release site
Satellite map indicating the location of the condor reintroduction site in the Sierra San Pedro Martir region of Baja California, Mexico. The red dots indicate the GPS location fixes of a three-year-old female condor that was tracked making a large-scale exploratory return flight of 200 km, north from the Baja release site across the USA/Mexico border in April 2007 (each dot represents a separate location fix acquired from the bird). The GPS fixes indicate that the condor made intensive use of core areas within close proximity to the release site. High-resolution satellite imagery provided by Planet Action enables researchers to build an accurate picture of condor habitat use and preference. This valuable ecological information will allow managers to tailor the reintroduction programs to the specific habitat requirements of the birds and to predict and mitigate the effects of climate change on this important ecosystem.
Images copyright: The Zoological Society of San Diego (ZSSD), 2006

PRESENCE AND MOVEMENTS OF CALIFORNIA CONDORS NEAR PROPOSED WIND TURBINES

FINAL REPORT PREPARED FOR
HT HARVEY AND ASSOCIATES
15 November 2007

Prepared by Nellie Thorngate
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EXECUTIVE SUMMARY

Wind energy poses particular hazards to birds with high wing loadings, large bodies and clumsy flight. California Condors, *Gymnogyps californianus*, a critically endangered species currently being reintroduced to central coastal California, may be at risk from wind turbines within their foraging range. In 2007, HT Harvey and Associates contracted the Ventana Wildlife Society to map the presence and movement patterns of California Condors near two proposed wind turbines at a winery near Gonzales CA, and to make recommendations regarding the potential risk posed to California Condors by the proposed turbines. Despite the proximity of Pinnacles National Monument, a rearing and release site for California Condors, only 417 detections occurred within a 25 km radius of the proposed wind turbines. No detections occurred closer than 3 km to the proposed wind turbine locations. Mean flight speed was 45.7 kph. Using flight speeds of 0 to 5 as our definition of perched birds, we determined that 151 detections were of perching events within 25 km of the proposed wind turbines. Condor flight headings were predominantly westerly within 25 km of the proposed wind area. Condor detections occurred most frequently over 31 to 40 degree slopes, and over northern and northwestern landscape aspects. The proximity of the Pinnacles rearing and release site indicates a potential risk situation for Condors in the vicinity of the proposed wind turbines, but given that the proposed project only calls for the installation of two turbines, and measures are taken to monitor and remove large carcasses in the area the proposed wind turbines pose only a minor risk to Condors in the area.

BACKGROUND

Wind energy poses substantial risks to avian wildlife under certain circumstances (Drewitt and Langston 2006, Barrios and Rodriguez 2004, Erikson et al 2001). Birds with high wing loadings, clumsy flight patterns, and foraging habits that draw them into the vicinity of wind turbines are all at high risk for turbine-related injuries and mortalities (Barrios and Rodriguez 2004). Risk is also increased where wind energy projects intersect with migratory pathways, daily flight paths, and foraging and roosting grounds (Dewitt and Langston 2006). While many studies have found that overall turbine-related avian mortality is low compared to other anthropogenic sources of mortality, even low levels of mortality could significantly impact species with low productivity that take years to reach reproductive maturity (Dewitt and Langston 2006). Because many at-risk birds are endangered, threatened, or otherwise protected by federal laws, it is important that new wind energy projects of any scale assess the potential threats to wildlife, and minimize the risks posed by turbines and associated structures.

Parts of central coastal California are ideal for the production of wind energy at many different scales, but the central coast is also home to a growing population of reintroduced California Condors (*Gymnogyps californianus*), a critically endangered species since 1967 (Kiff et al. 1996). Historically, California Condors ranged from British Columbia in the north to Baja California in the south and were found as far east as the western slope of the Sierra Nevada (Snyder and Schmitt 2002), but were nearly

extirpated by the mid-1980's due to hunting, poisoning and habitat loss (Snyder and Schmitt 2002). In 1987 the remaining wild population was captured and housed in captive rearing facilities in southern California to act as a breeding population for the planned species recovery and reintroduction program. Condors were released back in to the wild in southern California starting in 1994 and in central coastal California starting in 1997. The first rearing and release facility on the central coast was located in the Ventana Wilderness on the western slope of the Santa Lucia Mountains near Big Sur, and has been active since the inception of the central California recovery effort in 1997. In 2003, a second central California rearing and release site was established at Pinnacles National Monument in the Gabilan Mountains. As of September 30, 2007, the total population of California Condors was 305, with 157 of those in captivity at Los Angeles Zoo, San Diego Wild Animal Park, Boise World Center for Birds of Prey, Oregon Zoo, Mexico Zoo, Mentor Birds in field pens, and pre-release birds in field pens. Of wild birds (148), there are currently 72 in California, 16 in Baja California, and 60 in Arizona. The free-flying population in the central California area currently totals 39 free-flying birds, with 27 birds in the Big Sur population and 12 birds in the Pinnacles population. The eldest birds in the Big Sur flock established two successful nests in 2007, and it is expected that the eldest birds in the Pinnacles flock will begin breeding in 2010-2012. Meanwhile, annual additions of captive-raised Condors continue to bolster both flocks, and the ultimate goal of the central coast reintroduction program is a flock of 75 free-flying birds.

Little is known about the susceptibility of California Condors to wind turbine-induced mortality. Studies of Griffon Vultures (*Gyps fulvus*), a European species ecologically similar to California Condors (Snyder and Schmitt 2002), have shown that in high concentrations, the birds are quite vulnerable to turbine strikes (Barrios and Rodriguez 2004). Raptors such as Red-tailed Hawks (*Buteo jamaicensis*), who rely on topographic features to generate preferred flight conditions and who forage in the types of habitat that characterize many wind turbines, also experience high mortality rates due to wind turbines (Hoover and Morrison 2005). Flight characteristics of Turkey Vultures (*Cathartes aura*) in the Altamont Pass Wind Turbines indicate that scavenging birds frequently fly within the height range of wind turbines used for large-scale power production, although the location of the turbines with respect to wind direction and slope curvature are important factors in determining mortality risk (Smallwood and Neher 2004). The possible impact of smaller-scale wind resource projects, including isolated towers powering small facilities, is largely unknown.

In conjunction with site-specific habitat features, behaviorally and physiologically, California Condors exhibit many features that may put them at a high risk for wind turbine-related mortality: (1) high wing loading; (2) social foraging; (3) curiosity for novel objects; (4) k-selected reproductive strategy; and (5) foraging preference for sloped grassland sites. Condors have extremely high wing loading, and their flapping flight is clumsy, making them less maneuverable around objects on the landscape. Condors routinely forage and roost in social groups, so that the presence of a single bird near wind turbines increases the risk of mortality not only for that individual, but for other individuals that may follow it. Because they are scavengers, Condors exhibit pronounced

curiosity for novel objects in their environment (J. Burnett, pers. comm.) such that the presence of new turbines might increase overall Condor activity at a site. Condors raise one chick every 2 years with significant parental investment, thus losses of even a few individuals have large impacts on the total population. In the case of Condors, a closely managed, primarily captive-bred species, losses are also costly.

In 2007, HT Harvey and Associates contracted the Ventana Wildlife Society to map the presence and movement patterns of California Condors within 25 km of two proposed wind turbines on a winery near Gonzales CA (figure 1), and to assess the potential risk posed to California Condors by the proposed turbines. This report presents presence, associated landscape characteristics, flight characteristics, and home ranges of California Condors detected within 25 km of the proposed wind turbines, and presents recommendations for wind turbine installation based on those findings.

METHODS

Condor locations and movements

Twenty-seven free-flying, captive-reared Condors were tracked in central coastal California using solar powered, GPS Patagial PTT-100 transmitters (Microwave Telemetry, Inc., Columbia, MD) between 2 December 2003 and 31 March 2007. Transceivers were affixed directly to each bird's patagium in conjunction with an identification tag. The GPS receivers were programmed to collect a location fix (referred to as a "detection" in this report) every hour, 16 hours daily. In general, transceivers provide an average of 12 location fixes per day (16 possible) within 16 meters of the actual location, or, average location fixes 92% of the time. The built-in PTT transceivers transmitted stored GPS location data to Service ARGOS satellites each day.

Location data were downloaded daily via the Automatic Distribution Service administered by Service ARGOS. Data were then imported into a Microsoft Access database. Condor location fixes totaling 103,395 data points were examined for movement patterns and proximity to the two proposed wind turbines near Gonzales, CA. Error rates for flight speed (used to determine if a bird was perched or in flight when detected) were ± 1 km/hr at speeds above 40 km/hr (Microwave Telemetry, Inc, Columbia, MD). For the purposes of analysis, detections exhibiting flight speeds of greater than 5 kph, while detections exhibiting flight speeds of 0 through 5 were considered perching events.

Mapping

Condor location data including decimal-degree coordinates, speed, time and date were imported into an ArcGIS geodatabase. Each location fix, or data point, is referred to as a detection. The Condor data points, a Digital Elevation Model downloaded from the USGS Continuous Data Distribution Service, and an x,y data layer estimating the location of the two proposed wind turbines were plotted on a hillshade map of California.

ArcGIS Spatial Analyst tools were used to assess the proximity of Condor locations to the proposed wind turbines; landscape slope and aspect associated with Condor detections within the study area; and the flight behavior ("perched" or "flying") of Condor detections within 25 km, 20 km, 10 km and 5 km of the proposed wind turbines. MCP home ranges of individual Condors were calculated using Hawth's Tools, a free ArcGIS extension for assessing animal populations.

Statistical Methods

Distribution of flight speed categories, flight headings, slope categories and landscape aspects associated with detections were assessed for divergence from expected values using Pearson χ^2 analysis (Zar 1999).

RESULTS

Proximity to Proposed Wind Turbines

417 Condor detections representing 13 individual birds occurred within 25 km of the proposed wind turbines from 2 December 2003 to 31 March 2007. 130 detections were within 20 km of the proposed wind turbines, 33 were within 15 km, 11 were within 10 km, and 3 were within 5 km (see Figure 2). No Condor detections occurred closer than 3 km to the proposed wind turbine locations. The detections within 5 km of the proposed wind turbines were attributable to 3 different individual Condors.

Movement Patterns

266 flying bird detections occurred within 25 km of the proposed wind turbines; 88 flying birds were located within 20 km; 31 flying birds occurred within 15 km; 10 flying birds were located within 10 km; and 2 flying birds were located within 5 km (see Figure 3). The mean speed of flight within 25 km of the proposed wind turbines was 45.7 kph. The distribution of flight speeds within 25 km of the proposed wind area was significantly different from a random distribution ($\chi^2 = 116.7$, df = 61, P=0.000). The most frequently occurring flight speeds were between 31 and 40 kph (see Figure 4).

We used flight speed to identify perched birds: birds with flight speeds of 0 through 5 kph were designated as perched birds, while birds moving at 6 kph or faster were considered to be flying (see Figure 5). 151 perching events were located within 25 km of the proposed wind turbines; 42 perching events were located within 20 km; 2 perching events occurred within 15 km; 2 perching events were located within 10 km; and 1 perching event was located within 5 km (see Figure 6).

Within the 25 km study area, the distribution of flight headings was not significantly different from random, but detections that indicate a westerly orientation (44) were most frequent and detections with southerly orientation (20) were fewest.

Landscape Associations

While visualization of the slope data indicated that slopes were fairly evenly distributed within 25 km of the proposed wind turbines (figure 7), the distribution of Condor detections over different landscape slope categories was significantly different than expected ($\chi^2 = 279.8$, df = 69, P=0.000). Within the 25 km study area, condor detections were most frequent over landscapes with 51 to 60 degree slopes, and detections were fewest over landscapes with slopes less than 20 degrees (see Figure 8).

The landscape was evenly distributed across all aspect categories (see Figure 9), but the distribution of Condor detections over different landscape aspects within 25 km of the proposed wind turbines was significantly different than random ($\chi^2 = 36.9$, df = 7, P = 0.000). More detections (138) occurred over landscapes with northern and northwestern aspects than over any other aspect. The fewest detections (24) occurred over the eastern aspect (figure 10).

Home Ranges

Four individual Condors were determined to have home ranges encompassing the proposed wind turbine locations using the Minimum Convex Polygon technique (see Figure 11).

IMPLICATIONS

- The proximity of the Pinnacles National Monument Condor release facility to the proposed wind turbines means that Condor activity is high throughout the Salinas Valley and across both slopes of the Coast Ranges and the Gabilan Mountains. This indicates a potential risk situation for Condors because the proposed wind turbines are within range of regular foraging flights for all members of the Pinnacles flock, as well as exploratory flights of some of the older Big Sur Condors who may be expanding their foraging range or looking for nesting locations. The proposed turbine locations also fall within the calculated home ranges of 4 Pinnacles Condors. However, the low overall detections indicate that the actual risk is low, since Condors do not appear to be using the area near the proposed wind turbines frequently.

- The low number of detections of perching events within 25 km of the proposed wind turbines indicates that the area has not provided constant or frequent foraging or roosting opportunities. Thus, the risk posed to Condors perching or taking flight near the proposed turbines is low.

- Because the proposed wind turbines are located in suitable foraging habitat for Condors, clearing carcasses within 5 km of the proposed wind turbines when detected could reduce the potential risk to Condors foraging in the area.

- The Condors represented in this report represent only a subset of the entire central coast Condor population. This is because not all of the Condors have GPS transmitters. Most of the Pinnacles flock is GPS-tagged, but a much smaller

proportion of the Big Sur flock is tracked using GPS. The values enumerated in the report, therefore, are likely smaller than actuality.

- Given that the proposed project only calls for the installation of two turbines and measures are taken to monitor and remove large carcasses in the area, the proposed wind turbines pose a minor risk to Condors in the area.

- Because this is a small, managed population of 35 individuals with a k-selected reproductive strategy in addition to being listed as endangered, any risk associated with their population should be given careful consideration.

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PERSONAL COMMUNICATIONS

Burnett, J. May 1, 2007. Senior Wildlife Biologist, Ventana Wildlife Society. 19045 Portola Dr., Ste F-1, Salinas, CA 93908, joeburnett@ventanaws.org

Figure 1. Proposed wind turbines near Gonzales in Monterey County, CA, and the project study area, defined by a 25 km radius around the proposed turbines.

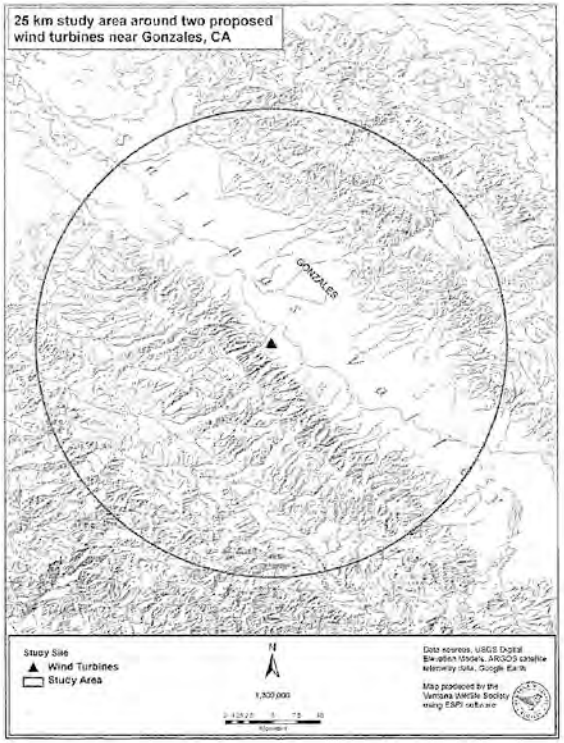

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Figure 2. Proximity of Condor detections to the proposed wind turbines, Monterey County, CA, 2003-2007

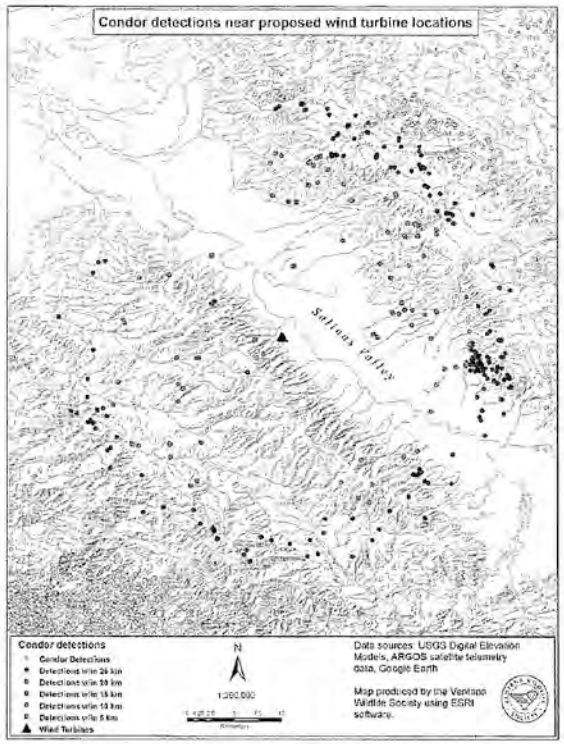

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Figure 3. Proximity of in-flight Condor detections to the proposed wind turbines, Monterey County, CA, 2003-2007

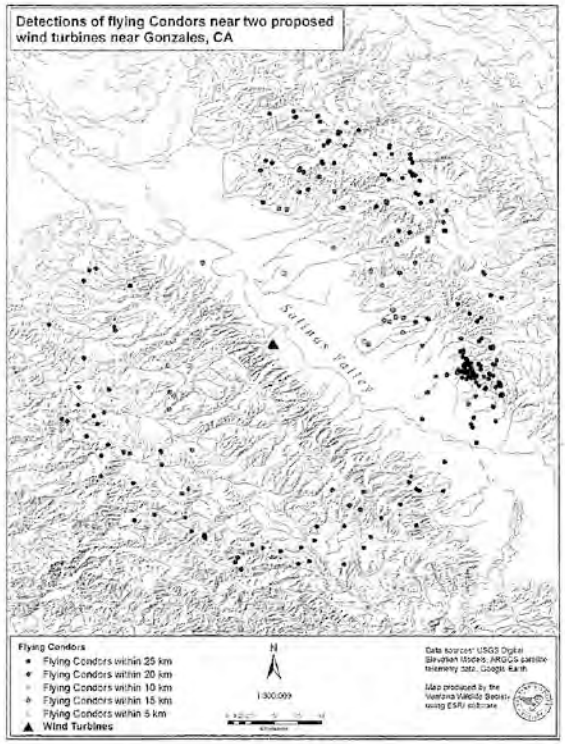

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Figure 4. Frequency distribution of flight speeds of Condors detected within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

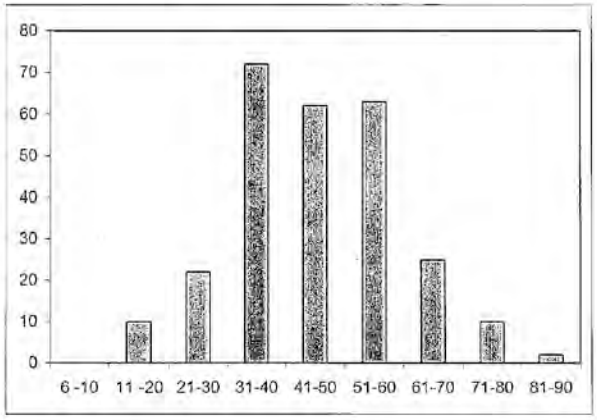

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Figure 5. Detections of flying and perched Condors within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

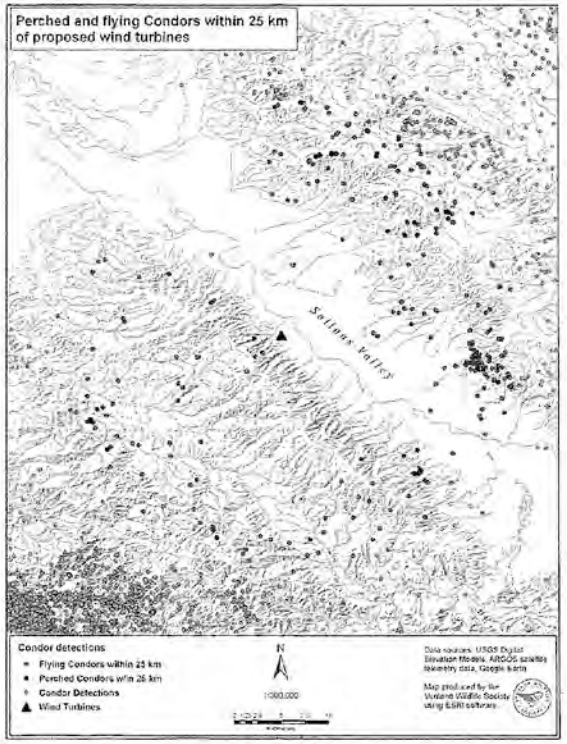

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Figure 6. Proximity of perched Condor detections to the proposed wind turbines, Monterey County, CA, 2003-2007

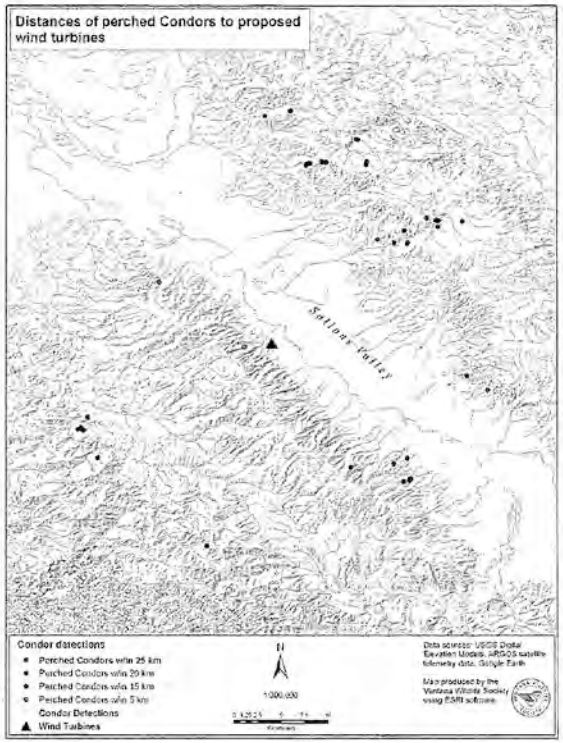

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Figure 7. Landscape slopes associated with Condor detections within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

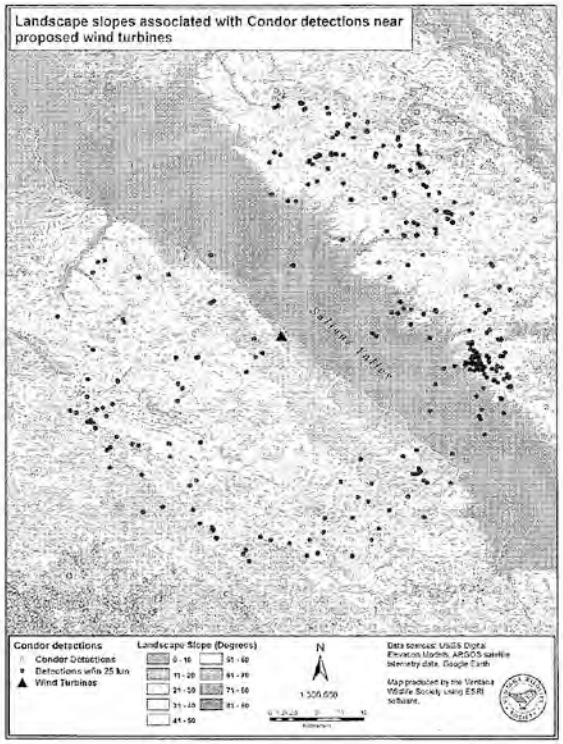

Figure 8. Distribution of landscape slope categories associated with Condor detections within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

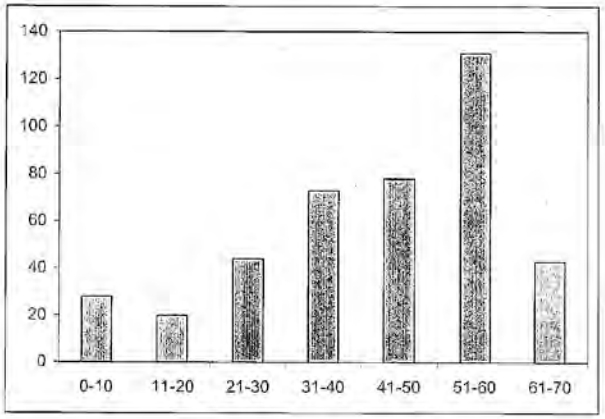

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Figure 9. Landscape aspects associated with Condor detections within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

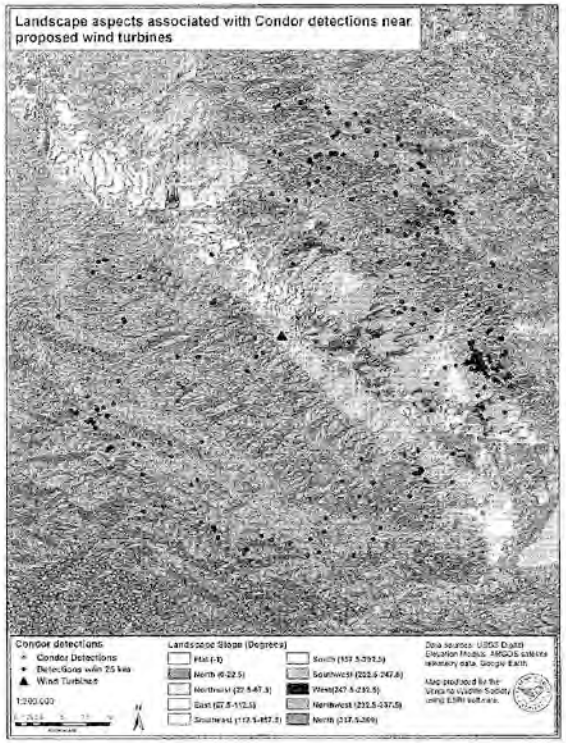


Figure 10. Distribution of landscape aspects associated with Condor detections within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

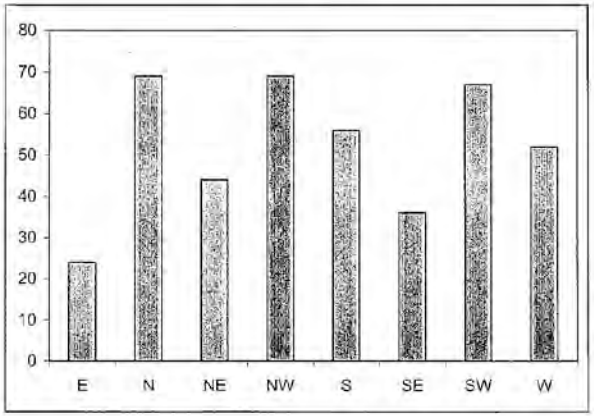
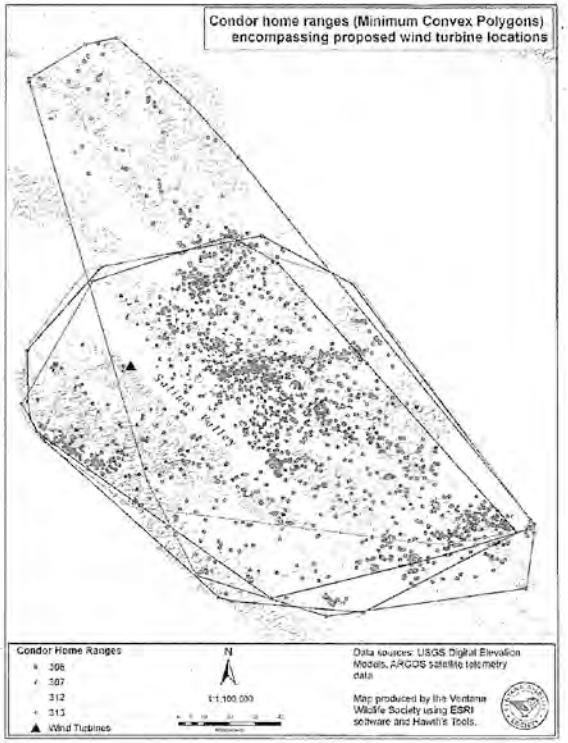


Figure 11. Condor Minimum Convex Polygon home ranges that encompass the proposed wind turbine locations, Monterey, CA



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U.S. Fish & Wildlife Service and California Department of Fish & Game

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In Reply Refer To:
FWS/CDFG-2008B0423/2008TA0847

AUG 25 2008

Billie Blanchard, CPUC/Lynda Kastoll, BLM
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San Francisco, California 94104-3106

Subject: Comments on the Recirculated Draft Environmental Impact Report/ Environmental Impact Statement for the Sunrise Powerlink Project, San Diego and Imperial Counties, California (SCH No. 2006091071)

Dear Ms. Blanchard and Ms. Kastoll:

F0006-1

The California Department of Fish and Game (Department) and U.S. Fish and Wildlife Service (Service), collectively the Wildlife Agencies, have reviewed the above-referenced recirculated draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the proposed Sunrise Powerlink (SRPL) Project. The comments provided herein are based on the information provided in the recirculated draft EIR/EIS, the original SRPL Project draft EIR/EIS, the Wildlife Agencies' knowledge of sensitive and declining vegetative communities, and our participation in regional conservation planning efforts. The Wildlife Agencies provided extensive comments on the initial Draft EIR/EIS in a letter dated April 11, 2008. All of our concerns addressed in that letter regarding potential "unmitigable" adverse impacts to federally and/or State-listed species, sensitive vegetation communities, and regional conservation plans remain.

The Department is a Trustee Agency and a Responsible Agency pursuant to the California Environmental Quality Act (CEQA), Sections 15386 and 15381 respectively. The Department is responsible for the conservation, protection, and management of the State's biological resources, including rare, threatened, and endangered plant and animal species, pursuant to the California Endangered Species Act (CESA), and administers the Natural Community Conservation Planning Program (NCCP). The primary concern and mandate of the Service is the protection of public fish and wildlife resources and their habitats. The Service has legal responsibility for the welfare of migratory birds, anadromous fish, and endangered animals and plants occurring in the United States. The Service is also responsible for administering the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 et seq.). The Proposed Project is the construction and operation of a 150-mile electric transmission line between the El Centro area of Imperial County and northwestern San Diego County.

Alternatives considered included alternative route alignments and other transmission alternatives, alternatives that could replace the Proposed Project as a whole, Non-Wire Alternatives, and the No Project/No Action Alternative.

TAKE PRIDE IN AMERICA

Comment Set F0006, cont.
U.S. Fish & Wildlife Service and California Department of Fish & Game

Additionally, there are four projects that are so closely related to the SRPL as to be considered "connected actions" under NEPA. These four projects are the Stirling Energy Systems solar facility, two components of the Imperial Irrigation District (IID) 230 kV transmission system upgrades, the Esmeralda–San Felipe Geothermal Project, and the Jacumba 230/500 kV Substation. One additional project, a wind project in northern Mexico's La Rumorosa area, under contract to meet Southern California Edison's renewable requirements, is defined in the Recirculated draft EIR/EIS as an "indirect effect" of the SRPL. The La Rumorosa wind project is being evaluated in the draft EIR/EIS because of the agreement that was signed between Sempra Generation and Southern California Edison in which Sempra Generation has agreed to sell SCE up to 250 MW of power from the La Rumorosa wind power facility under development, and the SRPL would be used to transmit the energy generated at the wind farm. F0006-1 cont.

This letter provides comments regarding the components identified in the recirculated draft EIR/EIS dated July 2008. These components include a new and revised analysis of the La Rumorosa Wind Energy Project (RWEP) wind farm and transmission line route revisions. The RWEP has several project components, which include the following: a double circuit 230 kV or single circuit 500 kV transmission line from Mexico to the U.S., a 500/230/69 kV substation located east of the town of Jacumba (i.e., Jacumba substation), a 13.4 mile 69 kV transmission line connecting the Jacumba and Boulevard Substations, a 0.5 acre expansion of the Boulevard substation, and a communication facility. We offer recommendations and comments in the enclosure to further assist in avoidance and minimization of impacts to biological resources, and to ensure that the project is consistent with ongoing regional habitat conservation planning efforts.

We remain concerned the Proposed Project (and many of the alternatives) would have "unmitigable," significant impacts to listed plant and animal species. Because the Wildlife Agencies are mandated to protect and recover these resources, we recommend an alternative that can avoid and minimize significant adverse impacts to rare and sensitive biological resources, similar to the In-Area Renewable Generation Alternative but with additional localized generation capacity (e.g., commercial and residential rooftop solar systems) to eliminate or maximize the need to transport electricity from remote locations. If you have questions or comments regarding the contents of this letter, please contact Paul Schlitt of the Department at (858) 637-5510 or Felicia Siretta of the Service at (760) 431-9440.

Sincerely,

Karen Goebel
Assistant Field Supervisor
U.S. Fish and Wildlife Service

Helen R. Birss
Environmental Program Manager
California Department of Fish and Game

Comment Set F0006, cont.
U.S. Fish & Wildlife Service and California Department of Fish & Game

ENCLOSURE
WILDLIFE AGENCY
COMMENTS AND RECOMMENDATIONS
ON THE RECIRCULATED DRAFT ENVIRONMENTAL IMPACT
REPORT/ENVIRONMENTAL IMPACT STATEMENT
FOR THE SUNRISE POWERLINK PROJECT

Sempra La Rumorosa Wind Energy Project Wind Farm

1. The recirculated draft EIR/EIS concludes that impacts to wildlife movement from the Sempra La Rumorosa Wind Energy Project (RWEP) wind farm would be considered adverse but less than significant (page 2-54). However, an analysis of the biological impacts concerning general wildlife movement patterns through the (RWEP) wind farm site has not been conducted. Therefore, this impact should be adequately assessed in the final EIR/EIS, or the final EIR/EIS should acknowledge this deficiency in the analysis for impacts to wildlife movement. In addition, Peninsular bighorn sheep (PBS) are known to occur in the Sierra de Juarez mountains. However, there is no discussion on how the RWEP may impact PBS movement at that site. The final EIR/EIS should address this potential impact to PBS and provide a discussion as to how the applicant can avoid and minimize any impacts that are identified. F0006-2

2. The recirculated draft EIR/EIS discusses the presence of PBS designated critical habitat (February 1, 2001) in the project area (U.S. portion only). However, although it does not appear that this portion of the project is within PBS proposed revised critical habitat (October 10, 2007), the presence of PBS proposed revised critical habitat in the vicinity of the project area should be discussed in the final EIR/EIS to ensure that potential edge effects (e.g., increased non-natives, fire, etc.) from the transmission line will not adversely affect the primary constituent elements in the adjacent critical habitat. F0006-3

3. The draft EIR/EIS lacks the information necessary to accurately quantify the potential direct and indirect impacts of each project component on listed species and their habitat. The final EIR/EIS should include a series of maps that depict such features as the locations of the proposed temporary and permanent project components including associated facilities, construction roads, access roads, towers, transmission lines, and staging areas. These maps should, at a minimum, also include vegetation-type; federally-listed and candidate species known to occur or potentially occur in the project areas; and proposed and/or designated critical habitat areas. Information on vegetation types and species locations and potential habitat within the project areas should be based on best available database information as well as recent habitat and species surveys conducted by qualified and or permitted biologists. F0006-4

Additionally, acreage impacts associated with the construction of each project component should be included in the baseline impact analysis. Impacts to sensitive vegetation F0006-5

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U.S. Fish & Wildlife Service and California Department of Fish & Game

Ms. Blanchard and Ms. Kastoll (FWS-SD/CDFG-2008B0423/2008TA0847) 2

communities and special status plant and animal species should be quantified and adequately disclosed in the final EIR/EIS. This analysis should be provided in revised summary tables/and or a consolidated matrix per guidance that was provided in the Wildlife Agencies comment letter, dated April 11, 2008. This would facilitate comparison of the proposed project to the alternative designs allowing for the identification of a biologically preferred alternative, in accordance with CEQA mandates (CEQA Guideline §15126.6(b). F0006-5 cont.

4. The recirculated draft EIR/EIS states that vegetation and plant species data is based on County of San Diego and CNDDB records, respectively, and subsequently states that no listed plant species occur in the project areas. However, information on vegetation types and plant species locations and potential habitat within the project area in the U.S. should be based on best available database information as well as recent habitat and species evaluations conducted by a qualified biologist/botanist familiar with local plant species in the project areas. F0006-6

5. The final EIR/EIS should provide additional information concerning the preliminary site assessment surveys that were conducted during site selection of the RWEP wind farm. There is limited information provided in the recirculated draft EIR/EIS regarding the development of pre-permitting monitoring protocols that were considered to address bird and bat mortality (and that resulted in NEPA/CEQA baseline and impact determination in the recirculated EIR/EIS). It is important to use the pre-permitting impact assessment to determine the operations monitoring protocols that would be used to substantiate impact estimates. Furthermore, the final EIR/EIS needs to provide a discussion on the evaluation given between the level of anticipated impacts (i.e., bird and bat collisions with wind turbines) and the amount of compensatory mitigation proposed. In considering potential fatalities and risk to individual species and populations, the priority should be avoidance of impacts, and if that is not possible, minimization and mitigation measures should be developed that are effective in reducing and/or offsetting bird/bat fatalities. Additionally, although operational fatalities cannot be forecasted with certainty, more comprehensive baseline data should be collected and provided in the final EIR/EIS. F0006-7

6. Table D.2.7 of the final EIR/EIS should be amended to reflect acreage impacts and corresponding mitigation acreage for the RWEP wind farm, Sempra Baja Wind Transmission Line, SDG&E Jacumba Substation, and SDG&E 69 kV transmission line. F0006-8

7. Page 2-22, Section 2.2.1, Special Status Wildlife Species, states that, "Protocol-level surveys for QCB were conducted at the ECO Substation site (i.e., Jacumba substation) and surrounding areas in April 2008 (SDG&E, 2008a)." However, a copy of the survey report has not been received by the Service. We recommend that protocol-levels surveys for the Quino be conducted in all project areas within the Service's recommended survey area for Quino and reports be submitted in a timely manner so that we may determine if they are adequate and impacts have been assessed correctly. F0006-9

Comment Set F0006, cont.
U.S. Fish & Wildlife Service and California Department of Fish & Game

Ms. Blanchard and Ms. Kastoll (FWS-SD/CDFG-2008B0423/2008TA0847) 3

8. The recirculated draft EIR/EIS discusses the potential presence of PBS, Quino, and Quino designated critical habitat along the 69kV Transmission Line. However, it appears that some portions of this project are also within Quino proposed revised critical habitat (January 17, 2008). Therefore, the potential impacts to Quino proposed revised critical habitat should be discussed in the final EIR/EIS. Additionally, it is not clear from the draft EIR/EIS if protocol-levels surveys have been conducted along this transmission line and adjacent areas. If so, a copy of the survey report has not been received by the Service. F0006-10

9. The recirculated draft EIR/EIS states that the Boulevard Substation Expansion and Communication Facility are expected to occur on land that is already developed. However, it is not clear if "developed" means that these areas no longer contain any vegetation. Therefore, the term "developed" should be defined in the final EIR/EIS. Additionally, because these proposed projects are located within the U.S. Fish and Wildlife Service's Quino Survey Area 1, Quino may use these areas to move between adjacent habitat patches. Therefore, protocol-level surveys should be conducted in the project areas to determine if Quino are present. F0006-11

10. It is premature to identify mitigation ratios for jurisdictional areas when formal jurisdictional delineation has not been completed. For projects with impacts to jurisdictional lakes or streambeds, the Department emphasizes that alternatives and mitigation measures be addressed in CEQA certified documents prior to submittal of an application of a Streambed Alteration Agreement (SAA). Any information which is supplied to the Department after the CEQA process is complete will not have been subject to the public review requirements of CEQA. Therefore, please ensure all impacts to jurisdictional waters are described in the final EIR/EIS. F0006-12

11. The Biological Resources section in the final EIR/EIS should include a discussion of any riparian habitat occurring in the project areas and whether or not arroyo toad, southwestern willow flycatcher, and least Bell's vireo habitat may occur in those project areas. F0006-13

Proposed and Alternative Transmission Line Routes

1. The impact analysis for the 13 reroute proposals mentions that reroutes would either result in no effect or an increase/decrease of impacts to sensitive vegetation communities (e.g., "This reroute would result in greater impacts to the same types of sensitive vegetation communities"), without quantifying the extent of the impact. The final EIR/EIS should include revisions to all the corresponding tables that quantify impacts to vegetation communities for each alternative route proposed (e.g., a revision should be made to Table E.2.2-2 to correspond with an increase or decrease in permanent and temporary impacts associated with a reroute proposal identified in the recirculated draft EIR/EIS). F0006-14

2. Section 3.3.4.6 mentions that the Highway 67 Hansen Quarry Reroute would shift the transmission line route to the east from Hansen Aggregate property onto land owned by the F0006-15

Comment Set F0006, cont.
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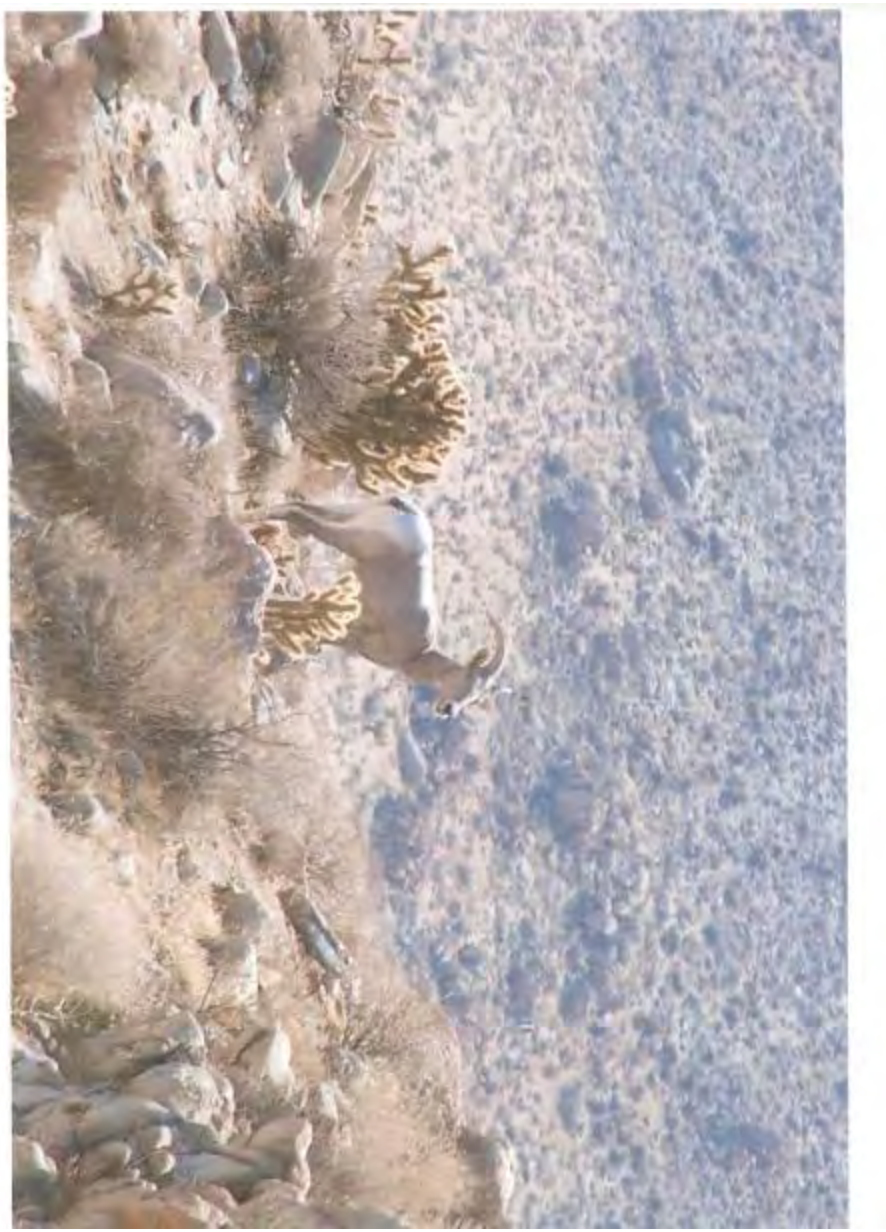
City of San Diego. This reroute would encroach into City of San Diego's Multiple Species Conservation Program cornerstone land holdings. A discussion regarding effects on land use impacts should be provided in the final EIR/EIS to address these concerns. F0006-15 cont.

3 Impacts to vegetation communities that will result from additional workspace needs for the Interstate 8 Alternative (Table 4.1 of the recirculated draft EIR/EIS) should be incorporated in the Table E.1.2-4 of the final EIR/EIS. F0006-16



FACT SHEET

U.S. Air Force Fact Sheet

MODULAR AIRBORNE FIRE FIGHTING SYSTEM

The Modular Airborne Fire Fighting System, or MAFFS, Program provides emergency capability to supplement existing commercial tanker support on wildland fires. MAFFS aids the U.S. Department of Agriculture's Forest Service. When all other air tankers are activated but further assistance is needed, the Forest Service can request help from the Air Force's MAFFS units. MAFFS is a mission that highlights interagency cooperation.

FILE PHOTO -- Air National Guard C-130 Hercules equipped with modular airborne firefighting systems, similar to this one, are dropping thousands of gallons of retardant on the wildfires in Southern California. The fires have destroyed more than 830 homes and burned out more than 500,000 acres. California officials said the fires are responsible for at least 15 deaths. (U.S. Air Force photo by Staff Sgt. Daryl McKamey)

MAFFS units fit inside C-130 airplanes without requiring structural modification. This allows the units to be loaded on short notice. It takes about two hours to load a MAFFS unit onto the C-130. The C-130s drop retardant from an altitude of about 150 feet through a discharge tube located in place of the left rear paratroop door of the aircraft. A MAFFS unit can discharge its load – 3,000 gallons weighing 28,000 pounds -- in less than five seconds. The retardant covers an area one-quarter of a mile long and 60 feet wide. After the plane discharges its load, and returns to an air tanker base, it can be refilled and airborne again in less than 20 minutes.

MAFFS units can drop either water or retardant called "slurry." Slurry is made of 80 to 85 percent water, 10 to 15 percent ammonium sulfate, a jelling agent and red coloring. The red in the retardant helps pilots see where they have dropped previous loads. Along with retarding the fire, the slurry acts as a fertilizer. Because the MAFFS discharges the agent in a mist, slurry does not cause damage to buildings.

Crews who fly MAFFS missions participate in annual re-currency training. Each wing is required to have five certified crews for each MAFFS unit.

In the 1970s, Congress established the MAFFS system after a major fire burned into Long Beach, Calif., destroyed hundreds of homes, and overwhelmed the civilian tanker fleet's ability to respond. Today, one Air Force Reserve Command and three Air National Guard locations participate in the MAFFS Program.

The 302nd Airlift Wing in Colorado Springs, Colo., is the only Reserve unit. The Guard units include the145th AW in Charlotte, N.C.; the 146th AW in Channel Islands, Calif. and the 153rd AW in Cheyenne, Wyo. The 302nd AW has two of the MAFFS units and the Guard has two units each for a total of eight systems nationwide.

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March 4, 2011

BY EMAIL AND OVERNIGHT MAIL

Mr. Iain Fischer, CPUC and
Mr. Greg Thomsen, BLM
c/o Dudek
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Encinitas, CA 92024
Email: ecosub@dudek.com
catulewind@blm.gov

Re: Comments on the Draft Environmental Impact Statement and Draft Environmental Impact Report for the East County Substation/ Tule Wind/ Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fischer and Mr. Thomsen:

We are writing on behalf of the International Brotherhood of Electrical Workers, Local 569 ("Local 569") and its members to comment on the Energia Sierra Juarez Gen-Tie ("ESJ Gen-Tie") and connected Energia Sierra Juarez Wind Farms ("ESJ Wind Farms") portion of the East County ("ECO") Substation, Tule Wind and ESJ Gen-Tie Draft Environmental Impact Statement and Draft Environmental Impact Report ("Draft EIS/EIR"). The ESJ Gen-Tie and the ESJ Wind Farms together are referred to in this letter as the "Project."

417-1

The ESJ Gen-Tie requires a Presidential Use Permit from the Department of Energy ("DOE") and a Major Use Permit from San Diego County to connect the ESJ Wind Farms in northern Baja California, Mexico to the existing Southwest Power Link Transmission Line through the ECO Substation.[1] The ESJ Wind Farms were granted a conditional approval from Mexico's environmental ministry, Secretaria de Medio Ambiente y Recursos Naturales ("SEMARNAT"). SEMARNAT's approval of the ESJ Wind Farms may still be challenged administratively.

[1] Dudek, Environmental Impact Report/Environmental Impact Statement for East County Substation, Tule Wind, and Energia Sierra Juarez Gen-Tie Projects (Dec. 2010), pp. A-13, A-19, A-20, B-9 (hereafter Draft EIS/EIR).

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RESPONSE TO 417-1: DOE notes that this letter is not directed at DOE's EIS. Accordingly, it is included here for the sake of being inclusive, but the comments raised are not specifically addressed here (although many are thoroughly discussed throughout this document in response to other commenters).

Local 569 has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for business and industry to expand in the region, and by making it less desirable for businesses to locate and people to live there. Indeed, continued degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduce future employment opportunities. In this case, the Project would also cause significant adverse socioeconomic impacts to Imperial and San Diego Counties and the southern California regional economy by facilitating the development of large-scale renewable energy projects in Mexico. These socioeconomic impacts, including the loss of employment opportunities, would in turn result in physical changes to the environment, such as urban decay and blight.

As explained more fully below, the Draft EIS/EIR does not comply with the National Environmental Policy Act ("NEPA") or the California Environmental Quality Act ("CEQA"). A Draft EIS/EIR must include a description and analysis of connected actions that are part of the whole of the action. The ESJ Wind Farms are connected to and part of the ESJ Gen-Tie Project. Nevertheless, the Bureau of Land Management ("BLM") and California Public Utilities Commission ("CPUC") did not describe the ESJ Wind Farms in the Draft EIS/EIR, and, therefore, failed to alert the public and decision makers of the Wind Farms' environmental consequences before they occur.

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The BLM and the CPUC also failed to take a hard look or adequately analyze all of the potential impacts to the United States of the Project, as required by NEPA and CEQA. The Project may have significant impacts on biological resources, hazards associated with wildfires and socioeconomics in the United States that have not been disclosed or mitigated in the Draft EIS/EIR.

Finally, San Diego County and the DOE must rely on a single document to support their approvals of a Major Use Permit and Presidential Permit for the ESJ Gen-Tie. San Diego County's reliance on the Draft EIS/EIR prepared by the BLM and CPUC and the DOE's separate reliance on its own Draft EIS violates the express guidance of NEPA and CEQA. NEPA and CEQA strongly encourage State and federal agencies to prepare a single document to avoid duplication of materials and resources, as well as unnecessary delay.

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In this case, the separate environmental documents prepared for the Project demonstrate the need for a single analysis and illustrate the rationale for the NEPA and CEQA policies in favor of a single document. The Draft EIS/EIR prepared by the BLM and CPUC and the Draft EIS prepared by the DOE contain numerous inconsistencies and conflicting information and analysis. San Diego County and the DOE are not only duplicating resources and causing unnecessary delay, but potentially relying on inconsistent and conflicting alternatives and mitigation measures to minimize the ESJ Gen Tie's environmental impacts. This approach precludes a meaningful analysis of alternatives, impairs the enforceability of mitigation measures and undermines public disclosure and informed decision making.

For these reasons, the BLM and CPUC may not certify the Draft EIS/EIR without describing the ESJ Wind Farms, fully assessing all impacts of the proposed Project and recirculating a Revised Draft EIS/EIR to the public. San Diego County also may not rely on a deficient and inconsistent document to support its approval of a Major Use Permit for the ESJ Gen-Tie Project.

I. THE DRAFT EIS/EIR DOES NOT COMPLY WITH NEPA OR CEQA BECAUSE IT DOES NOT INCLUDE A COMPLETE DESCRIPTION OF THE ESJ WIND FARMS

To comply fully with NEPA and CEQA, the CPUC and BLM must describe the ESJ Wind Farms and disclose all potential impacts to the United States in a re-circulated EIS/EIR. Because the ESJ Wind Farms are "connected actions" to the ESJ Gen-Tie and part of the "whole of the action" under review, the CPUC and BLM have a legal duty to include a complete and accurate description of the ESJ Wind Farms component of the Project and to disclose and evaluate all potential impacts so that decision makers and the public are fully informed before harm is done to the environment.

A. The ESJ Wind Farms are "connected actions" and part of the "whole of the action" within the meaning of NEPA and CEQA

Under NEPA, proposals that are so closely related that they are, in effect, a single course of action must be reviewed in the same NEPA document.[2] Federal

[2] 40 C.F.R. 1502.4, subd. (a).

agencies may not chop or segment connected actions into small pieces to avoid application of NEPA, or avoid a more detailed assessment of a project's environmental impacts.[3]

Similarly, under CEQA, a "project" is defined broadly to encompass the "whole of an action."[4] As the Guidelines state, "the term 'project' has been interpreted to mean far more than the ordinary dictionary definition of the term."[5] Any activity "which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment" constitutes a "project" or the "whole of the action."[6] This includes, but is not limited to, "later phases of the project, and any secondary, support, or off-site features necessary for its implementation."[7]

In this case, the ESJ Gen-Tie is dependent on and connected to implementation of the ESJ Wind Farms in Mexico. The Draft EIS/EIR specifically states that the "primary objective" of the ESJ Gen-Tie is "to transmit approximately 1,200 MW of renewable energy from a wind farm project in northern Baja California, Mexico."[8] There is no other stated purpose for the ESJ Gen-Tie except to carry renewable energy generated in Mexico to the United States. Indeed, the BLM and CPUC expressly acknowledge the obligation to analyze impacts of the ESJ Wind Farms because they are connected to the proposed actions and part of the whole of the action.[9]

B. Because the ESJ Wind Farms are "connected actions" and part of the "whole of the action," the Draft EIS/EIR must include an accurate and complete description of the ESJ Wind Farms

An accurate, complete and consistent project description is necessary for the public and decision makers to understand the effects of the proposed action and its

[3] 40 C.F.R. 1508.25, subd. (a).
[4] Pub. Resources Code, §§ 21065, 21080, subd. (a); 14 Cal. Code Regs. (hereinafter "CEQA Guidelines"), §§ 15002, subd. (d), 15003, subd. (h), 15165, 15378, Appendix G.
[5] CEQA Guidelines, § 15002, subd. (d).
[6] Pub. Resources Code, § 21065.
[7] CEQA Guidelines, Appendix G.
[8] Draft EIS/EIR, p. A-13.
[9] *Id.* at p. ES-11.

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alternatives.[10] "A clear description results in more focused and meaningful public input and [CPUC and] BLM participation, a more complete identification of issues, development of reasonable alternatives, sound analysis and interpretation of effects, focused analysis and a sound and supportable decision."[11] "Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost . . . ."[12]

The courts interpreting NEPA have held that "[w]here the information in the initial EIS was so incomplete or misleading that the decisionmaker and the public could not make an informed comparison of the alternatives, revision of an EIS [was] necessary to provide a reasonable, good faith, and objective presentation of the subjects required by NEPA."[13] Similarly, courts applying CEQA requirements have repeatedly held that "[a]n accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR."[14]

The Draft EIS/EIR at issue here contains a cryptic and extremely generalized description of the ESJ Wind Farms. It simply states that ESJ U.S. Transmission, LLC, is proposing "several phases" of wind projects with buildout anticipated to generate approximately 1,250 MW.[15] In addition, the Draft EIS/EIR discloses that the ESJ Wind Farms are planned to interconnect with the ECO Substation through the ESJ Gen-Tie.[16] This vague description does not provide the public or decision makers with any of the information necessary to assess the Projects' impacts. There is no information regarding the location of the ESJ Wind Farms, the height of the turbines, the design of the wind farms and mitigation measures that have been imposed by the Mexican government.

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[10] See 40 C.F.R. §§ 1502.4, 1502.15; see also *Laguna Greenbelt v. U.S. Dept. of Transportation* (1994) 42 F.3d 517, 528-29 (reviewing plaintiff's claim that inconsistent definition resulted in misleading analysis of project's positive and negative effects).
[11] Bur. of Land Management, National Environmental Policy Act Handbook, Jan. 2008, p. 43 (hereafter NEPA Handbook); see *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 192-93.
[12] *County of Inyo v. City of Los Angeles, supra*, 71 Cal.App.3d at 193.
[13] *Natural Resources Defense Council v. U.S. Forest Service* (9th Cir. 2005) 421 F.3d 797, 811. (citing *Animal Defense Council v. Hodel* (9th Cir. 1988) 840 F.2d 1432, 1439).
[14] *County of Inyo v. City of Los Angeles, supra*, 71 Cal.App.3d at 193.
[15] Draft EIS/EIR, p. F-5.
[16] *Id.* at pp. A-13, B-9.

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A more complete description of the ESJ Wind Farms is contained in the Recirculated Draft EIR/Supplemental Draft EIS ("RDEIR/SDEIS") for the Sunrise Powerlink Project, even though the ESJ Wind Farms project was in an early planning stage at the time of the October 2008 Sunrise Powerlink document.[17] The Sunrise document stated that the ESJ Wind Farms would be installed on 7,500 acres along the eastern side of the Sierra de Juarez Mountains.[18] In addition, Ricardo Moreno, the Director of International Public Relations of Sempra Energy Mexico, stated the wind project would use 2.5 MW turbines for its first phase.[19] Because the ESJ Wind Farms project was in an early stage, however, the size and location of subsequent phases of the project had not been determined, nor had the specific design of the first phase been established.[20]

Because the ESJ Wind Farms have undergone environmental review and approval by SEMARNAT, more information regarding subsequent phases and the specific design of the Wind Farms should be available and must be included in the Draft EIS/EIR. Without information regarding the size and location of subsequent phases, as well as the specific design of the Wind Farms, the environmental impacts to sensitive biological resources, hazards related to wildfires and socioeconomics in the United States cannot be meaningfully assessed.

C. The BLM and CPUC must describe the ESJ Wind Farms so that the public and decision makers can meaningfully assess all of the Project's impacts

An EIS and EIR are intended to inform decision makers and the public about the potential, significant environmental impacts of a project before harm is done to the environment.[21] Under CEQA, an EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return."[22]

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[17] Cal. Public Utilities Com. and Bur. of Land Management, Recirculated Draft EIR/Supplemental Draft EIS Sunrise Powerlink Project, Oct. 2008, p. 2-4 (hereafter Sunrise Powerlink RDEIR/SDEIS).
[18] *Ibid.*
[19] *Ibid.*
[20] *Id.* at p. 2-8.
[21] CEQA Guidelines, § 15002, subd. (a)(1); *Berkeley Keep Jets Over the Bay Com. v. Bd. of Port Comrs. of the City of Oakland* (2001) 91 Cal.App.4th 1344, 1354 (hereafter *Berkeley Jets*); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810; *Robertson v. Methow Valley Citizens Council* (1989) 490 U.S. 332, 350; *Dubois v. U.S. Dept. of Agriculture* (1996) 102 F.3d 1273, 1284.
[22] *County of Inyo v. Yorty, supra*, 32 Cal.App.3d 795 at p. 810.

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Similarly, under NEPA, an EIS serves as a means of assessing "the environmental impact of proposed agency actions, rather than justifying decisions already made."[23] To fulfill these functions, the discussion of impacts in a Draft EIS/EIR must be detailed, complete and reflect "a good faith effort at full disclosure."[24]

The BLM and CPUC must provide an accurate and complete description of the ESJ Wind Farms component of the Project and must disclose all impacts associated with the ESJ Wind Farms if the agencies are to meet their legal obligation to consider the whole of the action under review. As discussed below, development of the ESJ Wind Farms may have numerous significant effects on sensitive biological species, impacts associated with wildfire hazards and socioeconomics in the United States that have not been adequately addressed.

II. THE DRAFT EIS/EIR DOES NOT CONTAIN A HARD LOOK OR ADEQUATELY ANALYZE ALL POTENTIAL PROJECT IMPACTS AS REQUIRED BY NEPA AND CEQA AND PROPOSE APPROPRIATE AND FEASIBLE MITIGATION MEASURES

A meaningful analysis and evaluation of all potentially significant environmental effects of a project is central to the purposes behind NEPA and CEQA. NEPA requires that agencies take a "hard look" at the environmental consequences of a proposed action.[25] A hard look is defined as a "reasoned analysis containing quantitative or detailed qualitative information."[26]

An EIS must provide a full and fair discussion of every significant impact, as well as inform decision makers and the public of reasonable alternatives which would avoid or minimize adverse impacts.[27] It should be "concise, clear, to the point, and supported by evidence that the agency has made the necessary environmental analyses."[28] A concise and clear EIS that is supported by evidence ensures that federal agencies are informed of environmental consequences *before* making decisions and that the information is available to the public.[29] As the

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[23] 40 C.F.R. 1502.2, subd. (g).
[24] CEQA Guidelines, § 15151; 40 C.F.R. 1502.1.
[25] *Robertson v. Methow Valley Citizens Council, supra*, 490 U.S. at 350; *Dubois v. U.S. Dept. of Agriculture, supra*, 102 F.3d at 1284;.
[26] NEPA Handbook, p. 55.
[27] 40 C.F.R. § 1502.1.
[28] *Ibid.*
[29] *Inland Empire Public Lands Council v. U.S. Forest Service* (1996) 88 F.3d 754, 758.

Council on Environmental Quality explains in its regulations, "[e]nvironmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made."[30]

CEQA is also designed to inform decision makers and the public about the potential, significant environmental effects of a project.[31] To fulfill this function, the discussion of impacts in an EIR must be detailed, complete and "reflect a good faith effort at full disclosure."[32] An adequate EIR must contain facts and analysis, not just an agency's conclusions.[33] CEQA requires an EIR to disclose all potential direct and indirect, significant environmental impacts of a project.[34]

As discussed in detail below, the analysis presented by the Draft EIS/EIR fails to meet NEPA and CEQA legal standards. The Draft EIS/EIR fails to disclose and evaluate all potentially significant environmental impacts of the Project. Specifically, the Draft EIS/EIR fails to analyze the impacts the ESJ Wind Farms may have on sensitive biological resources, risks associated with wildfires and socioeconomics in the United States.

A. The Project may have significant impacts on sensitive biological resources in the United States

1. The Project may have significant impacts to California condors in the United States

The California condor is both a federal and State-listed endangered species, a California fully-protected species and is protected under the Migratory Bird Treaty Act.[35] Prohibitions under the Migratory Bird Treaty Act apply to birds in Mexico under international conventions between the United States and Mexico. The BLM and CPUC have failed to assess the Project's impacts to this highly-protected species and ensure compliance with the Endangered Species Act, the California Endangered Species Act and the Migratory Bird Treaty Act.

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[30] 40 C.F.R. § 1502.2, subd. (g).
[31] CEQA Guidelines, § 15002, subd. (a)(1).
[32] CEQA Guidelines, § 15151; *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 721-22.
[33] *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 568.
[34] Pub. Resources Code, § 21100, subd. (b)(1); CEQA Guidelines, § 15126.2, subd. (a).
[35] See Draft EIS/EIR, p. D.2-51.

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Development of the Project may impact California condors migrating to the United States from Baja California, Mexico. The Zoological Society of San Diego released a satellite map indicating the location fixes of a three-year-old female condor that was tracked moving north from the Baja release site across the United States/Mexico border.[36] The female condor was tracked in the area around La Rumorosa where the ESJ Wind Farms would be located, and entered the United States near the site of the ESJ Gen-Tie. This was the first record of a condor entering the United States from Baja California, and the first wild condor seen in San Diego County since 1910.[37]

Historically, California condors were found from British Columbia in the north to Baja California in the south.[38] As of March 31, 2010, there were only 169 California condors recorded in the wild.[39] If the population of California condors increases – as is the hope – the species could forage over the site during the lifetime of the ESJ Wind Farms. Operation of the ESJ Wind Farms and the ESJ Gen-Tie, however, may impede California condor viability.

Studies have shown that California condors may be vulnerable to turbine strikes.[40] California condors exhibit behavior and physical features that may put them at high risk for wind turbine-related mortality. For example, condors' flapping flight is very clumsy making them less maneuverable around objects on the landscape.[41] In addition, because California condors are scavengers, they exhibit pronounced curiosity for novel objects in their environment and may, therefore, be attracted to wind turbines.[42] The San Diego Audubon Society has stated that "there is a concern that these wind and transmission line projects would kill condors that are and will be re-colonizing the area."[43]

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[36] The Zoological Society of San Diego, 2008 (Attachment A).
[37] Draft EIS/DIER, p. D.2-52.
[38] H.T. Harvey and Associates, Presence and Movement of California Condors Near Proposed Wind Turbines, Ventana Wildlife Society, Nov. 15, 2007, p. 4 (hereafter HT Harvey and Associates, 2007) (Attachment B).
[39] Draft EIS/DEIR, p. D.2-52.
[40] HT Harvey and Associates, p. 5.
[41] *Ibid.*
[42] *Id.* at pp. 5-6.
[43] Letter from Shannon Dougherty, Conservation Chair, San Diego Audubon Society, to Dr. Jerry Pell, NEPA Document Manager, Office of Electricity Delivery and Energy Reliability, p. 2 (Attachment C).

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Bighorn Sheep movement between the United States and Mexico."[46] The Draft EIS/EIR itself acknowledges that Peninsular bighorn sheep migrate across the border to breed with other populations.[47]

Despite the clear evidence that Peninsular bighorn sheep may move from areas affected by the Project to the United States and the Draft EIS/EIR's own recognition of that fact, the document fails to analyze all potential impacts on bighorn sheep, or propose any alternatives or measures that would mitigate such impacts. The Draft EIS/EIR must indicate what conditions SEMARNAT has imposed to reduce impacts to bighorn sheep from the ESJ Wind Farms component. Potential mitigation measures could include limiting construction activities outside of the lambing season and period of greatest water need.[48] The Draft EIS/EIR must also describe fencing on the ESJ Wind Farms site that could funnel or impede Peninsular bighorn sheep movement.

3. The Project may have significant impacts to Barefoot banded geckos in the United States

The Barefoot banded gecko is a California-threatened species, as well as a BLM designated sensitive species.[49] This species is secretive and is not easily detected; however, it is known from the eastern edge of the Peninsular Ranges from Palms to Pines Highway State Route 74 to the Baja California, Mexico border.[50] While the Draft EIS/EIR states that the Barefoot banded gecko has low potential to occur on the ESJ Gen-Tie site, the species may occur on the ESJ Wind Farms site and migrate to the United States. For example, the Sunrise Powerlink Project RDEIR/SDEIS assumes that the Barefoot banded gecko is present on the ESJ Wind Farms site.[51]

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[46] Letter from Eric Gibson, Director, Dept. of Planning and Land Use, San Diego County, to Dr. Jerry Pell, Office of Electricity Deliverability and Energy Reliability, U.S. Dept. of Energy, Nov. 24, 2010, Attachment A, p. 3 (Attachment E); see also photographs of Bighorn sheep crossing rocky terrain in Attachment F.
[47] Draft EIS/EIR, p. D.2-59.
[48] See Sunrise Powerlink RDEIR/DEIS, Response to Comment Set F0006, F0006-2.
[49] See Draft EIS/EIR, p. D.2-40; Bur. of Land Management, Special Status Animals in Cal., Including BLM Designated Special Status Species <http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/pa/wildlife.Par.13499.File.dat/BLM%20Sensitive%20Animal%20Update%20SEP2006.pdf> (as of Mar. 3, 2011).
[50] Draft EIS/EIR, pp. D.2-40, D.2-148.
[51] Sunrise Powerlink Project, RDEIR/SDEIS, p. 2-30.

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If Barefoot banded gecko are indeed present on the ESJ Wind Farms site, they could cross the border in the mountainous terrain that is not occupied by the border fence and move into the United States. The Draft EIS/EIR must, therefore, evaluate whether Project conditions on the ESJ Wind Farms site will impact the Barefoot banded gecko and impede cross-border movement. This evaluation may only be conducted, however, once a full description of the ESJ Wind Farms has been provided.

4. The Project may have significant impacts to Golden eagles in the United States

The Golden eagle is a State fully-protected species, a CDFG-listed sensitive species and on the CDFG watch list, and protected under the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act and the Lacey Act.[52] Sempra Energy contracted San Diego Zoo Conservation Research to conduct a full-scale survey and analysis of Golden eagle population characteristics, habitat use and movement behaviors throughout the planned ESJ Wind Farms site.[53] Researchers from San Diego Zoo Conservation Research surveyed the area for three days via helicopter.[54] During the survey four nests were observed along with several Golden eagles.[55]

Because Golden eagles and nests were observed on the ESJ Wind Farms site, development of the ESJ Wind Farm may significantly impact Golden eagles in Mexico, as well as Golden eagles that may forage over land in the United States. As the Draft EIS/EIR recognizes, it is unlikely that Golden eagles would nest within the immediate vicinity of wind turbines.[56] Construction of the ESJ Wind Farms could, therefore, lead to nest abandonment.

Construction of the wind turbines may also lead to direct mortality of Golden eagles. The propensity of Golden eagles to seek out strong winds to gain elevation without expending much flying effort can bring the birds into proximity with wind

[52] See Draft EIS/EIR, p. D.2-149.
[53] James Sheppard, *Golden Eagle Helicopter Survey* (Mar. 23, 2009) <http://blogarchives.sandiegozoo.org/blog/2009/03/23/golden-eagle-helicopter-survey/> (as of Mar. 3, 2011) (hereafter Sheppard, 2009).
[54] *Ibid.*
[55] *Ibid.*
[56] Draft EIS/EIR, p. D.2-175.

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turbines.[57] Finally, because Golden eagles can range hundreds of miles while foraging for their food, nest abandonment and mortality caused by development of the ESJ Wind Farms, could impact Golden eagles that normally forage over the United States.[58]

It is unclear whether Sempra has released the findings of the Golden Eagle Helicopter Survey to the public and decision makers. A search of documents on the DOE, CPUC and Sempra Web sites did not reveal the Survey. It is also unclear whether SEMARNAT has imposed any conditions on the Applicant to reduce impacts to Golden eagles. This information must be provided in a Revised Draft EIS/EIR that is released to the public. The current Draft EIS/EIR prepared by BLM and the CPUC fails to adequately analyze the potential impacts to this species of the ESJ Wind Farms and the ESJ Gen-Tie.

5. The Project may have significant impacts to the Quino checkerspot butterfly in the United States

The Quino checkerspot butterfly is a federally-listed endangered species.[59] Although it is unclear whether focused, protocol-level surveys for this species were conducted on the ESJ Wind Farms site, the Sunrise Powerlink RDEIR/SDEIS concluded that Quino checkerspot butterfly may occur on the site.[60] In comments on the Sunrise Powerlink, the Center for Biological Diversity and the Sierra Club stated that the Quino checkerspot butterfly population in the United States is linked to the population in Mexico and may depend on it for its health.[61] Thus, impacts to Quino checkerspot butterfly populations in Mexico may indirectly impact populations in the United States. The Draft EIS/EIR must describe the ESJ Wind Farms and assess the likelihood that Quino checkerspot butterfly may occur on the site so that the public and decision makers can assess the impacts.

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[57] Sheppard, 2009.
[58] See *ibid.*
[59] Draft EIS/EIR, p. D.2-39.
[60] Sunrise Powerlink RDEIR/DEIS, p. 2-15.
[61] Letter from Steven Siegel, Staff Attorney, Center for Biological Diversity and Justin Augustine, Staff Attorney, Center for Biological Diversity, to CPUC/BLM re Recirculated draft environmental impact report/supplemental draft environmental impact statement for the Sunrise powerlink transmission project, Aug. 25, 2008, p. 4-810.

6. The Project may have significant impacts on the goals of *Las Californias Binational Reserve Conservation Initiative*

The Nature Conservancy, the Conservation of Biology Institute and Pronatura prepared *Las Californias Binational Conservation Initiative* in 2004 to foster a shared conservation vision for the United States/Mexico border.[62] The border region is home to more than 400 endangered, threatened and sensitive species.[63] This sensitive area is being rapidly destroyed, however, by urbanization of the San Diego, Tijuana and Tecate regions and their adjacent suburbs.[64]

The *Initiative* and the importance of the area to biodiversity are not mentioned in the Draft EIS/EIR. Unchecked development of the Project may undermine the goals of *Las Californias Binational Conservation Initiative* and destroy biological resources in both the United States and Mexico. The BLM and CPUC must include a complete description of the Project and take a hard look at its potential impacts so that a complete picture of the Project's impacts to biodiversity can be understood.

B. The Project may have potentially significant impacts to the United States associated with wildfire hazards

The Draft EIS/EIR recognizes that wildfires caused by the wind turbines in Mexico could have significant impacts on resources in the United States.[65] It fails to describe, however, the location of the wind turbines and measures that will be taken to reduce potential fire risks from the turbines. The lack of information contained in the Draft EIS/EIR undermines a meaningful analysis of the Wind Farms' impacts.

There is a high risk of fire from wind turbine power generation. The Confederation of Fire Protection Associations ("CFPA") in Europe developed Guidelines to protect against wind turbine fires. In the Guidelines, CFPA states

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[62] See Pronatura, Conservation Biology Institute and the Nature Conservancy, *Las Californias Binational Conservation Initiative: A Vision for Habitat Conservation in the Border Region of California and Baja California*, Sept. 2004 (hereafter Las Californias Binational Conservation Initiative).
[63] *Id.* at p. 1.
[64] *Id.* at p. 3.
[65] Draft EIS/EIR, p. A-4.

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that fire damage may be caused by machinery breakdowns, electrical installations and resonant circuits.[66] The most frequent causes of wind turbine fires, however, are lightening strikes.[67] The risk of lightning strikes is elevated due to the exposed locations (often at a higher altitude) and the large height of the turbines.[68] If a turbine is struck by lightning it may cause damage to the turbine itself, secondary fires on the ground where the turbine is located and service interruption exposure.[69]

The ESJ Wind Farms would also be located in an area of high wildfire risk. In Mexico, wildfires can spread rapidly to the west and south, all the way to the Mexican coastal communities.[70] Despite the high risk of fire associated with the turbines themselves and due to the location of the ESJ Wind Farms, the Draft EIS/EIR only considers the impacts to Mexico from ignition caused by the Tule Wind turbines.[71] The Draft EIS/EIR does not assess whether ignition caused by the ESJ Wind Farms or other Project components could include loss of personal property, injury, or loss of life as well as environmental impacts in the United States.

The Draft EIS/EIR must describe the location of the turbines, any fire safety measures that have been imposed by SEMARNAT and any emergency response plans that are in place to avoid catastrophic wildfires. Without this information the BLM and CPUC cannot adequately analyze all impacts of the ESJ Wind Farms to the United States.

C. Transmitting energy from the ESJ Wind Farms through the ESJ Gen-Tie may have potentially significant socioeconomic impacts to the United States

The Draft EIS/EIR fails to address the socioeconomic impacts of developing large-scale renewable energy projects in Mexico rather than in the United States. The Draft EIS/EIR also fails to address the related socioeconomic effects caused by the ESJ Gen-Tie and East County Substation's facilitation of future renewable energy projects in Mexico, as opposed to development of this important burgeoning

[66] CFPA Europe, European Guideline, Wind turbines fire protection guideline, Guideline No. 22:2010F, Apr. 19, 2010, pp. 7-9 (hereafter Wind Turbine Fire Guidelines) (Attachment G).
[67] *Id.* at p. 10.
[68] *Ibid.*
[69] *Id.* at pp. 6-7.
[70] Draft EIS/EIR, p. D.15-24.
[71] *Id.* at pp. D.15-24 to 25.

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industry in Southern California. The BLM and CPUC must revise the socioeconomic impact analysis in a Draft EIR/EIS that is recirculated to the public

Under CEQA, an EIR must identify and focus on the significant environmental impacts of a project. Specifically, the "[d]irect and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects."[72] Both direct and "reasonably foreseeable" indirect consequences must be considered when determining the significance of a project's environmental effect.[73] When the economic or social effects of a project cause a physical change, this change is to be regarded as a significant effect in the same manner as any other physical change resulting from the project.[74]

NEPA's requirement for analyzing socioeconomic impacts is similar to CEQA's. Under NEPA, the federal agency preparing an EIS must analyze social and economic impacts if they are interrelated with physical impacts.[75] Federal agencies have the additional responsibility to analyze a project's effects with respect to environmental justice.[76] Further, a Presidential Permit required for transmission must be "consistent with the public interest."[77] Thus, federal agencies have a heightened duty to consider the socioeconomic impacts that would be caused by a proposed project.

Renewable energy development in Mexico may supplant renewable energy development in the United States. Because renewable energy jobs are critical to the health of San Diego and Imperial Counties' economies, facilitating renewable energy development in northern Mexico may cause adverse physical changes to the environment in the United States, such as urban decay and blight. Because urban

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[72] CEQA Guidelines, § 15126.2, subd. (a).
[73] CEQA Guidelines, § 15064, subd. (d).
[74] CEQA Guidelines, § 15064, subd. (e); *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1205.
[75] See 40 C.F.R. § 1508.14; see also, e.g., *Rochester v. U.S. Postal Service* (1976) 541 F.2d 967 (placing postal service center outside urban core could cause increased commuting, loss of inner-city jobs and moving to suburbs, leading to economic and physical downtown deterioration and downtown post office abandonment, all contributing to urban decay and blight).
[76] See Exec. Order No. 12898, 59 Fed. Reg. 7629 (Feb. 16, 1994), see also Dept. of Justice, *Guidance Concerning Environmental Justice* <http://www.justice.gov/archive/enrd/ejguide.html> (as of Mar. 3, 2011).
[77] Exec. Order No. 10485, § 1, 18 Fed. Reg. 5397 (Sept. 3, 1953) (as amended by Exec. Order No. 12114, 44 Fed. Reg. 1957 (Jan. 4, 1979)).

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decay is a potentially significant physical change to the environment, the CPUC and BLM must analyze the socioeconomic impacts and propose any necessary mitigation measures.

1. Renewable energy development in northern Mexico may supplant development in California

Both the federal government and California have adopted polices, provided incentives and established goals to increase renewable energy development in the United States. One of the purposes behind the push for renewable energy generation in the United States is to foster economic growth and create employment opportunities in the United States. Federally, renewable energy generation is facilitated through federal tax credits and the American Recovery and Reinvestment Act.

In California, the Renewables Portfolio Standard ("RPS") sets some of the most ambitious renewable energy standards in the country. The RPS program, administered by the CPUC, the California Energy Commission and Air Resources Board, requires investor-owned utilities, electric service providers, publicly owned utilities and community choice aggregators to increase procurement from eligible renewable energy resources. In 2002, the Legislature established the original goal of 20% RPS by 2020 and in 2006 accelerated that goal. Since then, Governor Schwarzenegger increased that goal by Executive Order to 33% RPS by 2020. If enacted, pending legislation would codify the 33% RPS standard.[78]

Despite the federal incentives and State mandates, facilitating renewable energy development in Mexico may supplant renewable energy development in the United States. First, on average, renewable energy is significantly more expensive to generate than energy derived from conventional fossil-fuel production.[79] Utilities, therefore, only procure the renewable energy capacity they are required to by law. In California, the RPS allows utilities to pass the increased costs of

[78] See Sen. Bill No. x1 2, as introduced Feb. 1, 2011 < http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sbx1_2_bill_20110201_introduced.html> (as of Mar. 3, 2011); see also Sen. Bill No. 23, as introduced Dec. 6, 2010 <http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sb_23_bill_20101206_introduced.pdf> (as of March 3, 2011).

[79] See Div. of Ratepayer Advocates, *Green Rush: Investor-Owned Utilities' Compliance with the Renewables Portfolio Standard* (Feb. 2011), p. 7 <http://www.dra.ca.gov/NR/rdonlyres/0CB0E986-E93B-462A-BA62-804EDAE43B82/0/DRAReportPUBLICVERSIONFeb2011.pdf> (as of March 3, 2011).

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renewable energy along to retail consumers. Retailers do not have an incentive to procure renewable energy beyond the amount required to fulfill their RPS target. In this zero-sum game, the more renewable energy projects in Mexico deliver electricity to satisfy California's RPS, the less demand there will be for renewable energy development in California.

Further, transmission capacity in Southern California and in the Project area is limited, even with the recently approved Sunrise Powerlink. Thus, if more renewable and conventional energy projects built in Mexico use transmission in the United States, there will be less available transmission capacity for renewable energy development in the United States. The loss of domestic jobs to Mexico will adversely affect the regional economy in Imperial County and San Diego County.

2. Renewable energy jobs are critical to the future health of San Diego County and especially Imperial County

As of December 2010, El Centro had the highest unemployment rate among American cities, at 28.3%.[80] Unemployment rates for Imperial County as a whole are similarly well above State and national averages.

Renewable energy development presents one of the few areas of opportunity for economic development in Imperial County. The CPUC has recognized the tremendous potential for renewable energy projects in Imperial County and has adopted multiple orders intended to facilitate that development.[81]

Developing renewable energy projects in Imperial County has great potential to address the demand for renewable energy created by the RPS goals.[82] The ESJ Wind Farms in Mexico and approval of the ESJ Gen-Tie threaten this development by facilitating renewable energy projects in Mexico, where less stringent and

[80] See U.S. Bur. of Labor Statistics *Unemployment Rates for Metropolitan Areas* (Dec. 7, 2010) <http://www.bls.gov/web/metro/laummtrk.htm> (as of Mar. 3, 2011).
[81] See, e.g., Cal. Public Utilities Com., In the Matter of the Application of San Diego Gas & Electric Company (U 902 E) for a Certificate of Public Convenience and Necessity for the Sunrise Powerlink Transmission Project. Decision 08-12-058, pp. 63-68; see also Cal. Public Utilities Com., Decision Conditionally Accepting Procurement Plans for 2009 Renewables Portfolio Standard Solicitations and Integrated Resource Plan Supplements, Decision 09-06-018, §§ 4.1-4.2, 6.3.
[82] See Summit Blue Consulting, LLC, *Renewable Energy Feasibility Study* (Apr. 2008), pp. 14, 19-20, 22, 25 <http://www.ivedc.com/CMS/Media/IIDRenewableEnergyStudy_08.pdf> (as of March 3, 2011).

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protective environmental and labor standards may attract developers seeking to minimize costs.

3. These adverse economic effects will result in blight and other physical changes in the environment

Developing the ESJ Wind Farms and approving the ESJ Gen-Tie may well lead to a downward economic spiral in the United States. Investment in a region rich in solar and wind resources can be expected to continue as long as there is an expectation that renewable energy projects will continue to be proposed in the area. In addition, renewable energy development would indirectly stimulate local economies through the "economic multiplier effect."[83]

If the ESJ Gen-Tie is approved and renewable energy development emerges in northern Mexico instead, market expectations will shift and investment may drop off sharply. With prolonged and potentially deepening economic conditions, city and county governments would receive less tax revenue with which to fund infrastructure maintenance and improvements and government services. Further, property values would continue to fall, among other economic impacts. These impacts would result in physical impacts, such as deteriorating roads, vacant neighborhoods and urban decay. The Draft EIR/EIS is required to consider these indirect physical changes that would result from the Project.

D. The BLM and CPUC must develop and impose appropriate and feasible mitigation measures to reduce or avoid the Project's impacts

Both NEPA and CEQA require that lead agencies address all potentially significant impacts through the enforceability of alternatives and mitigation measures that will avoid or minimize such impacts. An EIS must provide a full and fair discussion of every significant impact, as well as inform decision makers and the public of reasonable alternatives which would avoid or minimize adverse impacts.[84] Under CEQA, an EIR must not only discuss measures to avoid or minimize adverse impacts, but must ensure that mitigation conditions are fully enforceable through permit conditions, agreements or other legally binding

[83] *See id.* at pp. 26, 91.
[84] 40 C.F.R. § 1502.1.

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instruments.[85] A CEQA lead agency is precluded from making the required CEQA findings unless the record shows that all uncertainties regarding the mitigation of impacts have been resolved; an agency may not rely on mitigation measures of uncertain efficacy or feasibility.[86] This approach helps "insure the integrity of the process of decision by precluding stubborn problems or serious criticism from being swept under the rug."[87]

As discussed above, the failure of the BLM and CPUC to describe the ESJ Wind Farms in the Draft EIS/EIR precluded a meaningful analysis of all of the Project's impacts. The BLM and CPUC failed to take a hard look and appropriately analyze all of the Project's impacts to biological resources, hazards associated with wildfires and socioeconomics in the United States. The Project's impacts to the United States may be significant.

The BLM and CPUC must, therefore, identify all potentially significant impacts of the Project and impose measures to reduce or avoid the Project's impacts to resources in the United States.

III. SAN DIEGO COUNTY AND THE DEPARTMENT OF ENERGY MUST RELY ON A JOINT ENVIRONMENTAL REVIEW DOCUMENT THAT SATISFIES THE REQUIREMENTS OF BOTH NEPA AND CEQA TO SUPPORT THEIR APPROVALS OF THE ESJ GEN-TIE PROJECT

Under NEPA, if a project requires state approval, the federal agency must cooperate with state and local agencies "to the fullest extent possible to reduce duplication between NEPA and state and local requirements."[88] This includes the preparation of a joint federal and state environmental review document so that one document will comply with all applicable laws.[89] Similarly, under CEQA, State and local agencies are encouraged to use a federal EIS, if the previously prepared EIS complies with CEQA.[90]

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[85] CEQA Guidelines, § 15126.4, subd. (a)(2).
[86] *Kings County Farm Bur. v. County of Hanford* (1990) 221 Cal.App.3d 692, 727-28 (groundwater purchase agreement found to be inadequate mitigation because there was no record evidence that replacement water was available.)
[87] *Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 935.
[88] 40 C.F.R. § 1506.2, subd. (b).
[89] 40 C.F.R. § 1506.2, subd. (c).
[90] CEQA Guidelines, § 15221, subd. (a).

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The CPUC and San Diego County must ensure that DOE's Draft EIS incorporates CEQA's requirements so that one document will comply with all applicable laws. Preparation of a single Draft EIS/EIR is essential because the alternatives and mitigation measures proposed by the DOE's Draft EIS and BLM/CPUC's Draft EIS/EIR are inconsistent and in conflict. The inconsistencies between the two documents undermine the public review process because it is not apparent how the differences between the two documents will be reconciled. The CPUC/San Diego County and DOE may select for approval two conflicting alternatives or impose conflicting mitigation measures.

1. **The alternatives for the ESJ Gen-Tie proposed by the BLM and CPUC in the Draft EIS/EIR are inconsistent and contrary to the alternatives proposed by the DOE in its Draft EIS**

The BLM/CPUC and the DOE have proposed inconsistent and contrary alternatives to the proposed ESJ Gen-Tie. Under NEPA, the alternatives analysis is considered the "heart" of the EIS.[91] CEQA also requires that an EIR provide a discussion of project alternatives that allow meaningful analysis and informed public participation.[92] Evaluation of alternatives should present the proposed action and all the alternatives in comparative form, clearly define the issues and provide a clear basis for choice among the options.

Because the alternatives analyses at issue here are inconsistent, the public cannot meaningfully evaluate the various alternatives or understand the basis of the agencies' choices. San Diego County must work with the DOE to revise the proposed alternatives so that agency decision making is based on a single, consistent document. The County may not support its Major Use Permit for the ESJ Gen-Tie based on an analysis that is in conflict with DOE's review.

DOE only considered two action alternatives in its Draft EIS: a double-circuit 230-kV transmission line and a single-circuit 500-kV transmission line.[93] It dismissed an alternative transmission route from further analysis because the proposed location of the ECO Substation would make the distance of the route

[91] 40 C.F.R. § 1502.14.
[92] *Laurel Heights Improvement Assn. v. Regents of Univ. of California* (1988) 47 Cal.3d 376, 403-04.
[93] U.S. Dept. of Energy, Energia Sierra Juarez U.S. Transmission Line Project, Draft Environmental Impact Statement, Aug. 2010, p. S-4 to S-6 (hereafter DOE DEIS).

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infeasible and impractical.[94] It also dismissed an underground transmission line alternative based on its determination that an underground failure can be more difficult to locate and repair, construction of an underground alternative would require greater ground disturbance and be more expensive and EMF exposure may be greater.[95] The 230-kV transmission line was identified as the preferred alternative.

The Draft EIS/EIR prepared by the BLM and CPUC proposed four alternatives, two of which included an underground transmission line and two of which included an overhead alternate route.[96] The overhead alternate route alternative was designated as the "environmentally superior alternative."[97] The BLM-Preferred Alternative, however, was an underground alternate route alternative.[98]

The Draft EIS/EIR's alternatives are alternatives that were expressly dismissed from further consideration by the DOE. In addition, each agency – San Diego County, the BLM and the DOE -- selected a potentially conflicting alternative. For example, it is possible that San Diego County could select a 500-kV overhead alternate alignment, the BLM could select a 500-kV underground alignment and the DOE could select a 230-kV overhead line. Because the DOE released the Draft EIS months before the BLM and CPUC released the Draft EIS/EIR, the agencies should have been on notice that these alternatives were considered infeasible by the DOE. Nowhere in the Draft EIS/EIR, however, is the inconsistency between the two alternatives analyses explained.

It is impossible for the public to assess whether the alternatives to the ESJ Gen-Tie proposed in the Draft EIS/EIR are actually feasible. It is also impossible for the public to understand the basis behind San Diego County, the BLM and the DOE's choice of a preferred alternative. Because an adequate alternatives analysis is so critical to both a NEPA and CEQA analysis, the DOE and San Diego County must coordinate to produce a single alternatives analysis that will allow the public and decision makers to meaningfully evaluate alternatives to the proposed action.

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[94] *Id.* at p. S-11.
[95] *Id.* at pp. S-11 to 12.
[96] Draft EIS/EIR, p. C-26 to 27.
[97] *Id.* at pp. E-30, E-32.
[98] *Id.* at p. E-34.

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2. The Mitigation Measures proposed by the BLM and CPUC in the Draft EIS/EIR are inconsistent and in conflict with the Mitigation Measures proposed by the DOE in its Draft EIS

The BLM/CPUC and the DOE have proposed inconsistent and contrary mitigation measures in their environmental documents. Under NEPA, a Draft EIS must include a discussion of the "means to mitigate adverse environmental impacts."[99] Mitigation measures must be discussed for all impacts, even those that by themselves would not be considered significant.[100] While NEPA does not require agencies to actually adopt these mitigation measures, CEQA does mandate that agencies adopt feasible mitigation measures to lessen or avoid otherwise significant adverse impacts.[101]

The mitigation measures discussed by the BLM and CPUC in the Draft EIS/EIR are inconsistent with the mitigation measures discussed by the DOE in its Draft EIS. As a result of the inconsistencies, it is impossible for the public to conclude which mitigation measure will be adopted for the ESJ Gen-Tie. San Diego County must work with the DOE to revise the proposed mitigation measures so that the agencies rely on a single, consistent document to support their actions. The possibility that the DOE and the County may both rely on inconsistent measures to mitigate the Project's impacts creates a question about the enforceability of the measures. Under CEQA, a California agency may not rely on mitigation measures of questionable enforceability.

For example, while both the Draft EIS prepared by the DOE and the Draft EIS/EIR prepared by the BLM and CPUC propose acquisition of compensation land, the requirements for compensation land differs. The DOE states that to compensate for the loss of native scrub habitat that would be disturbed during construction, the Applicant would place a portion of the Project site under a conservation easement for preservation. According to the Draft EIS, the Applicant has proposed placing the easement on a portion of its property east of the

[99] 40 C.F.R. § 1502.16, subd. (h).
[100] Council on Environmental Quality, Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, Question 19(a).
[101] Pub. Resources Code, §§ 21002, 21081, subd. (a); CEQA Guidelines, §§ 15002, subd. (a)(3), 15021, subd. (a)(2), 15091, subd. (a)(1).

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transmission line that could be up to 15 acres in size.[102] The BLM and CPUC, however, state that to compensate for all permanent impacts to vegetation, combination habitat and restoration is required at a minimum of a 1:1 ratio or as required by the permitting agencies. The Draft EIS/EIR also requires that all habitat compensation and restoration on private lands include long-term management and legal protection assurances.[103]

From these two mitigation measures, it is clear that the Applicant must compensate for permanent impacts to native vegetation. It is not clear, however, whether the Applicant must compensate for impacts that only occur during construction or all permanent impacts, or where and how much land would be put into easement. There is also no provision in the Draft EIS prepared by the DOE that the compensation land will have long-term management and legal protection assurances.

Because CEQA requires agencies to rely on specific enforceable mitigation measures in their environmental review documents, San Diego County may not rely on these inconsistent mitigation measures to support its Major Use Permit. The Applicant and the public cannot know how much land must be compensated for if DOE only requires compensation land for construction impacts, but the BLM and CPUC require compensation land for all impacts. In addition, the Applicant cannot know whether to compensate land up to 15 acres or at a ratio of 1:1. If the Applicant's duties to mitigate are unclear, the public and the decision makers cannot meaningfully assess whether impacts to native vegetation have indeed been mitigated.

San Diego and the DOE must work together to produce a single document that properly lays out mitigation measures to reduce and avoid the impacts associated with the ESJ Gen-Tie.

IV. CONCLUSION

The BLM and CPUC have failed to produce an environmental review document that complies with NEPA and CEQA. The Draft EIS/EIR undermines public disclosure and informed decision making by failing to provide an accurate and complete description of the Project. The EIS/EIR also failed to take a hard look

[102] DOE DEIS, p. S-20.
[103] Draft EIS/EIR, pp. D.2-129 to 130.

or adequately analyze all of the Project's potential impacts to the United States and impose all feasible and appropriate mitigation measures. In addition, the inconsistencies between the Draft EIS/EIR prepared by the BLM and CPUC and the Draft EIS prepared by the DOE preclude a meaningful analysis. A revised Draft EIS/EIR must be prepared to correct these deficiencies and recirculated for public comment.

Local 569 and its members appreciate this opportunity to comment and appreciate the BLM and the CPUC considering our views.

Sincerely,

Robyn C. Purchia

RCP:cnh

Attachments
Attachment A: The Zoological Society of San Diego Map of Condor Flight
Attachment B: Presence and Movement of California Condors Near Proposed Wind Turbines
Attachment C: San Diego Audubon Letter
Attachment D: USFWS and CDFG Letter
Attachment E: San Diego County Letter
Attachment F: Photographs of Peninsular bighorn sheep
Attachment G: European Guideline: Wind turbines fire protection guideline

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EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
WASHINGTON, D.C. 20503

MEMORANDUM TO HEADS OF AGENCIES ON THE APPLICATION OF THE NATIONAL ENVIRONMENTAL POLICY ACT TO PROPOSED FEDERAL ACTIONS IN THE UNITED STATES WITH TRANSBOUNDARY EFFECTS

FROM: KATHLEEN A. MCGINTY
CHAIR

DATE: JULY 1, 1997

In recent months, the Council has been involved in discussions with several agencies concerning the applicability of the National Environmental Policy Act (NEPA) to transboundary impacts that may occur as the result of proposed federal actions in the United States. To set forth a consistent interpretation of NEPA, CEQ is today issuing the attached guidance on NEPA analysis for transboundary impacts. In it, we advise that NEPA requires analysis and disclosure of transboundary impacts of proposed federal actions taking place in the United States.

We recommend that agencies which take actions with potential transboundary impacts consult as necessary with CEQ concerning specific procedures, proposals or programs which may be affected.

COUNCIL ON ENVIRONMENTAL QUALITY GUIDANCE ON NEPA ANALYSES FOR TRANSBOUNDARY IMPACTS

JULY 1, 1997

The purpose of this guidance is to clarify the applicability of the National Environmental Policy Act (NEPA) to proposed federal actions in the United States, including its territories and possessions, that may have transboundary effects extending across the border and affecting another country's environment. While the guidance arises in the context of negotiations undertaken with the governments of Mexico and Canada to develop an agreement on transboundary environmental impact assessment in North America, [1] the guidance pertains to all federal agency actions that are normally subject to NEPA, whether covered by an international agreement or not.

It is important to state at the outset the matters to which this guidance is addressed and those to which it is not. This guidance does not expand the range of actions to which NEPA currently applies. An action that does not otherwise fall under NEPA would not now fall under NEPA by virtue of this guidance. Nor does this guidance apply NEPA to so-called "extraterritorial actions"; that is, U.S. actions that take place in another country or otherwise outside the jurisdiction of the United States[2]. The guidance pertains only to those proposed actions currently covered by NEPA that take place within the United States and its territories, and it does not change the applicability of NEPA law, regulations or case law to those actions. Finally, the guidance is consistent with long-standing principles of international law.

NEPA LAW AND POLICY

NEPA declares a national policy that encourages productive and enjoyable harmony between human beings and their environment, promotes efforts which will prevent or eliminate damage to the environment and biosphere, stimulates the health and welfare of human beings, and enriches the understanding of ecological systems.[3] Section 102(1) of NEPA "authorizes and directs that, to the fullest extent possible . . . . the policies, regulations and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in [the] Act."[4] NEPA's explicit statement of policies calls for the federal government "to use all practical means and measures . . . . to create and maintain conditions under which man and nature can exist in productive harmony . . . ."[5] In addition, Congress directed federal agencies to "use all practical means . . . . to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may . . . . attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences."[6] Section 102(2)(C) requires federal agencies to assess the environmental impacts of and alternatives to proposed major federal actions significantly affecting the quality of the human environment.[7] Congress also recognized the "worldwide and long-range character of environmental problems" in NEPA and directed agencies to assist other countries in anticipating and preventing a decline in the quality of the world environment.[8]

Neither NEPA nor the Council on Environmental Quality's (CEQ) regulations implementing the procedural provisions of NEPA define agencies' obligations to analyze effects of actions by administrative boundaries. Rather, the entire body of NEPA law directs federal agencies to analyze the effects of proposed actions to the extent they are reasonably foreseeable consequences of the proposed action, regardless of where those impacts might occur. Agencies must analyze indirect effects, which are caused by the action, are later in time or farther removed in distance, but are still reasonably foreseeable, including growth-inducing effects and related effects on the ecosystem,[9] as well as cumulative effects.[10] Case law interpreting NEPA has reinforced the need to analyze impacts regardless of geographic boundaries within the United States,[11] and has also assumed that NEPA requires analysis of major federal actions that take place entirely outside of the United States but could have environmental effects within the United States.[12]

Courts that have addressed impacts across the United States' borders have assumed that the same rule of law applies in a transboundary context. In Swinomish Tribal Community v. Federal Energy Regulatory Commission,[13] Canadian intervenors were allowed to challenge the adequacy of an environmental impact statement (EIS) prepared by FERC in connection with its approval of an amendment to the City of Seattle's license that permitted raising the height of the Ross Dam on the Skagit River in Washington State. Assuming that NEPA required consideration of Canadian impacts, the court concluded that the report had taken the requisite "hard look" at Canadian impacts. Similarly, in Wilderness Society v. Morton,[14] the court granted intervenor status to Canadian environmental organizations that were challenging the adequacy of the trans-Alaska pipeline EIS. The court granted intervenor status because it found that there was a reasonable possibility that oil spill damage could significantly affect Canadian resources, and that Canadian interests were not adequately represented by other parties in the case.

In sum, based on legal and policy considerations, CEQ has determined that agencies must include analysis of reasonably foreseeable transboundary effects of proposed actions in their analysis of proposed actions in the United States.

PRACTICAL CONSIDERATIONS

CEQ notes that many proposed federal actions will not have transboundary effects, and cautions agencies against creating boilerplate sections in NEPA analyses to address this issue. Rather, federal agencies should use the scoping process[15] to identify those actions that may have transboundary environmental effects and determine at that point their information needs, if any, for such analyses. Agencies should be particularly alert to actions that may affect migratory species, air quality, watersheds, and other components of the natural ecosystem that cross borders, as well as to interrelated social and economic effects.[16] Should such potential impacts be identified, agencies may rely on available professional sources of information and should contact agencies in the affected country with relevant expertise.

Agencies have expressed concern about the availability of information that would be adequate to comply with NEPA standards that have been developed through the CEQ regulations and through judicial decisions. Agencies do have a responsibility to undertake a reasonable search for relevant, current information associated with an identified potential effect. However, the courts have adopted a "rule of reason" to judge an agency's actions in this respect, and do not require agencies to discuss "remote and highly speculative consequences".[17] Furthermore, CEQ's regulation at 40 CFR 1502.22 dealing with incomplete or unavailable information sets forth clear steps to evaluating effects in the context of an EIS when information is unobtainable.[18] Additionally, in the context of international agreements, the parties may set forth a specific process for obtaining information from the affected country which could then be relied upon in most circumstances to satisfy agencies' responsibility to undertake a reasonable search for information.

Agencies have also pointed out that certain federal actions that may cause transboundary effects do not, under U.S. law, require compliance with Sections 102(2)(C) and 102(2)(E) of NEPA. Such actions include actions that are statutorily exempted from NEPA, Presidential actions, and individual actions for which procedural compliance with NEPA is excused or modified by virtue of the CEQ regulations[19] and various judicial doctrines interpreting NEPA[20]. Nothing in this guidance changes the agencies' ability to rely on those rules and doctrines.

INTERNATIONAL LAW

It has been customary law since the 1905 Trail Smelter Arbitration that no nation may undertake acts on its territory that will harm the territory of another state[21]. This rule of customary law has been recognized as binding in Principle 21 of the Stockholm Declaration on the Human Environment and Principle 2 of the 1992 Rio Declaration on Environment and Development. This concept, along with the duty to give notice to others to avoid or avert such harm, is incorporated into numerous treaty obligations undertaken by the United States. Analysis

of transboundary impacts of federal agency actions that occur in the United States is an appropriate step towards implementing those principles.

CONCLUSION

NEPA requires agencies to include analysis of reasonably foreseeable transboundary effects of proposed actions in their analysis of proposed actions in the United States. Such effects are best identified during the scoping stage, and should be analyzed to the best of the agency's ability using reasonably available information. Such analysis should be included in the EA or EIS prepared for the proposed action.

[1] The negotiations were authorized in Section 10.7 of the North American Agreement on Environmental Cooperation, which is a side agreement to the North American Free Trade Agreement. The guidance is also relevant to the ECE Convention on Environmental Impact Assessment in a Transboundary Context, signed in Espoo, Finland in February, 1991, but not yet in force.

[2] For example, NEPA does apply to actions undertaken by the National Science Foundation in the Antarctica. Environmental Defense Fund v. Massey, 986 F.2d 528 (D.C. Cir. 1993).

[3] 42 USC 4321.

[4] 42 USC 4332(1).

[5] 42 USC 4331(a).

[6] 42 USC 4331(b)(3).

[7] 42 USC 4332(2)(C).

[8] 42 USC 4332(2)(F).

[9] 40 CFR 1508.8(b).

[10] 40 CFR 1508.7.

[11] See, *for example*, Sierra Club v. U.S.Forest Service, 46 F.3d 835 (8th Cir. 1995); Resources Ltd., Inc. v. Robertson, 35 F.3d 1300 and 8 F.3d 1394 (9th Cir. 1993); Natural Resources Defense Council v. Hodel, 865 F.2d 288 (D.C. Cir. 1988); County of Josephine v. Watt, 539 F.Supp. 696 (N.D. Cal. 1982).

[12] See Sierra Club v. Adams, 578 F.2d 389 (D.C. Cir. 1978); NORML v. Dept. of State, 452 F.Supp. 1226 (D.D.C. 1978).

[13] 627 F.2d 499 (D.C. Cir. 1980).

[14] 463 F.2d 1261 (D.C. Cir. 1972).

[15] 40 CFR 1501.7. Scoping is a process for determining the scope of the issues to be addressed and the parties that need to be involved in that process prior to writing the environmental analyses.

[16] It is a well accepted rule that under NEPA, social and economic impacts by themselves do not require preparation of an EIS. 40 CFR 1508.14.

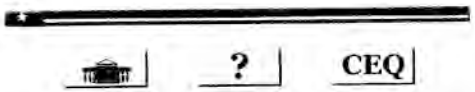
[17] Trout Unlimited v. Morton, 509 F.2d 1276, 1283 (9th Cir. 1974). See also, Northern Alaska Environmental Center v. Lujan, 961 F.2d 886, 890 (9th Cir. 1992); Idaho Conservation League v. Mumma, 956 F.2d 1508, 1519 (9th Cir. 1992); San Luis Obispo Mothers for Peace v. N.R.C., 751 F.2d 1287, 1300 (D.C. Cir. 1984); Scientists Institute for Public Information, Inc. v. Atomic Energy Commission, 481 F.2d 1079, 1092 (D.C. Cir. 1973).

[18] See Preamble to Amendment of 40 CFR 1502.22, deleting prior requirement for "worst case analysis" at 51 Federal Register 15625, April 25, 1986, for a detailed explanation of this regulation.

[19] For example, agencies may contact CEQ for approval of alternative arrangements for compliance with NEPA in the case of emergencies. 40 CFR 1506.11.

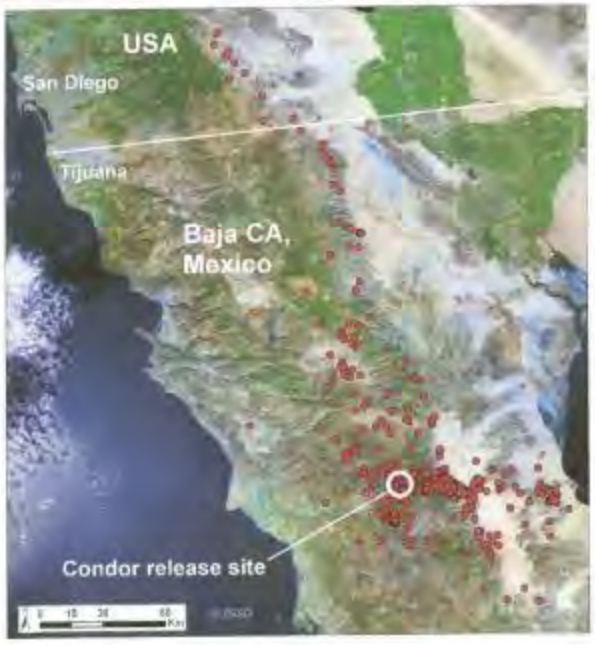
[20] For example, courts have recognized that NEPA does not require an agency to make public information that is otherwise properly classified information for national security reasons. Weinberger v. Catholic Action of Hawaii, 454 U.S. 139 (1981).

[21] *Trail Smelter Arbitration*, U.S. v. Canada, 3 UN Rep. Int'l Arbit. Awards 1911 (1941). The case involved a smelter in British Columbia that was causing environmental harm in the state of Washington. The decision held that "under principles of international Law, as well as the law of the United States, no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is described by clear and convincing injury." *Id.* at 1965). Also see the American Law Institute's Restatement of the Foreign Relations Law of the United States 3d, Section 601, ("State obligations with respect to environment of other States and the common environment").



PLANET ACTION

Managing the conservation of the California condor and its ecosystem in a changing climate



Satellite map indicating the location of the condor reintroduction site in the Sierra San Pedro Martir region of Baja California, Mexico. The red dots indicate the GPS location fixes of a three-year-old female condor that was tracked making a large-scale exploratory return flight of 200 km, north from the Baja release site across the USA/Mexico border in April 2007 (each dot represents a separate location fix acquired from the bird). The GPS fixes indicate that the condor made intensive use of core areas within close proximity to the release site. High-resolution satellite imagery provided by Planet Action enables researchers to build an accurate picture of condor habitat use and preference. This valuable ecological information will allow managers to tailor the reintroduction programs to the specific habitat requirements of the birds and to predict and mitigate the effects of climate change on this important ecosystem.

PRESENCE AND MOVEMENTS OF CALIFORNIA CONDORS NEAR PROPOSED WIND TURBINES

FINAL REPORT PREPARED FOR
HT HARVEY AND ASSOCIATES
15 November 2007

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EXECUTIVE SUMMARY

Wind energy poses particular hazards to birds with high wing loadings, large bodies and clumsy flight. California Condors, *Gymnogyps californianus*, a critically endangered species currently being reintroduced to central coastal California, may be at risk from wind turbines within their foraging range. In 2007, HT Harvey and Associates contracted the Ventana Wildlife Society to map the presence and movement patterns of California Condors near two proposed wind turbines at a winery near Gonzales CA, and to make recommendations regarding the potential risk posed to California Condors by the proposed turbines. Despite the proximity of Pinnacles National Monument, a rearing and release site for California Condors, only 417 detections occurred within a 25 km radius of the proposed wind turbines. No detections occurred closer than 3 km to the proposed wind turbine locations. Mean flight speed was 45.7 kph. Using flight speeds of 0 to 5 as our definition of perched birds, we determined that 151 detections were of perching events within 25 km of the proposed wind turbines. Condor flight headings were predominantly westerly within 25 km of the proposed wind area. Condor detections occurred most frequently over 31 to 40 degree slopes, and over northern and northwestern landscape aspects. The proximity of the Pinnacles rearing and release site indicates a potential risk situation for Condors in the vicinity of the proposed wind turbines, but given that the proposed project only calls for the installation of two turbines, and measures are taken to monitor and remove large carcasses in the area the proposed wind turbines pose only a minor risk to Condors in the area.

BACKGROUND

Wind energy poses substantial risks to avian wildlife under certain circumstances (Drewitt and Langston 2006, Barrios and Rodriguez 2004, Erikson et al 2001). Birds with high wing loadings, clumsy flight patterns, and foraging habits that draw them into the vicinity of wind turbines are all at high risk for turbine-related injuries and mortalities (Barrios and Rodriguez 2004). Risk is also increased where wind energy projects intersect with migratory pathways, daily flight paths, and foraging and roosting grounds (Dewitt and Langston 2006). While many studies have found that overall turbine-related avian mortality is low compared to other anthropogenic sources of mortality, even low levels of mortality could significantly impact species with low productivity that take years to reach reproductive maturity (Dewitt and Langston 2006). Because many at-risk birds are endangered, threatened, or otherwise protected by federal laws, it is important that new wind energy projects of any scale assess the potential threats to wildlife, and minimize the risks posed by turbines and associated structures.

Parts of central coastal California are ideal for the production of wind energy at many different scales, but the central coast is also home to a growing population of reintroduced California Condors (*Gymnogyps californianus*), a critically endangered species since 1967 (Kiff et al. 1996). Historically, California Condors ranged from British Columbia in the north to Baja California in the south and were found as far east as the western slope of the Sierra Nevada (Snyder and Schmitt 2002), but were nearly

extirpated by the mid-1980's due to hunting, poisoning and habitat loss (Snyder and Schmitt 2002). In 1987 the remaining wild population was captured and housed in captive rearing facilities in southern California to act as a breeding population for the planned species recovery and reintroduction program. Condors were released back in to the wild in southern California starting in 1994 and in central coastal California starting in 1997. The first rearing and release facility on the central coast was located in the Ventana Wilderness on the western slope of the Santa Lucia Mountains near Big Sur, and has been active since the inception of the central California recovery effort in 1997. In 2003, a second central California rearing and release site was established at Pinnacles National Monument in the Gabilan Mountains. As of September 30, 2007, the total population of California Condors was 305, with 157 of those in captivity at Los Angeles Zoo, San Diego Wild Animal Park, Boise World Center for Birds of Prey, Oregon Zoo, Mexico Zoo, Mentor Birds in field pens, and pre-release birds in field pens. Of wild birds (148), there are currently 72 in California, 16 in Baja California, and 60 in Arizona. The free-flying population in the central California area currently totals 39 free-flying birds, with 27 birds in the Big Sur population and 12 birds in the Pinnacles population. The eldest birds in the Big Sur flock established two successful nests in 2007, and it is expected that the eldest birds in the Pinnacles flock will begin breeding in 2010-2012. Meanwhile, annual additions of captive-raised Condors continue to bolster both flocks, and the ultimate goal of the central coast reintroduction program is a flock of 75 free-flying birds.

Little is known about the susceptibility of California Condors to wind turbine-induced mortality. Studies of Griffon Vultures (*Gyps fulvus*), a European species ecologically similar to California Condors (Snyder and Schmitt 2002), have shown that in high concentrations, the birds are quite vulnerable to turbine strikes (Barrios and Rodriguez 2004). Raptors such as Red-tailed Hawks (*Buteo jamaicensis*), who rely on topographic features to generate preferred flight conditions and who forage in the types of habitat that characterize many wind turbines, also experience high mortality rates due to wind turbines (Hoover and Morrison 2005). Flight characteristics of Turkey Vultures (*Cathartes aura*) in the Altamont Pass Wind Turbines indicate that scavenging birds frequently fly within the height range of wind turbines used for large-scale power production, although the location of the turbines with respect to wind direction and slope curvature are important factors in determining mortality risk (Smallwood and Neher 2004). The possible impact of smaller-scale wind resource projects, including isolated towers powering small facilities, is largely unknown.

In conjunction with site-specific habitat features, behaviorally and physiologically, California Condors exhibit many features that may put them at a high risk for wind turbine-related mortality: (1) high wing loading; (2) social foraging; (3) curiosity for novel objects; (4) k-selected reproductive strategy; and (5) foraging preference for sloped grassland sites. Condors have extremely high wing loading, and their flapping flight is clumsy, making them less maneuverable around objects on the landscape. Condors routinely forage and roost in social groups, so that the presence of a single bird near wind turbines increases the risk of mortality not only for that individual, but for other individuals that may follow it. Because they are scavengers, Condors exhibit pronounced

curiosity for novel objects in their environment (J. Burnett, pers. comm.) such that the presence of new turbines might increase overall Condor activity at a site. Condors raise one chick every 2 years with significant parental investment, thus losses of even a few individuals have large impacts on the total population. In the case of Condors, a closely managed, primarily captive-bred species, losses are also costly.

In 2007, HT Harvey and Associates contracted the Ventana Wildlife Society to map the presence and movement patterns of California Condors within 25 km of two proposed wind turbines on a winery near Gonzales CA (figure 1), and to assess the potential risk posed to California Condors by the proposed turbines. This report presents presence, associated landscape characteristics, flight characteristics, and home ranges of California Condors detected within 25 km of the proposed wind turbines, and presents recommendations for wind turbine installation based on those findings.

METHODS

Condor locations and movements

Twenty-seven free-flying, captive-reared Condors were tracked in central coastal California using solar powered, GPS Patagial PTT-100 transmitters (Microwave Telemetry, Inc., Columbia, MD) between 2 December 2003 and 31 March 2007. Transceivers were affixed directly to each bird's patagium in conjunction with an identification tag. The GPS receivers were programmed to collect a location fix (referred to as a "detection" in this report) every hour, 16 hours daily. In general, transceivers provide an average of 12 location fixes per day (16 possible) within 16 meters of the actual location, or, average location fixes 92% of the time. The built-in PTT transceivers transmitted stored GPS location data to Service ARGOS satellites each day.

Location data were downloaded daily via the Automatic Distribution Service administered by Service ARGOS. Data were then imported into a Microsoft Access database. Condor location fixes totaling 103,395 data points were examined for movement patterns and proximity to the two proposed wind turbines near Gonzales, CA. Error rates for flight speed (used to determine if a bird was perched or in flight when detected) were ± 1 km/hr at speeds above 40 km/hr (Microwave Telemetry, Inc, Columbia, MD). For the purposes of analysis, detections exhibiting flight speeds of greater than 5 kph, while detections exhibiting flight speeds of 0 through 5 were considered perching events.

Mapping

Condor location data including decimal-degree coordinates, speed, time and date were imported into an ArcGIS geodatabase. Each location fix, or data point, is referred to as a detection. The Condor data points, a Digital Elevation Model downloaded from the USGS Continuous Data Distribution Service, and an x,y data layer estimating the location of the two proposed wind turbines were plotted on a hillshade map of California.

ArcGIS Spatial Analyst tools were used to assess the proximity of Condor locations to the proposed wind turbines; landscape slope and aspect associated with Condor detections within the study area; and the flight behavior ("perched" or "flying") of Condor detections within 25 km, 20 km, 10 km and 5 km of the proposed wind turbines. MCP home ranges of individual Condors were calculated using Hawth's Tools, a free ArcGIS extension for assessing animal populations.

Statistical Methods

Distribution of flight speed categories, flight headings, slope categories and landscape aspects associated with detections were assessed for divergence from expected values using Pearson χ^2 analysis (Zar 1999).

RESULTS

Proximity to Proposed Wind Turbines

417 Condor detections representing 13 individual birds occurred within 25 km of the proposed wind turbines from 2 December 2003 to 31 March 2007. 130 detections were within 20 km of the proposed wind turbines, 33 were within 15 km, 11 were within 10 km, and 3 were within 5 km (see Figure 2). No Condor detections occurred closer than 3 km to the proposed wind turbine locations. The detections within 5 km of the proposed wind turbines were attributable to 3 different individual Condors.

Movement Patterns

266 flying bird detections occurred within 25 km of the proposed wind turbines; 88 flying birds were located within 20 km; 31 flying birds occurred within 15 km; 10 flying birds were located within 10 km; and 2 flying birds were located within 5 km (see Figure 3). The mean speed of flight within 25 km of the proposed wind turbines was 45.7 kph. The distribution of flight speeds within 25 km of the proposed wind area was significantly different from a random distribution ($\chi^2 = 116.7$, df = 61, P=0.000). The most frequently occurring flight speeds were between 31 and 40 kph (see Figure 4).

We used flight speed to identify perched birds: birds with flight speeds of 0 through 5 kph were designated as perched birds, while birds moving at 6 kph or faster were considered to be flying (see Figure 5). 151 perching events were located within 25 km of the proposed wind turbines; 42 perching events were located within 20 km; 2 perching events occurred within 15 km; 2 perching events were located within 10 km; and 1 perching event was located within 5 km (see Figure 6).

Within the 25 km study area, the distribution of flight headings was not significantly different from random, but detections that indicate a westerly orientation (44) were most frequent and detections with southerly orientation (20) were fewest.

Landscape Associations

While visualization of the slope data indicated that slopes were fairly evenly distributed within 25 km of the proposed wind turbines (figure 7), the distribution of Condor detections over different landscape slope categories was significantly different than expected ($\chi^2 = 279.8$, df = 69, P=0.000). Within the 25 km study area, condor detections were most frequent over landscapes with 51 to 60 degree slopes, and detections were fewest over landscapes with slopes less than 20 degrees (see Figure 8).

The landscape was evenly distributed across all aspect categories (see Figure 9), but the distribution of Condor detections over different landscape aspects within 25 km of the proposed wind turbines was significantly different than random ($\chi^2 = 36.9$, df = 7, P = 0.000). More detections (138) occurred over landscapes with northern and northwestern aspects than over any other aspect. The fewest detections (24) occurred over the eastern aspect (figure 10).

Home Ranges

Four individual Condors were determined to have home ranges encompassing the proposed wind turbine locations using the Minimum Convex Polygon technique (see Figure 11).

IMPLICATIONS

- The proximity of the Pinnacles National Monument Condor release facility to the proposed wind turbines means that Condor activity is high throughout the Salinas Valley and across both slopes of the Coast Ranges and the Gabilan Mountains. This indicates a potential risk situation for Condors because the proposed wind turbines are within range of regular foraging flights for all members of the Pinnacles flock, as well as exploratory flights of some of the older Big Sur Condors who may be expanding their foraging range or looking for nesting locations. The proposed turbine locations also fall within the calculated home ranges of 4 Pinnacles Condors. However, the low overall detections indicate that the actual risk is low, since Condors do not appear to be using the area near the proposed wind turbines frequently.

- The low number of detections of perching events within 25 km of the proposed wind turbines indicates that the area has not provided constant or frequent foraging or roosting opportunities. Thus, the risk posed to Condors perching or taking flight near the proposed turbines is low.

- Because the proposed wind turbines are located in suitable foraging habitat for Condors, clearing carcasses within 5 km of the proposed wind turbines when detected could reduce the potential risk to Condors foraging in the area.

- The Condors represented in this report represent only a subset of the entire central coast Condor population. This is because not all of the Condors have GPS transmitters. Most of the Pinnacles flock is GPS-tagged, but a much smaller

proportion of the Big Sur flock is tracked using GPS. The values enumerated in the report, therefore, are likely smaller than actuality.

- Given that the proposed project only calls for the installation of two turbines and measures are taken to monitor and remove large carcasses in the area, the proposed wind turbines pose a minor risk to Condors in the area.

- Because this is a small, managed population of 35 individuals with a k-selected reproductive strategy in addition to being listed as endangered, any risk associated with their population should be given careful consideration.

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PERSONAL COMMUNICATIONS

Burnett, J. May 1, 2007. Senior Wildlife Biologist, Ventana Wildlife Society. 19045 Portola Dr., Ste F-1, Salinas, CA 93908, joeburnett@ventanaws.org

Figure 1. Proposed wind turbines near Gonzales in Monterey County, CA, and the project study area, defined by a 25 km radius around the proposed turbines.

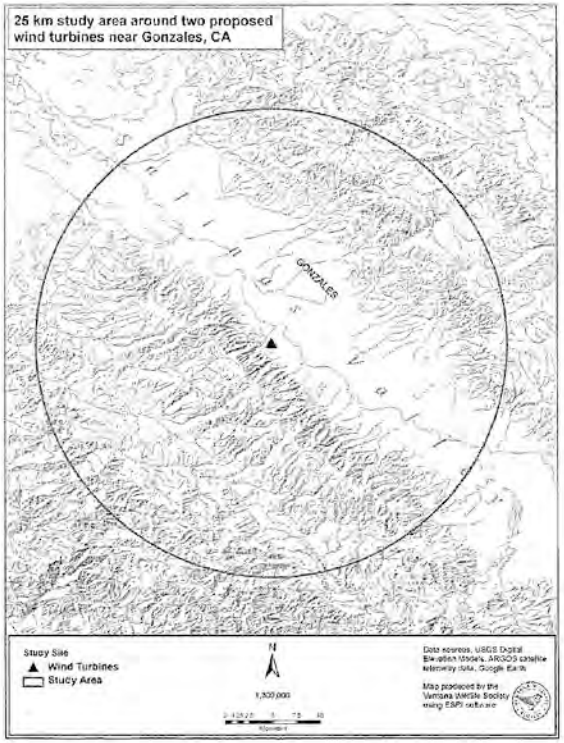

Figure 2. Proximity of Condor detections to the proposed wind turbines, Monterey County, CA, 2003-2007

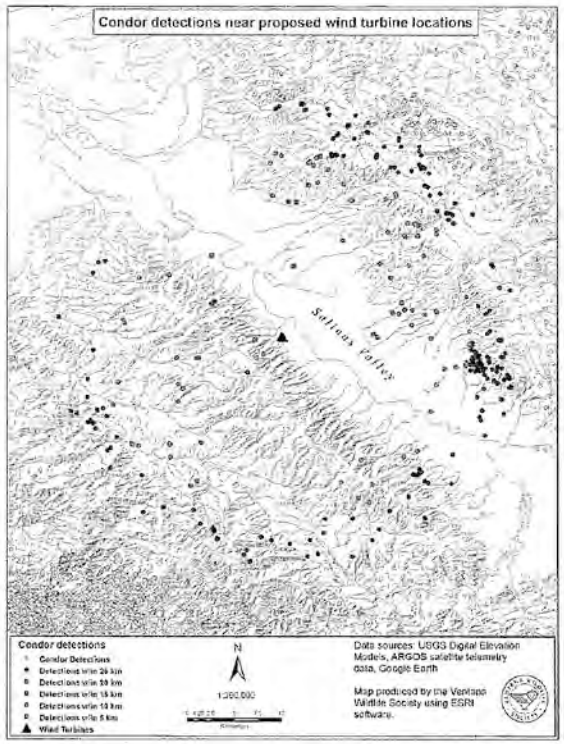

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Figure 3. Proximity of in-flight Condor detections to the proposed wind turbines, Monterey County, CA, 2003-2007

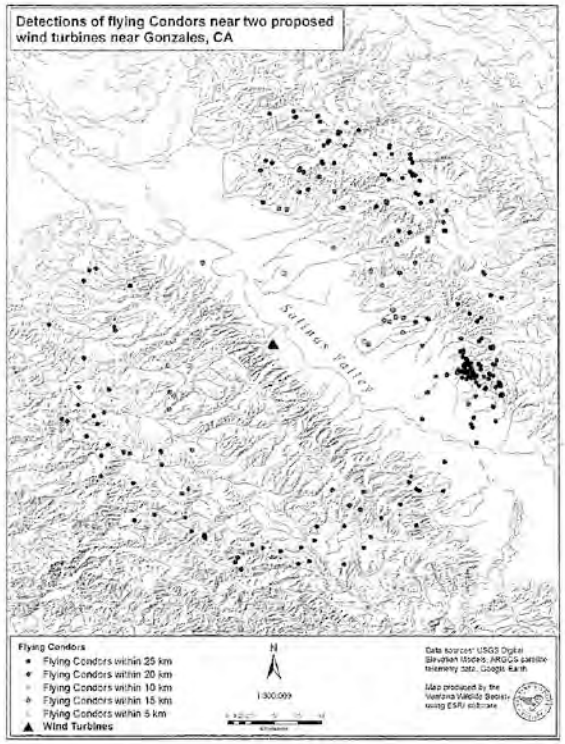

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Figure 4. Frequency distribution of flight speeds of Condors detected within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

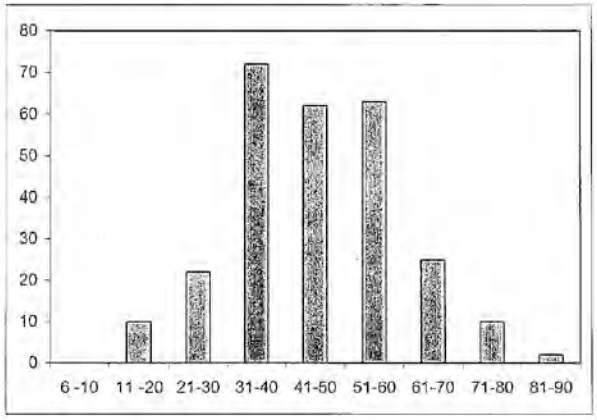

Figure 5. Detections of flying and perched Condors within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

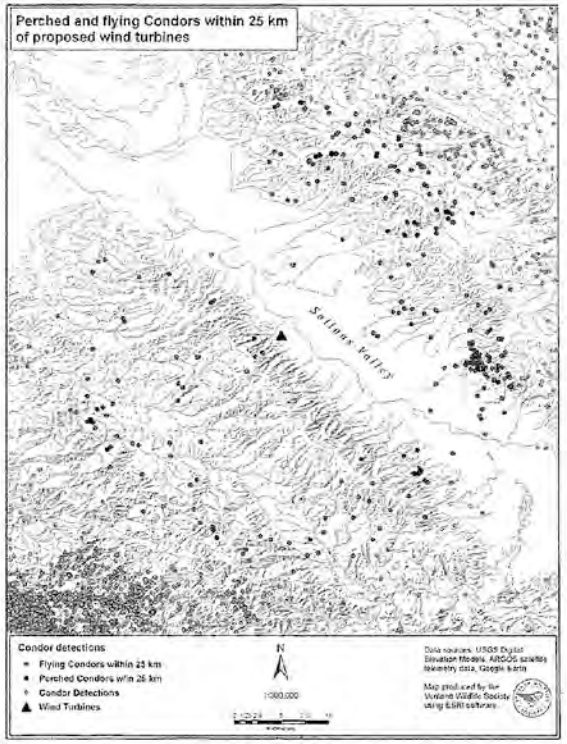

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Figure 6. Proximity of perched Condor detections to the proposed wind turbines, Monterey County, CA, 2003-2007

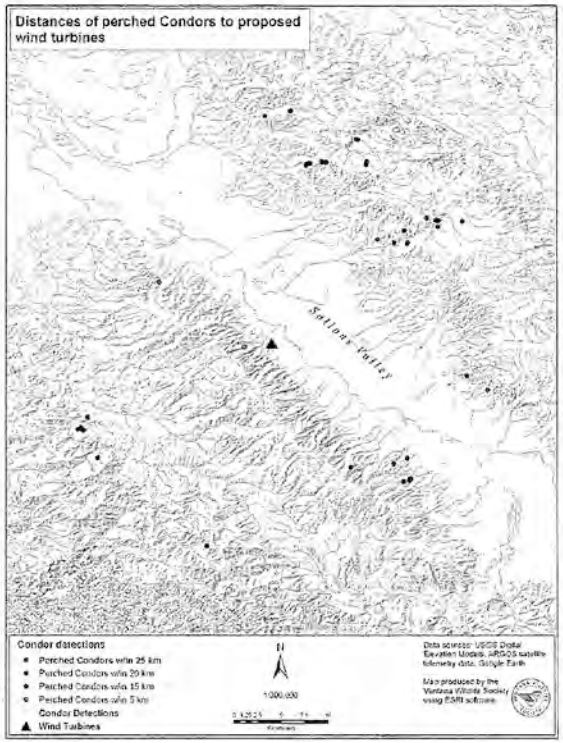

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Figure 7. Landscape slopes associated with Condor detections within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

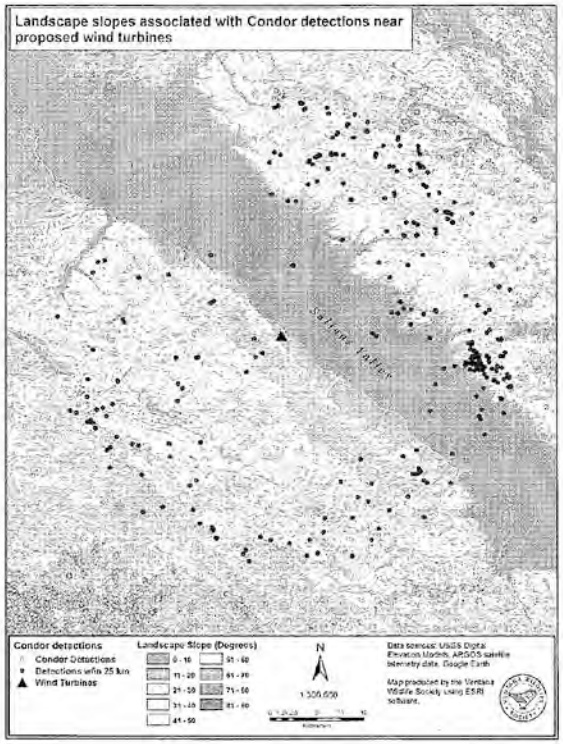
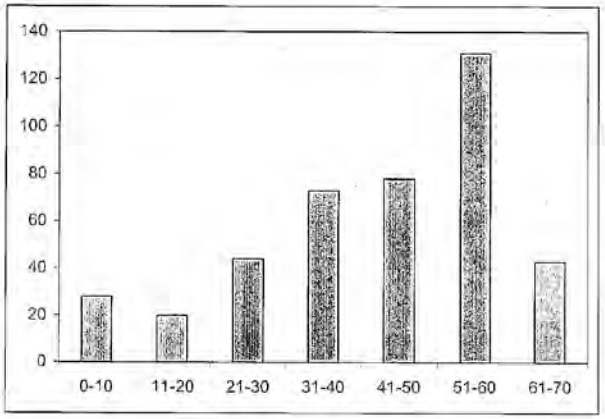


Figure 8. Distribution of landscape slope categories associated with Condor detections within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007



18

Figure 9. Landscape aspects associated with Condor detections within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

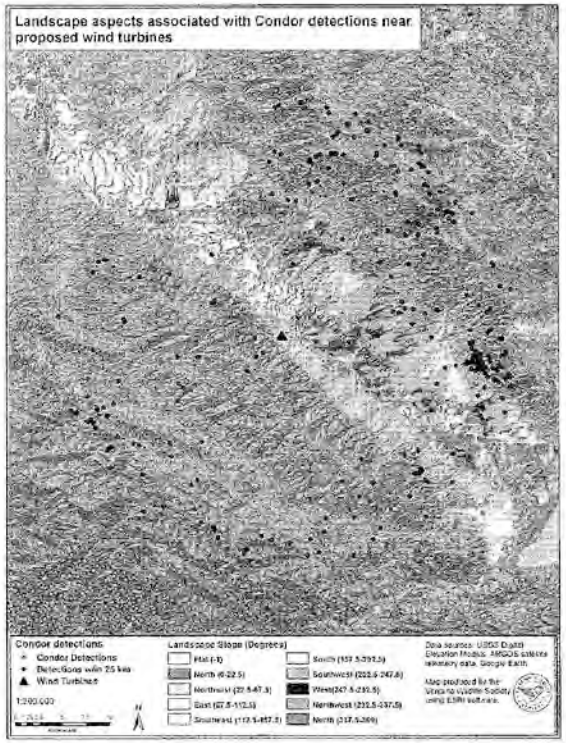


Figure 10. Distribution of landscape aspects associated with Condor detections within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

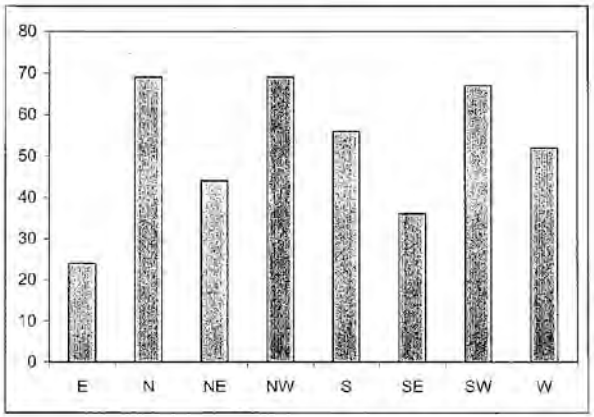
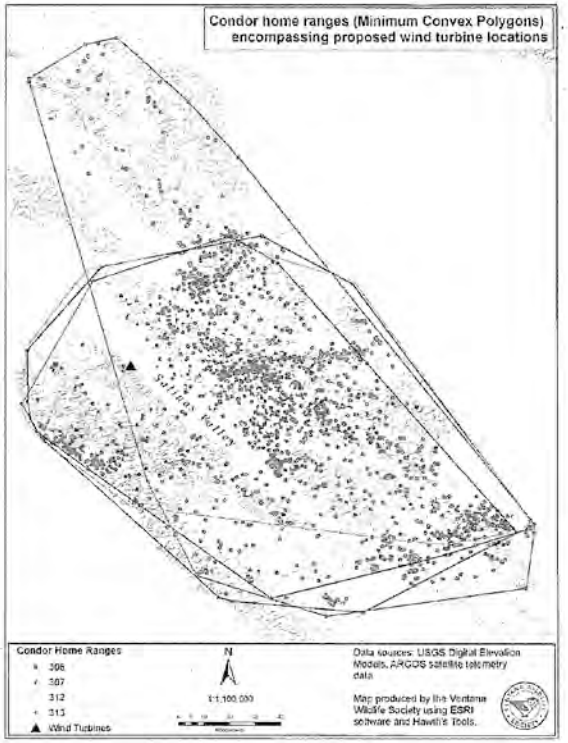


Figure 11. Condor Minimum Convex Polygon home ranges that encompass the proposed wind turbine locations, Monterey, CA



21

Comment Set F0006
U.S. Fish & Wildlife Service and California Department of Fish & Game

U.S. Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011
(760) 431-9440
FAX (760) 431-9618

California Department of Fish and Game
South Coast Region
4949 Viewridge Avenue
San Diego, California 92123
(858) 467-4201
FAX (858) 467-4299

In Reply Refer To:
FWS/CDFG-2008B0423/2008TA0847

AUG 25 2008

Billie Blanchard, CPUC/Lynda Kastoll, BLM
c/o Aspen Environmental Group
235 Montgomery Street, Suite 935
San Francisco, California 94104-3106

Subject: Comments on the Recirculated Draft Environmental Impact Report/ Environmental Impact Statement for the Sunrise Powerlink Project, San Diego and Imperial Counties, California (SCH No. 2006091071)

Dear Ms. Blanchard and Ms. Kastoll:

F0006-1

The California Department of Fish and Game (Department) and U.S. Fish and Wildlife Service (Service), collectively the Wildlife Agencies, have reviewed the above-referenced recirculated draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the proposed Sunrise Powerlink (SRPL) Project. The comments provided herein are based on the information provided in the recirculated draft EIR/EIS, the original SRPL Project draft EIR/EIS, the Wildlife Agencies' knowledge of sensitive and declining vegetative communities, and our participation in regional conservation planning efforts. The Wildlife Agencies provided extensive comments on the initial Draft EIR/EIS in a letter dated April 11, 2008. All of our concerns addressed in that letter regarding potential "unmitigable" adverse impacts to federally and/or State-listed species, sensitive vegetation communities, and regional conservation plans remain.

The Department is a Trustee Agency and a Responsible Agency pursuant to the California Environmental Quality Act (CEQA), Sections 15386 and 15381 respectively. The Department is responsible for the conservation, protection, and management of the State's biological resources, including rare, threatened, and endangered plant and animal species, pursuant to the California Endangered Species Act (CESA), and administers the Natural Community Conservation Planning Program (NCCP). The primary concern and mandate of the Service is the protection of public fish and wildlife resources and their habitats. The Service has legal responsibility for the welfare of migratory birds, anadromous fish, and endangered animals and plants occurring in the United States. The Service is also responsible for administering the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 et seq.). The Proposed Project is the construction and operation of a 150-mile electric transmission line between the El Centro area of Imperial County and northwestern San Diego County.

Alternatives considered included alternative route alignments and other transmission alternatives, alternatives that could replace the Proposed Project as a whole, Non-Wire Alternatives, and the No Project/No Action Alternative.

TAKE PRIDE IN AMERICA

Comment Set F0006, cont.
U.S. Fish & Wildlife Service and California Department of Fish & Game

Additionally, there are four projects that are so closely related to the SRPL as to be considered "connected actions" under NEPA. These four projects are the Stirling Energy Systems solar facility, two components of the Imperial Irrigation District (IID) 230 kV transmission system upgrades, the Esmeralda–San Felipe Geothermal Project, and the Jacumba 230/500 kV Substation. One additional project, a wind project in northern Mexico's La Rumorosa area, under contract to meet Southern California Edison's renewable requirements, is defined in the Recirculated draft EIR/EIS as an "indirect effect" of the SRPL. The La Rumorosa wind project is being evaluated in the draft EIR/EIS because of the agreement that was signed between Sempra Generation and Southern California Edison in which Sempra Generation has agreed to sell SCE up to 250 MW of power from the La Rumorosa wind power facility under development, and the SRPL would be used to transmit the energy generated at the wind farm.

F0006-1 cont.

This letter provides comments regarding the components identified in the recirculated draft EIR/EIS dated July 2008. These components include a new and revised analysis of the La Rumorosa Wind Energy Project (RWEP) wind farm and transmission line route revisions. The RWEP has several project components, which include the following: a double circuit 230 kV or single circuit 500 kV transmission line from Mexico to the U.S., a 500/230/69 kV substation located east of the town of Jacumba (i.e., Jacumba substation), a 13.4 mile 69 kV transmission line connecting the Jacumba and Boulevard Substations, a 0.5 acre expansion of the Boulevard substation, and a communication facility. We offer recommendations and comments in the enclosure to further assist in avoidance and minimization of impacts to biological resources, and to ensure that the project is consistent with ongoing regional habitat conservation planning efforts.

We remain concerned the Proposed Project (and many of the alternatives) would have "unmitigable," significant impacts to listed plant and animal species. Because the Wildlife Agencies are mandated to protect and recover these resources, we recommend an alternative that can avoid and minimize significant adverse impacts to rare and sensitive biological resources, similar to the In-Area Renewable Generation Alternative but with additional localized generation capacity (e.g., commercial and residential rooftop solar systems) to eliminate or maximize the need to transport electricity from remote locations. If you have questions or comments regarding the contents of this letter, please contact Paul Schlitt of the Department at (858) 637-5510 or Felicia Siretta of the Service at (760) 431-9440.

Sincerely,

Karen Goebel
Assistant Field Supervisor
U.S. Fish and Wildlife Service

Helen R. Birss
Environmental Program Manager
California Department of Fish and Game

Comment Set F0006, cont.
U.S. Fish & Wildlife Service and California Department of Fish & Game

ENCLOSURE
WILDLIFE AGENCY
COMMENTS AND RECOMMENDATIONS
ON THE RECIRCULATED DRAFT ENVIRONMENTAL IMPACT
REPORT/ENVIRONMENTAL IMPACT STATEMENT
FOR THE SUNRISE POWERLINK PROJECT

Sempra La Rumorosa Wind Energy Project Wind Farm

1. The recirculated draft EIR/EIS concludes that impacts to wildlife movement from the Sempra La Rumorosa Wind Energy Project (RWEP) wind farm would be considered adverse but less than significant (page 2-54). However, an analysis of the biological impacts concerning general wildlife movement patterns through the (RWEP) wind farm site has not been conducted. Therefore, this impact should be adequately assessed in the final EIR/EIS, or the final EIR/EIS should acknowledge this deficiency in the analysis for impacts to wildlife movement. In addition, Peninsular bighorn sheep (PBS) are known to occur in the Sierra de Juarez mountains. However, there is no discussion on how the RWEP may impact PBS movement at that site. The final EIR/EIS should address this potential impact to PBS and provide a discussion as to how the applicant can avoid and minimize any impacts that are identified. F0006-2

2. The recirculated draft EIR/EIS discusses the presence of PBS designated critical habitat (February 1, 2001) in the project area (U.S. portion only). However, although it does not appear that this portion of the project is within PBS proposed revised critical habitat (October 10, 2007), the presence of PBS proposed revised critical habitat in the vicinity of the project area should be discussed in the final EIR/EIS to ensure that potential edge effects (e.g., increased non-natives, fire, etc.) from the transmission line will not adversely affect the primary constituent elements in the adjacent critical habitat. F0006-3

3. The draft EIR/EIS lacks the information necessary to accurately quantify the potential direct and indirect impacts of each project component on listed species and their habitat. The final EIR/EIS should include a series of maps that depict such features as the locations of the proposed temporary and permanent project components including associated facilities, construction roads, access roads, towers, transmission lines, and staging areas. These maps should, at a minimum, also include vegetation-type; federally-listed and candidate species known to occur or potentially occur in the project areas; and proposed and/or designated critical habitat areas. Information on vegetation types and species locations and potential habitat within the project areas should be based on best available database information as well as recent habitat and species surveys conducted by qualified and or permitted biologists. F0006-4

Additionally, acreage impacts associated with the construction of each project component should be included in the baseline impact analysis. Impacts to sensitive vegetation F0006-5

Comment Set F0006, cont.
U.S. Fish & Wildlife Service and California Department of Fish & Game

Ms. Blanchard and Ms. Kastoll (FWS-SD/CDFG-2008B0423/2008TA0847) 2

communities and special status plant and animal species should be quantified and adequately disclosed in the final EIR/EIS. This analysis should be provided in revised summary tables/and or a consolidated matrix per guidance that was provided in the Wildlife Agencies comment letter, dated April 11, 2008. This would facilitate comparison of the proposed project to the alternative designs allowing for the identification of a biologically preferred alternative, in accordance with CEQA mandates (CEQA Guideline §15126.6(b). F0006-5 cont.

4. The recirculated draft EIR/EIS states that vegetation and plant species data is based on County of San Diego and CNDDB records, respectively, and subsequently states that no listed plant species occur in the project areas. However, information on vegetation types and plant species locations and potential habitat within the project area in the U.S. should be based on best available database information as well as recent habitat and species evaluations conducted by a qualified biologist/botanist familiar with local plant species in the project areas. F0006-6

5. The final EIR/EIS should provide additional information concerning the preliminary site assessment surveys that were conducted during site selection of the RWEP wind farm. There is limited information provided in the recirculated draft EIR/EIS regarding the development of pre-permitting monitoring protocols that were considered to address bird and bat mortality (and that resulted in NEPA/CEQA baseline and impact determination in the recirculated EIR/EIS). It is important to use the pre-permitting impact assessment to determine the operations monitoring protocols that would be used to substantiate impact estimates. Furthermore, the final EIR/EIS needs to provide a discussion on the evaluation given between the level of anticipated impacts (i.e., bird and bat collisions with wind turbines) and the amount of compensatory mitigation proposed. In considering potential fatalities and risk to individual species and populations, the priority should be avoidance of impacts, and if that is not possible, minimization and mitigation measures should be developed that are effective in reducing and/or offsetting bird/bat fatalities. Additionally, although operational fatalities cannot be forecasted with certainty, more comprehensive baseline data should be collected and provided in the final EIR/EIS. F0006-7

6. Table D.2.7 of the final EIR/EIS should be amended to reflect acreage impacts and corresponding mitigation acreage for the RWEP wind farm, Sempra Baja Wind Transmission Line, SDG&E Jacumba Substation, and SDG&E 69 kV transmission line. F0006-8

7. Page 2-22, Section 2.2.1, Special Status Wildlife Species, states that, "Protocol-level surveys for QCB were conducted at the ECO Substation site (i.e., Jacumba substation) and surrounding areas in April 2008 (SDG&E, 2008a)." However, a copy of the survey report has not been received by the Service. We recommend that protocol-levels surveys for the Quino be conducted in all project areas within the Service's recommended survey area for Quino and reports be submitted in a timely manner so that we may determine if they are adequate and impacts have been assessed correctly. F0006-9

Comment Set F0006, cont.
U.S. Fish & Wildlife Service and California Department of Fish & Game

Ms. Blanchard and Ms. Kastoll (FWS-SD/CDFG-2008B0423/2008TA0847) 3

8. The recirculated draft EIR/EIS discusses the potential presence of PBS, Quino, and Quino designated critical habitat along the 69kV Transmission Line. However, it appears that some portions of this project are also within Quino proposed revised critical habitat (January 17, 2008). Therefore, the potential impacts to Quino proposed revised critical habitat should be discussed in the final EIR/EIS. Additionally, it is not clear from the draft EIR/EIS if protocol-levels surveys have been conducted along this transmission line and adjacent areas. If so, a copy of the survey report has not been received by the Service. F0006-10

9. The recirculated draft EIR/EIS states that the Boulevard Substation Expansion and Communication Facility are expected to occur on land that is already developed. However, it is not clear if "developed" means that these areas no longer contain any vegetation. Therefore, the term "developed" should be defined in the final EIR/EIS. Additionally, because these proposed projects are located within the U.S. Fish and Wildlife Service's Quino Survey Area 1, Quino may use these areas to move between adjacent habitat patches. Therefore, protocol-level surveys should be conducted in the project areas to determine if Quino are present. F0006-11

10. It is premature to identify mitigation ratios for jurisdictional areas when formal jurisdictional delineation has not been completed. For projects with impacts to jurisdictional lakes or streambeds, the Department emphasizes that alternatives and mitigation measures be addressed in CEQA certified documents prior to submittal of an application of a Streambed Alteration Agreement (SAA). Any information which is supplied to the Department after the CEQA process is complete will not have been subject to the public review requirements of CEQA. Therefore, please ensure all impacts to jurisdictional waters are described in the final EIR/EIS. F0006-12

11. The Biological Resources section in the final EIR/EIS should include a discussion of any riparian habitat occurring in the project areas and whether or not arroyo toad, southwestern willow flycatcher, and least Bell's vireo habitat may occur in those project areas. F0006-13

Proposed and Alternative Transmission Line Routes

1. The impact analysis for the 13 reroute proposals mentions that reroutes would either result in no effect or an increase/decrease of impacts to sensitive vegetation communities (e.g., "This reroute would result in greater impacts to the same types of sensitive vegetation communities"), without quantifying the extent of the impact. The final EIR/EIS should include revisions to all the corresponding tables that quantify impacts to vegetation communities for each alternative route proposed (e.g., a revision should be made to Table E.2.2-2 to correspond with an increase or decrease in permanent and temporary impacts associated with a reroute proposal identified in the recirculated draft EIR/EIS). F0006-14

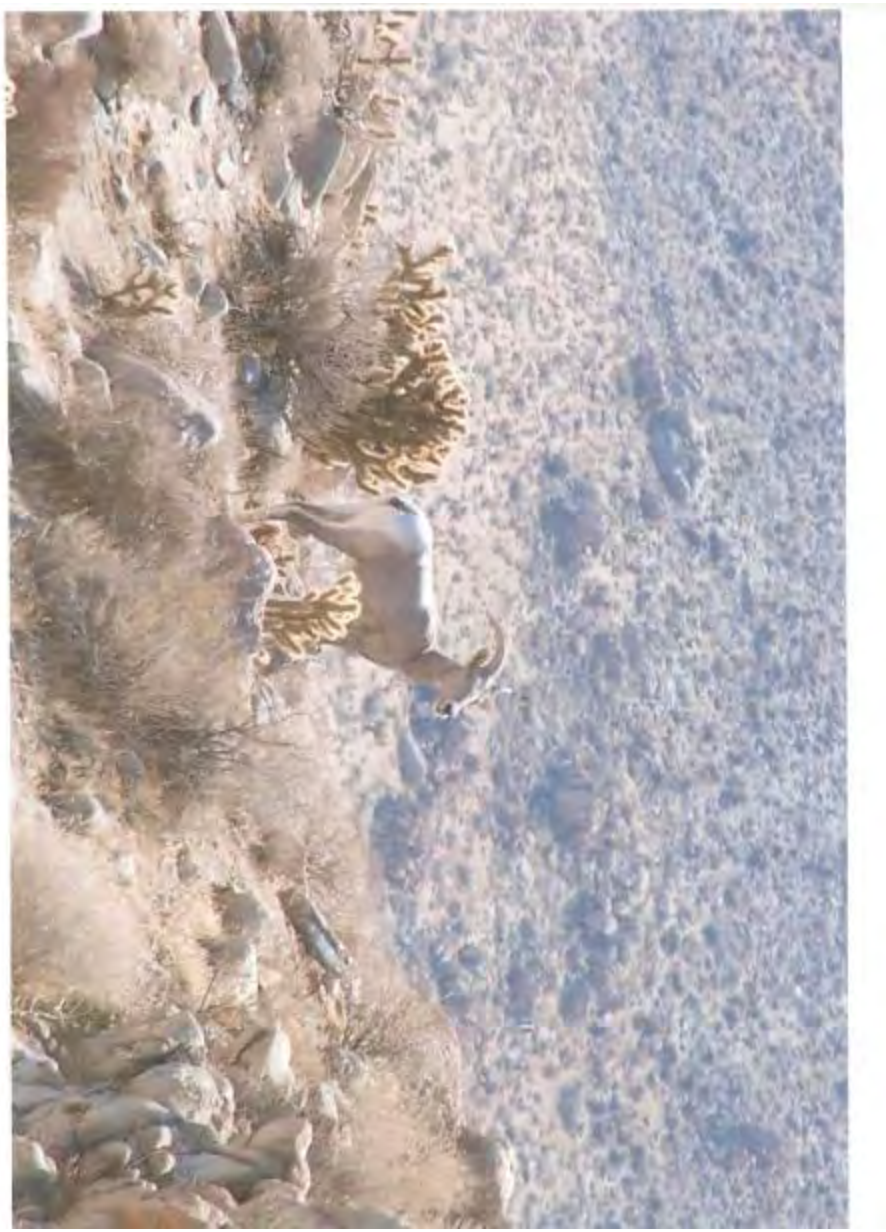
2. Section 3.3.4.6 mentions that the Highway 67 Hansen Quarry Reroute would shift the transmission line route to the east from Hansen Aggregate property onto land owned by the F0006-15

Comment Set F0006, cont.
U.S. Fish & Wildlife Service and California Department of Fish & Game

Ms. Blanchard and Ms. Kastoll (FWS-SD/CDFG-2008B0423/2008TA0847) 4

City of San Diego. This reroute would encroach into City of San Diego's Multiple Species Conservation Program cornerstone land holdings. A discussion regarding effects on land use impacts should be provided in the final EIR/EIS to address these concerns. F0006-15 cont.

3 Impacts to vegetation communities that will result from additional workspace needs for the Interstate 8 Alternative (Table 4.1 of the recirculated draft EIR/EIS) should be incorporated in the Table E.1.2-4 of the final EIR/EIS. F0006-16



FACT SHEET

U.S. Air Force Fact Sheet
MODULAR AIRBORNE FIRE FIGHTING SYSTEM

The Modular Airborne Fire Fighting System, or MAFFS, Program provides emergency capability to supplement existing commercial tanker support on wildland fires. MAFFS aids the U.S. Department of Agriculture's Forest Service. When all other air tankers are activated but further assistance is needed, the Forest Service can request help from the Air Force's MAFFS units. MAFFS is a mission that highlights interagency cooperation.

FILE PHOTO -- Air National Guard C-130 Hercules equipped with modular airborne firefighting systems, similar to this one, are dropping thousands of gallons of retardant on the wildfires in Southern California. The fires have destroyed more than 830 homes and burned out more than 500,000 acres. California officials said the fires are responsible for at least 15 deaths. (U.S. Air Force photo by Staff Sgt. Daryl McKamey)

MAFFS units fit inside C-130 airplanes without requiring structural modification. This allows the units to be loaded on short notice. It takes about two hours to load a MAFFS unit onto the C-130. The C-130s drop retardant from an altitude of about 150 feet through a discharge tube located in place of the left rear paratroop door of the aircraft. A MAFFS unit can discharge its load -- 3,000 gallons weighing 28,000 pounds -- in less than five seconds. The retardant covers an area one-quarter of a mile long and 60 feet wide. After the plane discharges its load, and returns to an air tanker base, it can be refilled and airborne again in less than 20 minutes.

MAFFS units can drop either water or retardant called "slurry." Slurry is made of 80 to 85 percent water, 10 to 15 percent ammonium sulfate, a jelling agent and red coloring. The red in the retardant helps pilots see where they have dropped previous loads. Along with retarding the fire, the slurry acts as a fertilizer. Because the MAFFS discharges the agent in a mist, slurry does not cause damage to buildings.

Crews who fly MAFFS missions participate in annual re-currency training. Each wing is required to have five certified crews for each MAFFS unit.

In the 1970s, Congress established the MAFFS system after a major fire burned into Long Beach, Calif., destroyed hundreds of homes, and overwhelmed the civilian tanker fleet's ability to respond. Today, one Air Force Reserve Command and three Air National Guard locations participate in the MAFFS Program.

The 302nd Airlift Wing in Colorado Springs, Colo., is the only Reserve unit. The Guard units include the145th AW in Charlotte, N.C.; the 146th AW in Channel Islands, Calif. and the 153rd AW in Cheyenne, Wyo. The 302nd AW has two of the MAFFS units and the Guard has two units each for a total of eight systems nationwide.

RESPONSE 418-1: Refer to response to comment 103-1.

May 3, 2011

The Honorable Steven Chu
Secretary
U.S. Department of Energy
The Forrestal Building
1000 Independence Avenue, SW
Washington, DC 20585

Dear Secretary Chu:

The San Diego and Imperial Counties Mechanical and Allied Crafts Council (MAC) represents more than 10,000 mechanical crafts trades people throughout Southern California. Today we write in opposition to Sempra Energy's application on behalf of Baja Wind U.S. Transmission, LLC (now known as Energia Sierra Juarez U.S. Transmission, LLC) for a Presidential Permit (Docket Number PP-334) to construct a cross-border transmission line between northern Baja Mexico and San Diego County.

The transmission project proposed in this application would undermine several goals of President Obama's Administration. Specifically:

418-1

1. **It would facilitate the export of American jobs**: Sempra's cross-border transmission lines would enable the company to build energy projects in Mexico and import the energy into Southern California instead of building them here where the power is being used. This moves our economy in the wrong direction at a time when we should be creating jobs here in the United States.

2. **It would increase the United States' dependence on imported energy**: The Administration has emphasized the need for America to become energy independent. Approving cross-border transmission lines to import energy from Mexico into California is the exact opposite of the President's stated goal. Our nation's economic future and security depends on developing energy infrastructure within our own borders.

3. **It would undermine American environmental and labor laws**: A core component of President Obama's campaign platform was his commitment to a green economy that could usher in a new period of environmental and economic prosperity. Construction of a cross-border transmission line will undermine the President's vision by enabling Sempra Energy to deliver energy to California from foreign facilities not built to our labor or environmental standards.

LABOR DONATED

418-1 If we are to reclaim America's middle class, we need to eliminate opportunities for corporations to offshore our jobs, exploit workers or raid natural resources. For these reasons, we respectfully request that you reject Sempra's application for a cross-border Presidential Permit.

Sincerely,

Joseph Powell
Secretary-Treasurer
San Diego and Imperial Counties
Mechanical and Allied Crafts Council
Business Manager
Sheetmetal Workers Local 206

Johnny Simpson
Business Manager
International Brotherhood of Electrical
Workers Local 569

Kirk Crosswhite
Business Manager
Plumbers & Pipefitters Local 230

Alfred Montoya
Business Manager
Asbestos Workers Local 5

Jose Naranjo
Business Manager
Ironworkers Local 229

Dale O'Dell
Business Agent District #22
Road Sprinkler Fitters UA Local 669

cc: Senator Barbara Boxer
Senator Dianne Feinstein
Congressman Bob Filner, 51st Congressional District
California Assembly Member Manuel V. Perez, 80th Assembly District
California State Senator Juan Vargas, 40th State Senate District
Anthony Como, Director, Permitting and Siting, U.S. Department of Energy

:dkm
opeiu #537, afl-cio, clc

LABOR DONATED

RESPONSE 419-1: Refer to response to comment 103-1.

UTILITY WORKERS UNION OF AMERICA

D. MICHAEL LANGFORD
PRESIDENT

STEVEN VANSLOOTEN
EXECUTIVE VICE PRESIDENT

GARY M. RUFFNER
SECRETARY-TREASURER

JOHN DUFFY
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Affiliated with A.F.L.-C.I.O

815 SIXTEENTH STREET, N.W.
WASHINGTON, D.C. 20006
(202) 974-8200
(202) 974-8201 FAX
www.uwua.net

May 26, 2011

VIA E-MAIL The.Secretary@hq.doe.gov
and U.S. Postal Service

The Honorable Steven Chu
Secretary
U.S. Department of Energy
The Forrestal Building
1000 Independence Avenue, SW
Washington, DC 20585

Dear Secretary Chu:

The Utility Workers Union of America, AFL-CIO (UWUA) represents over 50,000 members working in the electric, gas, water, and nuclear industries across the United States. Today we write in opposition to Sempra Energy's application on behalf of Baja Wind U.S. Transmission, LLC (now known as Energia Sierra Juarez U.S. Transmission, LLC) for a Presidential Permit (Docket Number PP-334) to construct a cross-border transmission line between northern Baja Mexico and San Diego County.

The transmission project proposed in this application would undermine several goals of President Obama's Administration. Specifically:

419-1

1. **It would facilitate the export of American jobs**: Sempra's cross-border transmission lines would enable the company to build energy projects in Mexico and import the energy into Southern California, instead of building them here where the power is being used. This moves our economy in the wrong direction at a time when we should be creating jobs here in the United States.

2. **It would increase the United States' dependence on imported energy**: The Administration has emphasized the need for America to become energy independent. Approving cross-border transmission lines to import energy from Mexico into California is the exact opposite of the President's stated goal. Our nation's economic future and security depends on developing energy infrastructure within our own borders.

UTILITY WORKERS UNION OF AMERICA, A.F.L.-C.I.O.

The Honorable Steven Chu
May 26, 2011
Page 2

3. **It would undermine American environmental and labor laws**: A core component of President Obama's campaign platform was his commitment to a green economy that could usher in a new period of environmental and economic prosperity. Construction of a cross-border transmission line will undermine the President's vision by enabling Sempra Energy to deliver energy to California from foreign facilities not built to our labor or environmental standards. 419-1

If we are to reclaim America's middle class, we need to eliminate opportunities for corporations to offshore our jobs, exploit workers or raid natural resources. For these reasons, we respectfully request that you reject Sempra's application for a cross-border Presidential Permit.

Sincerely,

D. Michael Langford
National President

cc: Senator Barbara Boxer
Senator Dianne Feinstein
Senator Harry Reid
Congressman Bob Filner, 51st Congressional District
Anthony Como, Director, Permitting and Siting, U.S. Department of Energy

COMITÉ CÍVICO DEL VALLE
INFORMED PEOPLE BUILD HEALTHY COMMUNITIES
www.ccvhealth.org

May 27, 2011

The Honorable Jerry Brown
Governor of California
State Capitol, Building, Suite 1173
Sacramento, CA 95814

Dear Governor Brown:

Comité Civico del Valle is a grassroots environmental justice organization located in Imperial County. We were founded by a retired farmworker in 1987 to help other farmworkers. As we have grown, our focus has expanded to serve the needs of underserved Imperial County residents. With our work on clean air, environmental health and related issues, we are working to fulfill our mission to improve the living conditions of our community through education, capacity building and civic participation. Our motto is that informed people create healthy communities.

We write today to ask for your help to protect green jobs in Imperial County by preventing Sempra Energy from building the proposed Energia Sierra Juarez (ESJ) cross-border transmission line.

420-1 Imperial County is a rural disadvantaged, largely Latino community suffering from 29% unemployment. According to the U.S. Census Bureau in 2008, one in five residents lived below the poverty line. Our community suffers from environmental injustices such as severe air pollution and illegal trash dumping. Fortunately, our region is also rich in renewable energy resources including solar, wind and geothermal and is close to existing transmission lines. Residents are hopeful we can rebuild our local economy by becoming California's new renewable energy capital and create desperately-needed green jobs.

Unfortunately, Sempra's ESJ cross-border transmission proposal jeopardizes this bright future because it would allow energy from Mexico to be imported onto Southern California's electricity grid, displacing energy that instead could come from green energy projects built here in Imperial County. This move to export jobs, particularly over the border where environmental standards are weaker, is the wrong direction at a time when we need to put Californians back to work.

Comité Civico del Valle appreciates your leadership on renewable energy and your vision to create jobs through a vibrant clean energy economy. Sempra's ESJ cross-border transmission line would undermine this effort. We ask for your help today to protect green jobs and stop this flawed proposal.

Sincerely,

Jose Luis Olmedo
Executive Director

CC: Secretary Steven Chu, Department of Energy
Senator Dianne Feinstein
Senator Barbara Boxer

699 "E" Street Brawley, CA 92227 Tel. (760)351-8761 Fax. (760)351-8762

RESPONSE TO 420-1: Refer to response to comment 103-1.

Congressman Bob Filner
California State Senator Juan Vargas
California Assembly Member Manuel V. Perez
Anthony J. Como , Director of Permitting and Siting for DOE

To: Pell, Jerry
Subject: RE: Docket Number PP-334 Public Comment

From: Micah Mitrosky [mailto:mmitrosky@ibew569.org]
Sent: Wednesday, April 20, 2011 1:46 PM
To: Pell, Jerry
Cc: Johnny Simpson; Burton, Bruce G.
Subject: Docket Number PP-334 Public Comment

Dr. Pell,

421-1 I would like to request the attached document be added to the public comment file regarding Sempra Energy's proposed Energia Sierra Juarez U.S. Transmission application, Docket Number PP-334.

Thank You,

Micah Mitrosky
Environmental Organizer
IBEW Local 569
4545 Viewridge Ave., Ste. 100
San Diego, CA 92123
Office: 858-569-8900, ext. 110
Cell: 619-957-2596
mmitrosky@ibew569.org

RESPONSE TO 421-1: Refer to response to comment 103-1.

CALIFORNIA STATE ASSOCIATION OF ELECTRICAL WORKERS

Affiliated With INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS A.F.L. - C.I.O.

International Brotherhood of Electrical Workers

· REPRESENTING 90,000 MEMBERS ·

Whereas, our nation's economic future and national security depends on developing energy infrastructure within our own borders; and

Whereas, cross-border transmission lines between California and Mexico would export jobs by enabling energy companies to build energy projects in Mexico and import electricity into the United States instead of building them here where the energy is being used and putting Californians back to work; and

Whereas, constructing cross-border transmission lines would enable energy companies to deliver electricity to California from foreign facilities not built to our environmental or labor standards; and

421-1 Whereas, energy projects build in Mexico should serve the needs of Mexico and the local communities where they are build. They should be subject to public input, be build in an environmentally responsible manner and create safe union careers for Mexican electrical workers; and

Whereas, if we are to reclaim American's middle class our nation must eliminate opportunities for corporations to export jobs, exploit workers, or raid natural resources. Now, therefore, be it

Resolved that the California State Association of Electrical Workers opposes the construction of cross-border transmission lines from Mexico into California and strongly condemns recent actions in Mexico to crush the Mexican electricians' union (SME).

Dated this 9th day of April 2011.

RESPONSE TO 422-1: Refer to response to comment 103-1.

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July 18, 2011

BY HAND DELIVERY

Dr. Steven Chu
Secretary of Energy
U.S. Department of Energy
1000 Independence Avenue
Washington, DC 20585

Anthony Como
Director, Permitting and Siting
U.S. Department of Energy
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Room 6H-050, OE-20
Washington, DC 20585

Re: Supplemental Comments on Application for Presidential Permit Application by Baja Wind U.S. Transmission, LLC – PP-334

Dear Secretary Chu and Mr. Como:

422-1 We are writing on behalf of the International Brotherhood of Electrical Workers, Local 569 ("Local 569") and its members to provide supplemental comments on Sempra Generation's ("Sempra")[1] application for a Presidential Permit, authorizing Sempra to construct, own, operate, and maintain the U.S. portion of the Energía Sierra Juárez Electric Transmission Line ("ESJ Gen Tie") and import up to 1250 MW of renewable energy from Sempra's proposed wind facility in Northern Baja California, Mexico into Southern California ("Project").[2] The proposed ESJ Gen Tie is a two-mile, double-circuit 230-kV electric transmission line which will cross the U.S. border near Jacume, Mexico.[3] In California, the ESJ Gen Tie will interconnect with the existing Southwest Power Link Transmission Line at the East County ("ECO") substation, proposed by Sempra's subsidiary San

[1] In these comments, "Sempra" refers to Sempra Generation, Sempra Energy Mexico, and their wholly owned subsidiaries, including: Baja Wind U.S. Transmission, LLC, the Presidential Permit applicant; and Baja Wind S. de R.L. de C.V., the developer of proposed wind energy projects in Northern Baja, Mexico.
[2] Baja Wind U.S. Transmission, LLC, Addendum to Application for Presidential Permit, U.S. Department of Energy ("DOE") Docket No. PP-334, March 19, 2008; Baja Wind U.S. Transmission, LLC, Application for Presidential Permit, DOE Docket No. PP-334, December 18, 2007.
[3] *See* DOE, Draft Environmental Impact Statement for the Energia Sierra Juarez Transmission Line Project, September 2010, p. 2-1 ("DEIS").
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Diego Gas & Electric Company ("SDG&E"), to transmit the imported electricity to SDG&E's service area.

If approved, the Project would export thousands of U.S. clean energy jobs to Mexico, eliminate a major opportunity for economic recovery for Imperial County, an area that is among the hardest hit by the recession, and hinder the Nation's progress toward energy independence by displacing domestic renewable generation development – all to extract a clean energy premium from California's ratepayers while delivering none of the economic co-benefit of in-State renewable generation development. Like the Federal government, California seeks to maximize the benefits of the clean energy sector with a preference for California-based projects which spur domestic job growth and provide workforce recruitment and training opportunities. The Project offers ***none*** of these attributes. The construction and operation of the ESJ Gen Tie will also result in unaddressed, potentially significant environmental impacts – including severe adverse socioeconomic effects in Imperial and San Diego Counties and their related environmental impacts – and may adversely impact electric reliability in California. For these reasons, described more fully below, we urge the Secretary of Energy ("Secretary") to deny Sempra's Presidential Permit application.

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Local 569 advocates for good jobs and the sustained viability and growth of California's renewable energy industry. Local 569 also has an interest in enforcing environmental laws that encourage the sustainable development of power plants and electric transmission facilities and that ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for business and industry to expand in the region, and by making it less desirable for businesses to locate and people to live there. Indeed, continued degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduce future employment opportunities.

On March 16, 2011, Local 569 submitted extensive comments to the U.S. Department of Energy ("DOE") in response to Sempra's Presidential Permit

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application.[4] Our comments, attached as Exhibit A, addressed Sempra's Presidential Permit application and the Draft Environmental Impact Statement ("DEIS") prepared by DOE for the Project pursuant to the National Environmental Policy Act ("NEPA").[5] In our comments, we presented substantial evidence that the Project would result in significant, unaddressed environmental impacts because the DEIS failed to take a hard look at the Project's impacts on special status species and the physical effects resulting from its adverse socioeconomic impacts on Imperial and San Diego Counties, including urban blight and decay.

Our NEPA comments also demonstrated that the DEIS is inadequate due to DOE's failure to coordinate its environmental review with the California Public Utilities Commission's review of SDG&E's proposed ECO substation – a project which DOE admits is a connected action to the ESJ Gen Tie for the purpose of NEPA.[6] Finally, our comments demonstrated that the Project may adversely impact electric reliability because Sempra's proposed 1250 MW ESJ Wind project exceeds the California Independent System Operator's limitation on generation tripping from a single contingency. For these reasons, we urged DOE to deny Sempra's Presidential Permit application.

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These supplemental comments were prepared with the assistance of economist and construction labor markets expert Dr. Peter Philips. Dr. Philips' analysis and his curriculum vitae are attached as Exhibit B.

I. SEMPRA'S PRESIDENTIAL PERMIT APPLICATION IS INCONSISTENT WITH THE PUBLIC INTEREST

The nation that leads the world in 21st century clean energy will be the nation that leads in the 21st century global economy, America can and must be that nation.

President Barack Obama

[4] International Brotherhood Electrical Workers, Local 569, Comments on Sempra Generation's Application to the DOE for a Presidential Permit for the Energia Sierra Juarez Gen-Tie Project, March 16, 2011.
[5] DOE, Draft Environmental Impact Statement for the Energia Sierra Juarez Transmission Line Project, September 2010, p. 2-1 ("DEIS").
[6] *See* DEIS, p. 2-18.
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Pursuant to Executive Order 10485, as amended by Executive Order 12038, the Secretary is empowered by the President of the United States to receive permit applications for the construction, operation, maintenance, or connection, of electric transmission facilities at the U.S. border. In order to issue a Presidential Permit authorizing private entities to import electric energy into the United States, the Secretary must:

1. find that the issuance of the permits is consistent with the public interest;

2. obtain favorable recommendations from the Secretary of State and the Secretary of Defense; and

3. attach to the issuance of the permit and to the exercise of the rights granted there under such conditions as the public interest may in its judgment require.[7]

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Executive Order 10485 places virtually no limits on the Secretary's discretion; the only constraints are those imposed generally on Executive branch action by the U.S. Constitution.[8]

In light of expansive Executive power under the Constitution, the Secretary may consider a wide range of issues in making a public interest determination in conjunction with the Presidential Permit process. The Secretary also has broad discretion to condition a Presidential Permit to safeguard the public interest. Indeed, the Executive branch has broadly interpreted its Presidential Permit authority. For example, the Department of Justice concluded that the President is "free to control" power imports.[9] More recently, the Federal Energy Regulatory Commission concluded that:

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[7] Exec. Order No. 10485, 3 C.F.R. 970 (1949-1953) as amended by Exec. Order No. 12038 1978 WL 219559 (emphasis added).
[8] Exec. Order No. 10485, 3 C.F.R. 970 (1949-1953) as amended by Exec. Order No. 12038 1978 WL 219559; *Greene County Planning Board v. Federal Power Commission* (2nd Cir. 1975) 528 F.2d 38, 46; *see also, Youngstown Sheet & Tube v. Sawyer* (1975) 343 U.S. 579, 637.
[9] 30 Op. Att'y Gen. 217, 221 (1913).
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> Executive Order [10485, as amended by 12038] places ***no limitations on the types of conditions the Secretary may attach*** to a permit, other than the requirement that they be conditions that the Secretary, ***in his or her judgement*** [*sic*], finds to be in the public interest.[10]

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With respect to Sempra's Presidential Permit application, the Secretary's public interest determination must be informed by the domestic and international challenges our Nation faces today. The Secretary must review the consistency of the Project with Federal policies intended to promote the Nation's full economic recovery and maintain its international leadership position. President Obama has stressed that the clean energy sector is one area where Federal stimulus funding has started to pay off with new jobs for U.S. workers.

United States energy independence is also a matter of national security. As the Nation endeavors to reduce its dependence on foreign oil and grapple with the environmental and economic threats of a changing climate, the Federal government must do all that it can to transition the country to a clean energy economy. Essential to the Administration's goals is the success of California's legislative and regulatory efforts to reduce greenhouse gas emissions and foster a demand for renewable resource capacity.

DOE approval of the Project would be inconsistent with the public interest as it is expressed through Federal legislation, policies, and DOE's own programs. By permitting the kind of power import Project proposed by Sempra's Presidential Permit application, the Secretary's action would effectively eliminate thousands of clean energy jobs, increase the Nation's reliance on foreign energy, and undermine the Nation's progress toward energy independence. The outsourcing of 1250 MW of renewable energy capacity to Mexico is contrary to Federal and California policy and contrary to the public interest. We urge the Secretary to deny Sempra's Presidential Permit application.

[10] *Enron Power Marketing, Inc.*, 83 F.E.R.C.¶ 61, 213, 61,944 (1998) (emphasis added).
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A. If Approved, the Project Would Eliminate as Many as 15,000 Jobs from the U.S. Labor Market

In February 2009, Congress passed, and President Obama signed into law, the American Recovery and Reinvestment Act of 2009 ("ARRA"). The ARRA was enacted as a direct response to what is widely deemed to be the most severe job recession in the United States since the Great Depression of 1929. Through the ARRA, Congress and the Obama Administration sought to curb rising unemployment and lay a foundation for future economic growth in the United States; the ARRA's primary purpose is to "preserve and create jobs."[11] The ARRA is a cornerstone of the Obama Administration's strategy for economic recovery.[12]

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On January 8, 2010, President Obama addressed the Nation regarding jobs and clean energy investments. The President's statements came on the heels of a spike in unemployment, resulting in more jobs lost than gained since the ARRA's enactment. The renewable energy industry and its role in economic recovery were central to the President's message:

> The Recovery Act has been a major force in breaking the trajectory of this recession and stimulating growth and hiring. ***And one of the most popular elements of it has been a clean energy manufacturing initiative that will put Americans to work while helping America gain the lead when it comes to clean energy.***[13]

President Obama made clear that economic recovery, as well as sustained U.S. leadership in the world economy, is contingent on a viable domestic renewable energy sector:

> ***Building a robust clean energy sector is how we will create the jobs of the future – jobs that pay well and can't be outsourced.***[14]

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[11] Pub. L. No. 111-5 § 3 subd. (a) (February 17, 2009), 50 Stat. 664 ("ARRA").
[12] *See* The White House, Economy, *available at* http://www.whitehouse.gov/issues/economy (last visited July 11, 2011).
[13] The White House, Press Release, *Remarks by the President on Jobs and Clean Energy Investments*, January 8, 2010, *available at* http://www.whitehouse.gov/the-press-office/remarks-president-jobs-and-clean-energy-investments (last visited July 11, 2011) (emphasis added).
[14] *Ibid.* (emphasis added).
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The Federal government dedicated billions of tax dollars to develop the U.S. clean energy sector. DOE specifically, was charged with allocating funds to stimulate renewable energy development and workforce training throughout the United States. For example, the ARRA made ***3.2 billion dollars*** available for Energy Efficiency and Conservation Block Grants, a competitive grant program established by the Energy Independent and Security Act of 2007 to, in part:

> ***[C]reate and strengthen solar industry workforce training and internship programs in installation, operation, and maintenance of solar energy projects*** and "***ensure a supply of well-trained individuals to support the expansion of the solar energy industry.***"[15]

422-1 In the words of Secretary of Energy Steve Chu "the Block Grants are a major investment in energy solutions that will strengthen America's economy and ***create jobs at the local level.***"[16]

In 2009, DOE awarded California $226,093,000 – more money than allocated to any single state – to help finance statewide energy efficiency programs and "[investment in] ***a more extensive green workforce focused on energy and clean energy sources, including wind and solar energy.***"[17] According to the DOE, its investment was intended to enable California businesses to create quality jobs.[18]

The Sempra Project is inconsistent with these express Federal and DOE policy and programmatic objectives. If DOE were to approve the Presidential

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[15] 42 U.S.C. § 17172 (emphasis added); *see* ARRA at Title IV.
[16] DOE, Energy Efficiency and Conservation Block Grant Program, *available at* http://www1.eere.energy.gov/wip/printable_versions/eecbg.html (last visited July 11, 2011) (emphasis added).
[17] DOE, California State Energy Program, *available at* http://www1.eere.energy.gov/wip/project_map/project_details_new.aspx?pid=6 (last visited July 11, 2011); DOE, Recovery Act and Weatherization Assistance Program, *available at* http://www1.eere.energy.gov/wip/recovery_act_wap.html (last visited July 11, 2011) (emphasis added).
[18] DOE, California Recovery Act Snapshot, *available at* http://energy.gov/recovery/ca.htm (last visited July 11, 2011) (emphasis added).
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Permit for the Project, the Secretary would be authorizing the export of ***3,000 future U.S. clean energy construction jobs from California to Mexico***. This result is contrary to the public interest and would undermine the Federal government's efforts toward economic recovery.

In California, the Legislature this year increased from 20 percent to 33 percent the amount of energy that regulated utilities must acquire from renewable sources by 2020 (Renewable Portfolio Standard ("RPS")).[19] Secretary Chu attended the signing ceremony for this landmark law. The new RPS law also requires that 75 percent of new renewable energy be from plants whose first point of interconnection is with a balancing area authority primarily located in California.[20] The Sempra Project would allow the wind farm in Mexico to connect with the California Independent System Operator balancing area authority, so that it meets this more stringent requirement. The Sempra Project allows wind and solar farms in Mexico to satisfy the RPS compliance requirements as though those projects were actually located in California.

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As a result of the relatively higher cost of electricity generated from renewable energy resources, particularly those that meet this more stringent requirement, utilities have an economic disincentive to exceed their mandated quota for renewable energy, and are unlikely to acquire more than the RPS requirement in the foreseeable future.[21] This means that California's demand for new renewable resource capacity over the next eight years is finite; one more renewable project built in Mexico to meet California's demand is one less renewable energy project built in the United States. Less renewable energy development in the United States means lost job opportunities for thousands of Americans. Accordingly, there is a direct trade-off between the clean energy jobs that may be created in the United States and the clean energy jobs that may be created in Mexico to meet U.S. demand for electricity sourcing from renewable resources.[22]

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[19] Senate Bill 2, First Extraordinary Session.
[20] Cal. Pub. Util. Code §§ 399.16 subds. (b)(1), (c)(1).
[21] Peter Philips, Should Green Jobs Be Outsourced: *A Case Study of Lost Jobs and Lost Opportunities*, July 10, 2011, p. 20.
[22] *Id* at pp. 16-21.
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The Secretary's approval of Sempra's Presidential Permit would eliminate thousands of near-term construction jobs.[23] Dr. Philips has shown that the construction of 1250 MW would create 3,000 U.S. clean energy jobs, where one "job" is a "job-year," defined as 52 weeks of 40 hours of work per week, or 2080 hours of work done by one person.[24] Thus, if the Project took five years to build, 600 full time workers would be required in each of those five years to construct the Project. Moreover, the opportunity losses associated with importing 1250 MW of renewable energy into California are much greater than the Project's direct effects on employment. Any construction site requires materials as well as workers. The materials needed to construct 1250 MW of renewable generation would create over the five years of construction up to 400 additional new jobs in Imperial County, more than 2,000 jobs in California, and more than 4,000 jobs nationwide.[25]

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In addition, workers that would have been employed to construct 1250 MW of new renewable generation would spend their new wages on food, homes, cars, gas, and other consumer goods and services. As a result of this multiplier effect, the construction employment that would have otherwise occurred in the Imperial Valley would have created, over the five-year period, almost 600 additional new jobs downstream in the Imperial County consumer market, more than 4,000 downstream jobs in California, and more than 7,000 downstream jobs nationwide.[26] ***Thus, importing 1250 MW of renewable generation from Mexico to California will eliminate as many as 15,000 jobs that would have otherwise been created in the U.S. labor market.***

This result is contrary to the public interest as expressed by Congressional directives, Executive policies, DOE's own programs, and the public's billion dollar investments in economic recovery and the clean energy sector in particular. In approving Sempra's application, the Secretary would be working at cross-purposes with National efforts to stimulate job growth. We note that SDG&E – the would-be purchaser of Sempra's imported power – has a large part to play in stimulating future domestic job growth in the clean energy sector. At this time, SDG&E is lagging behind California's two largest investor owned utilities with an RPS of just

[23] *Id.* at p. 40.
[24] *Id.* at p. 4.
[25] *Id.* at p. 51, Table 7.
[26] *Ibid.*
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12 percent.[27] There is absolutely no public interest justification for outsourcing SDG&E's unmet renewable resource demand to Mexico.

B. Project Approval Would Impede Job Growth Where It is Most Needed

Approval of Sempra's Presidential Permit application is contrary to the public interest because it will impede job growth where it is most needed. Based on annual average state unemployment rates, labor markets in California and Nevada have been two of the hardest hit by the recession (both the California and Nevada labor markets would be directly impacted by the Sempra Project).[28] While California has the second highest state unemployment rate in the country, Imperial County's unemployment rate is 27.9 percent – the highest unemployment rate of any county in the country.[29] Since October 2007, more than 50 percent of all Imperial County construction jobs have been lost.[30]

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In his study, Dr. Philips projected that the economic benefits of developing Sempra's 1250 MW of renewable generation – if that development occurred in California – would likely occur in the Imperial Valley and in Imperial County specifically.[31] In particular, due to abundant renewable resources and existing transmission capacity, Imperial County is a suitable alternative– and perhaps Sempra's best alternative – for renewable resource development outside of Mexico.[32] For Imperial County, exporting 1250 MW of renewable energy capacity to Mexico means:

> the loss of many fairly long-lasting construction jobs, plus the loss of careers in electrical utility operations, plus the loss of new careers for new apprentices in high-skilled, well-paid construction work, plus the loss of downstream spinoff jobs that would have been created by these lost construction and operation jobs, plus the loss of local, state and

[27] *Id.* at p. 19.
[28] *Id.* at p. 24.
[29] *Id.* at p. 22.
[30] *Id.* p. 30.
[31] *Id.* at p 21.
[32] *See ibid.*
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federal tax revenues that would have been generated by these lost jobs, lost careers and lost spinoff jobs.[33]

Dr. Philips quantifies the U.S. economic, employment and training opportunities that are jeopardized by the Sempra proposal. For example, if built in Imperial County, the 1250 MW of additional renewable energy capacity proposed for Mexico would mean that at least 100 Imperial County young people would have the opportunity to enter well-paid construction careers.[34] On an annual basis, across crafts and including both journeyworkers and apprentices, construction of 1250 MW of renewable generation would generate an average annual per capita compensation of $104,223, with the majority of these jobs going to Imperial County residents.[35]

422-1 Many of these jobs would have gone to minorities and first generation immigrants. More than 80 percent of the people living in Imperial County are of Hispanic and Latino descent, and more than one third of the County's population was born outside of the country.[36] The vast majority of this population is not college educated; only about ten percent of persons aged twenty-five and older in Imperial County holds a college degree.[37] Thus, a career in construction is one of the few means by which members of this community could lift themselves out of poverty to earn a middle-class income, healthcare and retirement benefits. In Imperial County, where the median annual household income is $37,846, persons entering careers as union electricians would nearly double their earning potential.[38]

Imperial County has long suffered from environmental injustices such as severe air pollution, trash dumping, and the general under-enforcement of State and federal environmental regulation. Today, residents of Imperial County are seeking to take advantage of a progressive energy policy and the County's natural resource potential to rebuild their local economy. This is why community

[33] *Id.* at p. 23.
[34] *Id.* at p. 42.
[35] *Id.* at p. 44.
[36] U.S. Census Bureau, Quick Facts: Imperial County.
[37] *Ibid.*
[38] *See*, Peter Philips, Should Green Jobs Be Outsourced: *A Case Study of Lost Jobs and Lost Opportunities, supra,* n. 21, p. 43.
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organizations and labor representatives have joined together to oppose the Project.[39] The underserved, predominantly Latino population of Imperial County is entitled to participate in a clean energy economy under Federal policies and State law.

Executive Order 12898 regarding Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations mandates executive agencies such as DOE to make achieving environmental justice part of their mission and address any disproportionate adverse environmental effects of their programs and policies on minority and low-income populations.[40] Pursuant to Executive Order 12898, each executive agency was required to develop a strategy to achieve these goals. California law specifically requires that utilities consider the interests of minority and low-income populations in soliciting renewable resources by giving first priority to renewable energy projects that offer environmental and economic benefits to these communities.[41]

422-1 DOE in its Environmental Justice Five-Year Plan committed to extend to minority and low-income communities their fair share of environmental benefits from the clean energy sector:

> As production possibilities turn to more environmentally friendly sources of energy from nontraditional sources, the benefits of such possibilities, when supported by public funds, should be shared by all populations, especially those who have suffered a disproportionate share of environmental burdens. Environmental justice means that those who have suffered a disproportionate share of environmental burdens should enjoy some of the environmental benefits of publicly funded production activities.[42]

Local 569 challenges the Secretary to uphold these environmental justice principles in exercising its Presidential Permit process authority.

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[39] *See, e.g.*, Letter from Jose Luis Olmedo Executive Director of Comité Civico del Valle to Jerry Brown Governor of California, May 27, 2011, attached as Exhibit C; Letter from Labor Council for Latin American Advancement to Secretary of Energy Steven Chu, February 22, 2010, attached as Exhibit D.
[40] Exec. Order 12898, 59 Fed. Reg. No. 32, February 16, 1994.
[41] Cal. Pub. Util. Code § 399.13 subd. (a)(5)(7).
[42] DOE, Environmental Justice Five-Year Plan, p. 6, *available at* http://www.hr.doe.gov/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=4369 (last visited July 14, 2011)
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DOE approval of Sempra's application would be tantamount to blocking a major path to recovery for those with the most to gain from the burgeoning clean energy sector. Moreover, for every lost construction job in Imperial County, almost four new jobs would be lost somewhere else in the United States.[43] The opportunity loss associated with approving Sempra's Presidential Permit application is an economic loss not only for Imperial County and California, but also for the United States as a whole.

As demonstrated by Dr. Philips' study, the Secretary's approval of Sempra's Presidential Permit application will eliminate job opportunities where they are most needed and will also cause the loss of job opportunities and related tax revenue elsewhere in the United States. Project approval is also contrary to the public interest as expressed through Federal policy and State law because it would deprive minority, low-income communities of the economic and environmental benefits of local renewable energy development. The Secretary must consider these
422-1 adverse public policy implications of Project approval and deny Sempra's Presidential Permit application.

C. Project Approval Hinders the Nation's Progress Toward Energy Independence

The Obama Administration considers energy independence a matter of national security. As stated by President Obama, in addition to the economic benefits of a robust clean energy sector, our investment in clean energy is,

> also how we will reduce our dangerous dependence on foreign oil, a dependence that endangers our economy and our security. And it is how we will combat the threat of climate change and leave our children a planet that's safer that the one we inherited.[44]

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[43] Peter Philips, Should Green Jobs Be Outsourced: *A Case Study of Lost Jobs and Lost Opportunities*, *supra*, n. 21, p. 52.
[44] The White House, Press Release, *Remarks by the President on Jobs and Clean Energy Investments*, January 6, 2010, *available at* http://www.whitehouse.gov/the-press-office/remarks-president-jobs-and-clean-energy-investments (last visited July 11, 2011).
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Energy independence is also one of President Obama's highest priorities.[45] Since President Obama came into office, the Federal government has allocated billions to clean energy workforce training, research and development and energy efficiency programs, opened hundreds of thousands of acres of public lands for renewable energy development, created a streamlined environmental review process for utility-scale renewable energy projects, and extended billions of dollars in tax credits and loan guarantees to stimulate private investment in renewable resource capacity. A decision to allow the outsourcing of 1250 MW of renewable energy generation to Mexico would increase U.S. dependence on foreign energy and would be directly contrary to these Federal efforts. The Secretary's approval of Sempra's Presidential Permit application would also diminish the Nation's skilled labor force and renewable energy capacity and would set us a step back on the path toward energy independence.

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1. Project Approval Would Cost the U.S. $2.6 Million in Lost Human Capital Investment

A skilled workforce is necessary to harness our Nation's enormous renewable resource potential. Indeed, DOE has repeatedly stressed that the projected dramatic increase in U.S. renewable resource installations will require a stream of trained and qualified workers to manufacture, construct, operate, and maintain these facilities.[46] By approving Sempra's Presidential Permit application, the Secretary would forego ***$2,644,682*** of private investment in clean energy jobs training and also eliminate ***75 future skilled journey-worker electricians*** from

[45] *See e.g.*, Department of the Interior, Secretarial Order 3285, March 11, 2009, *available at* http://www.blm.gov/or/energy/opportunity/files/order_3285.pdf (last visited July 13, 2011).
[46] DOE, Energy Efficiency & Renewable Energy, *Solar Technologies Program*, *available at* http://www1.eere.energy.gov/library/pdfs/wind_green_jobs_fs.pdf (last visited July 11, 2011); DOE, Energy Efficiency & Renewable Energy, *Solar Technologies Program*, *available at* http://www1.eere.energy.gov/library/pdfs/solar_green_jobs_fs.pdf (last visited July 11, 2011); DOE, Energy Efficiency & Renewable Energy, *Green Energy Technologies Create Green Jobs*, available at http://www1.eere.energy.gov/library/pdfs/corporate_green_jobs.pdf (last visited July 11, 2011); DOE, Energy Efficiency & Renewable Energy , *Geothermal Energy: Putting Creative Ideas to Work*, http://www1.eere.energy.gov/library/pdfs/geothermal_green_jobs_fs_7-8a.pdf (last visited July 13, 2011).
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California's construction labor pool.[47] Each of these workers would have undergone 1,020 hours of classroom training and 8,000 hours of on the job-training.[48]

All collectively bargained agreements in California construction require paying training contributions into registered apprenticeship programs.[49] A significant advantage of the International Brotherhood of Electrical Workers and other craft-oriented apprenticeship programs (carpenters, operating engineers, ironworkers, laborers, etc.) that would have supplied the craft labor required to build 1250 MW of renewable resource capacity in Imperial County is that the craft training programs are comprehensive in nature. Apprentices learn a full range of skills in their craft enabling them to construct not only solar farms, but other types of green energy facilities as well as other complex industrial and commercial facilities.[50]

422-1 The $2,644,682 invested in building 1250 MW of renewable energy capacity in the United States would have resulted in a clean energy jobs training investment of $35,262 for each apprentice or $7,052 per apprentice per year over five years.[51] To provide a perspective on this per apprentice investment, California spends approximately $13,000 per student per year for four years in the University of California system.[52] Thus, not counting the value of the on-the-job aspects of this apprenticeship training, this 1250 MW set of facilities would have invested in classroom training for each student almost the equivalent of what the State invests in a University of California student over three years ($35,000 vs. $39,000).[53] This kind of investment is necessary to support the development of a clean energy workforce, and it will also provide some of the investment needed to replace the Nation's aging trained construction labor force.[54] The Secretary should deny Sempra's Presidential Permit application because the Project undermines U.S. energy independence goals.

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[47] Peter Philips, Should Green Jobs Be Outsourced: *A Case Study of Lost Jobs and Lost Opportunities, supra*, n. 21, p. 47.
[48] *Ibid.*
[49] *Id.* at p. 46.
[50] *Id.* at pp. 45-46.
[51] *Id.* at p. 47.
[52] *Ibid.*
[53] *Ibid.*
[54] *Id.* at p. 48.
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2. Project Approval Would Subtract 1250 MW from California's Total Future Renewable Resource Capacity

The Secretary must ensure that California's renewable resource potential is fully utilized because the State's vast resources are an essential element of the Obama Administration's energy independence program.[55] Through the ARRA, Congress authorized DOE to direct an additional six billion dollars in loan guarantees to leverage private sector investment in renewable energy generation and transmission projects.[56] To date, DOE Loan Program Office has conditionally committed over $16 billion in loan guarantees to support 15 solar generation projects.[57] All but six of these projects are being developed in California.[58,59] As recently as June 30, 2011, DOE announced that it has extended $4.5 billion in loan guarantees to three California photovoltaic power plants.[60] In 2009, more than one-third of all solar energy development applications on public lands were for projects proposed in California.[61]

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[55] *See* U.S. Department of the Interior, Press Release, *Salazar, Abbey Describe Progress of Solar Energy on Public Lands*, January 28, 2010, *available at* http://www.doi.gov/news/pressreleases/2010_01_28_release.cfm (last visited July 13, 2011).
[56] ARRA at Title XVII.
[57] DOE, Press Release, *Department of Energy Offers Conditional Loan Guarantee Commitments to Support Nearly $4.5 Billion in Loans for Three California Photovoltaic Solar Power Plants*, *available at* http://www.energy.gov/10404.htm (last visited July 11, 2011).
[58] *See* DOE, Loan Program Office, *Our Projects*, https://lpo.energy.gov/?page_id=45 (last visited July 14, 2011).
[59] These projects are: Abengoa Mojave Solar Project, a 250 MW facility in San Bernardino County; a 383 MW solar generation facility proposed by BrightSourceEnergy; the 230 MW Antelope Valley Solar Project, the 550 MW Desert Sunlight Project, and the 550 MW Topaz Project, all proposed by First Solar, Inc.; the 250 MW Genesis Solar Project proposed by NextEra Energy Resources, LLC; the 484 MW Blythe Solar Millennium Project, proposed by Solar Trust of America; and the 250 MW California Valley Solar Ranch facility, proposed by SunPower Corporation.
[60] DOE, Press Release, *Department of Energy Offers Conditional Loan Guarantee Commitments to Support Nearly $4.5 Billion in Loans for Three California Photovoltaic Solar Power Plants*, *available at* http://www.energy.gov/10404.htm (last visited July 11, 2011).
[61] Statement of Jim Abbott, Acting California State Director of the U.S. Bureau of Land Management before the Subcommittee on Energy and Mineral Resources of the Committee on Natural Resources U.S. House of Representatives, Oversight Field Hearing, May 11, 2009, pp. 40-41

2599-005d

The Federal government's substantial investment in California is based on this State's superior renewable resource potential.[62] As reviewed above, authorizing Sempra to export 1250 MW of renewable generation from Mexico to meet California's electricity demand guarantees that an additional 1250 MW of renewable resource capacity ***will not be built*** in California. Therefore, we urge the Secretary to deny Sempra's Presidential Permit application because it is inconsistent with the public interest.

D. Sempra's Project is a Bad Deal for California

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California's energy and environmental protection policies are helping advance the Nation's energy independence and climate change goals. In 2006, California enacted the Global Warming Solution Act to mitigate the detrimental economic and environmental effects of a changing climate, exercise a leadership role in addressing global climate change, and to position the State's economy to benefit from national efforts to reduce emissions of greenhouse gases.[63] Like the Federal government, California is seeking to maximize the economic and environmental benefits of the clean energy sector.

One of California's principle means of attaining reductions in greenhouse gas emissions is the Renewable Portfolio Standard ("RPS") Program, the objective of which is to:

> [I]ncrease in the short term, the quantity of California's electricity generated by renewable electrical generation facilities located in this state, while protecting system reliability, fostering resource diversity, and obtaining the greatest environmental benefits for California.[64]

Pursuant to the RPS Program, retail sellers of electricity must comply with mandatory renewable resource purchase quotas. In April 2011, the California Legislature increased the RPS requirement from 20 percent to 33 percent by the year 2020.

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[62] One need only refer to the DOE's solar energy map to see the rich abundance of solar potential in Southern California. DOE, Solar Energy Resources, http://www.energyenvers.gov/pdfs/308.pdf (last visited July 13, 2011).
[63] Cal. Health & Saf. Code §§ 38500 et seq.
[64] Cal. Pub. Resources Code § 25740.5 subd. (a).
2599-003d

Under the RPS Program, the California Public Utilities Commission must ensure that the retail sellers select the least-cost and best-fit eligible renewable resources to meet their compliance obligations.[65] A least-cost and best-fit project is one that offers workforce recruitment, training, and retention opportunities, and fosters employment growth in the State.[66] The 1250 MW that SDG&E plans to purchase from Sempra's wind energy project in Mexico offers none of these local benefits.

Sempra's Project is not a good deal for California ratepayers. And for that matter, Sempra's imported energy is not a good investment for SDG&E. Pursuant to the RPS Program, utilities are required to give preference to projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment.[67] As detailed in these comments, the Project does nothing to help communities afflicted by high unemployment. In fact, the Project eliminates job growth opportunities where they are most needed.

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Sempra states that the "Energía Sierra Juárez [Electric Transmission Line] is a response to environmental public-policy initiatives and increasing demands for renewable energy projects that reduce greenhouse gas emissions."[68] The increased demand that Sempra is responding to is the product of California's new 33 percent RPS Program. As demonstrated above, however, the 1250 MW of imported renewable resources is not the type of project that California wants or needs. We urge the Secretary to consider California's key contribution to National economic recovery and energy independence goals and deny Sempra's Presidential Permit application.

E. Environmental Protection and Electric Reliability

In determining whether a Presidential Permit application is consistent with the public interest, the Secretary considers, pursuant to NEPA and its implementing regulations, the environmental impacts associated with issuing or

[65] Cal. Pub. Util.Code § 399.13 subd. (a).
[66] Cal. Pub. Util Code § 399.13 subd. (a)(4)(A)(iv).
[67] Cal. Pub. Util. Code § 399.13 subd. (a)(5)(F)(7).
[68] Philips, p. 17.
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denying the application. The Secretary also considers the effect that the proposed project would have on the operating reliability of the U.S. electric power supply system. On March 16, 2011, we submitted comments on behalf of Local 569 addressing these factors and we hereby incorporate by reference our prior comments. We urge the Secretary to reject Sempra's application because, as discussed in our previous comments, the environmental and electric reliability impacts of the Project also demonstrate that approval of the Presidential Permit would be inconsistent with the public interest.[69]

II. THE SECRETARY SHOULD POSTPONE ACTION ON THE PROJECT PENDING FURTHER REVIEW AND CONSULTATION WITH THE STATE OF CALIFORNIA

422-1 As discussed above, approval of the Sempra Project would result in significant adverse employment and socioeconomic impacts on one of the most economically depressed regions of the country. These impacts would fall most severely on the Latino and low-income communities that make up the majority of residents in Imperial County. The Project would also undermine the Nation's progress toward economic recovery, energy independence and renewable power development by eliminating substantial workforce training and development opportunities and by supplanting development where renewable energy resources are superior to almost anywhere else in the United States. The Project would set a dangerous precedent for the outsourcing of U.S. green energy jobs contrary to Federal and California policy.

We urge the Secretary to delay action on Sempra's Presidential Permit application until DOE has fully investigated the potential impacts of the Project and consulted with appropriate California state and local agencies. The Secretary must determine the consistency of the Project with the public interest as expressed through Federal and California economic recovery, environmental justice, energy independence and environmental protection programs and goals.

[69] We reserve the right to submit supplemental comments regarding DOE's environmental evaluation of the Project under NEPA based on a review of the Final Environmental Impact Statement once it is issued.
2599-003d

At a minimum, we propose that DOE take the following actions in order to make appropriate public interest findings and determinations in conjunction with a decision on the Sempra Project:

- Consult with the California Office of the Governor, and any state agency designated by the Office of the Governor, regarding the Project's economic and employment impacts, including specifically, the jobs, tax revenue, and training losses identified by Dr. Peter Philips, as well as the consistency of the Project with California statutory and regulatory policy;

- Consult with any State agency or agencies designated by the Office of the Governor, such as the California Energy Commission and the California Public Utilities Commission, to evaluate the data presented by Dr. Philips and the Project's impacts on California's renewable energy sector, including foregone future in-state renewable energy development;

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- Consult with the California Public Utilities Commission, the lead State agency for the purpose of environmental review of the ECO substation, regarding the Project's potentially significant socioeconomic and environmental impacts and incorporate the Commission's adopted mitigation measures as conditions on any Presidential Permit issued for the Project; and

- Identify local community representatives, such as the Comité Cívico del Valle, and consult with these stakeholders regarding the Project's adverse economic impacts on Imperial Valley communities, including the residents of Imperial County.

III. CONCLUSION

Through Executive Order 10485, the Secretary is directed by the President of the United States to ensure that transmission facilities built at the U.S. border are consistent with the public interest. The ESJ Gen Tie Project is not. If approved, the Project would eliminate thousands of jobs from the U.S. economy at a time when the United States is experiencing the greatest jobs recession in the past century.

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Approval of the Sempra proposal would also set a dangerous precedent, encouraging U.S. and foreign companies to profit from California's renewable resource demand and at the same time avoid compliance with domestic labor and environmental standards by building abroad.

The Project would impede the Nation's progress toward energy independence by displacing renewable generation development where solar resources are superior to almost anywhere else in the United States. If the Secretary denies Sempra's Presidential Permit, an additional 1250 MW of solar capacity ***will*** be built in the United States, creating thousands of jobs for the U.S. economy, helping to elevate economic conditions in areas of the country hardest hit by the recession, and bringing our Nation 1250 MW closer to energy independence. 422-1

For these reasons, we urge the Secretary to act in the public interest and deny Sempra's Presidential Permit application.

Sincerely,

Elizabeth Klebaner c.n.h.

Elizabeth Klebaner
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Attorneys for International Brotherhood of Electrical Workers, Local 569

EK:cnh

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Michael Skinker (email only)
Office of the General Counsel
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2599-003d

Attachments:

Exhibit A – Comments on Sempra Generation's Application to the Department of Energy for a Presidential Permit for the Energia Sierra Juarez Gen-Tie Project, March 16, 2011

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Exhibit B – Peter Philips, Should Green Jobs Be Outsourced? *A Case Study of Lost Jobs and Lost Opportunities*, July 10, 2011; Curriculum Vitae of Peter Philips

Exhibit C – Letter from Jose Luis Olmedo Executive Director of Comité Cívico del Valle to Jerry Brown Governor of California, May 27, 2011

Exhibit D – Letter from Labor Council for Latin American Advancement to Secretary of Energy Steven Chu, February 22, 2010

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EXHIBIT A

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March 16, 2011

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Re: Comments on Sempra Generation's Application to the Department of Energy for a Presidential Permit for the Energia Sierra Juarez Gen-Tie Project

Dear Dr. Pell:

We are writing on behalf of the International Brotherhood of Electrical Workers, Local 569 ("Local 569") and its members to comment on Sempra Generation's ("Applicant") application for a Presidential Permit for the Energia Sierra Juarez Gen-Tie Project ("Project"). The Project requires a Presidential Use Permit from the Department of Energy ("DOE") and a Major Use Permit from San Diego County to connect the ESJ Wind Farms in northern Baja California, Mexico to the existing Southwest Power Link Transmission Line through the ECO Substation.[1] The ESJ Wind Farms were granted a conditional approval from Mexico's environmental ministry, Secretaria de Medio Ambiente y Recursos Naturales ("SEMARNAT"). SEMARNAT's approval of the ESJ Wind Farms may still be challenged administratively.

Local 569 has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for business and industry to expand in the region, and by making it less desirable for businesses to locate and people to live there. Indeed,

[1] See U.S. Dept. of Energy, Energia Sierra Juarez U.S. Transmission Line Project, Draft Environmental Impact Statement, Aug. 2010, p. S-3 (hereafter DEIS).

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continued degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduce future employment opportunities. In this case, the Project would also cause significant adverse socioeconomic impacts to Imperial and San Diego Counties and the southern California regional economy by facilitating the development of large-scale renewable energy projects in Mexico. These socioeconomic impacts, including the loss of employment opportunities, would in turn result in physical changes to the environment, such as urban decay and blight.

For the reasons discussed in detail below, the DOE may not legally approve the Presidential Permit for the Project. The DOE has failed to demonstrate that approval of the Project is consistent with the public interest.

I. THE LEGAL REQUIREMENTS FOR ISSUANCE OF THE PRESIDENTIAL PERMIT HAVE NOT BEEN MET

Pursuant to the Federal Power Act of 1935, the Department of Energy Organization Act of 1977 and Executive Order 10485 as amended by Executive Order 12038, before a Presidential Permit may be issued, the action must be found to be consistent with the public interest. The two criteria used by the DOE to determine if a proposed project is consistent with the public interest are:

1. Environmental Impact – The National Environmental Policy Act ("NEPA") requires that federal agencies give due consideration to the environmental consequences of their actions. Pursuant to NEPA, the DOE must determine the environmental impacts associated with issuing or denying a Presidential Permit. Regulations codified at 10 CFR 205.321, 205.328, 205.329 and 1021 et seq. specifically delineate the DOE's steps in the NEPA process.

2. Impact on Electric Reliability – the DOE considers the effect that the proposed project would have on the operating reliability of the U.S. electric power supply system; i.e., the ability of the existing generation and transmission system to remain within acceptable voltage, loading and stability limits during normal and emergency conditions. The standards the DOE applies include the standards of the North American Electric Reliability Council and the standards of the member regional councils that are formulated by the utilities themselves.

Approval of the Presidential Permit at issue would not be consistent with the public interest for two reasons. First, the DOE has not complied with the requirements of NEPA because it did not take a hard look at all of the Project's environmental impacts and did not coordinate with San Diego County to prepare a single, consistent environmental review document. As a result, the Project may cause significant adverse impacts on the environment that have not been addressed. Second, development of the U.S. transmission line as proposed may impact electric reliability.

II. DOE HAS FAILED TO PREPARE A DEIS THAT FULLY COMPLIES WITH NEPA

The DEIS prepared by the DOE failed to comply with NEPA's requirements. First, the DEIS does not contain a hard look at all of the Project's environmental impacts or propose feasible measures to reduce or avoid these impacts. In addition, the DOE failed to comply with NEPA guidance and issue a joint environmental review document that also complies with the California Environmental Quality Act ("CEQA") to support San Diego County's issuance of a Major Use Permit. The DOE, therefore, has not ensured that the Project will comply with the public interest by evaluating and mitigating all potential environmental effects of the Project.

A. The DOE failed to take a hard look at the Project's impacts

NEPA has two basic requirements, neither of which the DEIS satisfies. First, NEPA requires that agencies take a "hard look" at the environmental consequences of a proposed action.[2] Second, NEPA review makes information on the environmental consequences of a proposed action available to the public, which may then offer its insight to assist the agency's decision-making.[3]

In an EIS, an agency must consider every significant aspect of a proposed action.[4] An EIS's discussion of environmental impacts forms the scientific and analytic basis for comparison of the alternatives.[5] The discussion of impacts must

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[2] *Robertson v. Methow Valley Citizens Council* (1989) 490 U.S. 332, 350; *Dubois v. U.S. Dept. of Agriculture* (1996) 102 F.3d 1273, 1284.
[3] See *Robertson, supra*, 490 U.S. at 350; *Dubois, supra*, 102 F.3d at 1284.
[4] *Baltimore Gas and Electric Co. v. Natural Resources Defense Council* (1983) 462 U.S. 87, 97; *Dubois, supra*, 102 F.3d at 1286.
[5] 40 C.F.R. § 1502.16; *Dubois, supra*, 102 F.3d at 1286.

include both "direct and indirect effects (secondary impacts) of a proposed project."[6] The impacts analysis must include a discussion of the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible or irretrievable commitments of resources which would be involved in the proposal should it be implemented.[7] An agency need not speculate about all conceivable impacts, but it must evaluate the reasonably foreseeable significant effects of the proposed action.[8] Reasonable foreseeability means that "the impact is sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision."[9]

Although the Council for Environmental Quality, charged with implementing NEPA, has stated that "NEPA requires agencies to include analysis of reasonably foreseeable transboundary effects of proposed actions in their analysis of proposed actions in the U.S.", the DOE has failed to take a hard look at the Project's foreseeable transboundary and local significant impacts.[10] Development of the ESJ Gen-Tie and ESJ Wind Farms will have significant transboundary and local effects on biological resources, hazards associated with wildfires, visual resources, air traffic safety and socioeconomics. Local 569 submitted comments on the Draft Environmental Impact Statement/Environmental Impact Report ("DEIS/EIR") that was prepared by the Bureau of Land Management ("BLM") and California Public Utilities Council ("CPUC") for the same Project. Local 569's comments on the DEIS/EIR are attached as Attachment A and are hereby incorporated as a part of this comment letter. The DOE must revise the DEIS and recirculate it for public comment.

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[6] 40 C.F.R. 1502.16, subd. (a), (b); *Dubois, supra*, 102 F.3d at 1286; *Sierra Club v. Marsh* (1992) 976 F.2d 763, 767.
[7] 40 C.F.R. § 1502.16.
[8] *Sierra Club, supra*, 976 F.2d at 768.
[9] *Dubois, supra*, 102 F.3d at 1286 (citing *Sierra Club, supra*, 976 F.2d at 767).
[10] Council on Environmental Quality, Memorandum to Heads of Agencies on the Application of the National Environmental Policy Act to Proposed Federal Actions in the United States with Transboundary Effects (July 1, 1997) (Attachment B).

2259-016d

I. The Project may have significant impacts on biological resources in the United States

a) The Project may have significant impacts to California condors in the United States

The California condor is both a federal and State-listed endangered species, a California fully-protected species and is protected under the Migratory Bird Treaty Act.[11] Prohibitions under the Migratory Bird Treaty Act apply to birds in Mexico under international conventions between the United States and Mexico.[12] Although the United States Fish and Wildlife ("USFWS") listed the California condor as potentially occurring in the vicinity of the Project, the DOE concluded that because California condors are so rare within their historic range, construction of the Project is not expected to result in adverse effects. This conclusion is unsubstantiated and fails to take the requisite hard look at the Project's impacts to a species on the brink of extinction.

Development of the Project may impact California condors migrating to the United States from Baja California, Mexico. The Zoological Society of San Diego released a satellite map indicating the location fixes of a three-year-old female condor that was tracked moving north from the Baja release site across the United States/Mexico border.[13] The female condor was tracked in the area around La Rumorosa where the ESJ Wind Farms would be located, and entered the United States near the site of the ESJ Gen-Tie. This was the first record of a condor entering the United States from Baja California, and the first wild condor seen in San Diego County since 1910.[14]

Historically, California condors were found from British Columbia in the north to Baja California in the south.[15] As of March 31, 2010, there were only 169

[11] Fish & G. Code, § 3511, subd. (b)(5); Cal. Code Regs., tit. 14, § 670.5, subd. (a)(5)(A); 50 C.F.R. §§ 10.13, subd. (c)(1), 17.11.
[12] 50 C.F.R. § 10.13, subd. (a)(2); see also 16 U.S.C. § 712.
[13] The Zoological Society of San Diego, 2008 (Attachment C).
[14] Dudek. Environmental Impact Report/Environmental Impact Statement for East County Substation, Tule Wind, and Energia Sierra Juarez Gen-Tie Projects (Dec. 2010), p. D.2-52 (hereafter Draft EIS/EIR).
[15] H.T. Harvey and Associates, Presence and Movement of California Condors Near Proposed Wind Turbines, Ventana Wildlife Society, Nov. 15, 2007, p. 4 (hereafter HT Harvey and Associates, 2007) (Attachment D).

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California condors recorded in the wild.[16] If the population of California condors increases – as is the objective of the breeding and release program – the species may at least forage over the site during the lifetime of the Project. Operation of the ESJ Wind Farms and the ESJ Gen-Tie, however, may impede California condor viability.

Studies have shown that California condors may be vulnerable to turbine strikes.[17] California condors exhibit behavior and physical features that may put them at high risk for wind turbine-related mortality. For example, condors' flapping flight is very clumsy making them less maneuverable around objects on the landscape.[18] In addition, because California condors are scavengers, they exhibit pronounced curiosity for novel objects in their environment and may, therefore, be attracted to wind turbines.[19] The San Diego Audubon Society has stated that "there is a concern that these wind and transmission line projects would kill condors that are and will be re-colonizing the area."[20]

Despite the sensitivity of the species and its recorded occurrence over the sites of the ESJ Wind Farms and ESJ Gen-Tie, the DEIS does not contain any analysis of the Project's potential impacts, nor does it propose any specific mitigation measures for the species. In addition, there is no indication that the Mexican government has proposed any measures to avoid or mitigate impacts to California condors besides requiring the Applicant to measure possible impacts to bird species ***after*** they occur.[21]

Although California condors currently have a limited distribution due to their extremely sensitive status, it is the hope that California condors may repopulate their historic range. The DOE must, therefore, take a hard look at the Project's impacts to this species and disclose any mitigation measures that may reduce or avoid the Project's impacts. If SEMARNAT has imposed any specific mitigation measures during its approval process, this must also be disclosed in the DEIS. Currently, there is no information in the record to ensure that impacts from the

[16] Draft EIS/EIR, p. D.2-52.
[17] HT Harvey and Associates, p. 5.
[18] *Ibid.*
[19] *Id.* at pp. 5-6.
[20] Letter from Shannon Dougherty, Conservation Chair, San Diego Audubon Society, to Dr. Jerry Pell, NEPA Document Manager, Office of Electricity Delivery and Energy Reliability, p. 2 (on file with the DOE).
[21] DEIS, p. S-28.

Project to California condors may not be significant, or that the DOE's approval of the DEIS will comply with federal and State law.

b) The Project may have significant impacts on Peninsular bighorn sheep in the United States

As the DEIS recognizes, Peninsular bighorn sheep are a federally-endangered and California State-threatened and fully-protected species.[22] The species is known to exist in the region and critical habitat is only 2.3 miles northeast of the ESJ Gen-Tie area.[23] The DOE, nevertheless, asserted that construction of the ESJ Gen-Tie would only have minor impacts to bighorn sheep because "it is unlikely the bighorn sheep will occur along the transmission corridor or access road."[24] This conclusory assertion is unsubstantiated and fails to take into account the impacts of development of the ESJ-Gen Tie and connected ESJ Wind Farms on populations of bighorn sheep.

According to the USFWS and California Department of Fish and Game ("CDFG"), Peninsular bighorn sheep are known to occur in the Sierra de Juarez mountains where the ESJ Wind Farms would be located.[25] San Diego County has also stated that while the U.S. Border Fence is normally a barrier for wildlife movement, a portion of the Project parcels are located in the mountainous terrain where the border fence is not present. Thus, according to the County, this area "could be considered a wildlife corridor for Peninsular Bighorn Sheep movement between the United States and Mexico."[26] The BLM and CPUC also acknowledged that Peninsular bighorn sheep migrate across the border to breed with other populations.[27]

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[22] DEIS, p. 3-18; see also Fish & G. Code, § 4700, subd. (b)(2); Cal. Code Regs., tit. 14, § 670.5, subd. (b)(6)(f); 50 C.F.R. § 17.11.
[23] DEIS, p. 3-18.
[24] *Id.* at p. 3-25.
[25] Letter from Karen Goebel, Assistant Field Supervisor, U.S. Fish and Wildlife Service and Helen R. Birss, Environmental Program Manager, Cal. Dept. of Fish and Game, to Billie Blanchard, Cal. Public Utilities Com. and Lynda Kastoll, Bur. of Land Management, Aug. 25, 2008, Enclosure (Attachment E).
[26] Letter from Eric Gibson, Director, Dept. of Planning and Land Use, San Diego County, to Dr. Jerry Pell, Office of Electricity Deliverability and Energy Reliability, U.S. Dept. of Energy, Nov. 24, 2010, Attachment A, p. 3 (on file with the DOE); see also photographs of Bighorn sheep crossing rocky terrain in Attachment F.
[27] Draft EIS/EIR, p. D.3-59.

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Despite the clear evidence that Peninsular bighorn sheep may move from areas affected by the Project to the United States, the DEIS fails to take a hard look at impacts to bighorn sheep, or propose any alternatives or measures that would mitigate such impacts. The DEIS must indicate what conditions SEMARNAT has imposed to reduce impacts to bighorn sheep from the ESJ Wind Farms component. Potential mitigation measures could include limiting construction activities outside of the lambing season and period of greatest water need.[28]

c) The Project may have significant impacts to Barefoot banded geckos in the United States

The Barefoot banded gecko is a California-threatened species, as well as a BLM designated sensitive species.[29] This species is secretive and is not easily detected; however, it is known from the eastern edge of the Peninsular Ranges from Palms to Pines Highway State Route 74 to the Baja California, Mexico border.[30] While the Draft EIS/EIR prepared by the BLM and CPUC for the same Project and the Recirculated Draft EIR/EIS prepared for the Sunrise Powerlink both recognize the potential for the gecko to occur on the Project site, the DEIS does not mention the species.[31]

Barefoot banded gecko may be present on the ESJ Wind Farms site and could cross the border in the mountainous terrain that is not occupied by the border fence and move into the United States. The DEIS must, therefore, evaluate whether Project conditions on the ESJ Wind Farms site will impact the Barefoot banded gecko and impede cross-border movement. Currently, the DOE has failed to take a hard look at all of the Project's impacts to the Barefoot banded gecko.

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[28] See Sunrise Powerlink RDEIR/DEIS, Response to Comment Set F0006, F0006-2.
[29] Cal. Code Regs., tit. 14, § 670.5, subd. (b)(4)(B); Bur. of Land Management, Special Status Animals in Cal., Including BLM Designated Special Status Species <http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/pa/wildlife.Par.13409.File.dat/BLM%20Sensitive%20Animal%20Update%20SEP2006.pdf> (as of Mar. 3, 2011).
[30] Draft EIS/EIR, pp. D.2-40, D.2-148.
[31] *Id.* at pp. D.2-40, D.2-148; Aspen Environmental Group, Sunrise Powerlink Project Recirculated Draft EIR/ Supplemental Draft EIS (Oct. 2008), p. 2-30 (hereafter Sunrise Powerlink RDEIR/SDEIS).

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d) The Project may have significant impacts on Golden eagles in the United States

The Golden eagle is a State fully-protected species, a California Department of Forestry and Fire Protection-listed sensitive species and on the CDFG watch list, and federally protected under the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act and the Lacey Act.[32] Development of the Project may impact Golden eagle nests and foraging areas. The DEIS, however, does not disclose any of the Project's impacts to this species or propose any specific mitigation measures. Specifically, the DOE did not take a hard look at the specific impacts development of the ESJ Wind Farm may have on Golden eagles and incorrectly assumes that mitigation for the species does not have to be disclosed in the DEIS. The DOE must take a hard look at the Project's impacts to Golden eagles.

According to the BLM and CPUC, the Golden eagle has "high potential for foraging" over the ESJ Gen-Tie Project site.[33] As the DEIS recognizes, jackrabbits are present on the Project site, which serve as a primary source of prey for Golden eagles.[34] In addition, the Applicant contracted San Diego Zoo Conservation Research to conduct a full-scale survey throughout the planned ESJ Wind Farms site.[35] During the survey four nests were observed along with several Golden eagles.[36]

Because Golden eagles and nests were observed on the ESJ Wind Farms site, development of the ESJ Wind Farm may significantly impact Golden eagles in Mexico, as well as Golden eagles that may forage over land in the United States. For example, because Golden eagles are unlikely to nest within the immediate vicinity of wind turbines, construction of the ESJ Wind Farms may lead to nest abandonment.[37]

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[32] Fish & G. Code, § 3511, subd. (b)(7); Cal. Forest Practice Rules, § 895.1; Cal. Dept. of Fish & Game, California Bird Species of Special Concern, 2006, Appendix 1, p. 57; 16 U.S.C. §§ 668, et seq.; 16 U.S.C. §§ 3371, et seq.; 50 C.F.R. § 10.13, subd. (c)(1).
[33] Draft EIS/EIR, p. D.2-105.
[34] DEIS, p. 3-17; see also Draft EIS/EIR, p. D 2-45.
[35] James Sheppard, *Golden Eagle Helicopter Survey* (Mar. 23, 2009) <http://blogarchives.sandiegozoo.org/blog/2009/03/23/golden-eagle-helicopter-survey/> (as of Mar. 3, 2011) (hereafter Sheppard, 2009).
[36] *Ibid.*
[37] Draft EIS/EIR, p. D.2-175.

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Construction of the wind turbines may also lead to direct mortality of Golden eagles. The propensity of Golden eagles to seek out strong winds to gain elevation without expending much flying effort can bring the birds into proximity with wind turbines.[38] Finally, because Golden eagles can range hundreds of miles while foraging for their food, nest abandonment and mortality caused by development of the ESJ Wind Farms, could impact Golden eagles that normally forage over the United States.[39]

The DEIS recognizes that cross-border migratory birds will traverse the border in the Project area to various degrees, and, thus, the ESJ Wind Project may result in direct mortality to these birds.[40] However, the DEIS erroneously passes responsibility for analyzing and mitigating these impacts to the Mexican Environmental, Natural Resources and Fisheries Ministry. The DOE must take a hard look at the Project's impacts to Golden eagles and disclose any measures that could be taken to mitigate those impacts in the DEIS. Depending on the discussion of the Project's impacts in the DEIS, decision makers may conclude that allowing wind energy generated in Mexico to be imported to the United States would cause too many unchecked environmental impacts. Decision makers cannot make an informed choice, however, without a complete discussion of the Project's impacts to Golden eagles. The DEIS does not include a hard look or provide a complete discussion of the issue.

e) The Project may have significant impacts on Quino checkerspot butterfly

The Quino checkerspot butterfly is a federally-listed endangered species.[41] Although it is unclear whether focused, protocol-level surveys for this species were conducted on the ESJ Wind Farms site, the Sunrise Powerlink RDEIR/SDEIS concluded that Quino checkerspot butterfly may occur on the site.[42] In comments on the Sunrise Powerlink, the Center for Biological Diversity and the Sierra Club stated that the Quino checkerspot butterfly population in the United States is

[38] Sheppard, 2009.
[39] See *ibid.*
[40] DEIS, p. 3-28.
[41] 50 C.F.R. § 17.11.
[42] Sunrise Powerlink RDEIR/DEIS, p. 2-15.

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linked to the population in Mexico and may depend on it for its health.[43] Thus, impacts to Quino checkerspot butterfly populations in Mexico may indirectly impact populations in the United States. The DOE must assess the likelihood that Quino checkerspot butterfly may occur on the site so that all Project impacts are disclosed and addressed.

f) The Project may have significant impacts on the goals of *Las Californias Binational Reserve Conservation Initiative*

The Nature Conservancy, the Conservation of Biology Institute and Pronatura prepared *Las Californias Binational Conservation Initiative* in 2004 to foster a shared conservation vision for the United States/Mexico border.[44] The border region is home to more than 400 endangered, threatened and sensitive species.[45] This sensitive area is being rapidly destroyed, however, by urbanization of the San Diego, Tijuana and Tecate regions and their adjacent suburbs.[46]

The *Initiative* and the importance of the area to biodiversity are not mentioned in the DEIS. Unchecked development of the Project may undermine the goals of *Las Californias Binational Conservation Initiative* and destroy biological resources in both the United States and Mexico. The DOE must take a hard look at the Project's potential impacts so that a complete picture of the Project's impacts to biodiversity can be understood.

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[43] Letter from Steven Siegel, Staff Attorney, Center for Biological Diversity and Justin Augustine, Staff Attorney, Center for Biological Diversity, to CPUC/BLM re Recirculated draft environmental impact report/supplemental draft environmental impact statement for the Sunrise powerlink transmission project, Aug. 25, 2008, p. 4-810.
[44] See Pronatura, Conservation Biology Institute and the Nature Conservancy, *Las Californias Binational Conservation Initiative: A Vision for Habitat Conservation in the Border Region of California and Baja California*, Sept. 2004 (hereafter Las Californias Binational Conservation Initiative).
[45] *Id.* at p. 1.
[46] *Id.* at p. 3.

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2. The Project may have significant impacts to visual resources in the area

The DOE is required to analyze the Project's aesthetic and visual impacts under NEPA.[47] To take the requisite hard look at all of the Project's aesthetic and visual impacts, the DOE must accurately describe the affected environment.[48] The DOE did not describe the residences surrounding the Project site that may be negatively affected by the Project's impacts to visual resources.

In the DEIS's analysis of the Project's impacts to noise and air quality, the DOE identifies a mobile home located approximately 1,600 feet west of the proposed transmission line route.[49] According to the DEIS, the residence "appears" to be unoccupied based on "field observations."[50] The nature of the "field observations" is unclear, and the DEIS does not explain why the occupancy of the mobile home was not verified with a knock on the door. There are additional residences located approximately 0.4 miles northwest of the site, 290 feet south of I-8 and 1.4 miles northeast of the site. There are also residences located approximately 2 miles west of the site, near the intersection of Carrizo Gorge Road and Old Highway 80.[51]

The DEIS does not incorporate any of this information into the analysis of the Project's impacts to visual resources. Instead, the DEIS concludes without any evidence that "[t]he ESJ U.S. project alternative corridors would not be visible from any residential viewpoints."[52] This conclusion appears contradicted by other information in the DEIS itself, and does not qualify as the requisite hard look under NEPA. The DOE must describe the residences that may be affected by the Project's changes to visual resources and take a hard look at the significance of those impacts.

[47] 40 C.F.R. § 1508.8.
[48] 40 C.F.R. § 1502.15.
[49] DEIS, p. 3-135.
[50] *Id.* at pp. 3-91, 3-135.
[51] *Id.* at p. 3-91.
[52] *Id.* at p. 3-33.

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3. The Project may have significant impacts associated with wildfire hazards in the United States

The DEIS recognizes that wildfires caused by the wind turbines in Mexico could have significant impacts on resources in the United States.[53] It fails to describe, however, design features that could be incorporated to reduce potential fire risks from the turbines. The DEIS simply states that "[i]t is not known whether the ESJ Wind project plans to incorporate these or other fire prevention control measures."[54] This statement does not constitute a hard look at the Project's impacts. Because the ESJ Wind Project has already received approval from the Mexican government, design features and mitigating conditions must be known. The DOE must describe the design features and mitigating conditions that will reduce potential impacts from wildfires.

4. The Project may have significant impacts to air traffic safety

While the DOE recognizes the need to address impacts on local air traffic in the DEIS, it does not take a hard look at all of the Project's potential impacts. For example, the DEIS recognizes potential impacts to air traffic associated with the Jacumba Airport and U.S. Border Patrol border monitoring, it does not recognize potential impacts to airborne fire-fighting systems. Air National Guard C-130s have been used to drop retardant on wildfires in southern California from an altitude of about 150 feet.[55] The 230-kV transmission lines would be supported on either 150-foot steel lattice towers or 150-foot steel monopoles.[56] The 500-kV transmission line would be supported on either 150-foot steel lattice towers or 170-foot monopoles.[57] Because construction of the steel lattice towers and steel monopoles under either alternative may impact airborne fire-fighting systems, the DOE must take a hard look at this impact and propose any feasible mitigation measures.

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[53] *Id.* at p. 3-128.
[54] *Id.* at p. 3-129.
[55] U.S. Air Force Fact Sheet, Modular Airborne Fire Fighting System <http://www.af.mil/information/factsheets/factsheet_print.asp?fsID=10566&page=1> (as of Mar. 10, 2011) (Attachment G).
[56] DEIS, p. 2-2.
[57] *Id.* at p. 2-10.

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5. Transmitting energy from the ESJ Wind Farms through the ESJ Gen-Tie may have potentially significant socioeconomic impacts to the United States

The DEIS fails to address the socioeconomic impacts of developing large-scale renewable energy projects in Mexico rather than in the United States and, more specifically, the DEIS fails to address the related socioeconomic effects caused by the ESJ Gen-Tie and East County Substation's facilitation of future renewable energy projects in Mexico, as opposed to development of this important burgeoning industry in Southern California. The DOE must revise the socioeconomic impact analysis in a DEIS that is recirculated to the public.

Under NEPA, the federal agency preparing an EIS must analyze social and economic impacts if they are interrelated with physical impacts.[58] Federal agencies have the additional responsibility to analyze a project's effects with respect to environmental justice.[59] Further, a Presidential Permit required for transmission must be "consistent with the public interest."[60] Thus, federal agencies have a heightened duty to consider the socioeconomic impacts that would be caused by a proposed project.

Renewable energy development in Mexico may supplant renewable energy development in the United States. According to a 2008 report prepared at the request of the California Energy Commission ("CEC"), the area of northern Mexico adjacent to the proposed ESJ Gen-Tie has the potential for thousands of megawatts of wind energy development alone.[61] There is substantial additional potential for solar and geothermal development.[62] The report reveals a strong interest by energy

[58] See 40 C.F.R. § 1508.14; see also, e.g., *Rochester v. U.S. Postal Service* (1979) 541 F.2d 967 (placing postal service center outside urban core could cause increased commuting, loss of inner-city jobs and moving to suburbs, leading to economic and physical downtown deterioration and downtown post office abandonment, all contributing to urban decay and blight).
[59] See Exec. Order No. 12898, 59 Fed. Reg. 7629 (Feb. 16, 1994); see also Dept. of Justice, *Guidance Concerning Environmental Justice* <http://www.justice.gov/archive/enrd/ejguide.html> (as of Mar. 3, 2011).
[60] Exec. Order No. 10485, § 1, 18 Fed. Reg. 5397 (Sept. 3, 1953) (as amended by Exec. Order No. 12114, 44 Fed. Reg. 1957 (Jan. 4, 1979)).
[61] KEMA Inc., Challenges and Opportunities to Deliver Renewable Energy from Baja California Norte to California, June 2008, p. 3 <http://www.energy.ca.gov/2008publications/CEC-600-2008-004/CEC-600-2008-004.PDF> (as of Mar. 11, 2011) (hereafter CEC Mexican Renewables Report).
[62] *Ibid.*

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industry representatives to develop these renewable energy resources for the purpose of exporting electricity to California.[53]

Because renewable energy jobs are critical to the health of San Diego and Imperial Counties' economies, facilitating renewable energy development in northern Mexico may cause adverse physical changes to the environment in the United States, such as urban decay and blight. Because urban decay is a potentially significant physical change to the environment, the DOE must analyze the socioeconomic impacts and propose any necessary mitigation measures.

a) Renewable energy development in northern Mexico may supplant development in California

Both the federal government and California have adopted polices, provided incentives and established goals to increase renewable energy development in the United States. One of the purposes behind the push for renewable energy generation in the United States is to foster economic growth and create employment opportunities in the United States. Federally, renewable energy generation is facilitated through federal tax credits and the American Recovery and Reinvestment Act. Another purpose that is often repeated is the desire to reduce United States dependence on foreign sources of energy.

In California, the Renewables Portfolio Standard ("RPS") sets some of the most ambitious renewable energy standards in the country. The RPS program, administered by the CPUC, the CEC and Air Resources Board, requires investor-owned utilities, electric service providers, publicly owned utilities and community choice aggregators to increase procurement from eligible renewable energy resources. In 2002, the Legislature established the original goal of 20% RPS by 2020 and in 2006 accelerated that goal. Since then, Governor Schwarzenegger increased that goal by Executive Order to 33% RPS by 2020. If enacted, pending legislation would codify the 33% RPS standard.[54]

Despite the federal incentives and State mandates, facilitating renewable energy development in Mexico may result in less renewable energy development in

[53] *Ibid.*
[54] See Sen. Bill No. x1 2, as introduced Feb. 1, 2011 < http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sbx1_2_bill_20110201_introduced.html> (as of Mar. 3, 2011); see also Sen. Bill No. 23, as introduced Dec. 6, 2010 <http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sb_23_bill_20101206_introduced.pdf> (as of March 3, 2011).

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the United States. First, on average, renewable energy is significantly more expensive to generate than energy derived from conventional fossil-fuel production.[55] Utilities, therefore, only procure the renewable energy capacity they are required to by law. In California, the RPS allows utilities to pass the increased costs of renewable energy along to retail consumers. Retailers do not have an incentive to procure renewable energy beyond the amount required to fulfill their RPS target. In this zero-sum game, the more renewable energy projects in Mexico deliver electricity to satisfy California's RPS, the less demand there will be for additional renewable energy development in California.

Further, transmission capacity in Southern California and in the Project area is limited, even with the recently approved Sunrise Powerlink.[56] Thus, if more renewable and conventional energy projects built in Mexico use transmission in the United States, there will be less available transmission capacity for renewable energy development in the United States. The loss of domestic jobs to Mexico will adversely affect the regional economies in Imperial and San Diego Counties.

b) Renewable energy jobs are critical to the future health of San Diego County and especially Imperial County

As of December 2010, El Centro had the highest unemployment rate among American cities, at 28.3%.[57] Unemployment rates for Imperial County as a whole are similarly well above State and national averages.

Renewable energy development presents one of the few areas of opportunity for economic development in Imperial County. The CPUC has recognized the tremendous potential for renewable energy projects in Imperial County and has adopted multiple orders intended to facilitate that development.[58]

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[55] See Div. of Ratepayer Advocates, *Green Rush: Investor-Owned Utilities' Compliance with the Renewables Portfolio Standard* (Feb. 2011), p. 7 <http://www.dra.ca.gov/NR/rdonlyres/0CB0B986-E93B-462A-BA62-804EDAE45B820/0/DRAReportPUBLICVERSIONFeb2011.pdf> (as of March 3, 2011).
[56] See CEC Mexican Renewable Report, pp. 27-32.
[57] See U.S. Bur. of Labor Statistics *Unemployment Rates for Metropolitan Areas* (Dec. 7, 2010) <http://www.bls.gov/web/metrolaumntrk.htm> (as of Mar. 3, 2011).
[58] See, e.g., Cal. Public Utilities Com., In the Matter of the Application of San Diego Gas & Electric Company (U 902 E) for a Certificate of Public Convenience and Necessity for the Sunrise Powerlink 2299-010d

Developing renewable energy projects in Imperial County has great potential to address the demand for renewable energy created by the RPS goals.[69] The ESJ Wind Farms in Mexico and approval of the ESJ Gen-Tie threaten this development by facilitating renewable energy projects in Mexico, where less stringent and protective environmental and labor standards may attract developers seeking to minimize costs.[70]

c) These adverse economic effects will result in blight and other physical changes in the environment

Developing the ESJ Wind Farms and approving the ESJ Gen-Tie may well lead to a downward economic spiral in the United States. Investment in a region rich in solar and wind resources can be expected to continue as long as there is an expectation that renewable energy projects will continue to be proposed in the area. In addition, renewable energy development would indirectly stimulate local economies through the "economic multiplier effect."[71]

If the ESJ Gen-Tie is approved and renewable energy development emerges in northern Mexico instead, market expectations will shift and investment may drop off sharply. With prolonged and potentially deepening economic conditions, city and county governments would receive less tax revenue with which to fund infrastructure maintenance and improvements and government services. Further, property values would continue to fall, among other economic impacts. These impacts would result in physical impacts, such as deteriorating roads, vacant neighborhoods and urban decay. The DEIS is required to consider these indirect physical changes that would result from the Project.

Transmission Project, Decision 08-12-058, pp. 63-68; see also Cal. Public Utilities Com., Decision Conditionally Accepting Procurement Plans for 2009 Renewables Portfolio Standard Solicitations and Integrated Resource Plan Supplements, Decision 09-06-018, §§ 4.1-4.2, 6.3.

[69] See Summit Blue Consulting, LLC, *Renewable Energy Feasibility Study* (Apr. 2008), pp. 14, 19-20, 22, 25 <http://www.ivedc.com/CMS/Media/IIDRenewableEnergyStudy_08.pdf> (as of March 3, 2011).

[70] See *Sempra Energy's Mexican (LNG) Unit, 'Energia Costa Azul' Facing Permanent Closure, States Landowner Ramon Eugenio Sanchez Ritchie* (PRNewswire, Feb. 8, 2011) <http://finance.yahoo.com/news/Sempra-Energys-Mexican-LNG-prnews-227471943.html?x=0&.v=1> (as of Mar. 11, 2011) (noting City of Ensenada's consideration of resolution to permanently shut down Costa Azul LNG Terminal Project Plant for alleged land use, public safety and environmental violations).

[71] See *id.* at pp. 26, 91.

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B. The DOE must prepare one, consistent environmental review document with San Diego County

Under NEPA, if a project requires state approval, the federal agency must cooperate with state and local agencies "to the fullest extent possible to reduce duplication between NEPA and state and local requirements."[72] This includes the preparation of a joint federal and state environmental review document so that one document will comply with all applicable laws.[73] The Code of Federal Regulations specifies that the "DOE shall integrate the NEPA process and coordinate NEPA compliance with other environmental review requirements to the fullest extent possible."[74] Despite NEPA's express guidance, however, the DOE has not coordinated with the County of San Diego to prepare one document that complies with both NEPA and CEQA.

Preparation of a single Draft EIS/EIR is essential because the alternatives and mitigation measures proposed by the DOE's DEIS and BLM/CPUC's Draft EIS/EIR are inconsistent and in conflict. The inconsistencies between the two documents undermine the public review process because it is not apparent how the differences between the two documents will be reconciled. The CPUC, San Diego County and DOE may approve conflicting alternatives or impose conflicting mitigation measures.

1. The alternatives for the ESJ Gen-Tie proposed by the BLM and CPUC in the Draft EIS/EIR are inconsistent and in conflict with the alternatives proposed by the DOE in its Draft EIS

The BLM/CPUC and the DOE have proposed inconsistent and conflicting alternatives to the proposed ESJ Gen-Tie. Under NEPA, the alternatives analysis is considered the "heart" of the EIS.[75] Because the alternatives at issue here are inconsistent, the public cannot meaningfully evaluate the various alternatives or understand the basis of the agencies' choices. The DOE must work with San Diego County to revise the proposed alternatives so that agency decision making is based on a single, consistent document. The DOE may not support its Presidential Permit

[72] 40 C.F.R. § 1506.2, subd. (b).
[73] 40 C.F.R. § 1506.2, subd. (c).
[74] 10 C.F.R. § 1021.541, subd. (a).
[75] 40 C.F.R. § 1502.14.

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for the ESJ Gen-Tie based on an analysis that is in conflict with San Diego County's review.

DOE only considered two action alternatives in its Draft EIS: a double-circuit 230-kV transmission line and a single-circuit 500-kV transmission line.[76] It dismissed an alternative transmission route from further analysis because the proposed location of the ECO Substation would make the distance of the route infeasible and impractical.[77] It also dismissed an underground transmission line alternative based on its determination that an underground failure can be more difficult to locate and repair, construction of an underground alternative would require greater ground disturbance and be more expensive and EMF exposure may be greater.[78] The 230-kV transmission line was identified as the preferred alternative.

The Draft EIS/EIR prepared by the BLM and CPUC proposed four alternatives, two of which included an underground transmission line and two of which included an overhead alternate route.[79] The overhead alternate route alternative was designated as the "environmentally superior alternative."[80] The BLM-Preferred Alternative, however, was an underground alternate route alternative.[81]

The Draft EIS/EIR's alternatives are alternatives that were expressly dismissed from further consideration by the DOE. In addition, each agency – San Diego County, the BLM and the DOE -- selected a potentially conflicting alternative. For example, it is possible that San Diego County could select a 500-kV overhead alternate alignment, the BLM could select a 500-kV underground alignment and the DOE could select a 230-kV overhead line. Because the DOE released the DEIS months before the BLM and CPUC released the Draft EIS/EIR, the agencies should have been on notice that these alternatives were considered infeasible by the DOE. Nowhere in the Draft EIS/EIR, however, is the inconsistency between the two alternatives analyses explained.

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[76] DEIS, pp. S-4 to S-5, 2-2, 2-16.
[77] *Id.* at pp. S-11, 2-16, 2-17.
[78] *Id.* at pp. S-11 to 13, 2-17, 2-18.
[79] Draft EIS/EIR, pp. C-26 to 27.
[80] *Id.* at pp. E-30, E-32.
[81] *Id.* at p. E-34.

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[76] DEIS, pp. S-4 to S-6, 2-2, 2-10.
[77] *Id.* at pp. S-11, 2-15, 2-17.
[78] *Id.* at pp. S-11 to 12, 2-17, 2-18.
[79] Draft EIS/EIR, pp. C-26 to 27.
[80] *Id.* at pp. E-30, E-32.
[81] *Id.* at p. E-34.

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It is impossible for the public to assess whether the alternatives to the ESJ Gen-Tie proposed in the Draft EIS/EIR are actually feasible. It is also impossible for the public to understand the basis behind San Diego County, the BLM and the DOE's choice of a preferred alternative. Because an adequate alternatives analysis is so critical to both a NEPA and CEQA analysis, the DOE and San Diego County must coordinate to produce a single alternatives analysis that will allow the public and decision makers to meaningfully evaluate alternatives to the proposed action.

2. The mitigation measures proposed by the BLM and CPUC in the Draft EIS/EIR are inconsistent and in conflict with the mitigation measures proposed by the DOE in its DEIS

The BLM/CPUC and the DOE have proposed inconsistent and contrary mitigation measures in their environmental documents. Under NEPA, a DEIS must include a discussion of the "means to mitigate adverse environmental impacts."[82] Mitigation measures must be discussed for all impacts, even those that by themselves would not be considered significant.[83]

The mitigation measures discussed by the BLM and CPUC in the Draft EIS/EIR are inconsistent with the mitigation measures discussed by the DOE in its DEIS. As a result of the inconsistencies, it is impossible for the public to conclude which mitigation measure will be adopted for the ESJ Gen-Tie. The DOE must work with San Diego County to revise the proposed mitigation measures so that the agencies rely on a single, consistent document to support their actions.

For example, while both the DEIS prepared by the DOE and the Draft EIS/EIR prepared by the BLM and CPUC propose acquisition of compensation land, the requirements for compensation land differs. The DOE DEIS will only compensate for land impacted by construction.[84] By contrast, the Draft EIS/EIR, proposes to compensate for all permanent impacts and allows compensation to include agency-approved land preservation or mitigation fee payment.[85] It also specifies that all habitat compensation and restoration on public lands must be located in areas designated for resource protection and management, and all

[82] 40 C.F.R. § 1502.16, subd. (h).
[83] Council on Environmental Quality, Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, Question 19(a).
[84] DEIS, p. 3-20.
[85] Draft EIS/EIR, p. D.2-129.

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habitat compensation and restoration on private lands must include long-term management and legal protection assurances.[86]

The DOE's DEIS assumes that the Applicant's plan to place an easement on a portion of the undeveloped property will be approved. If the plan is not approved, the DEIS asserts that "the ESJ-U.S. has sufficient land holdings in the project area to affect this change."[87] The DEIS then goes on to state that the Applicant has already developed a Conceptual Resource Management Plan, but does not include the Plan as an Appendix to the DEIS.

From two competing mitigation schemes set forth in DOE's DEIS and the Draft EIS/EIR, it is clear that the Applicant must compensate for permanent impacts to native vegetation. It is not clear, however, whether the Applicant must compensate for impacts that only occur during construction or all permanent impacts, or where the land would be put into easement and how it would be managed. If the Applicant has indeed prepared a Conceptual Resource Management Plan, this Plan must be attached to a single environmental document prepared by the DOE and San Diego County. In addition, the DOE must explain further how the mitigation plan would be assured, and cannot rely on the cryptic comment that the ESJ-U.S. has sufficient land holdings in the Project area. The inconsistencies between the two mitigation measures muddle a meaningful understanding of how the Applicant will reduce impacts to native scrub.

San Diego County and the DOE must work together to produce a single document that clearly sets forth definitive mitigation measures to reduce and avoid the impacts associated with the ESJ Gen-Tie.

III. THE PROJECT IS NOT CONSISTENT WITH THE PUBLIC INTEREST BECAUSE THE PROJECT MAY SIGNIFICANTLY IMPACT ELECTRIC RELIABILITY

In determining whether approval of the Presidential Permit is consistent with the public interest, the DOE must analyze whether the Project may impact electric reliability. Under standards articulated by the California Independent Service Operator ("CAISO"), the Project, as currently proposed, may impact electric

[86] *Id.* at p. D.2-130.
[87] DEIS, p. S-20.

reliability in the region. The DOE must, therefore, deny the Applicant's request for a Presidential Permit.

The CAISO grid planning standards specifies a limit of 1,150 MW of generation tripping for a single contingency.[88] Depending on other reliability criteria, however, the amount of generation that can be tripped for a specific project may be lower than the specified limit.[89] The Applicant has proposed three wind projects in Baja California, Mexico that would be transmitted over the ESJ Gen-Tie totaling 1,120 MW.[90] While the request is currently lower than the limit of 1,150 MW, approval of the ESJ Gen-Tie would allow ***up to*** 1,250 MW of renewable energy generated in Mexico to be transmitted to the United States.[91] This exceeds the CAISO limitation of 1,150 MW.

If the ESJ Gen-Tie will be a single-500 kV transmission line, the DOE must not approve the Presidential Permit unless transmission is limited to 1,150 MW to ensure compliance with CAISO grid planning standards and electric reliability in the region. If the ESJ Gen-Tie will be a double-230 kV transmission line, transmission must also be limited to the lesser of twice 1,150 MW or an amount the lines are typically capable of handling under normal conditions.

Because there are no such limitations on the carrying capacity of the ESJ Gen-Tie, the DOE must deny the Applicant's request for a Presidential Permit. The DOE cannot approve a Presidential Permit if approval would impact electric reliability in the region. Without compliance with CAISO standards, the Project may impact electric reliability and the public interest.

IV. CONCLUSION

The DOE must not approve the Project because it is not within the public interest. The DEIS prepared by the DOE does not comply with the requirements of NEPA, and, therefore, does not ensure that the Project would not significantly impact the environment. In addition, the Project as currently proposed would

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[88] Cal. Independent Service Operator, Planning Standards, Feb. 7, 2002, p. 5, ISO G4 (hereafter CAISO); see also Cal. Independent Service Operator, Grid Planning Standards, Draft Revision 1, June 19, 2008, ISO G4.
[89] See CAISO, ISO G4.
[90] Draft EIS/EIR, p. F-5.
[91] *Ibid.*

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impact electric reliability in southern California. The Presidential Permit must, therefore, be denied.

Local 569 and its members appreciate this opportunity to comment and appreciate the DOE considering our views.

Sincerely,

Robyn C. Purchia

RCP:cnh

Attachments:
Attachment A: Local 569 Letter to the CPUC and BLM (without attachments)
Attachment B: CEQ Memo to Heads of Agencies on Transboundary Effects
Attachment C: The Zoological Society of San Diego Map of Condor Flight
Attachment D: Presence and Movement of California Condors Near Proposed Wind Turbines
Attachment E: USFWS and CDFG Letter
Attachment F: Photographs of Peninsular bighorn sheep
Attachment G: U.S. Air Force Fact Sheet

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March 4, 2011

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Re: Comments on the Draft Environmental Impact Statement and Draft Environmental Impact Report for the East County Substation/ Tule Wind/ Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fischer and Mr. Thomsen:

We are writing on behalf of the International Brotherhood of Electrical Workers, Local 569 ("Local 569") and its members to comment on the Energia Sierra Juarez Gen-Tie ("ESJ Gen-Tie") and connected Energia Sierra Juarez Wind Farms ("ESJ Wind Farms") portion of the East County ("ECO") Substation, Tule Wind and ESJ Gen-Tie Draft Environmental Impact Statement and Draft Environmental Impact Report ("Draft EIS/EIR"). The ESJ Gen-Tie and the ESJ Wind Farms together are referred to in this letter as the "Project."

The ESJ Gen-Tie requires a Presidential Use Permit from the Department of Energy ("DOE") and a Major Use Permit from San Diego County to connect the ESJ Wind Farms in northern Baja California, Mexico to the existing Southwest Power Link Transmission Line through the ECO Substation.[1] The ESJ Wind Farms were granted a conditional approval from Mexico's environmental ministry, Secretaria de Medio Ambiente y Recursos Naturales ("SEMARNAT"). SEMARNAT's approval of the ESJ Wind Farms may still be challenged administratively.

[1] Dudek, Environmental Impact Report/Environmental Impact Statement for East County Substation, Tule Wind, and Energia Sierra Juarez Gen-Tie Projects (Dec. 2010), pp. A-13, A-19, A-20, B-9 (hereafter Draft EIS/EIR).

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Local 569 has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for business and industry to expand in the region, and by making it less desirable for businesses to locate and people to live there. Indeed, continued degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduce future employment opportunities. In this case, the Project would also cause significant adverse socioeconomic impacts to Imperial and San Diego Counties and the southern California regional economy by facilitating the development of large-scale renewable energy projects in Mexico. These socioeconomic impacts, including the loss of employment opportunities, would in turn result in physical changes to the environment, such as urban decay and blight.

As explained more fully below, the Draft EIS/EIR does not comply with the National Environmental Policy Act ("NEPA") or the California Environmental Quality Act ("CEQA"). A Draft EIS/EIR must include a description and analysis of connected actions that are part of the whole of the action. The ESJ Wind Farms are connected to and part of the ESJ Gen-Tie Project. Nevertheless, the Bureau of Land Management ("BLM") and California Public Utilities Commission ("CPUC") did not describe the ESJ Wind Farms in the Draft EIS/EIR, and, therefore, failed to alert the public and decision makers of the Wind Farms' environmental consequences before they occur.

The BLM and the CPUC also failed to take a hard look or adequately analyze all of the potential impacts to the United States of the Project, as required by NEPA and CEQA. The Project may have significant impacts on biological resources, hazards associated with wildfires and socioeconomics in the United States that have not been disclosed or mitigated in the Draft EIS/EIR.

Finally, San Diego County and the DOE must rely on a single document to support their approvals of a Major Use Permit and Presidential Permit for the ESJ Gen-Tie. San Diego County's reliance on the Draft EIS/EIR prepared by the BLM and CPUC and the DOE's separate reliance on its own Draft EIS violates the express guidance of NEPA and CEQA. NEPA and CEQA strongly encourage State and federal agencies to prepare a single document to avoid duplication of materials and resources, as well as unnecessary delay.

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In this case, the separate environmental documents prepared for the Project demonstrate the need for a single analysis and illustrate the rationale for the NEPA and CEQA policies in favor of a single document. The Draft EIS/EIR prepared by the BLM and CPUC and the Draft EIS prepared by the DOE contain numerous inconsistencies and conflicting information and analysis. San Diego County and the DOE are not only duplicating resources and causing unnecessary delay, but potentially relying on inconsistent and conflicting alternatives and mitigation measures to minimize the ESJ Gen Tie's environmental impacts. This approach precludes a meaningful analysis of alternatives, impairs the enforceability of mitigation measures and undermines public disclosure and informed decision making.

For these reasons, the BLM and CPUC may not certify the Draft EIS/EIR without describing the ESJ Wind Farms, fully assessing all impacts of the proposed Project and recirculating a Revised Draft EIS/EIR to the public. San Diego County also may not rely on a deficient and inconsistent document to support its approval of a Major Use Permit for the ESJ Gen-Tie Project.

I. THE DRAFT EIS/EIR DOES NOT COMPLY WITH NEPA OR CEQA BECAUSE IT DOES NOT INCLUDE A COMPLETE DESCRIPTION OF THE ESJ WIND FARMS

To comply fully with NEPA and CEQA, the CPUC and BLM must describe the ESJ Wind Farms and disclose all potential impacts to the United States in a re-circulated EIS/EIR. Because the ESJ Wind Farms are "connected actions" to the ESJ Gen-Tie and part of the "whole of the action" under review, the CPUC and BLM have a legal duty to include a complete and accurate description of the ESJ Wind Farms component of the Project and to disclose and evaluate all potential impacts so that decision makers and the public are fully informed before harm is done to the environment.

A. The ESJ Wind Farms are "connected actions" and part of the "whole of the action" within the meaning of NEPA and CEQA

Under NEPA, proposals that are so closely related that they are, in effect, a single course of action must be reviewed in the same NEPA document.[2] Federal

[2] 40 C.F.R. 1502.4 subd. (a).

agencies may not chop or segment connected actions into small pieces to avoid application of NEPA, or avoid a more detailed assessment of a project's environmental impacts.[3]

Similarly, under CEQA, a "project" is defined broadly to encompass the "whole of an action."[4] As the Guidelines state, "the term 'project' has been interpreted to mean far more than the ordinary dictionary definition of the term."[5] Any activity "which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment" constitutes a "project" or the "whole of the action."[6] This includes, but is not limited to, "later phases of the project, and any secondary, support, or off-site features necessary for its implementation."[7]

In this case, the ESJ Gen-Tie is dependent on and connected to implementation of the ESJ Wind Farms in Mexico. The Draft EIS/EIR specifically states that the "primary objective" of the ESJ Gen-Tie is "to transmit approximately 1,200 MW of renewable energy from a wind farm project in northern Baja California, Mexico."[8] There is no other stated purpose for the ESJ Gen-Tie except to carry renewable energy generated in Mexico to the United States. Indeed, the BLM and CPUC expressly acknowledge the obligation to analyze impacts of the ESJ Wind Farms because they are connected to the proposed actions and part of the whole of the action.[9]

B. Because the ESJ Wind Farms are "connected actions" and part of the "whole of the action," the Draft EIS/EIR must include an accurate and complete description of the ESJ Wind Farms

An accurate, complete and consistent project description is necessary for the public and decision makers to understand the effects of the proposed action and its

[3] 40 C.F.R. 1508.25, subd. (a).
[4] Pub. Resources Code, §§ 21065, 21080, subd. (a); 14 Cal. Code Regs. (hereinafter "CEQA Guidelines"), §§ 15002, subd. (d), 15003, subd. (h), 15165, 15378, Appendix G.
[5] CEQA Guidelines, § 15002, subd. (d).
[6] Pub. Resources Code, § 21065.
[7] CEQA Guidelines, Appendix G.
[8] Draft EIS/EIR, p. A-13.
[9] *Id.* at p. ES-11.

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alternatives.[10] "A clear description results in more focused and meaningful public input and [CPUC and] BLM participation, a more complete identification of issues, development of reasonable alternatives, sound analysis and interpretation of effects, focused analysis and a sound and supportable decision."[11] "Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost . . . ."[12]

The courts interpreting NEPA have held that "[w]here the information in the initial EIS was so incomplete or misleading that the decisionmaker and the public could not make an informed comparison of the alternatives, revision of an EIS [was] necessary to provide a reasonable, good faith, and objective presentation of the subjects required by NEPA."[13] Similarly, courts applying CEQA requirements have repeatedly held that "[a]n accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR."[14]

The Draft EIS/EIR at issue here contains a cryptic and extremely generalized description of the ESJ Wind Farms. It simply states that ESJ U.S. Transmission, LLC, is proposing "several phases" of wind projects with buildout anticipated to generate approximately 1,250 MW.[15] In addition, the Draft EIS/EIR discloses that the ESJ Wind Farms are planned to interconnect with the ECO Substation through the ESJ Gen-Tie.[16] This vague description does not provide the public or decision makers with any of the information necessary to assess the Projects' impacts. There is no information regarding the location of the ESJ Wind Farms, the height of the turbines, the design of the wind farms and mitigation measures that have been imposed by the Mexican government.

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[10] See 40 C.F.R. §§ 1502.4, 1502.15; see also *Laguna Greenbelt v. U.S. Dept. of Transportation* (1994) 42 F.3d 517, 528-29 (reviewing plaintiff's claim that inconsistent definition resulted in misleading analysis of project's positive and negative effects).
[11] Bur. of Land Management, National Environmental Policy Act Handbook, Jan. 2008, p. 42 (hereafter NEPA Handbook); see *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 192-93.
[12] *County of Inyo v. City of Los Angeles, supra*, 71 Cal.App 3d at 193.
[13] *Natural Resources Defense Council v. U.S. Forest Service* (9th Cir. 2005) 421 F.3d 797, 811 (citing *Animal Defense Council v. Hodel* (9th Cir. 1988) 840 F.2d 1432, 1439).
[14] *County of Inyo v. City of Los Angeles, supra*, 71 Cal.App.3d at 193.
[15] Draft EIS/EIR, p. E-5.
[16] *Id.* at pp. A-15, B-9.

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A more complete description of the ESJ Wind Farms is contained in the Recirculated Draft EIR/Supplemental Draft EIS ("RDEIR/SDEIS") for the Sunrise Powerlink Project, even though the ESJ Wind Farms project was in an early planning stage at the time of the October 2008 Sunrise Powerlink document.[17] The Sunrise document stated that the ESJ Wind Farms would be installed on 7,500 acres along the eastern side of the Sierra de Juarez Mountains.[18] In addition, Ricardo Moreno, the Director of International Public Relations of Sempra Energy Mexico, stated the wind project would use 2.5 MW turbines for its first phase.[19] Because the ESJ Wind Farms project was in an early stage, however, the size and location of subsequent phases of the project had not been determined, nor had the specific design of the first phase been established.[20]

Because the ESJ Wind Farms have undergone environmental review and approval by SEMARNAT, more information regarding subsequent phases and the specific design of the Wind Farms should be available and must be included in the Draft EIS/EIR. Without information regarding the size and location of subsequent phases, as well as the specific design of the Wind Farms, the environmental impacts to sensitive biological resources, hazards related to wildfires and socioeconomics in the United States cannot be meaningfully assessed.

C. The BLM and CPUC must describe the ESJ Wind Farms so that the public and decision makers can meaningfully assess all of the Project's impacts

An EIS and EIR are intended to inform decision makers and the public about the potential, significant environmental impacts of a project before harm is done to the environment.[21] Under CEQA, an EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return."[22]

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[17] Cal. Public Utilities Com. and Bur. of Land Management, Recirculated Draft EIR/Supplemental Draft EIS Sunrise Powerlink Project, Oct. 2008, p. 2-4 (hereafter Sunrise Powerlink RDEIR/SDEIS).
[18] *Ibid.*
[19] *Ibid.*
[20] *Id.* at p. 2-8.
[21] CEQA Guidelines, § 15002, subd. (a)(1); *Berkeley Keep Jets Over the Bay Com. v. Bd. of Port Comrs. of the City of Oakland* (2001) 91 Cal.App.4th 1344, 1354 (hereafter *Berkeley Jets*); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810; *Robertson v. Methow Valley Citizens Council* (1989) 490 U.S. 332, 350; *Dubois v. U.S. Dept. of Agriculture* (1996) 102 F.3d 1273, 1284.
[22] *County of Inyo v. Yorty, supra,* 32 Cal.App.3d 795 at p. 810.

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Similarly, under NEPA, an EIS serves as a means of assessing "the environmental impact of proposed agency actions, rather than justifying decisions already made."[23] To fulfill these functions, the discussion of impacts in a Draft EIS/EIR must be detailed, complete and reflect "a good faith effort at full disclosure."[24]

The BLM and CPUC must provide an accurate and complete description of the ESJ Wind Farms component of the Project and must disclose all impacts associated with the ESJ Wind Farms if the agencies are to meet their legal obligation to consider the whole of the action under review. As discussed below, development of the ESJ Wind Farms may have numerous significant effects on sensitive biological species, impacts associated with wildfire hazards and socioeconomics in the United States that have not been adequately addressed.

II. THE DRAFT EIS/EIR DOES NOT CONTAIN A HARD LOOK OR ADEQUATELY ANALYZE ALL POTENTIAL PROJECT IMPACTS AS REQUIRED BY NEPA AND CEQA AND PROPOSE APPROPRIATE AND FEASIBLE MITIGATION MEASURES

A meaningful analysis and evaluation of all potentially significant environmental effects of a project is central to the purposes behind NEPA and CEQA. NEPA requires that agencies take a "hard look" at the environmental consequences of a proposed action.[25] A hard look is defined as a "reasoned analysis containing quantitative or detailed qualitative information."[26]

An EIS must provide a full and fair discussion of every significant impact, as well as inform decision makers and the public of reasonable alternatives which would avoid or minimize adverse impacts.[27] It should be "concise, clear, to the point, and supported by evidence that the agency has made the necessary environmental analyses."[28] A concise and clear EIS that is supported by evidence ensures that federal agencies are informed of environmental consequences *before* making decisions and that the information is available to the public.[29] As the

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[23] 40 C.F.R. 1502.2, subd. (g).
[24] CEQA Guidelines, § 15151; 40 C.F.R. 1502.1.
[25] *Robertson v. Methow Valley Citizens Council, supra*, 490 U.S. at 350; *Dubois v. U.S. Dept. of Agriculture, supra*, 102 F.3d at 1284.
[26] NEPA Handbook, p. 55.
[27] 40 C.F.R. § 1502.1.
[28] *Ibid.*
[29] *Inland Empire Public Lands Council v. U.S. Forest Service* (1996) 88 F.3d 754, 758.

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Council on Environmental Quality explains in its regulations, "[e]nvironmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made."[30]

CEQA is also designed to inform decision makers and the public about the potential, significant environmental effects of a project.[31] To fulfill this function, the discussion of impacts in an EIR must be detailed, complete and "reflect a good faith effort at full disclosure."[32] An adequate EIR must contain facts and analysis, not just an agency's conclusions.[33] CEQA requires an EIR to disclose all potential direct and indirect, significant environmental impacts of a project.[34]

As discussed in detail below, the analysis presented by the Draft EIS/EIR fails to meet NEPA and CEQA legal standards. The Draft EIS/EIR fails to disclose and evaluate all potentially significant environmental impacts of the Project. Specifically, the Draft EIS/EIR fails to analyze the impacts the ESJ Wind Farms may have on sensitive biological resources, risks associated with wildfires and socioeconomics in the United States.

A. The Project may have significant impacts on sensitive biological resources in the United States

1. The Project may have significant impacts to California condors in the United States

The California condor is both a federal and State-listed endangered species, a California fully-protected species and is protected under the Migratory Bird Treaty Act.[35] Prohibitions under the Migratory Bird Treaty Act apply to birds in Mexico under international conventions between the United States and Mexico. The BLM and CPUC have failed to assess the Project's impacts to this highly-protected species and ensure compliance with the Endangered Species Act, the California Endangered Species Act and the Migratory Bird Treaty Act.

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[30] 40 C.F.R. § 1502.2, subd. (g).
[31] CEQA Guidelines, § 15002, subd. (a)(1).
[32] CEQA Guidelines, § 15151; *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 721-22.
[33] *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 568.
[34] Pub. Resources Code, § 21100, subd. (b)(1); CEQA Guidelines, § 15126.2, subd. (a).
[35] See Draft EIS/EIR, p. D.3-51.

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Development of the Project may impact California condors migrating to the United States from Baja California, Mexico. The Zoological Society of San Diego released a satellite map indicating the location fixes of a three-year-old female condor that was tracked moving north from the Baja release site across the United States/Mexico border.[36] The female condor was tracked in the area around La Rumorosa where the ESJ Wind Farms would be located, and entered the United States near the site of the ESJ Gen-Tie. This was the first record of a condor entering the United States from Baja California, and the first wild condor seen in San Diego County since 1910.[37]

Historically, California condors were found from British Columbia in the north to Baja California in the south.[38] As of March 31, 2010, there were only 169 California condors recorded in the wild.[39] If the population of California condors increases – as is the hope – the species could forage over the site during the lifetime of the ESJ Wind Farms. Operation of the ESJ Wind Farms and the ESJ Gen-Tie, however, may impede California condor viability.

Studies have shown that California condors may be vulnerable to turbine strikes.[40] California condors exhibit behavior and physical features that may put them at high risk for wind turbine-related mortality. For example, condors' flapping flight is very clumsy making them less maneuverable around objects on the landscape.[41] In addition, because California condors are scavengers, they exhibit pronounced curiosity for novel objects in their environment and may, therefore, be attracted to wind turbines.[42] The San Diego Audubon Society has stated that "there is a concern that these wind and transmission line projects would kill condors that are and will be re-colonizing the area."[43]

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[36] The Zoological Society of San Diego, 2008 (Attachment A)
[37] Draft EIS/DEIR, p. D.2-52.
[38] H.T. Harvey and Associates, Presence and Movement of California Condors Near Proposed Wind Turbines, Ventana Wildlife Society, Nov. 15, 2007, p. 4 (hereafter HT Harvey and Associates, 2007) (Attachment B).
[39] Draft EIS/DEIR, p. D.2-53.
[40] HT Harvey and Associates, p. 5
[41] *Ibid.*
[42] *Id.* at pp. 5-6.
[43] Letter from Shannon Dougherty, Conservation Chair, San Diego Audubon Society, to Dr. Jerry Pell, NEPA Document Manager, Office of Electricity Delivery and Energy Reliability, p. 2 (Attachment C).

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Despite the sensitivity of the species and its recorded occurrence over the sites of the ESJ Wind Farms and ESJ Gen-Tie, the Draft EIS/EIR does not contain any analysis of the Project's potential impacts, nor does it propose any specific mitigation measures for the species. In addition, there is no indication that the Mexican government has proposed any measures to avoid or mitigate impacts to California condors.

The CPUC and BLM must describe the location and design of the ESJ Wind Farms so that impacts to California condors may be disclosed and assessed by the public and decision makers. If SEMARNAT has imposed any mitigation measures during its approval process, this must also be disclosed in the Draft EIS/EIR. Currently, there is no information in the record to ensure that impacts from the Project to California condors will not be significant, or that the CPUC and BLM's approval of the Draft EIS/EIR for the ESJ Gen-Tie will comply with federal and State law. The BLM and CPUC must take a hard look at the ESJ Wind Farms' impacts to the California condor in a Revised Draft EIS/EIR.

2. The Project may have significant impacts to Peninsular bighorn sheep in the United States

As the Draft EIS/EIR recognizes, Peninsular bighorn sheep are a federally-endangered and California State-threatened and fully-protected species.[44] The BLM and CPUC's failure to describe ESJ Wind Farms in the Draft EIS/EIR has led to a failure to assess the overall Project's impacts to Peninsular bighorn sheep moving between Baja California, Mexico and the United States.

According to the United States Fish & Wildlife Service and California Department of Fish and Game ("CDFG"), Peninsular bighorn sheep are known to occur in the Sierra de Juarez mountains where the ESJ Wind Farms would be located.[45] San Diego County has also stated that while the U.S. Border Fence is normally a barrier for wildlife movement, a portion of the Project parcels are located in the mountainous terrain where the border fence is not present. Thus, according to the County, this area "could be considered a wildlife corridor for Peninsular

[44] Draft EIS/DEIR, p. D.2-56.
[45] Letter from Karen Goebel, Assistant Field Supervisor, U.S. Fish and Wildlife Service and Helen R. Birss, Environmental Program Manager, Cal. Dept. of Fish and Game, to Billie Blanchard, Cal Public Utilities Com. and Lynda Kastoll, Bur. of Land Management, Aug. 25, 2008, Enclosure (Attachment D).

Bighorn Sheep movement between the United States and Mexico.[46] The Draft EIS/EIR itself acknowledges that Peninsular bighorn sheep migrate across the border to breed with other populations.[47]

Despite the clear evidence that Peninsular bighorn sheep may move from areas affected by the Project to the United States and the Draft EIS/EIR's own recognition of that fact, the document fails to analyze all potential impacts on bighorn sheep, or propose any alternatives or measures that would mitigate such impacts. The Draft EIS/EIR must indicate what conditions SEMARNAT has imposed to reduce impacts to bighorn sheep from the ESJ Wind Farms component. Potential mitigation measures could include limiting construction activities outside of the lambing season and period of greatest water need.[48] The Draft EIS/EIR must also describe fencing on the ESJ Wind Farms site that could funnel or impede Peninsular bighorn sheep movement.

3. The Project may have significant impacts to Barefoot banded geckos in the United States

The Barefoot banded gecko is a California-threatened species, as well as a BLM designated sensitive species.[49] This species is secretive and is not easily detected; however, it is known from the eastern edge of the Peninsular Ranges from Palms to Pines Highway State Route 74 to the Baja California, Mexico border.[50] While the Draft EIS/EIR states that the Barefoot banded gecko has low potential to occur on the ESJ Gen-Tie site, the species may occur on the ESJ Wind Farms site and migrate to the United States. For example, the Sunrise Powerlink Project RDEIR/SDEIS assumes that the Barefoot banded gecko is present on the ESJ Wind Farms site.[51]

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[46] Letter from Eric Gibson, Director, Dept. of Planning and Land Use, San Diego County, to Dr. Jerry Pell, Office of Electricity Deliverability and Energy Reliability, U.S. Dept. of Energy, Nov. 24, 2010, Attachment A, p. 3 (Attachment E); see also photographs of Bighorn sheep crossing rocky terrain in Attachment F.

[47] Draft EIS/EIR, p. D.2-59.

[48] See Sunrise Powerlink RDEIR/DEIS, Response to Comment Set F0006, F0006-2.

[49] See Draft EIS/EIR, p. D.2-40; Bur. of Land Management, Special Status Animals in Cal., Including BLM Designated Special Status Species <http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/pa/wildlife.Par.13499.File.dat/BLM%20Sensitive%20Animal%20Update%20SEP2008.pdf> (as of Mar. 3, 2011).

[50] Draft EIS/EIR, pp. D.2-40, D.2-148.

[51] Sunrise Powerlink Project, RDEIR/SDEIS, p. 2-30.

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If Barefoot banded gecko are indeed present on the ESJ Wind Farms site, they could cross the border in the mountainous terrain that is not occupied by the border fence and move into the United States. The Draft EIS/EIR must, therefore, evaluate whether Project conditions on the ESJ Wind Farms site will impact the Barefoot banded gecko and impede cross-border movement. This evaluation may only be conducted, however, once a full description of the ESJ Wind Farms has been provided.

4. The Project may have significant impacts to Golden eagles in the United States

The Golden eagle is a State fully-protected species, a CDFG-listed sensitive species and on the CDFG watch list, and protected under the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act and the Lacey Act.[52] Sempra Energy contracted San Diego Zoo Conservation Research to conduct a full-scale survey and analysis of Golden eagle population characteristics, habitat use and movement behaviors throughout the planned ESJ Wind Farms site.[53] Researchers from San Diego Zoo Conservation Research surveyed the area for three days via helicopter.[54] During the survey four nests were observed along with several Golden eagles.[55]

Because Golden eagles and nests were observed on the ESJ Wind Farms site, development of the ESJ Wind Farm may significantly impact Golden eagles in Mexico, as well as Golden eagles that may forage over land in the United States. As the Draft EIS/EIR recognizes, it is unlikely that Golden eagles would nest within the immediate vicinity of wind turbines.[56] Construction of the ESJ Wind Farms could, therefore, lead to nest abandonment.

Construction of the wind turbines may also lead to direct mortality of Golden eagles. The propensity of Golden eagles to seek out strong winds to gain elevation without expending much flying effort can bring the birds into proximity with wind

[52] See Draft EIS/EIR, p. D.3-149.
[53] James Sheppard, *Golden Eagle Helicopter Survey* (Mar. 23, 2009) <http://blogarchives.sandiegozoo.org/blog/2009/03/23/golden-eagle-helicopter-survey/> (as of Mar. 3, 2011) (hereafter Sheppard, 2009).
[54] *Ibid.*
[55] *Ibid.*
[56] Draft EIS/EIR, p. D.2-175.

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turbines.[57] Finally, because Golden eagles can range hundreds of miles while foraging for their food, nest abandonment and mortality caused by development of the ESJ Wind Farms, could impact Golden eagles that normally forage over the United States.[58]

It is unclear whether Sempra has released the findings of the Golden Eagle Helicopter Survey to the public and decision makers. A search of documents on the DOE, CPUC and Sempra Web sites did not reveal the Survey. It is also unclear whether SEMARNAT has imposed any conditions on the Applicant to reduce impacts to Golden eagles. This information must be provided in a Revised Draft EIS/EIR that is released to the public. The current Draft EIS/EIR prepared by BLM and the CPUC fails to adequately analyze the potential impacts to this species of the ESJ Wind Farms and the ESJ Gen-Tie.

5. The Project may have significant impacts to the Quino checkerspot butterfly in the United States

The Quino checkerspot butterfly is a federally-listed endangered species.[59] Although it is unclear whether focused, protocol-level surveys for this species were conducted on the ESJ Wind Farms site, the Sunrise Powerlink RDEIR/SDEIS concluded that Quino checkerspot butterfly may occur on the site.[60] In comments on the Sunrise Powerlink, the Center for Biological Diversity and the Sierra Club stated that the Quino checkerspot butterfly population in the United States is linked to the population in Mexico and may depend on it for its health.[61] Thus, impacts to Quino checkerspot butterfly populations in Mexico may indirectly impact populations in the United States. The Draft EIS/EIR must describe the ESJ Wind Farms and assess the likelihood that Quino checkerspot butterfly may occur on the site so that the public and decision makers can assess the impacts.

[57] Sheppard, 2009.
[58] See *ibid.*
[59] Draft EIS/EIR, p. D 2-39.
[60] Sunrise Powerlink RDEIR/DEIS, p. 2-15.
[61] Letter from Steven Siegel, Staff Attorney, Center for Biological Diversity and Justin Augustine, Staff Attorney, Center for Biological Diversity, to CPUC/BLM re Recirculated draft environmental impact report/supplemental draft environmental impact statement for the Sunrise powerlink transmission project, Aug. 25, 2008, p. 4-810.

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6. The Project may have significant impacts on the goals of *Las Californias Binational Reserve Conservation Initiative*

The Nature Conservancy, the Conservation of Biology Institute and Pronatura prepared *Las Californias Binational Conservation Initiative* in 2004 to foster a shared conservation vision for the United States/Mexico border.[62] The border region is home to more than 400 endangered, threatened and sensitive species.[63] This sensitive area is being rapidly destroyed, however, by urbanization of the San Diego, Tijuana and Tecate regions and their adjacent suburbs.[64]

The *Initiative* and the importance of the area to biodiversity are not mentioned in the Draft EIS/EIR. Unchecked development of the Project may undermine the goals of *Las Californias Binational Conservation Initiative* and destroy biological resources in both the United States and Mexico. The BLM and CPUC must include a complete description of the Project and take a hard look at its potential impacts so that a complete picture of the Project's impacts to biodiversity can be understood.

B. The Project may have potentially significant impacts to the United States associated with wildfire hazards

The Draft EIS/EIR recognizes that wildfires caused by the wind turbines in Mexico could have significant impacts on resources in the United States.[65] It fails to describe, however, the location of the wind turbines and measures that will be taken to reduce potential fire risks from the turbines. The lack of information contained in the Draft EIS/EIR undermines a meaningful analysis of the Wind Farms' impacts.

There is a high risk of fire from wind turbine power generation. The Confederation of Fire Protection Associations ("CFPA") in Europe developed Guidelines to protect against wind turbine fires. In the Guidelines, CFPA states

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[62] See Pronatura, Conservation Biology Institute and the Nature Conservancy, *Las Californias Binational Conservation Initiative: A Vision for Habitat Conservation in the Border Region of California and Baja California*, Sept. 2004 (hereafter Las Californias Binational Conservation Initiative).
[63] *Id.* at p. 1.
[64] *Id.* at p. 3.
[65] Draft EIS/EIR, p. A-4.

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that fire damage may be caused by machinery breakdowns, electrical installations and resonant circuits.[66] The most frequent causes of wind turbine fires, however, are lightening strikes.[67] The risk of lightning strikes is elevated due to the exposed locations (often at a higher altitude) and the large height of the turbines.[68] If a turbine is struck by lightning it may cause damage to the turbine itself, secondary fires on the ground where the turbine is located and service interruption exposure.[69]

The ESJ Wind Farms would also be located in an area of high wildfire risk. In Mexico, wildfires can spread rapidly to the west and south, all the way to the Mexican coastal communities.[70] Despite the high risk of fire associated with the turbines themselves and due to the location of the ESJ Wind Farms, the Draft EIS/EIR only considers the impacts to Mexico from ignition caused by the Tule Wind turbines.[71] The Draft EIS/EIR does not assess whether ignition caused by the ESJ Wind Farms or other Project components could include loss of personal property, injury, or loss of life as well as environmental impacts in the United States.

The Draft EIS/EIR must describe the location of the turbines, any fire safety measures that have been imposed by SEMARNAT and any emergency response plans that are in place to avoid catastrophic wildfires. Without this information the BLM and CPUC cannot adequately analyze all impacts of the ESJ Wind Farms to the United States.

C. Transmitting energy from the ESJ Wind Farms through the ESJ Gen-Tie may have potentially significant socioeconomic impacts to the United States

The Draft EIS/EIR fails to address the socioeconomic impacts of developing large-scale renewable energy projects in Mexico rather than in the United States. The Draft EIS/EIR also fails to address the related socioeconomic effects caused by the ESJ Gen-Tie and East County Substation's facilitation of future renewable energy projects in Mexico, as opposed to development of this important burgeoning

[66] CFPA Europe, European Guideline, Wind turbines fire protection guideline, Guideline No. 22:2010F, Apr. 19, 2010, pp. 7-9 (hereafter Wind Turbine Fire Guidelines) (Attachment G).
[67] *Id.* at p. 10.
[68] *Ibid.*
[69] *Id.* at pp. 6-7.
[70] Draft EIS/EIR, p. D.15-24.
[71] *Id.* at pp. D.15-24 to 25.

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industry in Southern California. The BLM and CPUC must revise the socioeconomic impact analysis in a Draft EIR/EIS that is recirculated to the public.

Under CEQA, an EIR must identify and focus on the significant environmental impacts of a project. Specifically, the "[d]irect and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects."[72] Both direct and "reasonably foreseeable" indirect consequences must be considered when determining the significance of a project's environmental effect.[73] When the economic or social effects of a project cause a physical change, this change is to be regarded as a significant effect in the same manner as any other physical change resulting from the project.[74]

NEPA's requirement for analyzing socioeconomic impacts is similar to CEQA's. Under NEPA, the federal agency preparing an EIS must analyze social and economic impacts if they are interrelated with physical impacts.[75] Federal agencies have the additional responsibility to analyze a project's effects with respect to environmental justice.[76] Further, a Presidential Permit required for transmission must be "consistent with the public interest."[77] Thus, federal agencies have a heightened duty to consider the socioeconomic impacts that would be caused by a proposed project.

Renewable energy development in Mexico may supplant renewable energy development in the United States. Because renewable energy jobs are critical to the health of San Diego and Imperial Counties' economies, facilitating renewable energy development in northern Mexico may cause adverse physical changes to the environment in the United States, such as urban decay and blight. Because urban

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[72] CEQA Guidelines, § 15126.2, subd. (a).
[73] CEQA Guidelines, § 15064, subd. (d).
[74] CEQA Guidelines, § 15064, subd. (e); *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1205.
[75] See 40 C.F.R. § 1508.14; see also, e.g., *Rochester v. U.S. Postal Service* (1976) 541 F.2d 967 (placing postal service center outside urban core could cause increased commuting, loss of inner-city jobs and moving to suburbs, leading to economic and physical downtown deterioration and downtown post office abandonment, all contributing to urban decay and blight).
[76] See Exec. Order No. 12898, 59 Fed. Reg. 7629 (Feb. 16, 1994); see also Dept. of Justice, *Guidance Concerning Environmental Justice* <http://www.justice.gov/morehive/coord/ejguide.html> (as of Mar. 3, 2011).
[77] Exec. Order No. 10485, § 1, 18 Fed. Reg. 5397 (Sept. 3, 1953) (as amended by Exec. Order No. 12114, 44 Fed. Reg. 1957 (Jan. 4, 1979)).

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decay is a potentially significant physical change to the environment, the CPUC and BLM must analyze the socioeconomic impacts and propose any necessary mitigation measures.

1. Renewable energy development in northern Mexico may supplant development in California

Both the federal government and California have adopted polices, provided incentives and established goals to increase renewable energy development in the United States. One of the purposes behind the push for renewable energy generation in the United States is to foster economic growth and create employment opportunities in the United States. Federally, renewable energy generation is facilitated through federal tax credits and the American Recovery and Reinvestment Act.

In California, the Renewables Portfolio Standard ("RPS") sets some of the most ambitious renewable energy standards in the country. The RPS program, administered by the CPUC, the California Energy Commission and Air Resources Board, requires investor-owned utilities, electric service providers, publicly owned utilities and community choice aggregators to increase procurement from eligible renewable energy resources. In 2002, the Legislature established the original goal of 20% RPS by 2020 and in 2006 accelerated that goal. Since then, Governor Schwarzenegger increased that goal by Executive Order to 33% RPS by 2020. If enacted, pending legislation would codify the 33% RPS standard [78]

Despite the federal incentives and State mandates, facilitating renewable energy development in Mexico may supplant renewable energy development in the United States. First, on average, renewable energy is significantly more expensive to generate than energy derived from conventional fossil-fuel production.[79] Utilities, therefore, only procure the renewable energy capacity they are required to by law. In California, the RPS allows utilities to pass the increased costs of

[78] See Sen. Bill No. x1 2, as introduced Feb. 1, 2011 < http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sbx1_2_bill_20110201_introduced.html> (as of Mar. 3, 2011); see also Sen. Bill No. 23, as introduced Dec. 6, 2010 <http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sb_23_bill_20101206_introduced.pdf> (as of March 3, 2011).

[79] See Div. of Ratepayer Advocates, *Green Rush: Investor-Owned Utilities' Compliance with the Renewables Portfolio Standard* (Feb. 2011), p. 7 <http://www.dra.ca.gov/NR/rdonlyres/0CB0B386-E93B-462A-BA62-804EDAE43B820/DRAReportPUBLICVERSIONFeb2011.pdf> (as of March 3, 2011).

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renewable energy along to retail consumers. Retailers do not have an incentive to procure renewable energy beyond the amount required to fulfill their RPS target. In this zero-sum game, the more renewable energy projects in Mexico deliver electricity to satisfy California's RPS, the less demand there will be for renewable energy development in California.

Further, transmission capacity in Southern California and in the Project area is limited, even with the recently approved Sunrise Powerlink. Thus, if more renewable and conventional energy projects built in Mexico use transmission in the United States, there will be less available transmission capacity for renewable energy development in the United States. The loss of domestic jobs to Mexico will adversely affect the regional economy in Imperial County and San Diego County.

2. Renewable energy jobs are critical to the future health of San Diego County and especially Imperial County

As of December 2010, El Centro had the highest unemployment rate among American cities, at 28.3%.[80] Unemployment rates for Imperial County as a whole are similarly well above State and national averages.

Renewable energy development presents one of the few areas of opportunity for economic development in Imperial County. The CPUC has recognized the tremendous potential for renewable energy projects in Imperial County and has adopted multiple orders intended to facilitate that development.[81]

Developing renewable energy projects in Imperial County has great potential to address the demand for renewable energy created by the RPS goals.[82] The ESJ Wind Farms in Mexico and approval of the ESJ Gen-Tie threaten this development by facilitating renewable energy projects in Mexico, where less stringent and

[80] See U.S. Bur. of Labor Statistics *Unemployment Rates for Metropolitan Areas* (Dec. 7, 2010) <http://www.bls.gov/web/metrolaumtrk.htm> (as of Mar. 3, 2011).
[81] See, e.g., Cal. Public Utilities Com., In the Matter of the Application of San Diego Gas & Electric Company (U 902 E) for a Certificate of Public Convenience and Necessity for the Sunrise Powerlink Transmission Project, Decision 08-12-058, pp. 63-68; see also Cal. Public Utilities Com., Decision Conditionally Accepting Procurement Plans for 2009 Renewables Portfolio Standard Solicitations and Integrated Resource Plan Supplements, Decision 09-06-018, §§ 4.1-4.3, 6.3.
[82] See Summit Blue Consulting, LLC, *Renewable Energy Feasibility Study* (Apr. 2008), pp. 14, 19-20, 22, 25 <http://www.ivedc.com/CMS/Media/IIDRenewableEnergyStudy_08.pdf> (as of March 3, 2011).

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protective environmental and labor standards may attract developers seeking to minimize costs.

3. These adverse economic effects will result in blight and other physical changes in the environment

Developing the ESJ Wind Farms and approving the ESJ Gen-Tie may well lead to a downward economic spiral in the United States. Investment in a region rich in solar and wind resources can be expected to continue as long as there is an expectation that renewable energy projects will continue to be proposed in the area. In addition, renewable energy development would indirectly stimulate local economies through the "economic multiplier effect."[83]

If the ESJ Gen-Tie is approved and renewable energy development emerges in northern Mexico instead, market expectations will shift and investment may drop off sharply. With prolonged and potentially deepening economic conditions, city and county governments would receive less tax revenue with which to fund infrastructure maintenance and improvements and government services. Further, property values would continue to fall, among other economic impacts. These impacts would result in physical impacts, such as deteriorating roads, vacant neighborhoods and urban decay. The Draft EIR/EIS is required to consider these indirect physical changes that would result from the Project.

D. The BLM and CPUC must develop and impose appropriate and feasible mitigation measures to reduce or avoid the Project's impacts

Both NEPA and CEQA require that lead agencies address all potentially significant impacts through the enforceability of alternatives and mitigation measures that will avoid or minimize such impacts. An EIS must provide a full and fair discussion of every significant impact, as well as inform decision makers and the public of reasonable alternatives which would avoid or minimize adverse impacts.[84] Under CEQA, an EIR must not only discuss measures to avoid or minimize adverse impacts, but must ensure that mitigation conditions are fully enforceable through permit conditions, agreements or other legally binding

[83] *See id.* at pp. 26, 91.
[84] 40 C.F.R. § 1502.1

instruments.[85] A CEQA lead agency is precluded from making the required CEQA findings unless the record shows that all uncertainties regarding the mitigation of impacts have been resolved; an agency may not rely on mitigation measures of uncertain efficacy or feasibility.[86] This approach helps "insure the integrity of the process of decision by precluding stubborn problems or serious criticism from being swept under the rug."[87]

As discussed above, the failure of the BLM and CPUC to describe the ESJ Wind Farms in the Draft EIS/EIR precluded a meaningful analysis of all of the Project's impacts. The BLM and CPUC failed to take a hard look and appropriately analyze all of the Project's impacts to biological resources, hazards associated with wildfires and socioeconomics in the United States. The Project's impacts to the United States may be significant.

The BLM and CPUC must, therefore, identify all potentially significant impacts of the Project and impose measures to reduce or avoid the Project's impacts to resources in the United States.

III. SAN DIEGO COUNTY AND THE DEPARTMENT OF ENERGY MUST RELY ON A JOINT ENVIRONMENTAL REVIEW DOCUMENT THAT SATISFIES THE REQUIREMENTS OF BOTH NEPA AND CEQA TO SUPPORT THEIR APPROVALS OF THE ESJ GEN-TIE PROJECT

Under NEPA, if a project requires state approval, the federal agency must cooperate with state and local agencies "to the fullest extent possible to reduce duplication between NEPA and state and local requirements."[88] This includes the preparation of a joint federal and state environmental review document so that one document will comply with all applicable laws.[89] Similarly, under CEQA, State and local agencies are encouraged to use a federal EIS, if the previously prepared EIS complies with CEQA.[90]

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[85] CEQA Guidelines, § 15126.4, subd. (a)(2).
[86] *Kings County Farm Bur. v. County of Hanford* (1990) 221 Cal.App.3d 692, 727-28 (groundwater purchase agreement found to be inadequate mitigation because there was no record evidence that replacement water was available.)
[87] *Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 935
[88] 40 C.F.R. § 1506.2, subd. (b).
[89] 40 C.F.R. § 1506.2, subd. (c).
[90] CEQA Guidelines, § 15221, subd. (a).

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The CPUC and San Diego County must ensure that DOE's Draft EIS incorporates CEQA's requirements so that one document will comply with all applicable laws. Preparation of a single Draft EIS/EIR is essential because the alternatives and mitigation measures proposed by the DOE's Draft EIS and BLM/CPUC's Draft EIS/EIR are inconsistent and in conflict. The inconsistencies between the two documents undermine the public review process because it is not apparent how the differences between the two documents will be reconciled. The CPUC/San Diego County and DOE may select for approval two conflicting alternatives or impose conflicting mitigation measures.

1. The alternatives for the ESJ Gen-Tie proposed by the BLM and CPUC in the Draft EIS/EIR are inconsistent and contrary to the alternatives proposed by the DOE in its Draft EIS

The BLM/CPUC and the DOE have proposed inconsistent and contrary alternatives to the proposed ESJ Gen-Tie. Under NEPA, the alternatives analysis is considered the "heart" of the EIS.[91] CEQA also requires that an EIR provide a discussion of project alternatives that allow meaningful analysis and informed public participation.[92] Evaluation of alternatives should present the proposed action and all the alternatives in comparative form, clearly define the issues and provide a clear basis for choice among the options.

Because the alternatives analyses at issue here are inconsistent, the public cannot meaningfully evaluate the various alternatives or understand the basis of the agencies' choices. San Diego County must work with the DOE to revise the proposed alternatives so that agency decision making is based on a single, consistent document. The County may not support its Major Use Permit for the ESJ Gen-Tie based on an analysis that is in conflict with DOE's review.

DOE only considered two action alternatives in its Draft EIS: a double-circuit 230-kV transmission line and a single-circuit 500-kV transmission line.[93] It dismissed an alternative transmission route from further analysis because the proposed location of the ECO Substation would make the distance of the route

[91] 40 C.F.R. § 1502.14.
[92] *Laurel Heights Improvement Assn. v. Regents of Univ. of California* (1988) 47 Cal.3d 376, 405-04
[93] U.S. Dept. of Energy, Energia Sierra Juarez U.S. Transmission Line Project, Draft Environmental Impact Statement, Aug. 2010, p. S-4 to S-6 (hereafter DOE DEIS).

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infeasible and impractical.[94] It also dismissed an underground transmission line alternative based on its determination that an underground failure can be more difficult to locate and repair, construction of an underground alternative would require greater ground disturbance and be more expensive and EMF exposure may be greater.[95] The 230-kV transmission line was identified as the preferred alternative.

The Draft EIS/EIR prepared by the BLM and CPUC proposed four alternatives, two of which included an underground transmission line and two of which included an overhead alternate route.[96] The overhead alternate route alternative was designated as the "environmentally superior alternative."[97] The BLM-Preferred Alternative, however, was an underground alternate route alternative.[98]

The Draft EIS/EIR's alternatives are alternatives that were expressly dismissed from further consideration by the DOE. In addition, each agency – San Diego County, the BLM and the DOE -- selected a potentially conflicting alternative. For example, it is possible that San Diego County could select a 500-kV overhead alternate alignment, the BLM could select a 500-kV underground alignment and the DOE could select a 230-kV overhead line. Because the DOE released the Draft EIS months before the BLM and CPUC released the Draft EIS/EIR, the agencies should have been on notice that these alternatives were considered infeasible by the DOE. Nowhere in the Draft EIS/EIR, however, is the inconsistency between the two alternatives analyses explained.

It is impossible for the public to assess whether the alternatives to the ESJ Gen-Tie proposed in the Draft EIS/EIR are actually feasible. It is also impossible for the public to understand the basis behind San Diego County, the BLM and the DOE's choice of a preferred alternative. Because an adequate alternatives analysis is so critical to both a NEPA and CEQA analysis, the DOE and San Diego County must coordinate to produce a single alternatives analysis that will allow the public and decision makers to meaningfully evaluate alternatives to the proposed action.

[94] *Id.* at p. S-11.
[95] *Id.* at pp. S-11 to 12.
[96] Draft EIS/EIR, p. C-26 to 27.
[97] *Id.* at pp. E-30, E-32.
[98] *Id.* at p. E-34.

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2. The Mitigation Measures proposed by the BLM and CPUC in the Draft EIS/EIR are inconsistent and in conflict with the Mitigation Measures proposed by the DOE in its Draft EIS

The BLM/CPUC and the DOE have proposed inconsistent and contrary mitigation measures in their environmental documents. Under NEPA, a Draft EIS must include a discussion of the "means to mitigate adverse environmental impacts."[99] Mitigation measures must be discussed for all impacts, even those that by themselves would not be considered significant.[100] While NEPA does not require agencies to actually adopt these mitigation measures, CEQA does mandate that agencies adopt feasible mitigation measures to lessen or avoid otherwise significant adverse impacts.[101]

The mitigation measures discussed by the BLM and CPUC in the Draft EIS/EIR are inconsistent with the mitigation measures discussed by the DOE in its Draft EIS. As a result of the inconsistencies, it is impossible for the public to conclude which mitigation measure will be adopted for the ESJ Gen-Tie. San Diego County must work with the DOE to revise the proposed mitigation measures so that the agencies rely on a single, consistent document to support their actions. The possibility that the DOE and the County may both rely on inconsistent measures to mitigate the Project's impacts creates a question about the enforceability of the measures. Under CEQA, a California agency may not rely on mitigation measures of questionable enforceability.

For example, while both the Draft EIS prepared by the DOE and the Draft EIS/EIR prepared by the BLM and CPUC propose acquisition of compensation land, the requirements for compensation land differs. The DOE states that to compensate for the loss of native scrub habitat that would be disturbed during construction, the Applicant would place a portion of the Project site under a conservation easement for preservation. According to the Draft EIS, the Applicant has proposed placing the easement on a portion of its property east of the

[99] 40 C.F.R. § 1502.16, subd. (h).
[100] Council on Environmental Quality, Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, Question 19(a).
[101] Pub. Resources Code, §§ 21002, 21081, subd. (a); CEQA Guidelines, §§ 15002, subd. (a)(3), 15021, subd. (a)(2), 15091, subd. (a)(1).

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transmission line that could be up to 15 acres in size.[102] The BLM and CPUC, however, state that to compensate for all permanent impacts to vegetation, combination habitat and restoration is required at a minimum of a 1:1 ratio or as required by the permitting agencies. The Draft EIS/EIR also requires that all habitat compensation and restoration on private lands include long-term management and legal protection assurances.[103]

From these two mitigation measures, it is clear that the Applicant must compensate for permanent impacts to native vegetation. It is not clear, however, whether the Applicant must compensate for impacts that only occur during construction or all permanent impacts, or where and how much land would be put into easement. There is also no provision in the Draft EIS prepared by the DOE that the compensation land will have long-term management and legal protection assurances.

Because CEQA requires agencies to rely on specific enforceable mitigation measures in their environmental review documents, San Diego County may not rely on these inconsistent mitigation measures to support its Major Use Permit. The Applicant and the public cannot know how much land must be compensated for if DOE only requires compensation land for construction impacts, but the BLM and CPUC require compensation land for all impacts. In addition, the Applicant cannot know whether to compensate land up to 15 acres or at a ratio of 1:1. If the Applicant's duties to mitigate are unclear, the public and the decision makers cannot meaningfully assess whether impacts to native vegetation have indeed been mitigated.

San Diego and the DOE must work together to produce a single document that properly lays out mitigation measures to reduce and avoid the impacts associated with the ESJ Gen-Tie.

IV. CONCLUSION

The BLM and CPUC have failed to produce an environmental review document that complies with NEPA and CEQA. The Draft EIS/EIR undermines public disclosure and informed decision making by failing to provide an accurate and complete description of the Project. The EIS/EIR also failed to take a hard look

[102] DOE DEIS, p. S-20.
[103] Draft EIS/EIR, pp. D.3-129 to 130.

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or adequately analyze all of the Project's potential impacts to the United States and impose all feasible and appropriate mitigation measures. In addition, the inconsistencies between the Draft EIS/EIR prepared by the BLM and CPUC and the Draft EIS prepared by the DOE preclude a meaningful analysis. A revised Draft EIS/EIR must be prepared to correct these deficiencies and recirculated for public comment.

Local 569 and its members appreciate this opportunity to comment and appreciate the BLM and the CPUC considering our views.

Sincerely,

Robyn C. Purchia

RCP:cnh

Attachments:
Attachment A: The Zoological Society of San Diego Map of Condor Flight
Attachment B: Presence and Movement of California Condors Near Proposed Wind Turbines
Attachment C: San Diego Audubon Letter
Attachment D: USFWS and CDFG Letter
Attachment E: San Diego County Letter
Attachment F: Photographs of Peninsular bighorn sheep
Attachment G: European Guideline: Wind turbines fire protection guideline

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EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
WASHINGTON, D.C. 20503

MEMORANDUM TO HEADS OF AGENCIES ON THE APPLICATION OF THE NATIONAL ENVIRONMENTAL POLICY ACT TO PROPOSED FEDERAL ACTIONS IN THE UNITED STATES WITH TRANSBOUNDARY EFFECTS

FROM: KATHLEEN A. MCGINTY
CHAIR

DATE: JULY 1, 1997

In recent months, the Council has been involved in discussions with several agencies concerning the applicability of the National Environmental Policy Act (NEPA) to transboundary impacts that may accrue as the result of proposed federal actions in the United States. To set forth a consistent interpretation of NEPA, CEQ is today issuing the attached guidance on NEPA analyses for transboundary impacts. In it, we advise that NEPA requires analysis and disclosure of transboundary impacts of proposed federal actions taking place in the United States.

We recommend that agencies which take actions with potential transboundary impacts consult as necessary with CEQ concerning specific procedures, proposals or programs which may be affected.

COUNCIL ON ENVIRONMENTAL QUALITY GUIDANCE ON NEPA ANALYSES FOR TRANSBOUNDARY IMPACTS

JULY 1, 1997

The purpose of this guidance is to clarify the applicability of the National Environmental Policy Act (NEPA) to proposed federal actions in the United States, including its territories and possessions, that may have transboundary effects extending across the border and affecting another country's environment. While the guidance arises in the context of negotiations undertaken with the governments of Mexico and Canada to develop an agreement on transboundary environmental impact assessment in North America, [1] the guidance pertains to all federal agency actions that are normally subject to NEPA, whether covered by an international agreement or not.

It is important to state at the outset the matters to which this guidance is addressed and those to which it is not. This guidance does not expand the range of actions to which NEPA currently applies. An action that does not otherwise fall under NEPA would not now fall under NEPA by virtue of this guidance. Nor does this guidance apply NEPA to so-called "extraterritorial actions"; that is, U.S. actions that take place in another country or otherwise outside the jurisdiction of the United States[2]. The guidance pertains only to those proposed actions currently covered by NEPA that take place within the United States and its territories, and it does not change the applicability of NEPA law, regulations or case law to those actions. Finally, the guidance is consistent with long-standing principles of international law.

NEPA LAW AND POLICY

NEPA declares a national policy that encourages productive and enjoyable harmony between human beings and their environment, promotes efforts which will prevent or eliminate damage to the environment and biosphere, stimulates the health and welfare of human beings, and enriches the understanding of ecological systems.[3] Section 102(1) of NEPA "authorizes and directs that, to the fullest extent possible . . . . the policies, regulations and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in [the] Act."[4] NEPA's explicit statement of policies calls for the federal government "to use all practical means and measures . . . . to create and maintain conditions under which man and nature can exist in productive harmony . . . ."[5] In addition, Congress directed federal agencies to "use all practical means . . . . to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may . . . . attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences."[6] Section 102(2)(C) requires federal agencies to assess the environmental impacts of and alternatives to proposed major federal actions significantly affecting the quality of the human environment.[7] Congress also recognized the "worldwide and long-range character of environmental problems" in NEPA and directed agencies to assist other countries in anticipating and preventing a decline in the quality of the world environment.[8]

Neither NEPA nor the Council on Environmental Quality's (CEQ) regulations implementing the procedural provisions of NEPA define agencies' obligations to analyze effects of actions by administrative boundaries. Rather, the entire body of NEPA law directs federal agencies to analyze the effects of proposed actions to the extent they are reasonably foreseeable consequences of the proposed action, regardless of where those impacts might occur. Agencies must analyze indirect effects, which are caused by the action, are later in time or farther removed in distance, but are still reasonably foreseeable, including growth-inducing effects and related effects on the ecosystem,[9] as well as cumulative effects.[10] Case law interpreting NEPA has reinforced the need to analyze impacts regardless of geographic boundaries within the United States,[11] and has also assumed that NEPA requires analysis of major federal actions that take place entirely outside of the United States but could have environmental effects within the United States.[12]

Courts that have addressed impacts across the United States' borders have assumed that the same rule of law applies in a transboundary context. In Swinomish Tribal Community v. Federal Energy Regulatory Commission,[13] Canadian intervenors were allowed to challenge the adequacy of an environmental impact statement (EIS) prepared by FERC in connection with its approval of an amendment to the City of Seattle's license that permitted raising the height of the Ross Dam on the Skagit River in Washington State. Assuming that NEPA required consideration of Canadian impacts, the court concluded that the report had taken the requisite "hard look" at Canadian impacts. Similarly, in Wilderness Society v. Morton,[14] the court granted intervenor status to Canadian environmental organizations that were challenging the adequacy of the trans-Alaska pipeline EIS. The court granted intervenor status because it found that there was a reasonable possibility that oil spill damage could significantly affect Canadian resources, and that Canadian interests were not adequately represented by other parties in the case.

In sum, based on legal and policy considerations, CEQ has determined that agencies must include analysis of reasonably foreseeable transboundary effects of proposed actions in their analysis of proposed actions in the United States.

PRACTICAL CONSIDERATIONS

CEQ notes that many proposed federal actions will not have transboundary effects, and cautions agencies against creating boilerplate sections in NEPA analyses to address this issue. Rather, federal agencies should use the scoping process[15] to identify those actions that may have transboundary environmental effects and determine at that point their information needs, if any, for such analyses. Agencies should be particularly alert to actions that may affect migratory species, air quality, watersheds, and other components of the natural ecosystem that cross borders, as well as to interrelated social and economic effects.[16] Should such potential impacts be identified, agencies may rely on available professional sources of information and should contact agencies in the affected country with relevant expertise.

Agencies have expressed concern about the availability of information that would be adequate to comply with NEPA standards that have been developed through the CEQ regulations and through judicial decisions. Agencies do have a responsibility to undertake a reasonable search for relevant, current information associated with an identified potential effect. However, the courts have adopted a "rule of reason" to judge an agency's actions in this respect, and do not require agencies to discuss "remote and highly speculative consequences".[17] Furthermore, CEQ's regulation at 40 CFR 1502.22 dealing with incomplete or unavailable information sets forth clear steps to evaluating effects in the context of an EIS when information is unobtainable.[18] Additionally, in the context of international agreements, the parties may set forth a specific process for obtaining information from the affected country which could then be relied upon in most circumstances to satisfy agencies' responsibility to undertake a reasonable search for information.

Agencies have also pointed out that certain federal actions that may cause transboundary effects do not, under U.S. law, require compliance with Sections 102(2)(C) and 102(2)(E) of NEPA. Such actions include actions that are statutorily exempted from NEPA, Presidential actions, and individual actions for which procedural compliance with NEPA is excused or modified by virtue of the CEQ regulations[19] and various judicial doctrines interpreting NEPA[20]. Nothing in this guidance changes the agencies' ability to rely on those rules and doctrines.

INTERNATIONAL LAW

It has been customary law since the 1905 Trail Smelter Arbitration that no nation may undertake acts on its territory that will harm the territory of another state[21]. This rule of customary law has been recognized as binding in Principle 21 of the Stockholm Declaration on the Human Environment and Principle 2 of the 1992 Rio Declaration on Environment and Development. This concept, along with the duty to give notice to others to avoid or avert such harm, is incorporated into numerous treaty obligations undertaken by the United States. Analysis

of transboundary impacts of federal agency actions that occur in the United States is an appropriate step towards implementing those principles.

CONCLUSION

NEPA requires agencies to include analysis of reasonably foreseeable transboundary effects of proposed actions in their analysis of proposed actions in the United States. Such effects are best identified during the scoping stage, and should be analyzed to the best of the agency's ability using reasonably available information. Such analysis should be included in the EA or EIS prepared for the proposed action.

[1] The negotiations were authorized in Section 10.7 of the North American Agreement on Environmental Cooperation, which is a side agreement to the North American Free Trade Agreement. The guidance is also relevant to the ECE Convention on Environmental Impact Assessment in a Transboundary Context, signed in Espoo, Finland in February, 1991, but not yet in force.

[2] For example, NEPA does apply to actions undertaken by the National Science Foundation in the Antarctica. Environmental Defense Fund v. Massey, 986 F.2d 528 (D.C. Cir. 1993).

[3] 42 USC 4321.

[4] 42 USC 4332(1).

[5] 42 USC 4331(a).

[6] 42 USC 4331(b)(3).

[7] 42 USC 4332(2)(C).

[8] 42 USC 4332(2)(F).

[9] 40 CFR 1508.8(b).

[10] 40 CFR 1508.7.

[11] See, *for example*, Sierra Club v. U.S.Forest Service, 46 F.3d 835 (8th Cir. 1995); Resources Ltd., Inc. v. Robertson, 35 F.3d 1300 and 8 F.3d 1394 (9th Cir. 1993); Natural Resources Defense Council v. Hodel, 865 F.2d 288 (D.C. Cir. 1988); County of Josephine v. Watt, 539 F.Supp. 696 (N.D. Cal. 1982).

[12] See Sierra Club v. Adams, 578 F.2d 389 (D.C. Cir. 1978); NORML v. Dept. of State, 452 F.Supp. 1226 (D.D.C. 1978).

[13] 627 F.2d 499 (D.C. Cir. 1980).

[14] 463 F.2d 1261 (D.C. Cir. 1972).

[15] 40 CFR 1501.7. Scoping is a process for determining the scope of the issues to be addressed and the parties that need to be involved in that process prior to writing the environmental analyses.

[16] It is a well accepted rule that under NEPA, social and economic impacts by themselves do not require preparation of an EIS. 40 CFR 1508.14.

[17] Trout Unlimited v. Morton, 509 F.2d 1276, 1283 (9th Cir. 1974). See also, Northern Alaska Environmental Center v. Lujan, 961 F.2d 886, 890 (9th Cir. 1992); Idaho Conservation League v. Mumma, 956 F.2d 1508, 1519 (9th Cir. 1992); San Luis Obispo Mothers for Peace v. N.R.C., 751 F.2d 1287, 1300 (D.C. Cir. 1984); Scientists Institute for Public Information, Inc. v. Atomic Energy Commission, 481 F.2d 1079, 1092 (D.C. Cir. 1973).

[18] See Preamble to Amendment of 40 CFR 1502.22, deleting prior requirement for "worst case analysis" at 51 Federal Register 15625, April 25, 1986, for a detailed explanation of this regulation.

[19] For example, agencies may contact CEQ for approval of alternative arrangements for compliance with NEPA in the case of emergencies. 40 CFR 1506.11.

[20] For example, courts have recognized that NEPA does not require an agency to make public information that is otherwise properly classified information for national security reasons, Weinberger v. Catholic Action of Hawaii, 454 U.S. 139 (1981).

[21] *Trail Smelter Arbitration*, U.S. v. Canada, 3 UN Rep. Int'l Arbit. Awards 1911 (1941). The case involved a smelter in British Columbia that was causing environmental harm in the state of Washington. The decision held that "under principles of International Law, as well as the law of the United States, no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is described by clear and convincing injury." *Id.* at 1965). Also see the American Law Institute's Restatement of the Foreign Relations Law of the United States 3d, Section 601, ("State obligations with respect to environment of other States and the common environment").

PLANETACTION

Managing the conservation of the California condor and its ecosystem in a changing climate

Satellite map indicating the location of the condor reintroduction site in the Sierra San Pedro Martir region of Baja California, Mexico. The red dots indicate the GPS location fixes of a three-year-old female condor that was tracked making a large-scale exploratory return flight of 200 km, north from the Baja release site across the USA/Mexico border in April 2007 (each dot represents a separate location fix acquired from the bird). The GPS fixes indicate that the condor made intensive use of core areas within close proximity to the release site. High-resolution satellite imagery provided by Planet Action enables researchers to build an accurate picture of condor habitat use and preference. This valuable ecological information will allow managers to tailor the reintroduction programs to the specific habitat requirements of the birds and to predict and mitigate the effects of climate change on this important ecosystem.

PRESENCE AND MOVEMENTS OF CALIFORNIA CONDORS NEAR PROPOSED WIND TURBINES

FINAL REPORT PREPARED FOR
HT HARVEY AND ASSOCIATES
15 November 2007

VENTANA WILDLIFE SOCIETY

Prepared by Nellie Thorngate
Ventana Wildlife Society
Principal Investigator: Karen Shihadeh[1]
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EXECUTIVE SUMMARY

Wind energy poses particular hazards to birds with high wing loadings, large bodies and clumsy flight. California Condors, *Gymnogyps californianus*, a critically endangered species currently being reintroduced to central coastal California, may be at risk from wind turbines within their foraging range. In 2007, HT Harvey and Associates contracted the Ventana Wildlife Society to map the presence and movement patterns of California Condors near two proposed wind turbines at a winery near Gonzales CA, and to make recommendations regarding the potential risk posed to California Condors by the proposed turbines. Despite the proximity of Pinnacles National Monument, a rearing and release site for California Condors, only 417 detections occurred within a 25 km radius of the proposed wind turbines. No detections occurred closer than 3 km to the proposed wind turbine locations. Mean flight speed was 45.7 kph. Using flight speeds of 0 to 5 as our definition of perched birds, we determined that 151 detections were of perching events within 25 km of the proposed wind turbines. Condor flight headings were predominantly westerly within 25 km of the proposed wind area. Condor detections occurred most frequently over 31 to 40 degree slopes, and over northern and northwestern landscape aspects. The proximity of the Pinnacles rearing and release site indicates a potential risk situation for Condors in the vicinity of the proposed wind turbines, but given that the proposed project only calls for the installation of two turbines, and measures are taken to monitor and remove large carcasses in the area the proposed wind turbines pose only a minor risk to Condors in the area.

BACKGROUND

Wind energy poses substantial risks to avian wildlife under certain circumstances (Drewitt and Langston 2006, Barrios and Rodriguez 2004, Erikson et al 2001). Birds with high wing loadings, clumsy flight patterns, and foraging habits that draw them into the vicinity of wind turbines are all at high risk for turbine-related injuries and mortalities (Barrios and Rodriguez 2004). Risk is also increased where wind energy projects intersect with migratory pathways, daily flight paths, and foraging and roosting grounds (Dewitt and Langston 2006). While many studies have found that overall turbine-related avian mortality is low compared to other anthropogenic sources of mortality, even low levels of mortality could significantly impact species with low productivity that take years to reach reproductive maturity (Dewitt and Langston 2006). Because many at-risk birds are endangered, threatened, or otherwise protected by federal laws, it is important that new wind energy projects of any scale assess the potential threats to wildlife, and minimize the risks posed by turbines and associated structures.

Parts of central coastal California are ideal for the production of wind energy at many different scales, but the central coast is also home to a growing population of reintroduced California Condors (*Gymnogyps californianus*), a critically endangered species since 1967 (Kiff et al. 1996). Historically, California Condors ranged from British Columbia in the north to Baja California in the south and were found as far east as the western slope of the Sierra Nevada (Snyder and Schmitt 2002), but were nearly

extirpated by the mid-1980's due to hunting, poisoning and habitat loss (Snyder and Schmitt 2002). In 1987 the remaining wild population was captured and housed in captive rearing facilities in southern California to act as a breeding population for the planned species recovery and reintroduction program. Condors were released back in to the wild in southern California starting in 1994 and in central coastal California starting in 1997. The first rearing and release facility on the central coast was located in the Ventana Wilderness on the western slope of the Santa Lucia Mountains near Big Sur, and has been active since the inception of the central California recovery effort in 1997. In 2003, a second central California rearing and release site was established at Pinnacles National Monument in the Gabilan Mountains. As of September 30, 2007, the total population of California Condors was 305, with 157 of those in captivity at Los Angeles Zoo, San Diego Wild Animal Park, Boise World Center for Birds of Prey, Oregon Zoo, Mexico Zoo, Mentor Birds in field pens, and pre-release birds in field pens. Of wild birds (148), there are currently 72 in California, 16 in Baja California, and 60 in Arizona. The free-flying population in the central California area currently totals 39 free-flying birds, with 27 birds in the Big Sur population and 12 birds in the Pinnacles population. The eldest birds in the Big Sur flock established two successful nests in 2007, and it is expected that the eldest birds in the Pinnacles flock will begin breeding in 2010-2012. Meanwhile, annual additions of captive-raised Condors continue to bolster both flocks, and the ultimate goal of the central coast reintroduction program is a flock of 75 free-flying birds.

Little is known about the susceptibility of California Condors to wind turbine-induced mortality. Studies of Griffon Vultures (*Gyps fulvus*), a European species ecologically similar to California Condors (Snyder and Schmitt 2002), have shown that in high concentrations, the birds are quite vulnerable to turbine strikes (Barrios and Rodriguez 2004). Raptors such as Red-tailed Hawks (*Buteo jamaicensis*), who rely on topographic features to generate preferred flight conditions and who forage in the types of habitat that characterize many wind turbines, also experience high mortality rates due to wind turbines (Hoover and Morrison 2005). Flight characteristics of Turkey Vultures (*Catharies aura*) in the Altamont Pass Wind Turbines indicate that scavenging birds frequently fly within the height range of wind turbines used for large-scale power production, although the location of the turbines with respect to wind direction and slope curvature are important factors in determining mortality risk (Smallwood and Neher 2004). The possible impact of smaller-scale wind resource projects, including isolated towers powering small facilities, is largely unknown.

In conjunction with site-specific habitat features, behaviorally and physiologically, California Condors exhibit many features that may put them at a high risk for wind turbine-related mortality: (1) high wing loading; (2) social foraging; (3) curiosity for novel objects; (4) k-selected reproductive strategy; and (5) foraging preference for sloped grassland sites. Condors have extremely high wing loading, and their flapping flight is clumsy, making them less maneuverable around objects on the landscape. Condors routinely forage and roost in social groups, so that the presence of a single bird near wind turbines increases the risk of mortality not only for that individual, but for other individuals that may follow it. Because they are scavengers, Condors exhibit pronounced

curiosity for novel objects in their environment (J. Burnett, pers. comm.) such that the presence of new turbines might increase overall Condor activity at a site. Condors raise one chick every 2 years with significant parental investment, thus losses of even a few individuals have large impacts on the total population. In the case of Condors, a closely managed, primarily captive-bred species, losses are also costly.

In 2007, HT Harvey and Associates contracted the Ventana Wildlife Society to map the presence and movement patterns of California Condors within 25 km of two proposed wind turbines on a winery near Gonzales CA (figure 1), and to assess the potential risk posed to California Condors by the proposed turbines. This report presents presence, associated landscape characteristics, flight characteristics, and home ranges of California Condors detected within 25 km of the proposed wind turbines, and presents recommendations for wind turbine installation based on those findings.

METHODS

Condor locations and movements

Twenty-seven free-flying, captive-reared Condors were tracked in central coastal California using solar powered, GPS Patagial PTT-100 transmitters (Microwave Telemetry, Inc., Columbia, MD) between 2 December 2003 and 31 March 2007. Transceivers were affixed directly to each bird's patagium in conjunction with an identification tag. The GPS receivers were programmed to collect a location fix (referred to as a "detection" in this report) every hour, 16 hours daily. In general, transceivers provide an average of 12 location fixes per day (16 possible) within 16 meters of the actual location, or, average location fixes 92% of the time. The built-in PTT transceivers transmitted stored GPS location data to Service ARGOS satellites each day.

Location data were downloaded daily via the Automatic Distribution Service administered by Service ARGOS. Data were then imported into a Microsoft Access database. Condor location fixes totaling 103,395 data points were examined for movement patterns and proximity to the two proposed wind turbines near Gonzales, CA. Error rates for flight speed (used to determine if a bird was perched or in flight when detected) were ± 1 km/hr at speeds above 40 km/hr (Microwave Telemetry, Inc, Columbia, MD). For the purposes of analysis, detections exhibiting flight speeds of greater than 5 kph, while detections exhibiting flight speeds of 0 through 5 were considered perching events.

Mapping

Condor location data including decimal-degree coordinates, speed, time and date were imported into an ArcGIS geodatabase. Each location fix, or data point, is referred to as a detection. The Condor data points, a Digital Elevation Model downloaded from the USGS Continuous Data Distribution Service, and an x,y data layer estimating the location of the two proposed wind turbines were plotted on a hillshade map of California.

ArcGIS Spatial Analyst tools were used to assess the proximity of Condor locations to the proposed wind turbines; landscape slope and aspect associated with Condor detections within the study area; and the flight behavior ("perched" or "flying") of Condor detections within 25 km, 20 km, 10 km and 5 km of the proposed wind turbines. MCP home ranges of individual Condors were calculated using Hawth's Tools, a free ArcGIS extension for assessing animal populations.

Statistical Methods

Distribution of flight speed categories, flight headings, slope categories and landscape aspects associated with detections were assessed for divergence from expected values using Pearson χ^2 analysis (Zar 1999).

RESULTS

Proximity to Proposed Wind Turbines

417 Condor detections representing 13 individual birds occurred within 25 km of the proposed wind turbines from 2 December 2003 to 31 March 2007. 130 detections were within 20 km of the proposed wind turbines, 33 were within 15 km, 11 were within 10 km, and 3 were within 5 km (see Figure 2). No Condor detections occurred closer than 3 km to the proposed wind turbine locations. The detections within 5 km of the proposed wind turbines were attributable to 3 different individual Condors.

Movement Patterns

266 flying bird detections occurred within 25 km of the proposed wind turbines; 88 flying birds were located within 20 km; 31 flying birds occurred within 15 km; 10 flying birds were located within 10 km; and 2 flying birds were located within 5 km (see Figure 3). The mean speed of flight within 25 km of the proposed wind turbines was 45.7 kph. The distribution of flight speeds within 25 km of the proposed wind area was significantly different from a random distribution ($\chi^2 = 116.7$, df = 61, P=0.000). The most frequently occurring flight speeds were between 31 and 40 kph (see Figure 4).

We used flight speed to identify perched birds: birds with flight speeds of 0 through 5 kph were designated as perched birds, while birds moving at 6 kph or faster were considered to be flying (see Figure 5). 151 perching events were located within 25 km of the proposed wind turbines; 42 perching events were located within 20 km; 2 perching events occurred within 15 km; 2 perching events were located within 10 km; and 1 perching event was located within 5 km (see Figure 6).

Within the 25 km study area, the distribution of flight headings was not significantly different from random, but detections that indicate a westerly orientation (44) were most frequent and detections with southerly orientation (20) were fewest.

Landscape Associations

While visualization of the slope data indicated that slopes were fairly evenly distributed within 25 km of the proposed wind turbines (figure 7), the distribution of Condor detections over different landscape slope categories was significantly different than expected ($\chi^2 = 279.8$, df = 69, P=0.000). Within the 25 km study area, condor detections were most frequent over landscapes with 51 to 60 degree slopes, and detections were fewest over landscapes with slopes less than 20 degrees (see Figure 8).

The landscape was evenly distributed across all aspect categories (see Figure 9), but the distribution of Condor detections over different landscape aspects within 25 km of the proposed wind turbines was significantly different than random ($\chi^2 = 36.9$, df = 7, P = 0.000). More detections (138) occurred over landscapes with northern and northwestern aspects than over any other aspect. The fewest detections (24) occurred over the eastern aspect (figure 10).

Home Ranges

Four individual Condors were determined to have home ranges encompassing the proposed wind turbine locations using the Minimum Convex Polygon technique (see Figure 11).

IMPLICATIONS

- The proximity of the Pinnacles National Monument Condor release facility to the proposed wind turbines means that Condor activity is high throughout the Salinas Valley and across both slopes of the Coast Ranges and the Gabilan Mountains. This indicates a potential risk situation for Condors because the proposed wind turbines are within range of regular foraging flights for all members of the Pinnacles flock, as well as exploratory flights of some of the older Big Sur Condors who may be expanding their foraging range or looking for nesting locations. The proposed turbine locations also fall within the calculated home ranges of 4 Pinnacles Condors. However, the low overall detections indicate that the actual risk is low, since Condors do not appear to be using the area near the proposed wind turbines frequently.

- The low number of detections of perching events within 25 km of the proposed wind turbines indicates that the area has not provided constant or frequent foraging or roosting opportunities. Thus, the risk posed to Condors perching or taking flight near the proposed turbines is low.

- Because the proposed wind turbines are located in suitable foraging habitat for Condors, clearing carcasses within 5 km of the proposed wind turbines when detected could reduce the potential risk to Condors foraging in the area.

- The Condors represented in this report represent only a subset of the entire central coast Condor population. This is because not all of the Condors have GPS transmitters. Most of the Pinnacles flock is GPS-tagged, but a much smaller

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proportion of the Big Sur flock is tracked using GPS. The values enumerated in the report, therefore, are likely smaller than actuality.

- Given that the proposed project only calls for the installation of two turbines and measures are taken to monitor and remove large carcasses in the area, the proposed wind turbines pose a minor risk to Condors in the area.

- Because this is a small, managed population of 35 individuals with a k-selected reproductive strategy in addition to being listed as endangered, any risk associated with their population should be given careful consideration.

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PERSONAL COMMUNICATIONS

Burnett, J. May 1, 2007. Senior Wildlife Biologist, Ventana Wildlife Society. 19045 Portola Dr., Ste F-1, Salinas, CA 93908, joeburnett@ventanaws.org

Figure 1. Proposed wind turbines near Gonzales in Monterey County, CA, and the project study area, defined by a 25 km radius around the proposed turbines.

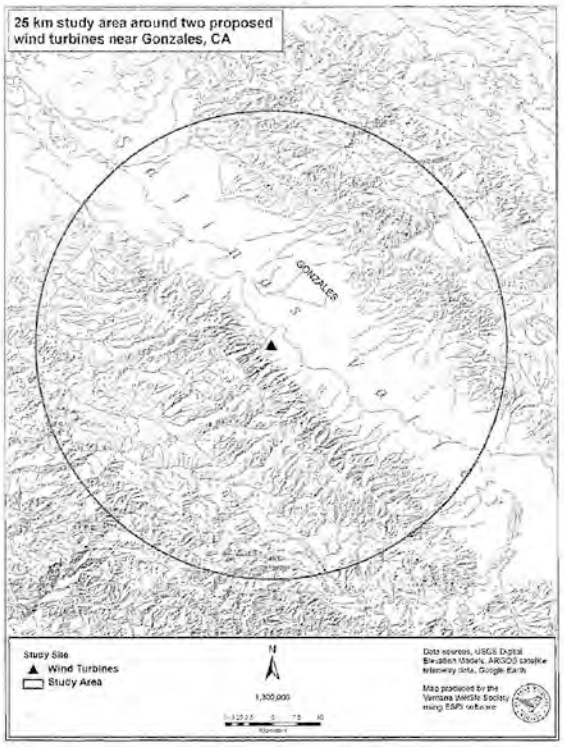

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Figure 2. Proximity of Condor detections to the proposed wind turbines, Monterey County, CA, 2003-2007

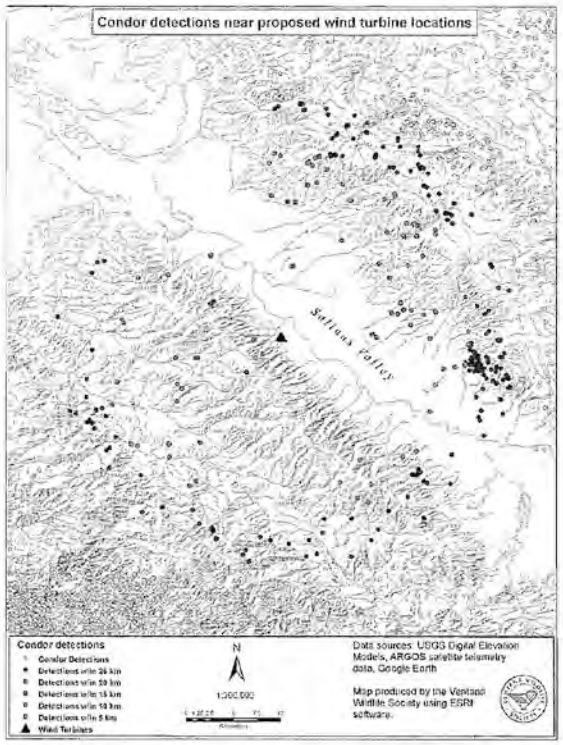

Figure 3. Proximity of in-flight Condor detections to the proposed wind turbines, Monterey County, CA, 2003-2007

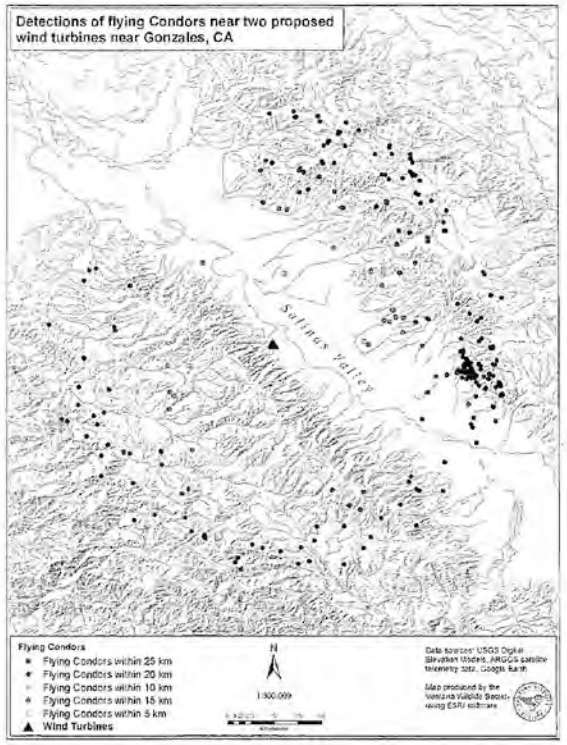

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Figure 4. Frequency distribution of flight speeds of Condors detected within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

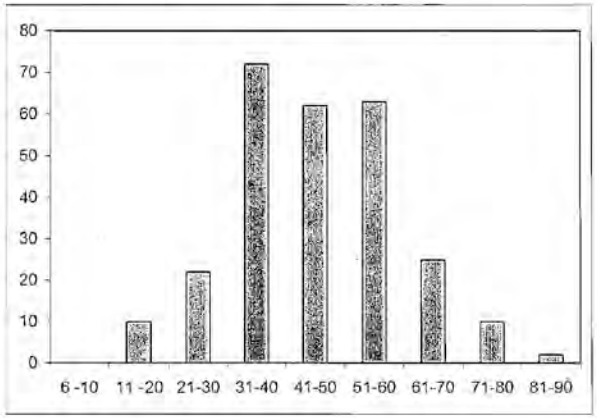

Figure 5. Detections of flying and perched Condors within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

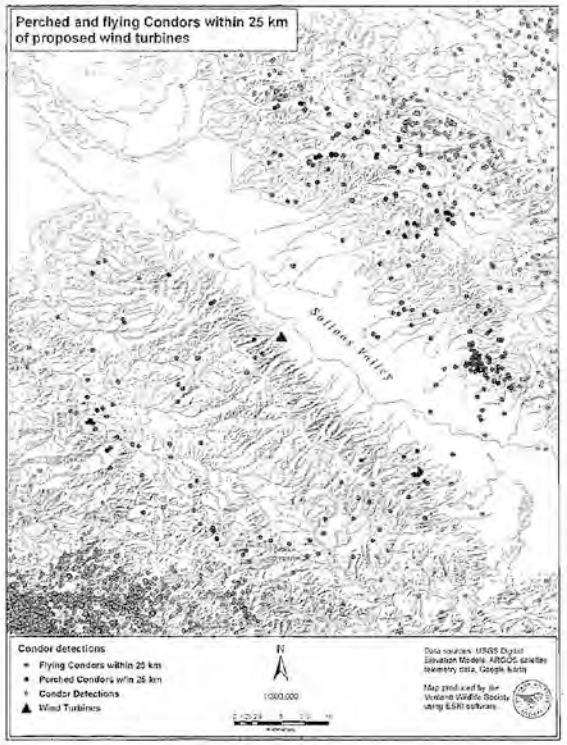

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Figure 6. Proximity of perched Condor detections to the proposed wind turbines, Monterey County, CA, 2003-2007

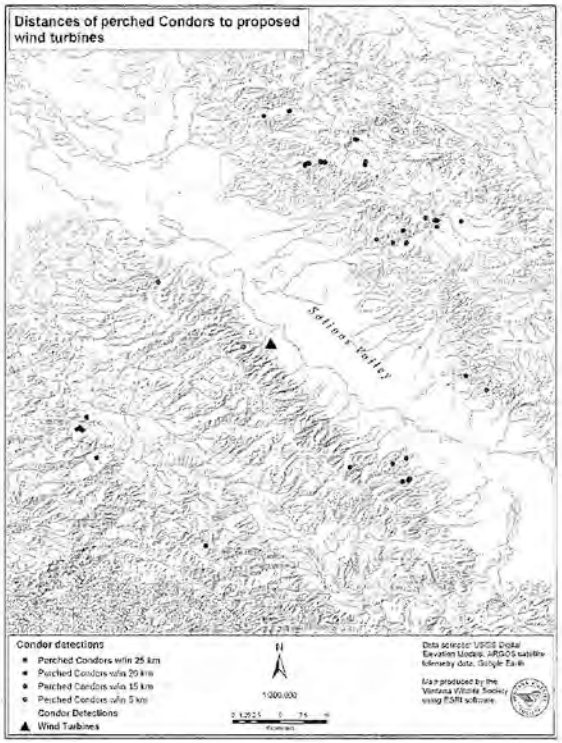

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Figure 7. Landscape slopes associated with Condor detections within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

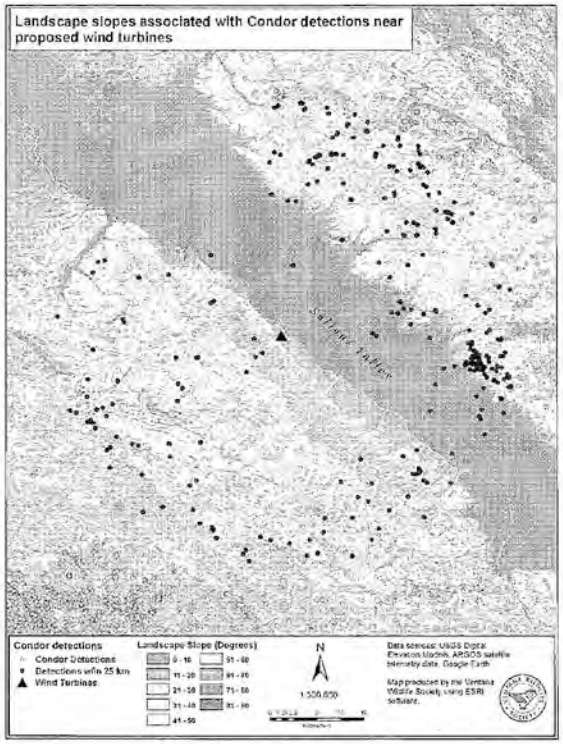

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Figure 8. Distribution of landscape slope categories associated with Condor detections within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

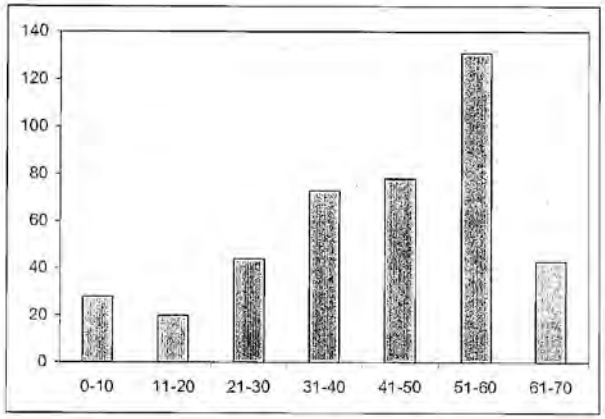

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Figure 9. Landscape aspects associated with Condor detections within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

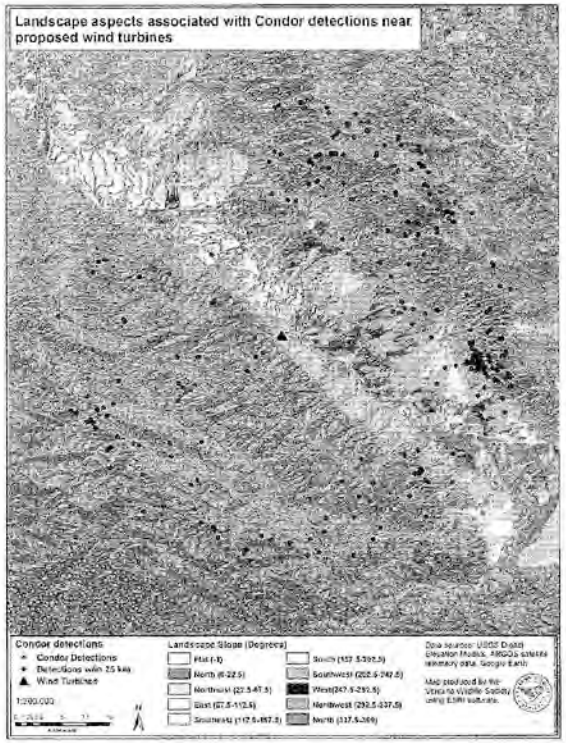


Figure 10. Distribution of landscape aspects associated with Condor detections within 25 km of the proposed wind turbines, Monterey County, CA, 2003-2007

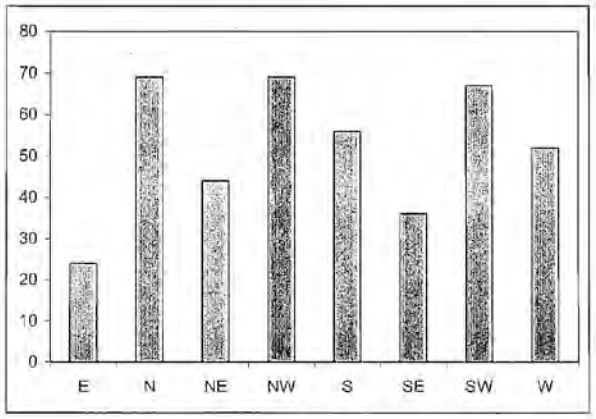
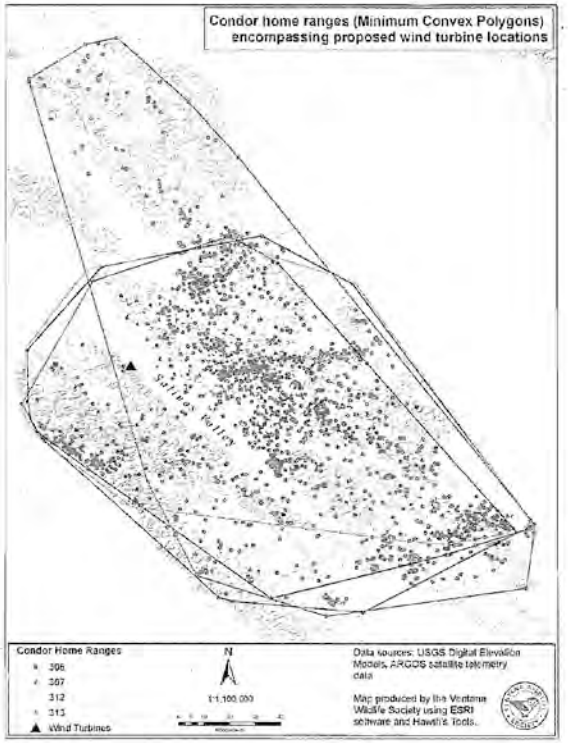


Figure 11. Condor Minimum Convex Polygon home ranges that encompass the proposed wind turbine locations, Monterey, CA



Comment Set F0006
U.S. Fish & Wildlife Service and California Department of Fish & Game

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In Reply Refer To:
FWS/CDFG-2008B0423/2008TA0847

AUG 25 2008

Billie Blanchard, CPUC/Lynda Kastoll, BLM
c/o Aspen Environmental Group
235 Montgomery Street, Suite 935
San Francisco, California 94104-3100

Subject: Comments on the Recirculated Draft Environmental Impact Report/ Environmental Impact Statement for the Sunrise Powerlink Project, San Diego and Imperial Counties, California (SCH No. 2006091071)

Dear Ms. Blanchard and Ms. Kastoll:

F0006-1

The California Department of Fish and Game (Department) and U.S. Fish and Wildlife Service (Service), collectively the Wildlife Agencies, have reviewed the above-referenced recirculated draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the proposed Sunrise Powerlink (SRPL) Project. The comments provided herein are based on the information provided in the recirculated draft EIR/EIS, the original SRPL Project draft EIR/EIS, the Wildlife Agencies' knowledge of sensitive and declining vegetative communities, and our participation in regional conservation planning efforts. The Wildlife Agencies provided extensive comments on the initial Draft EIR/EIS in a letter dated April 11, 2008. All of our concerns addressed in that letter regarding potential "unmitigable" adverse impacts to federally and/or State-listed species, sensitive vegetation communities, and regional conservation plans remain.

The Department is a Trustee Agency and a Responsible Agency pursuant to the California Environmental Quality Act (CEQA), Sections 15386 and 15381 respectively. The Department is responsible for the conservation, protection, and management of the State's biological resources, including rare, threatened, and endangered plant and animal species, pursuant to the California Endangered Species Act (CESA), and administers the Natural Community Conservation Planning Program (NCCP). The primary concern and mandate of the Service is the protection of public fish and wildlife resources and their habitats. The Service has legal responsibility for the welfare of migratory birds, anadromous fish, and endangered animals and plants occurring in the United States. The Service is also responsible for administering the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 et seq.). The Proposed Project is the construction and operation of a 150-mile electric transmission line between the El Centro area of Imperial County and northwestern San Diego County.

Alternatives considered included alternative route alignments and other transmission alternatives, alternatives that could replace the Proposed Project as a whole, Non-Wire Alternatives, and the No Project/No Action Alternative.

TAKE PRIDE IN AMERICA

Comment Set F0006, cont.
U.S. Fish & Wildlife Service and California Department of Fish & Game

Ms. Blanchard and Ms. Kastoll (FWS-SD/CDFG-200SB0423/2008TA0847) 2

Additionally, there are four projects that are so closely related to the SRPL as to be considered "connected actions" under NEPA. These four projects are the Stirling Energy Systems solar facility, two components of the Imperial Irrigation District (IID) 230 kV transmission system upgrades, the Esmeralda–San Felipe Geothermal Project, and the Jacumba 230/500 kV Substation. One additional project, a wind project in northern Mexico's La Rumorosa area, under contract to meet Southern California Edison's renewable requirements, is defined in the Recirculated draft EIR/EIS as an "indirect effect" of the SRPL. The La Rumorosa wind project is being evaluated in the draft EIR/EIS because of the agreement that was signed between Sempra Generation and Southern California Edison in which Sempra Generation has agreed to sell SCE up to 250 MW of power from the La Rumorosa wind power facility under development, and the SRPL would be used to transmit the energy generated at the wind farm.

F0005-1 cont.

This letter provides comments regarding the components identified in the recirculated draft EIR/EIS dated July 2008. These components include a new and revised analysis of the La Rumorosa Wind Energy Project (RWEP) wind farm and transmission line route revisions. The RWEP has several project components, which include the following: a double circuit 230 kV or single circuit 500 kV transmission line from Mexico to the U.S., a 500/230/69 kV substation located east of the town of Jacumba (i.e., Jacumba substation), a 13.4 mile 69 kV transmission line connecting the Jacumba and Boulevard Substations, a 0.5 acre expansion of the Boulevard substation, and a communication facility. We offer recommendations and comments in the enclosure to further assist in avoidance and minimization of impacts to biological resources, and to ensure that the project is consistent with ongoing regional habitat conservation planning efforts.

We remain concerned the Proposed Project (and many of the alternatives) would have "unmitigable," significant impacts to listed plant and animal species. Because the Wildlife Agencies are mandated to protect and recover these resources, we recommend an alternative that can avoid and minimize significant adverse impacts to rare and sensitive biological resources, similar to the In-Area Renewable Generation Alternative but with additional localized generation capacity (e.g., commercial and residential rooftop solar systems) to eliminate or maximize the need to transport electricity from remote locations. If you have questions or comments regarding the contents of this letter, please contact Paul Schlitt of the Department at (858) 637-5510 or Felicia Sirelius of the Service at (760) 431-9440.

Sincerely,

Karen Goebel
Assistant Field Supervisor
U.S. Fish and Wildlife Service

Helen R. Birss
Environmental Program Manager
California Department of Fish and Game

Comment Set F0006, cont.
U.S. Fish & Wildlife Service and California Department of Fish & Game

ENCLOSURE
WILDLIFE AGENCY
COMMENTS AND RECOMMENDATIONS
ON THE RECIRCULATED DRAFT ENVIRONMENTAL IMPACT
REPORT/ENVIRONMENTAL IMPACT STATEMENT
FOR THE SUNRISE POWERLINK PROJECT

Sempra La Rumorosa Wind Energy Project Wind Farm

1. The recirculated draft EIR/EIS concludes that impacts to wildlife movement from the Sempra La Rumorosa Wind Energy Project (RWEP) wind farm would be considered adverse but less than significant (page 2-54). However, an analysis of the biological impacts concerning general wildlife movement patterns through the (RWEP) wind farm site has not been conducted. Therefore, this impact should be adequately assessed in the final EIR/EIS, or the final EIR/EIS should acknowledge this deficiency in the analysis for impacts to wildlife movement. In addition, Peninsular bighorn sheep (PBS) are known to occur in the Sierra de Juarez mountains. However, there is no discussion on how the RWEP may impact PBS movement at that site. The final EIR/EIS should address this potential impact to PBS and provide a discussion as to how the applicant can avoid and minimize any impacts that are identified. F0006-2

2. The recirculated draft EIR/EIS discusses the presence of PBS designated critical habitat (February 1, 2001) in the project area (U.S. portion only). However, although it does not appear that this portion of the project is within PBS proposed revised critical habitat (October 10, 2007), the presence of PBS proposed revised critical habitat in the vicinity of the project area should be discussed in the final EIR/EIS to ensure that potential edge effects (e.g., increased non-natives, fire, etc.) from the transmission line will not adversely affect the primary constituent elements in the adjacent critical habitat. F0006-3

3. The draft EIR/EIS lacks the information necessary to accurately quantify the potential direct and indirect impacts of each project component on listed species and their habitat. The final EIR/EIS should include a series of maps that depict such features as the locations of the proposed temporary and permanent project components including associated facilities, construction roads, access roads, towers, transmission lines, and staging areas. These maps should, at a minimum, also include vegetation-type; federally-listed and candidate species known to occur or potentially occur in the project areas; and proposed and/or designated critical habitat areas. Information on vegetation types and species locations and potential habitat within the project areas should be based on best available database information as well as recent habitat and species surveys conducted by qualified and or permitted biologists. F0006-4

Additionally, acreage impacts associated with the construction of each project component should be included in the baseline impact analysis. Impacts to sensitive vegetation F0006-5

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communities and special status plant and animal species should be quantified and adequately disclosed in the final EIR/EIS. This analysis should be provided in revised summary tables/and or a consolidated matrix per guidance that was provided in the Wildlife Agencies comment letter, dated April 11, 2008. This would facilitate comparison of the proposed project to the alternative designs allowing for the identification of a biologically preferred alternative, in accordance with CEQA mandates (CEQA Guideline §15126.6(b). F0006-5 cont.

4. The recirculated draft EIR/EIS states that vegetation and plant species data is based on County of San Diego and CNDDB records, respectively, and subsequently states that no listed plant species occur in the project areas. However, information on vegetation types and plant species locations and potential habitat within the project area in the U.S. should be based on best available database information as well as recent habitat and species evaluations conducted by a qualified biologist/botanist familiar with local plant species in the project areas. F0006-6

5. The final EIR/EIS should provide additional information concerning the preliminary site assessment surveys that were conducted during site selection of the RWEP wind farm. There is limited information provided in the recirculated draft EIR/EIS regarding the development of pre-permitting monitoring protocols that were considered to address bird and bat mortality (and that resulted in NEPA/CEQA baseline and impact determination in the recirculated EIR/EIS). It is important to use the pre-permitting impact assessment to determine the operations monitoring protocols that would be used to substantiate impact estimates. Furthermore, the final EIR/EIS needs to provide a discussion on the evaluation given between the level of anticipated impacts (i.e., bird and bat collisions with wind turbines) and the amount of compensatory mitigation proposed. In considering potential fatalities and risk to individual species and populations, the priority should be avoidance of impacts, and if that is not possible, minimization and mitigation measures should be developed that are effective in reducing and/or offsetting bird/bat fatalities. Additionally, although operational fatalities cannot be forecasted with certainty, more comprehensive baseline data should be collected and provided in the final EIR/EIS. F0006-7

6. Table D.2.7 of the final EIR/EIS should be amended to reflect acreage impacts and corresponding mitigation acreage for the RWEP wind farm, Sempra Baja Wind Transmission Line, SDG&E Jacumba Substation, and SDG&E 69 kV transmission line. F0006-8

7. Page 2-22, Section 2.2.1, Special Status Wildlife Species, states that, "Protocol-level surveys for QCB were conducted at the ECO Substation site (i.e., Jacumba substation) and surrounding areas in April 2008 (SDG&E, 2008a)." However, a copy of the survey report has not been received by the Service. We recommend that protocol-levels surveys for the Quino be conducted in all project areas within the Service's recommended survey area for Quino and reports be submitted in a timely manner so that we may determine if they are adequate and impacts have been assessed correctly. F0006-9

Comment Set F0006, cont.
U.S. Fish & Wildlife Service and California Department of Fish & Game

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8. The recirculated draft EIR/EIS discusses the potential presence of PBS, Quino, and Quino designated critical habitat along the 69kV Transmission Line. However, it appears that some portions of this project are also within Quino proposed revised critical habitat (January 17, 2008). Therefore, the potential impacts to Quino proposed revised critical habitat should be discussed in the final EIR/EIS. Additionally, it is not clear from the draft EIR/EIS if protocol-levels surveys have been conducted along this transmission line and adjacent areas. If so, a copy of the survey report has not been received by the Service. F0006-10

9. The recirculated draft EIR/EIS states that the Boulevard Substation Expansion and Communication Facility are expected to occur on land that is already developed. However, it is not clear if "developed" means that these areas no longer contain any vegetation. Therefore, the term "developed" should be defined in the final EIR/EIS. Additionally, because these proposed projects are located within the U.S. Fish and Wildlife Service's Quino Survey Area 1, Quino may use these areas to move between adjacent habitat patches. Therefore, protocol-level surveys should be conducted in the project areas to determine if Quino are present. F0006-11

10. It is premature to identify mitigation ratios for jurisdictional areas when formal jurisdictional delineation has not been completed. For projects with impacts to jurisdictional lakes or streambeds, the Department emphasizes that alternatives and mitigation measures be addressed in CEQA certified documents prior to submittal of an application of a Streambed Alteration Agreement (SAA). Any information which is supplied to the Department after the CEQA process is complete will not have been subject to the public review requirements of CEQA. Therefore, please ensure all impacts to jurisdictional waters are described in the final EIR/EIS. F0006-12

11. The Biological Resources section in the final EIR/EIS should include a discussion of any riparian habitat occurring in the project areas and whether or not arroyo toad, southwestern willow flycatcher, and least Bell's vireo habitat may occur in those project areas. F0006-13

Proposed and Alternative Transmission Line Routes

1. The impact analysis for the 13 reroute proposals mentions that reroutes would either result in no effect or an increase/decrease of impacts to sensitive vegetation communities (e.g., "This reroute would result in greater impacts to the same types of sensitive vegetation communities"), without quantifying the extent of the impact. The final EIR/EIS should include revisions to all the corresponding tables that quantify impacts to vegetation communities for each alternative route proposed (e.g., a revision should be made to Table E.2.2-2 to correspond with an increase or decrease in permanent and temporary impacts associated with a reroute proposal identified in the recirculated draft EIR/EIS). F0006-14

2. Section 3.3.4.6 mentions that the Highway 67 Hansen Quarry Reroute would shift the transmission line route to the east from Hansen Aggregate property onto land owned by the F0006-15

Comment Set F0006, cont.
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City of San Diego. This reroute would encroach into City of San Diego's Multiple Species Conservation Program cornerstone land holdings. A discussion regarding effects on land use impacts should be provided in the final EIR/EIS to address these concerns. F0006-15 cont.

3. Impacts to vegetation communities that will result from additional workspace needs for the Interstate 8 Alternative (Table 4.1 of the recirculated draft EIR/EIS) should be incorporated in the Table E.1.2-4 of the final EIR/EIS. F0006-16

FACT SHEET

U.S. Air Force Fact Sheet
MODULAR AIRBORNE FIRE FIGHTING SYSTEM

The Modular Airborne Fire Fighting System, or MAFFS, Program provides emergency capability to supplement existing commercial tanker support on wildland fires. MAFFS aids the U.S. Department of Agriculture's Forest Service. When all other air tankers are activated but further assistance is needed, the Forest Service can request help from the Air Force's MAFFS units. MAFFS is a mission that highlights interegency cooperation.

FILE PHOTO -- Air National Guard C-130 Hercules equipped with modular airborne firefighting systems, similar to this one, are dropping thousands of gallons of retardant on the wildfires in Southern California. The fires have destroyed more than 830 homes and burned out more than 500,000 acres. California officials said the fires are responsible for at least 15 deaths. (U.S. Air Force photo by Staff Sgt. Daryl McKamey)

MAFFS units fit inside C-130 airplanes without requiring structural modification. This allows the units to be loaded on short notice. It takes about two hours to load a MAFFS unit onto the C-130. The C-130s drop retardant from an altitude of about 150 feet through a discharge tube located in place of the left rear paratroop door of the aircraft. A MAFFS unit can discharge its load -- 3,000 gallons weighing 28,000 pounds -- in less than five seconds. The retardant covers an area one-quarter of a mile long and 60 feet wide. After the plane discharges its load, and returns to an air tanker base, it can be refilled and airborne again in less than 20 minutes.

MAFFS units can drop either water or retardant called "slurry." Slurry is made of 80 to 85 percent water, 10 to 15 percent ammonium sulfate, a jelling agent and red coloring. The red in the retardant helps pilots see where they have dropped previous loads. Along with retarding the fire, the slurry acts as a fertilizer. Because the MAFFS discharges the agent in a mist, slurry does not cause damage to buildings.

Crews who fly MAFFS missions participate in annual re-currency training. Each wing is required to have five certified crews for each MAFFS unit.

In the 1970s, Congress established the MAFFS system after a major fire burned into Long Beach, Calif., destroyed hundreds of homes, and overwhelmed the civilian tanker fleet's ability to respond. Today, one Air Force Reserve Command and three Air National Guard locations participate in the MAFFS Program.

The 302nd Airlift Wing in Colorado Springs, Colo., is the only Reserve unit. The Guard units include the145th AW in Charlotte, N.C.; the 146th AW in Channel Islands, Calif. and the 153rd AW in Cheyenne, Wyo. The 302nd AW has two of the MAFFS units and the Guard has two units each for a total of eight systems nationwide.

EXHIBIT B

7/10/2011

Should Green Jobs Be Outsourced?

A Case Study of Lost Jobs and Lost Opportunities

Peter Philips, Ph.D. Professor of
Economics, University of Utah

Peter Philips, Ph.D. Professor of Economics, University of Utah

Should Green Jobs Be Outsourced?

A Case Study of Lost Jobs and Lost Opportunities

Executive Summary

The proposed Sempra 1250 megawatt (MW) tieline connecting the California grid to envisioned new wind-farms in Mexico is not just about electricity. It is also about foregone opportunities, lost human capital investment, lost worklives, lost tax revenues, and diminished economic development prospects; and also, it is about which regulatory authority, California or Mexico, should oversee the environmental impacts of building green generation capacity for the California grid. Finally, it is about undoing some of the economic benefits and jobs stimulated by the first set of federally subsidized, utility-scale, solar projects fast-tracked by the Interior Department.

Approving the Sempra tieline into Mexico will result in:

- 5 years of lost construction work
- 3000 lost construction job-years including 2430 lost to Imperial County, California residents
  (At 27.0%, Imperial County has the highest unemployment rate in the country)
- 3450 lost job-years overall in Imperial County (2430 construction plus 1000 spinoff jobs)
- 9800 lost job-years in California, including Imperial County
- 15,000 lost job-years in the U.S. including California
- $550 million in lost wages (plus additional losses in benefits) over 5 years
- $300 million loss in local, state and federal business and personal taxes
- $4.5 million loss in local human capital investment in Imperial County
- 103 Imperial County youth deprived of apprenticeship training and skill acquisition
- $127 million net present value of lost lifetime wages and benefits associated with foregone training
- 40 permanent operation and maintenance jobs lost in Imperial County amounting to 1000 lost job-years over 25 years
- $78 million in the net present value of lost wages and benefits in Imperial County from the lost operations jobs in addition to the aforementioned $550 million in lost wages associated with lost construction and related spinoff jobs

Sempra, the parent company of San Diego Gas & Electric, proposes to outsource 1250 MW of green electrical generating capacity to Mexico by connecting a one-mile tieline from Mexico to the Southwest Powerlink electrical transmission line close to the San Diego County and Imperial County border. (See map below: Figure 1) This proposal, if approved, would outsource to Mexico 5 years of work for 600 construction workers, 489 of whom otherwise would have been residents of Imperial County, and 111 of whom would have traveled from other parts of California, Arizona and Southern Nevada to work in Imperial County. In total, 3000 direct, on-site construction job-years (600 workers times 5 years) will be taken from the U.S. construction labor market and transferred to Mexico. In addition to these lost

construction jobs, 40 permanent operation and maintenance jobs will be lost. Over a 25 year lifespan of these types of facilities, 40 lost operations jobs amount to 1000 lost local job-years taken from the Imperial County labor market. Overall, the U.S. labor market would lose 4000 job-years in direct construction and operation work by approving Sempra's proposal. Almost 90% of these direct job-losses would be lost in the Imperial County labor market itself.

Imperial County can ill-afford to lose any jobs. In April, 2011, Imperial County's unemployment rate stood at 27.9%, the highest county unemployment rate in the nation. Construction employment in Imperial County is down 50% from early 2008. The loss of 489 long-lasting construction jobs in this small county of 170,000 people, at this time of deep economic crisis simply rubs grit and salt into an already gaping wound. But the job losses from Sempra's proposal do not stop at the construction site gate nor at the county line.

The loss of direct construction employment would lead to a spinoff of an additional 1000 lost job years elsewhere on other types of jobs in the local Imperial County labor market. Because the Imperial County population is small, the spinoff losses from outsourcing these jobs to Mexico will spread to the overall California and U.S. labor markets through supply-chain and consumer-chain channels. In total, outsourcing this work to Mexico will mean that the U.S. labor market will lose from 10,000 to 15,000 job-years, a multiple of from 3 to 5 times the direct job-years lost on the construction work itself. These 15,000 lost job-years correspond to net present value of $550 million in lost earnings.

With the loss of direct construction work alone, comes more than $4.5 million of lost human capital investment through the loss of more than 100 apprentices whose 5 years of training would have been financed by this construction work. Over the courses of their worklives, in net present value, collectively these workers will lose $127 million in reduced wages and benefits due to this lost training.

Of the 103 apprentices that would have been on this Imperial County work, 75 would have been electrician apprentices. Each of the 75 skipped-over electrical apprentices regrettably will forego more than $30,000 of human capital investment in classroom and job training that contractors otherwise would have invested in them. This lost human capital investment is equivalent to what the State of California invests for the first three years of a student's undergraduate training at the University of California. Outsourcing this type of work to Mexico is like closing a university in the harm that it does to post-secondary education for blue-collar workers in Imperial County.

The loss to these individuals is also a loss to Imperial County which will lose the services and economic development advantages of having 103 additional, highly skilled construction workers within the local construction labor force. Given that the total size of Imperial County's construction labor force is about 2000 workers, this amount to a 5% loss in the total skill makeup available to local construction contractors. Because long-term local economic development is partially a function of near-run local human capital accumulation, the dead-weight loss of this training will prove to be a permanent drag on future economic development in Imperial County.

The loss of construction jobs and consequent loss of spinoff jobs during the period of construction alone reduces local, state and federal tax revenues by almost $300 million. More lost tax revenues are associated with the absence of these power-generating facilities within the County over the 25-year, expected lifetime of this power generation. Sempra's tieline proposal is about importing electricity, but it is also about outsourcing jobs, foregoing human capital investments, lost careers and lost tax revenues.

This Report begins on page 12 with an Introduction. A map of the Sempra proposal, a set of frequently asked questions (FAQs), the author's bio, and a Table of Contents precede the Introduction. Readers may review the FAQs prior to reading the Report to familiarize themselves with some of the conceptual issues and conclusions of the Report; or refer back to the FAQs and map as needed.

Map of Sempra's Proposed Cross-Border Transmission Tieline

This map of Sempra's proposal will help the reader visualize Sempra's cross-border transmission request:

Figure 1: Map of Sempra Energy's proposed Sierra Juarez 1250 MW one-mile, cross-border transmission tieline connecting proposed wind farms in Mexico to an existing U.S. Southwest Powerlink transmission line on the border of Imperial and San Diego counties.

FAQs: Concepts and Conclusions

These frequently asked questions will help the reader understand some of the conceptual issues and conclusions found in this report. They may be reviewed now or referred to as needed while reading the report. The report itself begins with the Introduction section below.

What is a "job" in analyzing job losses?

Whenever someone gets hired, that person has a new job. But that new job could last 4 months, 4 years or 40 years. Obviously, there is a lot more work, income and spinoff effects from 40 years of work compared to just 4 months of work. So in analyzing job losses or job gains, economists have standardized the concept of "job" as a "job-year." A job-year is 52 weeks of 40 hours of work per week, or 2080 hours equaling one year's worth of work. When an economist looking at the economic impact of building a new

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Peter Philips, Ph.D. Professor of Economics, University of Utah

solar farm says that this solar farm will create 3000 new jobs on the construction site, that economist means 3000 new job-years.

Does that mean there will 3000 construction workers on the construction site?

Not necessarily. If a construction project requires 3000 job-years, and the construction will last one year than we would expect, on average, 3000 construction workers on that worksite. However, if the job is expected to take 5 years, then we would expect, on average, there would be 600 construction workers on the worksite at any given time. (600 workers time 5 years equals 3000 job-years).

What are the spinoff or multiplier effects of 3000 new jobs from a new construction site?

Any construction site requires materials as well as workers. The materials bought for the new construction site will create new jobs somewhere else in order to make and transport these new construction materials to where the new construction is taking place. This new upstream demand will create new jobs spun-off from the new construction work. Also, the workers on the new construction site will spend their new wages buying food, paying for their homes, buying cars, gas and other consumer goods and services. This new consumer demand will create new spinoff jobs downstream in the consumer market.

If a new green power-plant is built in Mexico instead of in the U.S., wouldn't the American construction workers just go work somewhere else?

Sure, if there was full employment. But today we have the worst labor market since World War Two. California is one of the hardest hit states while Imperial County, with an unemployment rate of almost 28% in April 2011, is *the hardest hit* county in the nation. Furthermore, construction employment in Imperial County is only half of what it was in early 2008. So a job lost to Mexico in the aftermath of the Great Recession means an unemployed American construction worker stays unemployed.

How do you calculate the multiple number of spinoff jobs from a new construction site?

The new construction jobs are called the "direct" employment effect of the new work. The new spinoff upstream supply-chain jobs are called the "indirect" employment effect. The new spinoff downstream consumer-chain jobs are called the "induced" employment effect. The "multiplier" effect is the multiple number of new indirect and induced spinoff jobs that are created by the original new direct construction jobs. So the total number of new jobs is the direct jobs plus the indirect jobs plus the induced jobs. The multiplier is the total number of jobs divided by the original new direct construction jobs.

The multiplier effect from the original number of new direct construction jobs depends on how big an area you are looking at. In a small county such as Imperial County, the multiplier will be small because the upstream supply-chain and the downstream consumer-chain will both be short. The solar panels built for a solar farm will not be built in Imperial County. So any new jobs created by a demand for solar panels will not create those new jobs in Imperial County. (That new demand might not even create new jobs in California if those panels are imported from China).

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But as you lift your gaze from Imperial County to California or higher still to the U.S. economy as a whole, the supply-chains and the consumer-chains will get longer: and the potential for new spinoff jobs making the construction materials or making the consumer goods to meet this new demand will grow substantially. Still, the new demand coursing through these supply-chains and consumer-chains will not stay completely in the United States in any case. If the solar panels come from China, or if a newly employed construction worker goes to Wal-Mart and buys an MP3 player made in Korea, some of the new spinoff jobs created by this new construction site will be created overseas.

Standard computer programs have been created to estimate the within county, within state, and within U.S. new-jobs-effect of a new construction site. These programs have been used widely to estimate the number of new jobs from new green electrical generating facilities, new bridges built on interstate highways, new companies coming to town or old companies leaving, etc.

What is the multiplier that you use to calculate the jobs lost from building 1250 MW of green electrical generating capacity in Mexico and importing that electricity to the U.S. rather than building that same capacity here?

For photovoltaic construction work, we calculate that the multiplier for Imperial County is 1.4, for California, it is 3.3 and for the U.S. as a whole it is 4.9. This means that for every 1 new direct job on this type of construction, there would be 0.4 new upstream and downstream spinoff jobs elsewhere in Imperial County; there would be 2.3 new upstream and downstream jobs in California; and there would be 3.9 new upstream and downstream jobs in the U.S. as a whole. The longer the potential supply-chains and consumer-chains, the larger the multiplier effect. These new jobs will be lost if Sempra is allowed to build its 1250 MW cross-border transmission tieline in Mexico.

How many jobs in total would be lost in the U.S. if Sempra is allowed to build a 1250 MW transmission line and import green energy from Mexico?

We calculate that 3000 direct construction jobs would be lost with 2445 of those being lost by Imperial County construction workers. These 3000 jobs are measured in job-years, so if it took 5 years to put in place 1250 MW of photovoltaic generating capacity, then 600 individual construction workers would lose 5 years worth of work each while 489 of those individuals would be Imperial County residents.

In addition to these lost construction jobs, there would be almost 400 supply chain jobs and 600 consumer chain jobs (measured in job-years) lost in Imperial County for a total Imperial County loss of 3439 jobs (again measured in job-years). But California (counting Imperial County) would lose more. The loss of the original 3000 construction jobs would lead to a total loss of 9787 California jobs with more new jobs lost in the consumer-chain than in the supply-chain.

But the U.S. (counting California) would lose the most. The original 3000 lost construction jobs would lead to almost 15,000 lost new jobs overall with half of that overall job loss coming from lost consumer demand, a 30% from lost producer demand and 20% from the lost direct construction jobs themselves. These 15,000 lost job years imply $550 Million in lost earnings.

What would be the tax loss associated with these lost jobs?

At the federal, state and local levels taken together, the tax revenue loss would be almost $300 million.

Peter Philips, Ph.D. Professor of Economics, University of Utah

You have talked about lost construction jobs. Wouldn't there also be lost jobs running these facilities?

Yes. It would take about 40 workers to manage, operate and maintain 1250 MW of photovoltaic solar capacity. These one or several facilities would last about 25 years each before they would have to be rebuilt. So 1000 job-years of work in Imperial County would be lost over a 25 year period (40 workers times 25 years). Plus, quite often, when the useful life of a power plant ends, the utility rebuilds at the same location. So actually, building in Mexico as opposed to building in the U.S. may create unending Mexican benefits and unending Imperial County job losses.

Construction workers do not stay on one job indefinitely. Are there any long-term losses that continue past the lost jobs on the actual construction work itself?

Yes. Had Sempra built its green generation capacity in Imperial County instead of Mexico, contractors on the U.S. side of the border would have invested more than $4.5 million over 5 years in classroom and lab instruction for the more than 100 apprentices that would have worked on this job.

For electricians, the largest group of apprentices, contractors would have invested more than $36,000 over 5 years in classroom and lab instruction, plus provided hands-on, supervised on-the-job training. This lost human capital investment means that these 103 would-be apprentices will forego skills development, get less well-paying work, and each earn, a net present value in today's dollars, almost $1 million less over their worklives than they would have earned had they received this training. To give you an idea of the value of this lost training, the foregone human capital investment due to this lost work is equivalent to about what the State of California invests in the education of a University of California undergraduate over his or her first three years.

Outsourcing a large, long-lasting construction site is like closing down a university. Indeed, construction apprenticeship training is the largest system of privately financed higher education in the United States creating well-paid, middle-class, blue-collar jobs by investing huge sums in human capital on local youth while essentially putting each apprentice on scholarship because each apprentice earns while he learns. To make the apprenticeship system work, contractor-paid-for apprenticeship programs rely upon projects like the type Sempra proposes to outsource to Mexico. Imperial County also loses because local communities rely upon human capital investment in their young people to build a key component of future local economic development, namely a skilled local construction labor force.

Would the new green electrical generating capacity built in Imperial County create new jobs overseas?

Sure. To the extent that either the contractor buys imports to build the project, or the workers buy imported consumer goods, some of the new demand from this construction will generate overseas jobs. But the biggest impact will be new domestic job creation because lots of the construction materials such as cement or fencing or wiring will be domestically made. And while we all buy some imported goods when we go to the store, still many consumer goods and most consumer services are still made in the U.S.A. So the biggest spinoff of new jobs will be domestic.

Peter Philips, Ph.D. Professor of Economics, University of Utah

If the new green power generation was built in Mexico, wouldn't that create new jobs in the U.S.?

Sure. But the biggest new job benefits of building this green power in Mexico would go to Mexico. First of all, the new direct construction jobs would all be Mexican. Second, while Mexican consumers also buy imports, some from the U.S., nonetheless, most of their consumer services will be domestically provided and many of their consumer goods will be Mexican made. Also, just as American buy Japanese and Korean cars, so do Mexicans. So while building across the border will create some new jobs in the U.S. primarily through supply-chain channels, this new spinoff-job creation coming to the U.S. will be diluted because the U.S. will not be the only source of foreign goods Mexicans will buy, and the new consumer chain demand will still primarily snake through the Mexican domestic consumer sector.

You say that Sempra intends to build wind farms in Mexico, yet you use as your alternative the building of solar farms in Imperial County. Why?

Currently a megawatt of wind energy is cheaper than a megawatt of solar energy, although solar energy costs have been falling. The places where wind farms can be built are relatively limited and probably all of California's wind resources that can be developed responsibly with due consideration for environmental impacts will, in fact, be developed whether or not Sempra is allowed to construct its tieline.

California requires that all utilities and other electricity providers in California get 33% of their electricity from renewable energy sources such as geothermal, wind and solar by the year 2020. To achieve this goal, all of the geothermal and all of the wind resources in the state that can be developed responsibly with appropriate consideration of environmental impacts will be developed; and still the 33% renewable energy generation standard will not be fully met. So to build up to this 33% goal, utilities will have to develop solar resources as well. Thus, at the margin, if 1250 MW of wind energy is not developed for the California grid in Mexico, then 1250 MW of solar capacity will be built in California. While the construction of thermal solar-farms are breaking ground now, the recent decline in the cost of photovoltaic solar generation will mean that future solar farms will likely be photovoltaic.

You point out that wind energy is cheaper than solar energy. Isn't it better to build across the border in Mexico to capture this wind resource in order to benefit from the cheaper cost of wind?

Picking up an additional large wind farm in Mexico would probably lower San Diego Gas & Electric's green electrical generation costs somewhat. And these savings would mostly be passed on to at least some SDG&E customers.

However, the U.S., and especially California, carefully evaluates the potential environmental harm of building any type of power plant—gas, solar or wind. Mexico does not have as careful an environmental review. So the cheaper wind-generated electricity built in Mexico may have hidden environmental costs that could make that imported wind-energy cost artificially low.

In any case, Mexico needs its own green-energy generation capacity, including wind and solar. Mexico disproportionately relies upon high sulfur content oil for much of its electrical generation. This form of power production generate more pollution with consequent increased health hazards. By building a captive wind-farm in Mexico tied to the California grid, Mexico is deprived of this wind-resource. So

another hidden cost of the proposed "cheaper" wind farms is more pollution and more health hazards in Mexico.

So, while there may be some cost savings to SDG&E associated with capturing a Mexican wind resource for Sempra's sole use, this savings has to be balanced against the potential environmental, pollution and health hazards Sempra's proposal entails for Mexico along with the costs in lost American jobs, lost domestic training, lost local income and lost U.S. tax revenues outlined in this report.

About the Author

Peter Philips is a labor economist specializing in the construction labor market. He is the nation's recognized expert on the economics of prevailing wage laws and one of the foremost experts on the construction labor market, generally. Philips has related interests in construction worker safety, health economics and economic history. Philips received his B.A. from Pomona College and his M.A. and Ph.D. from Stanford University. He is Professor of Economics and former chair of the Department of Economics at the University of Utah.

Philips' most recent books include *Building Chaos: An International Comparison of the Effects of Deregulation on the Construction*, (with Gerhard Bosch, 2003) and *The Economics of Prevailing Wage Laws*, (with Hamid Azari-Rad and Mark Prus, 2005). Philips most recent journal articles include "Health Insurance and Worker Retention in the Construction Industry," *Journal of Labor Research*, "Effect of Multiemployer Collective Bargaining on Employer-Provided Health Insurance in the Construction Industry," *Journal of Labor Research*, "A Case Study of Labor Turnover on a Large Industrial Construction Project," *Journal of Construction Engineering & Management*, (all with JaeWhan Kim), and "Analysis of the Impacts of the Number of Bidders upon Bid Values: Implications for Contractor Prequalification and Project Timing & Bundling," *Public Works Management & Policy*, (with Sheng Li).

Philips has received many awards for his teaching and research including the prestigious University of Utah Presidential Teaching Scholar, and the University of Utah, Graduate Student & Postdoctoral Scholar Distinguished Mentor.

Acknowledgement, Disclosure and Disclaimer

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List of Figures and Tables

Peter Philips, Ph.D. Professor of Economics, University of Utah

Introduction

Context: On January 28, 2010, Secretary of the Interior, Kenneth Salazar, told Congress that 13 envisioned, utility-scale, solar electrical generating facilities in California, Arizona and Nevada were being put on fast-track for approval. Should these projects pass environmental and technical review by December, 2010, they would be eligible for economic stimulus funding under the 2009 American Recovery and Reinvestment Act.[1] These 13 projects, taken together, would put in place about 4500 megawatts (MW) of renewable energy generation capacity and create 40,000 new jobs. These new jobs would include both construction, operation and maintenance workers as well as spinoff jobs up the supply-chain and in the downstream consumer market where new workers would spend their incomes.

Eleven months later, in November, 2010, Secretary Salazar approved the second largest solar farm ever on U.S. lands, the 500 MW thermal-solar Amargosa Farm Road Solar Project, in rural Nye County, Nevada, north of Las Vegas. This project will create 1300 construction jobs and up to 200 permanent operation and maintenance jobs over the lifetime of the facility.[2] There would be additional spinoff jobs created as well in both the supply-chain and consumer-chain feeding off this project.

There is a zero sum game afoot. If 1250 MW of wind or other green energy generation is built in Mexico designed to be imported to the U.S., that 1250 MW of green energy capacity will not be built in the U.S.

One month later, in December, 2010, Secretary Salazar approved the 110 MW thermal-solar Crescent Dunes Energy Project, the ninth utility-scale solar project to receive approval under the Administration's initiative to encourage the rapid but environmentally responsible development of renewable energy on public lands. Again in Nye County, Nevada, near the small desert community of Tonopah, the 110 MW Crescent Dunes project will employ about 450 construction workers at a time when Las Vegas area construction employment is about 60% below its peak achieved before the Great Recession.[3]

On June 17, 2011, Secretary Salazar, joined with California Governor, Jerry Brown, to break ground on the world's largest solar power plant: the 1000 MW Blythe Solar Power Project in the small Riverside dessert community of Blythe, California. This thermal-solar project will create 1000 construction jobs per year with a spinoff of another 3000 new jobs in the supply-chain serving this construction project plus new jobs in the consumer market feeding off the wages these new construction and supply-chain workers earn.[4] With California, Nevada and Arizona suffering some of the highest state unemployment rates in the country, and with construction employment in these states down 30% to 60% from their peak four years ago, these jobs could not have come at a better time.[5] And the promise of more to come is good news indeed.

Case Study: But more jobs will not come to the U.S. labor market if these new renewable facilities are built in Mexico. One of the misconceptions regarding job creation from the building and operating of renewable energy electrical generating facilities is the notion that these jobs cannot be outsourced. This is a report about the loss of American jobs due to the outsourcing of the construction and operation of green, electrical power-generation to Mexico. Specifically, we analyze the economic impact of a proposal to build

a 1250 MW cross-border transmission tieline from Southern California into Mexico in order to import wind-generated electricity from Mexico onto the California grid. The flurry of utility-scale green energy construction described above is responding to higher state standards for renewable energy generation required in the energy mix that utilities use.

Tradeoff. There is a zero sum game afoot. If 1250 MW of wind or other green energy generation is built in Mexico designed to be imported in the U.S., that 1250 MW of green energy capacity will not be built in the U.S. Because in the foreseeable future, utilities will not go beyond their mandated quota for green energy generation, if it is built there, it will not be built here. Consequently, there is a tradeoff between jobs created in the U.S. to build these plants and jobs created in Mexico should those plants be built there. Not only is there a tradeoff between the direct employment of workers building and operating these green power plants, but also there is a tradeoff in the spinoff jobs derived from these direct workers either spending their income domestically in the U.S. or in Mexico. The tradeoff also extends to local, state and federal tax revenues with either American or Mexican governmental entities benefiting depending on where these jobs land.

Allowing Sempra to build a line to import up to 1250 MW of green electricity from Mexico would, in one stroke, offset 25% of the job-creating benefits of these 13 fast-tracked, federally subsidized projects announced by Interior Secretary Salazar.

How big is this tradeoff? In the case study under review, the 1250 MW transmission line proposed by Sempra, the parent company of San Diego Gas & Electric, would allow for the outsourcing of 600 construction jobs, each lasting 5 years, plus an additional 2400 supply-chain and consumer-chain jobs that would have been stimulated by these new construction jobs. These supply-chain and consumer-chain jobs would also last for 5 years supported by the 5-year construction phase required to build 1250 MW of green electrical generation capacity. Altogether, in the construction phase, almost. 15,000 American job-years and a corresponding $550 million in earnings would be lost by outsourcing the construction of this green electrical generation capacity to Mexico.

In addition about 40 permanent operation and maintenance jobs would be lost to Mexico over the 25 years that is the expected lifetime of these types of electrical generation facilities. Multiplying 40 jobs times 25 years yields another 1000 job-years lost after the five-year construction period.

Perspective. How does the construction-period job-loss associated with the Sempra 1250 MW transmission tieline compare with the envisioned 40,000 jobs Secretary Salazar foresaw from the construction of 13 solar facilities that together would generate 4500 MW of green electricity? One way to answer this, is to focus on the megawatts of green electrical generating capacity that will not be built in the U.S. if it is built in Mexico and imported here.

Sempra proposes a cross-border transmission line that would permit the outsourcing of 1250 MW green electrical generating capacity. This equals about 25% of the nameplate capacity of Secretary Salazar's 13 fast-tracked projects. So, in rough terms, allowing Sempra to build a line to import up to 1250 MW of green electricity from Mexico would, in one stroke, offset 25% of the job-creating benefits associated with these 13 fast-tracked, federally subsidized projects. That would entail the loss of 10,000 of the anticipated 40,000 jobs.

But in these calculations, the definition of "jobs" is important. Typically, economists doing this type of analysis use the concept of a "job-year." A job-year is 2080 hours of work done by one person or even by a combination of part-time workers adding up to 2080 hours. (This is a job "year" because 2080 hours is 40 hours per week times 52 weeks). The 40,000 new jobs Secretary Salazar mentioned in his Congressional testimony probably referred to job-years.

With this understanding, the 1250 MW capacity Sempra proposes to outsource, means that approving Sempra's plan implies the loss of 10,000 job-years in the American labor market. In our own calculations, explained in detail in Sections 3 through 5 below, we estimate that almost 15,000 job-years would be lost if Sempra's proposal is approved. So, in general terms, approving Sempra's proposed tieline would offset somewhere between one-quarter to one-third of the envisioned job benefits Secretary Salazar envisions from the 13 green-energy, utility-scale projects that were fast-tracked in January 2011.

Approving Sempra's planned tieline connecting the California grid to a set of envisioned, captive wind-farms in Mexico would displace somewhere between 10,000 and 15,000 job-years from the American labor market.

Sections in Report: This report begins with a discussion of the issue at hand in **Section 1**. We explain the push for green-energy, electrical-generation capacity; the requirements established through California's renewable energy portfolio standards; Sempra's proposed tieline that would connect envisioned, wind-farms in Mexico dedicated or captive to the California grid; and why this proposal means that 1250 MW of green, electrical-generation capacity will not be built in the U.S.

Because Sempra's proposed tieline would connect to the Southwest Powerlink transmission line which runs from Imperial County to San Diego County, and because Imperial County has abundant solar energy potential, we model the loss of these jobs in Mexico as a loss centered in Imperial County, California.

In **Section 2**, we provide an economic context for the analysis of job losses and tax revenue losses associated with outsourcing 10,000 to 15,000 job-years to Mexico. Lost jobs and lost tax revenues may always be regretted and typically, in reports like these, the value of jobs lost or gained is calculated simply by the amount of earnings that those jobs would have generated. But in the aftermath of the Great Recession, when the American labor market is struggling to regain employment levels attained three years ago, the economic context of jobs foregone is more salient.

The fact is that the American labor market is more deeply mired in job losses than at any time since World War Two. California, Nevada and Arizona are among the hardest hit among all the states hammered by the Great Recession. Imperial County, a place of abundant solar resources has, at the time of this writing, the highest unemployment rate of any county in the United States, at almost 28%. Construction employment in Imperial County is half what it was when the Great Recession hit. So Section 2 underscores the meaning of job losses and job outsourcing in the context of historically extraordinarily severe troubles in the American, Californian and Imperial County labor markets.

In **Section 3**, we benchmark our estimates of the underlying data required to model and calculate job losses tied to this outsourcing. We review four other recent comparable analyses done on

three photovoltaic solar farms soon to be built in California. While Sempra proposes to tie yet-to-be-built wind farms in Mexico to the California grid, we assume that the supplanted operation in California due to this outsourcing would be a photovoltaic solar farm. The bases for this assumption are explained in detail in Section 3.

We use these four reports as benchmarks to ensure that our assumptions regarding the direct employment of construction workers building and operating 1250 MW of photovoltaic solar capacity are moderate and well within professional practices. A key assumption that we make is that 50% of the skilled craft workers in our model of constructing solar facilities in Imperial County would be travelers from outside the county. We also assume the apprentices and laborers would come from within Imperial County, and we anticipate that building this amount of generating capacity would take 5 years and require, on average, 600 construction workers per year.

In **Section 4**, we estimate the occupational mix and wages required to build 1250 MW of photovoltaic solar power in Imperial County and calculate the average earnings for all workers on the project. We pay careful attention to crew mix and apprenticeship ratios as well as considering wage rates, benefits and payroll taxes. These are key inputs to the next section of the analysis.

In **Section 5**, we calculate the lost jobs, lost earnings and lost tax revenues associated with outsourcing 1250 MW of green electrical generating capacity to Mexico. We begin by pointing out something typically missed by other analysts. Large, long-lasting industrial construction involves apprentices as well as journeyworkers, and entails hourly contributions to apprenticeship training programs along with the usually considered hourly wages, health insurance and pension contributions.

We calculate that more than $4.5 million in human capital investment would be lost by outsourcing this work to Mexico. More than 100 apprentices that would have been trained will not be trained. For the 75 skipped-over electrical apprentices that would have been trained on this work absent outsourcing, each will lose more than $36,000 per year in foregone income due to the absence of training that otherwise would have been provided. The net present value of these lost earnings across all 75 apprentices is almost $75 million that otherwise would have been spent in Imperial County over their 40 year worklives. Imperial County, in turn, loses out on that within-county $75 million in local citizen income, consequent consumer demand and further loss in local taxes. Perhaps even more important, Imperial County will also be out 103 young, well-trained construction workers with all the support for economic development projects that such $4.5 million in human capital investment could have provided.

Section 5 follows this analysis of lost human capital investment with an analysis of lost jobs and lost tax revenues using IMPLAN and JEDI, two standard regional economic impact computer programs.[4] We show in a footnote that the JEDI and IMPLAN programs yield comparable results for California when JEDI is set to assume that no solar panels used building 1250 MW of photovoltaic electrical generation capacity are built in California. When JEDI alternatively assumes within-state supplies of solar panels, the job loss impact rises fairly dramatically. Solar panel manufacturing capacity in California is currently limited but growing. Nonetheless, the more conservative approach is to assume that solar panels are likely to be imported.

In our main analysis, we assume away this domestic solar panel supply chain effect. We provide job loss calculations separately for Imperial County, for California, and for the U.S. As the circle of potential impact widens, the job losses rise. In job-year terms, construction period job losses rise from a

bit more than 3,400 lost jobs in Imperial County to over 9700 lost in California to almost 15,000 lost for the U.S. as a whole.

In addition to these construction period job losses there is the aforementioned 1000 job-year losses of operation and maintenance work after the 1250 MW solar generating capacity is put in place. Overall, for the 5-year construction period, the 15,000 job-year loss for the U.S. labor market involves a corresponding almost $500 million loss in local, state and federal tax revenues. Additional tax revenues would be lost over the 25 year period of operations after construction is completed.

These jobs and tax revenues are lost when the work building and operating 1250 MW of green electrical generating capacity in Imperial County, California is outsourced to Mexico. The proposed Sempra tieline is not just about electricity. It is also about foregone opportunities, forsaken human capital investments, lost worklives and diminished economic development prospects.

Section 1: The Issue--Economic Losses from a Proposed Cross Border Transmission Line Linking 1250 MW of Electrical Generating Capacity in Mexico to the California Grid

On January 8, 2010, President Barack Obama announced $2.3 billion in tax credits to stimulate the promising clean energy sector of an otherwise stagnating U.S. economy:

> The jobs numbers that were released by the Labor Department this morning are a reminder that the road to recovery is never straight, and that we have to continue to work every single day to get our economy moving again. For most Americans, and for me, that means jobs. It means whether we are putting people back to work.... Building a robust clean energy sector is how we will create the jobs of the future – jobs that pay well and can't be outsourced....I don't want the industries that yield the jobs of tomorrow to be built overseas. I don't want the technology that will transform the way we use energy to be invented abroad. I want the United States of America to be what it has always been -- and that is a leader -- the leader when it comes to a clean energy future.
>
> **Barak Obama**, Remarks by the President on Jobs and Clean Energy Investments, January 08, 2010[1]

At the same the President proclaimed the importance of domestic clean energy jobs, and Secretary Salazar announced to Congress that 13 fast-tracked solar projects were in the pipeline. Robert Rogan, senior vice president of eSolar, a solar farm developer, said that their upcoming 92 megawatt solar facility would create 400 on-site construction jobs, 20 new permanent operation and maintenance jobs, and more new jobs created by the companies that supplied the materials for this solar-farm project. But in this hearing, Senator Kit Bond (R-Mo), ranking member on the Senate Green Jobs and the New Economy subcommittee, argued that most good jobs in utility-scale green energy construction go overseas. Senator Bond pointed out that

First Solar (a developer of utility-scale solar farms) does most of its manufacturing in Malaysia and that eSolar imports most of its solar components from China and just signed a deal to outsource manufacturing to that country. "Don't get me wrong. I'm not critical of the companies here today," Bond said. "But at a time of great economic need for America's workers, we need proposals that will maximize the creation of jobs here in America, not in Asia, when we're talking about federal subsidies."[8]

When Interior Secretary Salazar predicted that 13 utility-scale solar construction projects would create 40,000 new American jobs, he was vulnerable to Senator Bond's criticism that some of these anticipated new jobs would be in construction-material supply-lines snaking their way to labor markets outside the U.S.[9] Senator Bond is correct in pointing out that currently most solar panels are manufactured overseas. So some of the job-creating spin-off effects from supply-chains serving the building of solar farms in the U.S. will spill over to job creation outside the U.S.[10] What did not seem possible is for the construction jobs, themselves, to spill out of the U.S. labor market. But this report is a case-study of just such a prospect.

> *"But at a time of great economic need for America's workers, we need proposals that will maximize the creation of jobs here in America, not in Asia, when we're talking about federal subsidies."*
>
> *Sen. Kit Bond (R-Mo.)*

In electrical generation, construction jobs can be outsourced if the electrical generation facility is built outside the U.S., and the electricity is imported onto the U.S. grid. When these American construction jobs are lost, spinoff jobs are lost too. An unemployed American construction worker buys less from local merchants, pays less in local taxes and with this diminution in local demand and local tax revenues more jobs are lost in the local private and public sectors.

This is a case study of the lost American jobs, lost local, state and federal tax revenues and diminished economic development that would occur in Imperial County, California and in the state of California, and the U.S. overall, should a proposal by San Diego Gas and Electric's parent company, Sempra, to build a 1250 megawatt (MW) transmission line across the U.S.-Mexican border be approved. The purpose of this 1250 MW tieline is to import future wind-generated electricity from Mexico into Southern California, effectively outsourcing renewable energy construction and generation. (See map of the proposed cross-border transmission tieline above in Figure 1.)

San Diego Gas & Electric (SDG&E) is obliged by California state law to have 33% of the electrical energy it provides to customers come from renewable energy sources such as geothermal, wind and solar by 2020. Given the price of renewable energy generation relative to gas-fired power plants and other traditional sources of electricity, it is unlikely that SDG&E will exceed its quota for green energy once met. In addition, 75% of the generation SDG&E procures after June 1, 2010 must come from plants connected to a California balancing area authority. In practical terms, this means that the new electrical generation capacity for California will primarily be built in California with the consequent positive local job creation and local spinoff economic development that comes with new jobs. However, as we shall see, Sempra's proposal to build a transmission line across the border to connect wind generation in Mexico to the California grid will have the effect of making a piece of Mexico part of a California balancing area authority with a consequent loss to local jobs and local economic development within California.

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Most electrical generation capacity connected to a California balancing area authority is located within California, itself. There are small enclaves in rural Nevada and Arizona.[17] For our purposes, this means that almost all the people building and operating these new facilities will be spending most of their income and paying most of their state and local taxes within California. So not only will Californians and others in the United States have new jobs from building and operating these facilities, they will create new spinoff jobs in California by buying local consumer goods and services. Thus, the requirement to have 75% of new capacity within the various California balancing area authorities stimulates employment and economic development within California.

Nonetheless, Sempra's proposed transmission line coming from Mexico would connect the upcoming, dedicated-for-export-to-California, Mexican wind plant(s) to a California balancing area authority. Even though the proposed electrical generation would be in Mexico, it would all go to Southern California and all fall within the California balancing area authority oversight. Thus, technically these foreign facilities would count under the 75% California quota for new electrical generation capacity. So California would capture this Mexican wind resource, but the economic stimulus in California from building and operating this resource would, for the most part, be lost.

There are two-fold benefits derived from California's 33% renewable energy generation and 75% domestic sourcing requirements. First, environmentally, these requirements reduce greenhouse gas emissions while second, economically, these requirements create incentives to develop domestic renewable resources, stimulate jobs, increase tax revenues and encourage local economic development. The economic channel of these two streams of domestic benefits is truncated when these green jobs are outsourced to Mexico.

There are two-fold benefits derived from California's 33% renewable energy generation and 75% domestic sourcing requirements. First, environmentally, these requirements reduce greenhouse gas emissions while second, economically, these requirements create incentives to develop domestic renewable resources, stimulate jobs, increase tax revenues and encourage local economic development. The economic channel of these two streams of domestic benefits is truncated when these green jobs are outsourced to Mexico.

Also, while not examined in this report, building the 1250 MW of generating capacity in Mexico shifts environmental review authority from one of the world's most careful and diligent systems for considering environmental impacts associated with U.S. and California environmental regulations to a perhaps less stringent review on the Mexican side of the border.[18] As the Solar Energy Industries Association states:

> The laws and regulations governing power plants' environmental compliance in the United States, particularly in California, are among the most stringent and detailed in the world with regard to mitigating the possible impacts of such facilities on wildlife.[19]

So building 1250 MW of green energy capacity for the California grid, but having that energy come from Mexico, could substantially diminish the overall environmental benefit of this green energy capacity by placing the environmental decisions regarding how and where to build this capacity within a less rigorous Mexican regime of environmental oversight and regulation.[20]

Energia Sierra Juárez U.S. Transmission, the Sempra subsidiary of Sempra Generation, proposes to connect an envisioned wind farm in Northern Baja Mexico to an existing U.S. electrical transmission line, the Southwest Powerlink, by hooking onto the California electrical grid near the border between San Diego and Imperial counties in California. This one-mile, generation tieline would have the capacity to import up to 1250 MW of renewable energy generated in Mexico by connecting this Mexican electrical generating capacity to the California grid.[1]

Sempra Generation states that "Energia Sierra Juárez is a response to environmental public policy initiatives and increasing demands for renewable energy projects that reduce greenhouse gas emissions."[2] The key environmental public-policy that Sempra is responding to with its Energia Sierra Juárez proposal is the California Renewables Portfolio Standard:

> Established in 2002 under Senate Bill 1078 and accelerated in 2006 under Senate Bill 107, California's Renewables Portfolio Standard (RPS) is one of the most ambitious renewable energy standards in the country. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources by at least 1% of their retail sales annually, until they reach 20% by 2010.[3] Governor Arnold Schwarzenegger signed Executive Order (EO) S-21-09 on September 15, 2009 directing the California Air Resources Board (CARB) to adopt regulations requiring 33 percent of electricity sold in the state come from renewable energy by 2020.[4]

On April 12, 2011, California Governor Jerry Brown signed legislation that codified the 33% standard into law meaning that the Schwarzenegger executive order was here to stay.[5] San Diego Gas & Electric, recently signed two new solar power purchase agreements totaling 237 MW of generating capacity helping towards its renewable goals under the 33% standard.[6] However, SDG&E still has a considerable ways to go over the next ten years. At the time of this writing, the California Public Utilities Commission indicated that SDG&E was lagging California's other two large investor owned utilities in their current renewable procurement status. While Southern California Edison was at almost 20% renewable and Pacific Gas and Electric at almost 18%, SDG&E trailed behind at almost 12% renewables.[7] So SDG&E has a considerable path ahead in sponsoring the development of renewable energy generation capacity. The proposed development of wind farms in Mexico tied into the Southwest Powerlink which flows from Imperial County to San Diego County would be a part of the effort by SDG&E and its parent company, Sempra, to meet the 33% renewable regulation.

However, there is a zero-sum-gain with winners and losers afoot. There is a tradeoff between building renewable energy generating capacity in California and building that same capacity in Mexico if the Mexican capacity is dedicated to importing renewable energy electricity to California. Constructing 1250 MW of renewable energy generation capacity in Mexico and transmitting that power across a 1250

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MW cross-border transmission tie line onto the California grid will displace 1250 MW of electrical generating capacity on the U.S. side of the border.

This tradeoff is straight forward. As noted, California utilities must source 33% of their electricity from renewable energy generation facilities by 2020. The cost of renewable energy generation as compared to natural gas-fired generation, a cheaper alternative, will keep these utilities from surpassing their required green-energy quotas. If a California utility is allowed to draw green energy from Mexico and count it towards its green energy quota, that utility will have no incentive to develop a comparable amount of green energy generation capacity in California.[1]

Currently, the most cost efficient of these green electrical power plants are geothermal and wind. The geothermal plants are particularly attractive because they continuously generate electricity while wind and solar facilities generate power when the wind blows or the Sun shines. Not all geothermal sites will be developed within California because power plants of all types must pass muster under California's strict environmental impact rules and geothermal's unique engineering challenges. But all of the technically feasible geothermal sites within California that can qualify under carefully crafted and strict environmental regulations will be built.

There is a tradeoff between building renewable energy generating capacity in California and building that same capacity in Mexico if the Mexican capacity is dedicated to importing renewable energy electricity to California.

However, California utilities will not be able to meet their renewable energy-generation quotas with geothermal power alone. Given current technology and pricing, California utilities will also have to develop all the available wind resources in California that can also qualify under California and U.S. environmental protection regulations. And still the quotas set by recently passed law will not be met by 2020. Consequently, utilities will also need to develop California's solar resources with large and small solar energy facilities. Rooftop solar will play a role, but due to higher costs associated with lack of scale-economies, large-utility-scale solar farms will be needed also.

There are two types of large-scale solar facilities, solar thermal facilities which use mirrors to collect solar energy to create steam to drive electrical generators, and solar photovoltaic facilities which uses photovoltaic panels to gather and translate the Sun's energy directly into electricity. Given technical advances in solar panel technology and manufacturing, along with other factors causing a dramatic drop in the price of solar panels, most new solar facilities will be photovoltaic rather than thermal.

[1] Renewable electrical generation facilities include wind, solar thermal, solar photovoltaic, small hydro and geothermal power plants, along with a few other minor technologies.

If 1250 MW of renewable energy is imported from Mexico, and if California utilities are allowed to credit this energy towards their 33% renewable quota, 1250 MW of domestic California renewable energy generation capacity ***will not be built***. This domestic solar generation capacity will not be built because given the price of renewable energy versus carbon-based energy (primarily gas-fired power plants), California's utilities will not go beyond their quota for renewable energy generation set for them by California law. In short, there is a tradeoff between building renewable energy generation capacity in California and building renewable energy generation capacity in Mexico connected to the California power grid. If it is built there to be sent here, it will not be built here.

And what will not be built here by 2020 is 1250 MW of photovoltaic generation capacity. All technically feasible environmentally permitable geothermal power plants will be built. All environmentally permitable wind power farms will be built. But 1250 MW of environmentally permitable solar photovoltaic capacity will not be built in California if 1250 MW of renewable energy generation capacity is built in Mexico, credited as California renewable power and transmitted from Mexico to the California grid.

This report analyses the jobs that will be lost if 1250 MW of green energy capacity is built in Mexico but credited as California's own domestic green energy generation capacity. This amounts to analysing how many jobs will not be created in building 1250 MW of photovoltaic generating capacity in California. It also entails analyzing how many jobs in the supply chain and downstream consumer market will not be created if 1250 MW of photovoltaic generating capacity is not built in California. It also involves calculating all the local state and federal tax revenues that will be lost if this green generating capacity is not built domestically.

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We will assume for simplicity that this lost 1250 MW of photovoltaic generating capacity would have been built in Imperial County. This makes sense because the cross-border transmission line Sempra is proposing would tie into the Southwest Powerlink, an existing transmission line in California that connects Imperial County to San Diego. The Southwest Powerlink has the ability to transmit renewable energy from Imperial County to the San Diego metropolitan market. Our assumption also makes sense because Imperial County has abundant solar resources well above the foregone 1250 MW of photovoltaic capacity that would be lost; and Imperial County has more than enough solar resources that could qualify for permits under California's strict environmental standards.[8] Finally, it makes sense because it is the San Diego utility, San Diego Gas and Electric, and its parent company, Sempra, who want to use green electricity from Mexico to count towards their California quota of domestic green electric generating capacity. Thus, Sempra's closest alternative to its Mexican proposal is Imperial County.

Section 2: Economic Context

This report analyzes the national, California and Imperial County economic losses from constructing and operating 1250 megawatts (MW) of new green electrical generating capacity in Mexico and sending that electricity north. Local and regional economic loss analysis typically measures the impact of lost jobs at a lost worksite in terms of foregone wages, lost tax revenues and lost spinoff jobs dependent upon the local consumer spending from the foregone wages and the foregone business spending associated the original lost jobs. This we will do.

But while new jobs are always needed and lost jobs always regretted, in the wake of the Great Recession, new jobs are needed now more than ever. So we begin by drawing the economic context within which the local economic impact analysis of 1250 MW of lost generating capacity in Imperial County will be made.

Thus, the loss of 1250 MW of photovoltaic electrical generating capacity in Imperial County entails the loss of many fairly long-lasting construction jobs, plus the loss of careers in electrical utility operations, plus the loss of new careers for new apprentices in high-skilled, well-paid construction work, plus the loss of downstream spinoff jobs that would have been created by these lost construction and operation jobs, plus the loss of local, state and federal tax revenues that would have been generated by these lost jobs, lost careers and lost spinoff jobs.

The Great Recession has hit the US labor market harder than any recession in the lifetime of most people living today. California has been hit harder than most states. And Imperial County has been hit as hard as or harder than any other county in the country.

In April 2011, the latest available data at the time of this writing, Imperial County's unemployment rate was 27.9%--the highest county unemployment rate in the country. This one-out-of-four unemployed was a substantially higher county unemployment rate than other well-known, hard-hit counties such as Miami-Dade County, Florida (13.2%), or Clark County, Nevada (Las Vegas 12.1%), or Wayne County, Michigan (Detroit, 12%), or Genesee County, Michigan (Flint, 10.8%) or Essex County, New Jersey (Newark 10.7%).[2] So while jobs are needed everywhere, jobs in Imperial County are needed more than almost anywhere.

Three kinds of jobs would have been created by the construction and operation of a 1250 MW photovoltaic electrical generating capacity in Imperial County. The first and most obvious are about 600 annual construction jobs required to build this capacity. Most construction jobs are short-lived. These jobs would have lasted much longer than most because we estimate that it would take about five years to put in place this amount of green power.

Once built, about 40 management, operations and maintenance employees would have been required for 25 or more years to work this facility or these facilities over their expected lifetime. Currently no one photovoltaic facility in place or planned generates more than 550 MW of power. So probably more than one facility would be required to put in place 1250 MW of photovoltaic generating capacity. But because solar facility sizes have been growing exponentially in recent years, one possibility would be a single large 1250 MW solar farm.

So this solar farm or farms would have created both construction jobs and utility careers. But these solar farms would have also created construction careers.

The work made available building 1250 MW of photovoltaic capacity would finance more than $4.5 million in apprenticeship classroom training plus valuable on-the-job experience. These funds and this work would have brought more than 100 new apprentices into the Imperial County construction industry.

Once turned out as journeyworkers, these newly skilled electricians, ironworkers, piledrivers and operating engineers would have entered well-paid, high-skilled, union construction careers. Over the lifetime of their careers, each of these new journeyworkers would have earned a present value of almost $1 million per worker more in income than they otherwise would have earned had they not received this skill-enhancing apprenticeship training.

Thus, the loss of 1250 MW of photovoltaic electrical generating capacity in Imperial County entails the loss of many fairly long-lasting construction jobs, plus the loss of careers in electrical utility operations, plus the loss of new careers for new apprentices in high-skilled, well-paid construction work, plus the loss of downstream spinoff jobs that would have been created by these lost construction and operation jobs, plus the loss of local, state and federal tax revenues that would have been generated by these lost jobs, lost careers and lost spinoff jobs.

All of these job and career losses are exacerbated by the aftermath of the Great Recession where job growth has been painfully sluggish and halting. Because Imperial County is one of the worst hit by the Great Recession, the proposal to outsource to Mexico 1250 MW of jobs building and operating California green energy generation rubs salt into an already gaping wound of unemployment in Imperial County.

And all of these job and career losses are exacerbated by the aftermath of the Great Recession where job growth has been painfully sluggish and halting. Because Imperial County is one of the worst hit by the Great Recession, the proposal to outsource to Mexico 1250 MW of jobs building and operating California green energy generation rubs salt into an already gaping wound of unemployment in Imperial County. So we begin by assessing how deeply wounded is the labor market in Imperial County.

The Great Recession and Unemployment: Imperial County among the Hardest Hit

We are in a slow recovery from the deepest jobs recession since the Great Depression. Figure 2 shows how severely the Great Recession and subsequent slow recovery have affected the U.S. labor market in comparison to previous recession since the World War Two (WWII). Starting at the upper left corner in Figure 1 at 0% job loss (and month zero shown on the horizontal axis), each colored line moving to the right represents in percentage terms, the path of job loss over the course of the downturn and recovery for each of the postwar recessions.[2]

As each line dips towards increasing percentages of job losses relative to the previous peak of employment, the US labor market shrinks. As these lines bottom out, job losses stop. As each line rises, employment begins to rebound back towards the peak established prior to that recession.

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Months, shown at the bottom of the figure, tick by. Eventually, each line except for the most recent recession (in red), comes back to 0% shown as a black dashed line in Figure 2. This means that at the month where the job-loss-line crosses the dashed 0% line, the economy has regained the employment height achieved prior to that recession. These job recession/recoveries vary in length from 9 months to 47 months. The current national job recession is in its 41st month. But it is far from over.

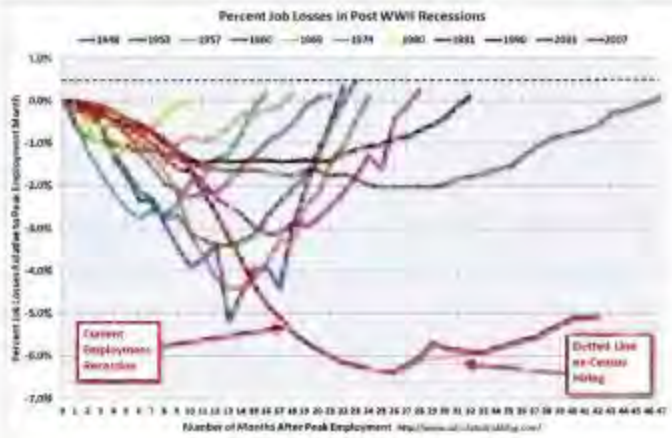

Figure 2: : Relative impact of post-WWII recessions on total non-farm employment

The Great Recession (in red) has brought the deepest job market losses of any recession since the Great Depression; and the Great Recession promises to last substantially longer than any other post-WWII recession before employment regains the level attained in January, 2008. We have waited three-and-one-half years for normal times to return; and a simple extrapolation of the red line shown in Figure 1 suggests that we may have two or more years yet to go.

Figure 2 based on 2010 annual average state unemployment rates, shows that among states, the labor markets in Nevada, California and Michigan have been hit the hardest by the Great Recession. As of April, 2011, Nevada's seasonally adjusted state unemployment rate was 12.5% and California's was 11.9%—the two highest state unemployment rates in the country.

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Figure 3: Annual average unemployment rate by state, 2010

Figure 4 shows that the unemployment rate in Imperial County, California, is among the highest in the nation. [3] However, this map understates the severity of unemployment in Imperial County because the black fill-color for Imperial County refers to unemployment rates of 14% ***and over***. Imperial County's unemployment rate is well over 14%. As mentioned, in April, 2011, Imperial County's unemployment rate was 27.6%, both the highest in California and also the highest in the country. [4]

Figure 3 shows California's unemployment rate is among highest of any state in the nation.

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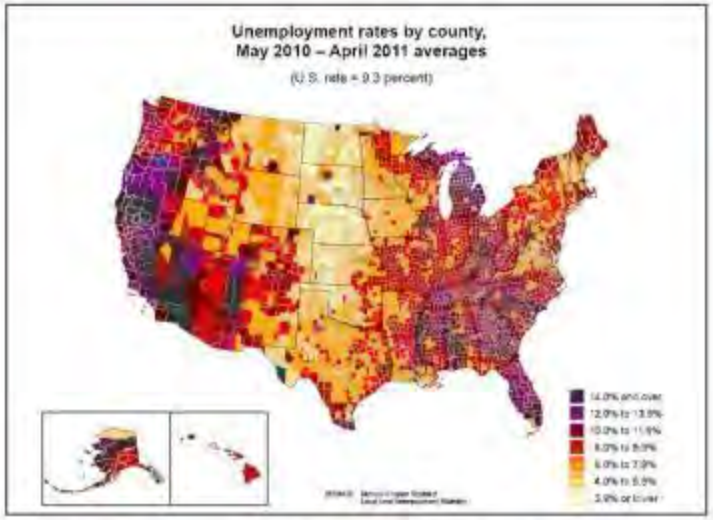

Figure 4: Annual average unemployment rate by county, April 2010 to March 2011

So Figure 5 uses a more sensitive scale of unemployment rates for California counties showing more precisely how dire conditions in Imperial County are. For these April, 2011 data, Imperial County has the highest unemployment rate, and Marin County has the lowest. Both of these are smaller counties and smaller counties tend to have more extreme labor market conditions. In this case, Marin County is small, well-to-do, and is avoiding the main thrust of the Great Recession while Imperial County is small, poor and receiving the full force of the economic crisis.

Figure 4 shows Imperial County's unemployment among highest in the nation. In April 2011, it was the highest.

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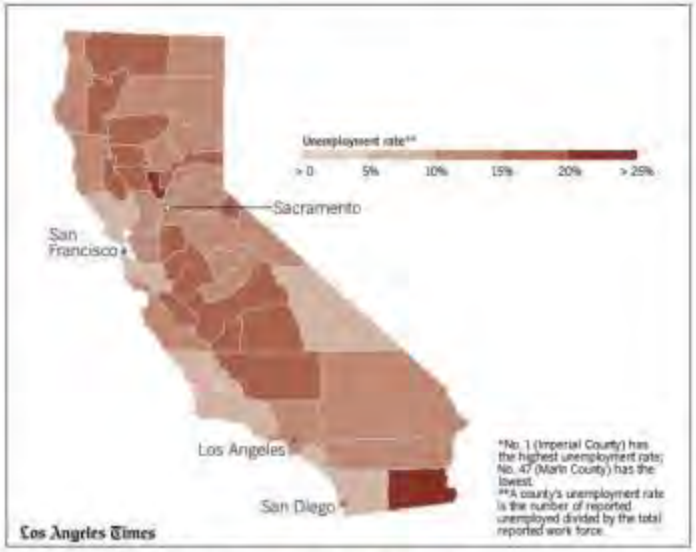

Figure 5: Unemployment rate by county in California, May, 2011[47]

In 2009, Imperial County had a population of 166,874.[48] There were 75,120 workers in Imperial County's labor force in April 2011. As suggested above, to some extent high local unemployment rates can be partially an artifact of small size. However, Imperial County has significantly higher unemployment than counties of similar size in California. Figure 6 shows that for 16 California counties with labor force sizes ranging between 40,000 and 150,000 in population, Imperial County has anywhere from one-third to three times higher unemployment than these comparable counties in April, 2011.[49]

Figure 7 shows Imperial County's unemployment highest in California.

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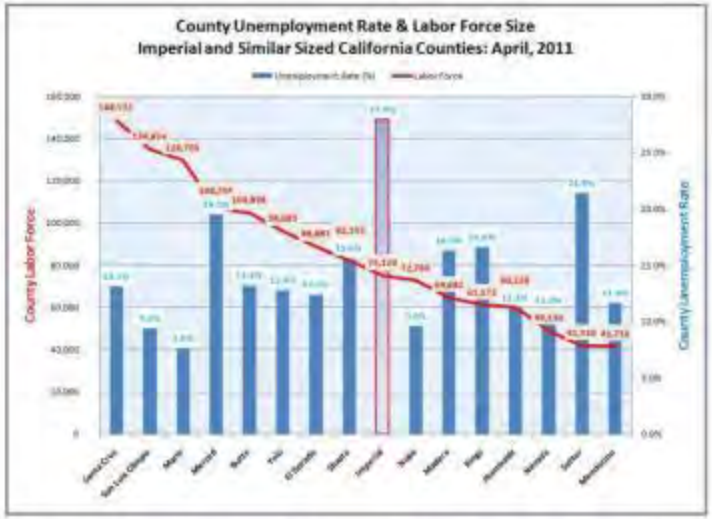

Figure 6: Imperial County unemployment rate compared to similar sized California counties, March 2011

Unemployment rates can also be regionally concentrated. And indeed, as mentioned, California has more than its national share of the job losses caused by the Great Recession. Nonetheless, Figure 7 shows that compared to the surrounding California counties of San Diego, San Bernardino, Riverside, Orange and Los Angeles, Imperial County's unemployment is substantially higher—more than twice as high as Los Angeles, San Bernardino and Riverside, and three times higher than Orange, and San Diego.[8] In short, the Great Recession has pounded Imperial County.

No county in the U.S. has been hit harder by the Great Recession than has Imperial County

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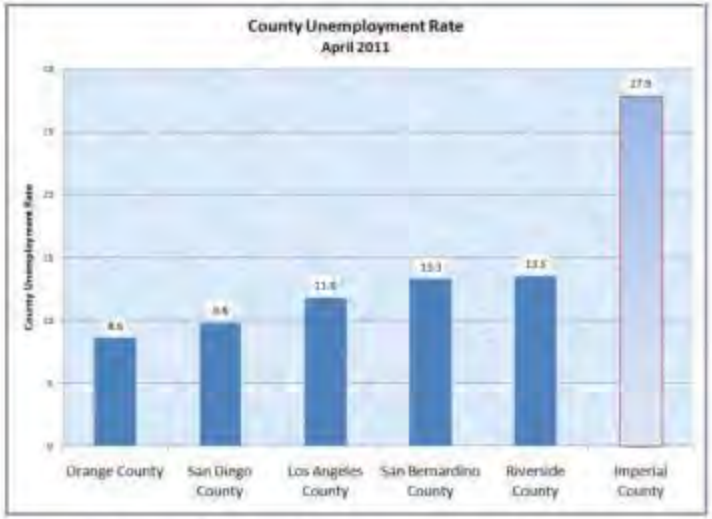

Figure 7: March 2011 unemployment rate in Imperial and surrounding counties

Figure 8 shows that however bad employment losses in the Great Recession look relative to previous recessions since WWII, as shown in Figure 2, things look worse when you look at California compared to the US during the Great Recession, itself. The solid lines in Figure 8 are percentage losses in total employment for the US (blue), California (green) and Imperial County (red). As also seen in Figure 1, the blue solid line in Figure 8 shows that the US has lost about 6 percent of all jobs compared to an employment peak in January 2008. In contrast, California has lost about 8 percent of all its jobs since an employment peak in July, 2007 (green solid line). So California has experience one-third more job loss compared to the U.S. as a whole.

Labor market outcomes are even worse when you look at Imperial County (red solid line) compared to California. Imperial County entered the Great Recession a bit later than did the state or the country. Nonetheless, after Imperial County employment peaked in April, 2008, the County has lost about 10 percent to 15 percent of its workforce. In percentage terms, this is twice the national job loss and at least 50% greater job loss than overall losses in California.

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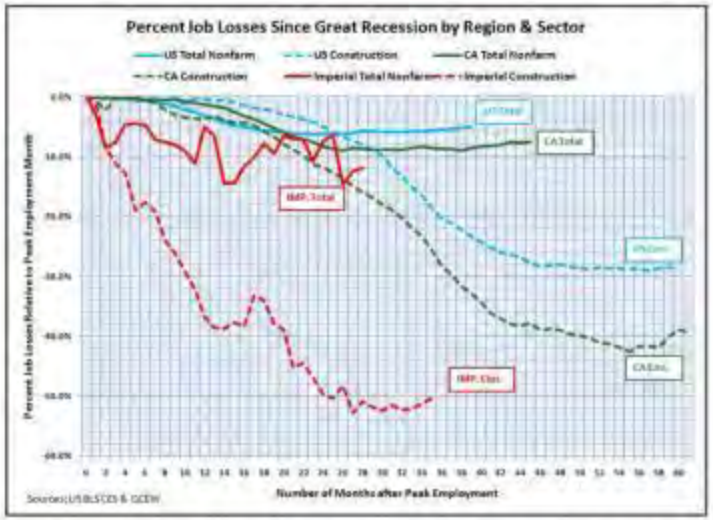

Figure 8: Percent job losses for the US, California and Imperial County since peak employment for total and construction employment

The story for construction, however, is much worse. In Figure 8, construction is represented by dotted lines. US construction has lost almost 30 percent of all employment since the Great Recession hit construction in April 2006 (blue dotted line). So nationally, (again in percentage terms) construction job loss is five times greater than total job losses.

California construction has lost over 40 percent of all its jobs since February 2006 (green dotted line). Imperial County construction again came late to the recession; but since October 2007, *more than 50 percent* of all Imperial County construction jobs have been lost (red dotted line). ***Thus, in percentage terms, no county in the U.S. has been hit harder by the Great Recession than has Imperial County, and ground zero for this labor market implosion has been the Imperial County construction industry.***

Since October 2007, more than 50 percent of all Imperial County construction jobs have been lost.

Section 3: Benchmarking Comparable Recent Studies

Two large-scale, central-station photovoltaic solar farms are nearing construction in San Luis Obispo County, California. The 250 MW California Valley Solar Ranch and the 550 MW Topaz Solar Farm, envisioned to be built at about the same time, together amount to 800 MW of solar generating capacity. Also the 550 MW Desert Sunlight Solar Farm is nearing construction in eastern Riverside County. All of the projects have received conditional loan guarantees from the US Department of Energy.[2] The two San Luis Obispo sites have been studied by both proponents and more skeptical analysts. The eastern Riverside site has been analyzed by proponents.

We will use these studies of the prospective local economic impact of building and operating 1350 MW of photovoltaic electrical generation capacity in rural California locations to create benchmarks for our analysis of the foregone opportunities in Imperial County foreshadowed by the prospect of building 1250 MW of green electrical generation capacity in Mexico instead of Imperial County.

All estimates of future economic impact of a new project depend upon the analyst's assumptions. Analysts must make informed assumptions regarding how many workers it will take to build the project, what the workers will be paid, how much materials and other business services which are required in the building and operating of the project will be bought locally, how long it will take to build the works, how much it will cost, etc. These and other assumptions are placed into a computer model that calculates the multiple effects of an initial changes, in this case the initial change being the building and operating a photovoltaic electrical generation facility. All of the aforementioned studies have used the same computer models that we will use, IMPLAN and JEDI. So any differences in estimating local economic impact are due, primarily, to differences in assumptions.

Usually these differences in assumptions make sense—for example, one project is bigger than another so naturally analysts assume that more workers will be required to build the bigger project. Wages might be different in different locations. One project may be on an accelerated timeline involving more scheduled overtime leading the analyst on that project to assume higher annual earnings per capita on that project due to overtime earnings. As discussed below, the primary difference in results in these various reports will be due to differences in assumptions regarding how many local construction workers and how many travelers would work on these projects. Because of the importance of this assumption, we will discuss our approach in some detail below.

Differences in local impact estimates can also be due to differences in the size of the local economy. Larger local economies have more businesses, more workers and a greater ability to meet the needs of a new project with local labor, supplies and services. Being able to meet the new needs locally creates more spinoff jobs in the local economy. San Luis Obispo County is a small county with about 270,000 people. Riverside is a much larger county with almost 2.2 million people. So when "local" means "county," a solar farm placed in Riverside County (albeit in eastern Riverside County) will purchase more labor and business services "locally" (i.e. within the county) compared to a comparably sized solar farm in a smaller county such as San Luis Obispo County or Imperial County which has a population of about 170,000 people. San Diego County would likely supply Imperial County in ways similar to the urban part of Riverside County supplying eastern Riverside County.

Indeed, large solar farms are not going to be placed in heavily populated areas with well established supply chains. Eastern Riverside County is really very similar to Imperial and San Luis Obispo counties. To some extent, what we call "local" is an artifact of the way data are collected on a county-by-county basis. In California, solar farms will be placed in rural counties such as Imperial and San Luis Obispo or in rural segments of more populated counties such as Riverside and San Bernardino.

One of the truly promising aspects of the green-power-generation initiative in California is that it promises to bring jobs to many of these rural areas. These large facilities can help provide an engine for rural economic growth creating denser economic development that in turn feeds on itself as these counties or rural segments of counties gain a greater economic foundation to meet more of their own local needs.

In any case, we review these four previous studies in order to provide benchmarks for judging our assumptions and conclusions regarding the local economic impact of building a 1250 MW photovoltaic electrical generating capacity in Imperial County. Because these three projects have been closely evaluated by others for their local economic impact, and because San Luis Obispo, Riverside and Imperial Counties are economically, geographically and/or demographically similar, we will compare our assumptions and conclusions to these four studies of three projects to help evaluate our conclusions regarding the loss of employment and wages associated with not building and operating 1250 MW of solar generating capacity in Imperial County.

We will compare our assumptions and conclusions to these recent four studies of three other California solar farms to help evaluate our conclusions regarding the loss of employment and wages associated with not building and operating 1250 MW of solar generating capacity in Imperial County.

The California Valley Solar Ranch (CVSR)

Of the three projects reviewed here, the 250 MW California Valley Solar Ranch Project (CVSR) may be closest to ground breaking. This project envisions building a 250 MW solar photovoltaic power plant at a cost of $450 million in California Valley, San Luis Obispo County, California. This planned facility is in the pre-construction phase, expects to break ground in the third quarter of 2011,[29] anticipates 32 months of construction employing 681 full-time-equivalent (FTE) job-years worth of workers.[30]

We have a schedule of anticipated employment by month and craft for this project which allows us to describe the project's labor curve and crew mix. Because an individual worker may work only part of the year on this project and be replaced by another for the remainder of the year, we need a standard unit to describe a "job." Following a standard convention in regional impact analysis, we define an "FTE job-year" as 2080 hours of work done by one worker or some combination of several workers replacing each other over the course of the 2080 hours which is 52 weeks times 40 hours per week. Figure 9 uses the percent of total hours anticipated for this facility to show how the project would ramp up over the first ten months of construction, run fairly steady for the next two years, and then finish off over a two month period of shows final-completion work.[31] This is a typical construction labor curve for this size and type of project.

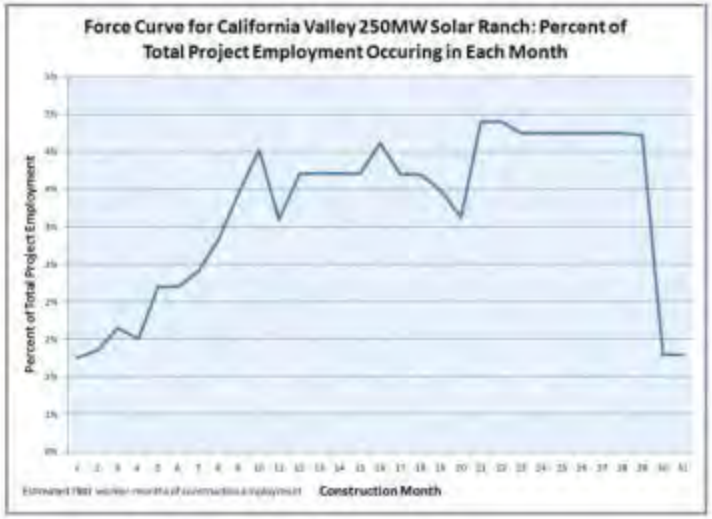

Figure 9: California Valley 250 MW Solar Ranch Force Curve

Figure 10 shows the distribution of work across craft occupations and administrative/professional workers on the project. Electricians account for just over 40% of the work while laborers and ironworkers together account for about 35% of the hours on the project. Piledrivers, operating engineers and carpenters together account for about 11% of the hours while administrators, professional, security and other personnel also account for about 11% of the hours on the job. In our own analysis, we will use this crew mix to help calculate the average wage on project like these based on wage rates by occupation in Imperial County.

Figure 10: California Valley 250 MW Solar Ranch Occupational Composition (crew mix)

Thus, on a large-scale photovoltaic solar project, we can expect a ramp-up period followed by fairly steady construction with a fairly brief wrap-up period prior to completion. Electricians will be the predominant craft on the project installing the solar panels. Operating engineers will do the initial dirt work of preparing the site. Ironworkers and piledrivers will set up the foundations. The "other" category is primarily administrative, engineering and supervisory personnel. We will use this information below to estimate the number and types of apprentices on this type of work as well as to help us calculate the number of local workers as opposed to traveling construction workers who will be found on this type of project. As mentioned, this information will also help us calculate an average wage across occupations.

Four Economic Impact Reports

We have four economic impact reports covering three photovoltaic solar projects to review. **i)** As part of the Environmental Impact Report (EIR) for the California Valley Solar Ranch project, Stephen F. Hamilton, Chair of the Economics Department at California Polytechnic State University at San Luis Obispo along with Darin Smith and Tepa Banda of Economic & Planning Systems, Inc., released a study of the local employment and fiscal impact of the CVSR in December, 2010. **ii)** Stephen Hamilton again, along with Mark Berkman of the Brattle Group released a similar report for the nearby Topaz Solar Farm in March, 2011. **iii)** In January, 2011, the Aspen Group, also as a part of the CVSR EIR, released a study

that combined the impacts of CVST and Topaz together because these two projects would occur in the same county at approximately the same time.[6] [iv] Finally, in May of 2011, Wesley Ahlgren of the Coachella Valley Economic Partnership and Mark Berkman of the Brattle Group released an economic impact study of the Desert Sunlight Solar Farm to be built in eastern Riverside County.

Thus, at the time of this writing, over the space of the previous seven months, four reports covering three large photovoltaic solar farms projected for two counties, and ranging in nameplate capacity from 250 MW to 550 MW to a combined 800 MW, have been released. The three projects collectively account for 1550 MW of photovoltaic electrical generation capacity. The authors drew information from the developers, SunPower and First Solar, upon which they based their a) local input purchase, b) employment and c) wage assumptions. In one case, the Aspen Group provided two sets of wage assumptions, one based on the builder's information and another based on state wage surveys. In all cases, a time frame for construction and operation came from the developers.

In terms of perspective, three reports were done in association with the developer while the Aspen Group's report was done on behalf of the County for the EIR. So three might be more optimistic regarding the beneficial impacts of these projects and Aspen might be somewhat more skeptical.

In terms of perspective, three reports were done in association with each project's developer while the Aspen Group's report was done on behalf of the County for the EIR. So three might be more optimistic regarding the beneficial impacts of these projects and the fourth might be somewhat more skeptical.

Table 1 shows many of the relevant assumptions used by these various analysts to assess the economic and fiscal impacts of building these three photovoltaic projects in the near future. In column b, for the 250 MW California Valley Solar Ranch in San Luis Obispo County, based on information provided by SunPower, Hamilton, Smith and Banda assumed the construction project would last 32 months; on average 264 FTE construction, supervisory, on-site engineering and other personnel would be employed annually. On average, these workers would earn $68,135 per year in wages and an additional $37,004 in benefits. Over the 32 months of expected construction, these 264 FTE jobs would amount to 681 FTE job-years. Total wages from these new jobs would amount to $72 million in new wages (681 times $68,135) and total benefits would add up to an additional $25.2 million (681 times $37,004).[7]

Hamilton, Smith and Banda do not explicitly consider overtime wages that may be earned on this project. Recall an FTE job-year is 2080 hours of work (40 hours per week times 52 weeks). Using FTE jobs is standard for this kind of analysis and all the reports under review use this concept. However, this approach assumes away the possibility of overtime. Overtime is not uncommon in industrial construction, particularly when a contractor is seeking to accelerate towards the project's final completion, or the contractor at various points in the construction process tries to avoid bottlenecks along the critical path by using overtime to complete strategic tasks. Furthermore, contractors intending to accelerate construction from the outset may include scheduled overtime in their initial planning. While overtime is common in industrial construction, it is often ignored in analyses like the ones under review here.[8] Following this custom, we will ignore the possibility of overtime in our estimates of economic impact as well.

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Table 11 Analysts assumptions for various photovoltaic solar projects in San Luis Obispo and Riverside counties and assumptions for Imperial County[39]

Notes for column b, Table 1:

- total FTE construction-job-years = 1000 = 1250 MW * 2.4 job-years per MW,
- annual construction jobs = (total FTE construction job-years)/(5 years),
- average annual construction wage income = average hourly wage rate * annual hours worked = $32.05 * 2080 (see below for derivation of hourly wage rate),
- for average construction annual benefits plus payroll taxes see Table 5 and its discussion below,
- average annual permanent operation jobs = 40 = 1250 MW / 31.2 where 31.2 = average MW per operation job on other projects,
- operation job_years = 1025 = 40 * 25 years,
- operation average annual wage income = average for other projects in Table 1,
- operation average annual benefits = average for other projects in Table 1,
- total annual compensation including payroll taxes = annual wages + benefits,
- total wages (millions) = annual average wage * FTE job_years,
- total benefits (millions) = annual average wage * total FTE job_years

In addition to these 264 construction workers and 681 construction job-years in column b for CVSR, Hamilton, Smith and Banda assumed that there would be 12 permanent FTE jobs operating and maintaining the 250 MW facility after it was constructed; they assumed a 25-year worklife for the facility, thus creating 300 FTE operation and maintenance job-years over the life of the facility (12 jobs times 25 years). On this project, Hamilton, Smith and Banda assumed that operation and maintenance workers would receive, on average, $66,667 in wages (in today's dollars), $36,333 in benefits (including payroll taxes) for an annual total compensation of $103,000. Over 25 years, these new jobs would inject into the economy $20 million in wages (300 FTE job-years times $66,667) and $11 million in benefits (300 FTE job-years times $36,333) for a total of $31 million in new dollars from new jobs.[40]

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Hamilton, Smith and Banda do not consider how many of the construction workers on this project would be new apprentices. Nor do they consider the economic impact over their career of apprentices becoming journeyworkers, gaining new skills and earning more than they otherwise would have if the opportunities of investment in training not been created by this facility. Thus, while we will see that in other ways this Hamilton, Smith and Banda study is perhaps the most optimistic among the reports under review, on this key issue of human capital formation, these optimists understate one of the key benefits of the CVSR project. The benefit of substantial human capital investment in a local apprentice on a project such as this is both immediate and lifelong. And it is a benefit that accrues not only the apprentice-turned-journeyworker but also to the community that enjoys the long term economic development advantages of more human capital in their labor market and more spending over a lifetime in their consumer market.[1]

In column c of Table 1, for the Topaz project in San Luis Obispo County, Hamilton plus Berkman of the Brattle Group (Berkman will be involved in the Riverside study), based on information from First Solar, assume an annual average of 400 construction workers over 36 months are required to build this 550W solar facility. This amounts to 1200 FTE job-years over 36 months with average annual wages of $65,000 and benefits of $43,250. These jobs would inject $167 million in wages into the local economy which they define as San Luis Obispo plus adjacent Kern counties. Defining the local area larger allows for more workers to be "local" and more supplies to be provided "locally" resulting in a larger local impact. We will see this difference in our own work below when we compare the loss associated with not building 1250 MW of green electrical generating capacity in Imperial County to the wider loss experienced by the overall California economy from that same initial failure to build this capacity within the state.

> *Thus, in looking at the consequences of building 1250 MW of green electrical generating capacity in Mexico, as we lift our gaze from analyzing the resulting loss for Imperial County, to the loss for California, to the loss for the U.S. as a whole, not building and operating in Imperial County has a greater and greater negative impact in terms of lost spinoff jobs. All of these lost jobs, in turn, mean greater lost tax revenues not only at the local level, but also at the California state level, and ultimately in other states as well and at the national level.*

Larger economic regions have longer supply chains and denser consumer markets allowing for greater spinoff benefits from an initial new economic activity. In these studies under review, the question posed is how will the new facility they are considering benefit the local county or region in which the facility is located compared to building this facility somewhere else in California? In our case, it is not a matter of building somewhere else in California or even somewhere else in the United States: the Sempra proposed alternative in our case is building in Mexico.

Consequently, the loss associated with approving the Sempra decline and importing dedicated-for-export green energy from Mexico is a loss not only for Imperial County, nor only for California, but also for the U.S. as a whole. As we move our perspective from the county to the state to the nation, supply lines and consumer services lengthen and deepen. As we expand our geographic scope, there simply are more Americans out there standing ready to meet the new supply-chain demands for building this green capacity in Imperial County and meet the consumer-chain demands of workers with new money to spend.

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Thus, in looking at the consequences of building 1250 MW of green electrical generating capacity in Mexico, as we lift our gaze from analyzing the resulting loss for Imperial County, to the loss for California, to the loss for the U.S. as a whole, not building and operating in Imperial County has a greater and greater negative impact in terms of lost spinoff jobs. All of these lost jobs, in turn, mean greater lost tax revenues not only at the local level, but also at the California state level, and ultimately in other states as well and at the national level.

Returning to Hamilton and Berkman's analysis of the 550 MW Topaz project, they assumed 17 operation and maintenance FTE-jobs per year over 25 years with an annual average wage of $65,200. Hamilton and Berkman do not provide an assumption regarding operation workers' benefits. Similarly, in column F for the Desert Sunlight project in Riverside County, Berkman along with Tran and Aldgren again do not provide a benefit estimate for operation personnel.

While in some respects, the two Berkman reports are the more optimistic of the four reports under review, this assumption of zero benefits and no payroll taxes for operator and maintenance workers downplays the positive benefits of these new facilities.

The CVSR and Topaz studies were based on information from two separate developers, SunPower and First Solar. These two developers provided substantially different construction worker average, annual, FTE total compensation including payroll taxes. SunPower indicated a total compensation of $105,140 while First Solar planned for $138,750 in total compensation. It appears that First Solar was planning to schedule substantial overtime due to the fact that it planned to build a larger 550 MW Topaz project in about the same time as the 250 MW CVSR project with only some additional workers. The CVSR project assumes 32 months to put in place 250 MW while the Topaz project assumes only 4 additional months to put in more than twice the nameplate capacity (550 MW vs. 250 MW) with only half again more workers (400 vs. 264). So the total compensation discrepancy between these two projects is probably due to differences in scheduled overtime on the bigger Topaz project.

The Aspen Environmental Group was asked to provide a separate assessment of the economic and fiscal impact of the CVSR project. Aspen chose, in part, to combine CVSR with Topaz in order to get a sense of what the full impact of 800 MW of photovoltaic solar construction scheduled for about the same time in about the same location would be on the local economy.[4] Reflecting a more conservative approach, Aspen defined "local" as San Luis Obispo County excluding Kern or other adjoining counties.

Aspen also presents a low-wage scenario (column d) with wages based on government wage survey data and a high wage scenario (column c) based on First Solar data. Aspen's low-wage scenario is naïve for two reasons.

First, typically government surveys of construction wages yield average wages lower than the wages paid on industrial construction. This is because government surveys include both industrial and residential construction workers in the same average wage. Because industrial construction requires greater skills than residential construction, averaging the two sets of wages puts apples and oranges together yielding an estimated wage lower than those prevailing on industrial construction projects. Second, in the case of the CVSR project, a project labor agreement has been signed based on wages reflecting industrial construction wage rates and not the lower average wage rates of government surveys which meld residential and industrial wages together.

Aspen's presentation of this low-wage scenario reflects its skeptical or conservative stance relative to the more optimistic reports under review. But in this instance, Aspen's skepticism may not be warranted because its low wage scenario relies on surveys that are not particularly germane to this type of construction work.

In any case, Aspen assumes 1842 FTE job-years in both their high-wage and low-wage scenarios for the two CVSR and Topaz projects taken together. This is very close to the assumptions of the other analysts in considering each job separately (681+1200= 1881 FTE job-years). The Aspen low-wage scenario is only a low-wage scenario for construction workers. They have only one estimate of total compensation for maintenance and operations personnel and their estimate of operator compensation estimate is very much in line with those of the other reports at about $103,000 per year including benefits and payroll taxes.

Berkman, Tran and Ahlgren (column f) analyze the impact of the 550 MW Desert Sunlight project in eastern Riverside County. They assume 1353 FTE job-years to get this facility into place over 26 months.[9] The San Luis Obispo Topaz and Riverside Desert Sunlight projects are both 550 MW jobs. They are roughly comparable in expected construction FTE job-years (1200 over 36 months for Topaz vs. 1511 jobs over 26 months for Desert Sunlight). The higher Desert Sunlight construction FTE manpower requirements may be due to the planned accelerated schedule (26 vs. 36 months). Differences in planned overtime probably explains the differences in construction worker total compensation estimates across all three projects--Desert Sunlight with the fastest schedule ($145,602) vs. Topaz with a slower schedule but fewer workers per megawatt ($138,750) vs. the smaller CVSR project ($105,140) with a slower schedule and more planned workers per megawatt.

Developers and contractors on large industrial projects sometimes have strong economic interests in accelerating construction to get to market faster even if it means a considerable increase in construction labor costs either through scheduled overtime or overmanning the job. Much of the variation in total compensation for construction workers found in Table 1 may well reflect variations in developer/contractor strategies regarding the use of overtime in building the project. Both 550 MW projects (Topaz and Desert Sunlight) assume a 25 year life with 15 operators annually employed.

We will return to Table 1 later to compare our assumptions to these previous reports. We will be seeking a middle ground between the more conservative Aspen approach and the more optimistic approaches of the other reports.

Section 4: Estimating Employment and Earnings

Hourly Compensation Assumptions for Imperial County

In our analysis, we will use the prevailing wages and benefits for construction crafts in Imperial County as the basis for calculating construction worker earnings in the building of photovoltaic solar capacity there. Table 2 shows the hourly wage rate, health, pension, vacation and apprenticeship training contributions for the various construction trades typically found building photovoltaic electrical generation utility construction projects. (See Figure 11). The apprenticeship hourly wage rate in Table 2 is set at 60% of the journeyworker hourly wage rate reflecting a mixture of beginning and advanced apprenticeship wage rates. (Apprentices start out at 40% or 50% of the journey worker wage, and this percentage rises as the apprentice works towards graduation.) At 2080 hours, annual wage income for

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these crafts runs between $54,371 (laborers) to $77,688 (carpenters). These wage incomes do not assume any overtime and fall within the range of wage incomes shown for the other analysts' reports in Table 1 some of which may include scheduled overtime earnings.

Table 2: Hourly wage rates, benefits and training contributions by craft, Imperial County[41]

	Journey worker hourly wage	Apprentice hourly wage ([illegible])	Health	Pension	Vacation	Training	Total Compensation (journeyman)	Apprentice Total Compensation (apprentice)
Laborer	$26.14		$5.78	$4.87	$2.42	$0.64	$38.59	
Electrician	$36.63	$21.98	$6.40	$4.35	$0.00	$0.55	$48.54	$33.48
Piledriver	$27.28	$22.17	$3.95	$3.40	$2.30	$0.42	$46.16	$31.45
Carpenter	$37.35	$22.41	$3.95	$3.41	$1.90	$0.42	$48.42	$32.49
Ironworker	$33.09	$29.80	$7.38	$7.54	$3.92	$0.72	$55.09	$39.88
Operating Engineer	$35.43	$31.50	$10.70	$5.56	$2.42	$0.69	$55.79	$41.46

Annual total compensation including apprenticeship contributions at 2080 hours per year runs between $69,572 for a piledriver apprentice to $116,043 for an operating engineer. Again these total compensation estimates fall within the range for other analysts shown in Table 1 (although their estimates include payroll taxes while these calculations, as yet, do not). In order to calculate an average hourly wage rate and an average annual total compensation (sans payroll taxes), we need to estimate the mix of apprentices and journey workers as well as the mix of crafts that would build photovoltaic solar farms.

Employment Assumptions for Imperial County Projects

For each of the previous studies, row 14 of Table 1 shows the FTE worker job-years required to put in place one megawatt of nameplate capacity (which equals total job-years/total megawatts). These worker-years-per-megawatt ratios range from a low of 2.2 in the Hamilton and Berkman report for the Topaz project to a high of 2.7 in the Hamilton, Smith and Banda study of the CVSR project with an average of 2.4 across all projects. Some of this variation has to do with how accelerated the construction of the project is. Projects using more overtime will require fewer workers because each worker is working more. We will assume the average of 2.4 FTE-worker-years per megawatt-put-in place to calculate the total FTE job-years required to build 1250 MW of nameplate photovoltaic solar capacity in Imperial County.

This assumption results in an estimated 3000 FTE worker-years to build 1250 MW of photovoltaic solar capacity shown in Table 1 column (3000 FTE job-years=2.4 times 1250). The other projects shown in Table 1 range in size from 250 MW to 550 MW to a combined 800 MW for the two San Luis Obispo projects. These projects are assumed to take from 26 months to 36 months to complete. We will assume that putting 1250 MW of nameplate capacity in place in Imperial County will take 5 years. This assumption allows the total capacity to be on-line by 2020 helping to meet California's new green electrical generation requirements.[42]

There is a tradeoff associated with the assumption regarding the length of projects and their local economic impact. For any given size project, the shorter the assumed length of construction, the more overtime must be paid to accelerate construction or the more workers per megawatt must be employed to finish quickly. Thus, shorter projects generate more total wage income per megawatt due to scheduled overtime or alternatively to crowding the job with more workers. By itself, this means a greater offsite

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local impact of the new work due to more disposable income for workers to spend in the local community. On the other hand, accelerated work puts pressure on the local labor market due to increased labor demand per megawatt installed. Thus, while overtime may simply mean using local workers more intensively, crowding the job with more workers may mean more travelers which in turn may mean more wage income spent outside the local community. In assuming 5 years to construct 1250 MW of solar capacity in Imperial County, we are seeking a balance between these two effects. We are assuming a longer set of jobs or jobs stung seriatim over a longer period, which means that this nameplate green-electrical capacity will more easily be built with local labor; but we are also assuming no overtime which means the local labor will earn less. This reflects the kind of balancing of assumptions analysis must do in estimating the local economic impact of building new industrial capacity and also our effort to make moderate assumptions.

Table 1 (column h) shows that it it takes 3000FTE worker-years to build 1250 MW of photovoltaic generation capacity, and if the construction projects together lasts 5 years, on average, 600 FTE workers would be employed per year. With a local Imperial County construction labor force of about 2000 workers and currently, with about 50% of these workers unemployed, it is conceivable that local workers could meet the 600 FTE workers-per-year required by the envisioned Imperial County facilities.[8] All the previous reports except Aspen do assume that local construction workers would build the facilities they reviewed.

However, because some of the skills required on these types of projects are scarce, in the case of Imperial County, it probably is too aggressive to assume that all the workers could be recruited locally. Laborers and apprentices will probably all come from the local labor force given the extraordinarily high local unemployment rate and the limited skill barriers confronting beginning apprentices and laborers.[9] Some already trained journeyworkers for the other crafts are likely to travel to this work from San Diego and other Southern California counties or perhaps even from Nevada or Arizona. Some professional and engineering staff may move to Imperial County for the duration of these projects which for our purposes would make these professional quasi-local workers in the sense that they would be spending much of their income locally.

Only the Aspen Group report among the studies summarized in Table 1, explicitly divides the construction workforce between county-local and outside-the-county traveling construction workers. Aspen assumes that 64 percent of the workers on the CVSR and Tenaz sites come from San Luis Obispo County.[10] Assuming, as they do, that fewer construction workers are sourced locally reduces their estimate of the economic impact of new jobs because traveling construction workers spend less in the local community where the construction job takes place.

Aspen's approach reflects their more conservative or skeptical stance regarding the local benefits of these solar projects built in rural areas. With a modification, we will follow Aspen's conservative assumption. Aspen does not distinguish between apprentices and journeyworkers; nor do they distinguish between laborers and the more skilled crafts. While a large project may require some already skilled construction workers to travel from elsewhere, apprentices can be sourced locally especially in places such as Imperial County where a well-paid construction career is worth going into and overall unemployment rates are high. With typical apprenticeship ratios of 3 journeyworkers to 1 apprentice[11] and a construction time frame of 5 years, many new entrants to industrial construction could be trained on this facility. We will estimate the number of apprentices by craft on this project below. Further below

we will estimate the long-term local impact of creating a new generation of skilled construction workers in Imperial County.

Here we will assume that the apprentices on this job will be locally sourced. We will also assume that the laborers on this job will also be locally sourced. Figure 10 (above) shows the projected occupational composition for the CVSR project. We use these percentages in Table 3 to calculate the estimated local and nonlocal workers for the Imperial County projects. The percent of each craft plus administrative and professional workers among all FTE workers is shown in the first row of Table 3. For 3000 FTE job-years, these percentages are translated into FTE job-years per occupation in row 2. Based on an apprenticeship ratio of 3 journeyworkers to 1 apprentice, the number of FTE apprentice job-years by occupation is shown in row 3. Rows 4 and 5 reflect the assumption that all apprentices on the jobs are locally sourced. There are an estimated 514 FTE local apprentice job-years which over a 5 year construction period is about 103 FTE apprentices on the projects each year.

So our assumption for skilled craft workers will be the same as Aspen's (the most skeptical analysis) that 64 percent of the skilled craft journeyworkers will be local to Imperial County and 36% will be travelers. In contrast to Aspen, we will assume that all the apprentices and laborers on the project will come from Imperial County. Our assumptions balance the differences between the more conservative Aspen approach with the more optimistic approaches of the other analysts.

This the 5-year construction of this 1250 MW of solar capacity means that at least 100 Imperial County young people would have entered well-paid construction careers had this capacity been built in Imperial County instead of Mexico. But given that many of these apprentices would be rotated out of this work into other jobs elsewhere in order to expand their work experience, probably many more Imperial County youth would have become skilled construction craft workers due to this new work opening the door for them. We will discuss the lost economic value and impact of this foregone opportunity in more detail below.

Row 6 in Table 3 shows the estimated number of journeyworkers by occupation plus professional and supervisory workers while rows 7 and 8 show the locally sourced and travelers among these workers. As stated above, we assume that all the laborers on the project would have come from Imperial County and also we assume that the professional workers either would have come from Imperial County or more typically, for this kind of industrial construction, we assume that these professional workers would have moved to Imperial County for the duration of the project.[6]

Row 9 shows the basic results in Table 3. For occupations other than laborers and professionals we assume that 50% of the journeyworkers and 0% of the apprentices for a combined 27% of these FTE craft workers would have been travelers from outside Imperial County. We assume that laborers, apprentices and professionals would have been all local (or in local residence) with the result that overall we estimate that 19% of the FTE construction workers on this project would have been from outside Imperial County and 81% will be local. This compares to Aspen's assumption that 64% would be local and the other reports' assumption that 100% would be local. Again our approach reflects the kind of balancing of assumptions required to estimate the local economic impact of building an industrial project such as a 1250 MW of solar capacity.

Table 3: Estimated number and percent local FTE workers vs. travelers on Imperial County projects

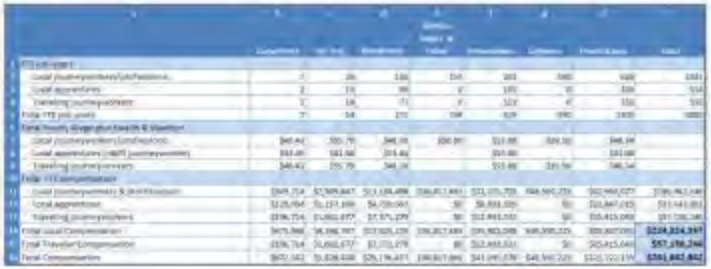
Source: see Figure 10; note components may not sum to total due to rounding error

Because the envisioned facilities would have operated for 25 years, we assume that all the operations personnel would have been either local or would have moved to Imperial County and become local. Based on the average megawatts per FTE operations and maintenance workers assumed in the various reports summarized in Table 1, we assume that there will be 40 maintenance and operating workers for this 1250 MW of solar facilities. (See Table 1.)

Average Hourly Wage Rate and Annual Earnings

Table 4 takes information on FTE job-years by craft and journeyworker/apprentice from Table 3 and combines it with hourly compensation information from Table 2 to calculate total compensation by local journeyworkers and apprentices and travelers on this project. Rows 2 through 5 in Table 4 show the FTE job-years by craft broken down by local and traveling journeyworkers plus apprentices. As in Table 3, we assumed that all the apprentices plus all the laborers would have been locally sourced. Column e in row 2 shows the FTE job-years for the professional, administrative, engineering and other non-craft workers on these sites. Again, as in Table 3, we assume that the professional workers would have been either locally sourced, or more likely, would have moved to Imperial County for the duration of the projects.

Table 4: Calculating total compensation by craft



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Rows 7 through 9 transfer the hourly total compensation including apprenticeship contribution information from Table 2. While we have precise information on compensation for the construction crafts from prevailing wage determinations, we must estimate the professional and other non-craft, on-site, hourly total compensation rate; and we set that at $50 per hour. This reflects a mixture of better-paid professionals and other non-professional white collar workers that would have been on-site.

Rows 11 through 13 in Table 4 multiply the FTE job-years shown in rows 1 through 4 times the corresponding hourly compensation rates shown in rows 7 through 9 times 2080 hours per year. (Again: this 2080 hour figure assumes no overtime).

Column 1 provides totals for each row with the punch lines found in rows 14 through 16. Row 14 shows the total local wages plus benefits (including training contributions which do not go to the worker but rather to the local training program) paid on this project. Line 15 shows the total for travelers and line 16 shows the grand total for compensation.

A set of calculations similar to those of Table 4 shown in a footnote yield an average hourly wage rate of $33.23 with traveling workers earning, on average, $35.97 per hour and a local average hourly wage rate of $32.60.[1] Locals include apprentices and laborers who would have earned less relative to journeymen craft workers pulling down the local wage relative to travelers. On an annual basis, across crafts and including both journeyworkers and apprentices, the average wage rate of $33.23 yields an annual wage income excluding benefits of about $69,100 per year.

We calculate an average hourly wage rate of $33.23 across all crafts including laborers and apprentices. The average annual income plus benefits of all workers on these projects is $93,894 with an average hourly total compensation of $45.14.

Adding the employer share of payroll taxes (6.2% for Social Security, 3.4% for Unemployment Insurance and 1.45% for Medicare) adds 11% to total compensation yielding an average hourly payroll cost of just over $50, and an average annual per capita payroll cost of $104,223.

This total compensation estimate of $104,223 is below most of the estimates for construction workers in previous studies shown in Table 1. Lower total compensation estimates decrease the calculation of the negative impact of not creating these new jobs.

Table 5: Average hourly and annual total compensation by Imperial County and traveling worker

Total Compensation		
	Hourly	Annual
Imperial County	$44.15	$91,834
Travelers	$49.50	$102,988
Average	$45.14	$93,894
CA Payroll tax 11%	$50.11	$104,223

Table 5 is derived from column 1 of Table 4 and shows the average hourly and annual compensation per worker by Imperial County and traveling workers. Because apprentices and laborers would have been both local and paid less, Imperial County workers, on average, would have earned less than travelers. The average annual income plus benefits of all workers on these projects is $93,894 with an average hourly total compensation of $45.14. Adding the employer share of payroll taxes (6.2% for Social Security, 3.4% for Unemployment Insurance and 1.45% for Medicare) adds 11% to total

compensation yielding an average hourly payroll cost of just over $50 and an *average annual per capita payroll cost of $104,225*.

This total compensation estimate of $104,225 is below most of the estimates for construction workers in previous studies shown in Table 1 line 20, and is similar in the assumptions these studies made for the total compensation of operations and maintenance workers. (Table 1, line 30)

All other things equal, lower total compensation for construction workers leads to a smaller economic impact from the building a project. Thus, relative to the more optimistic reports reviewed above, our approach tends towards the more conservative both in terms of the number of locals who would have worked on these projects and in terms of how much they would have been paid. However, our approach is more optimistic than the low-wage Aspen scenario which has both a lower estimated wage and fewer local workers compared to our assumptions. We believe that the Aspen approach is too conservative because 1) its low wages rely upon surveys dominated by residential rather than industrial construction workers, and 2) Aspen does not consider that laborers and apprentices are likely to be almost entirely locally sourced. Otherwise, our assumptions regarding the percent of local journeyworkers is the same as Aspen's.

Section 5: Local Economic Benefits Lost

1: Apprentices: More than 100 Lifetime Careers Lost with a Net Present Value Loss of $127 Million in Wages and Benefits

One advantage of the International Brotherhood of Electricians (IBEW) and other craft-oriented apprenticeship programs (operating engineers, ironworkers, pile drivers) that would have filled roughly 25% of the required craft labor supply in building this solar capacity in Imperial County is that craft training is rounded training. Apprentices learn a full range of skills in their craft enabling them not only to construct solar farms but also to build other green electrical facilities and other industrial and commercial facilities more generally. For instance, an electrical apprenticeship program includes not only the skills needed for traditional construction but the skills required to also build green energy projects:

> Electricians employ the use of a variety of green technologies including energy efficient lighting, systems and appliances; motion and occupancy sensors, dimmers, timers, and smart power strips; and PVC free cables. They install wireless switches for remodeling, electrical consumption economizers - devices that reduce energy use of AC units - and programmable thermostats as well as daylight harvesting system, which uses photosensors to detect light levels in a room. Electricians also are knowledgeable about different types of renewable energy, such as solar, wind, and geothermal, and are able to integrate these sources into a comprehensive energy efficiency system. In addition to working on commercial and residential building retrofits, they also work on wind turbine installations, parking lot electrical outlets, electrical vehicles, mass transit and light rail projects, and smart electrical grid transmission systems. [8]

Imperial County has a growing need for green skills associated with the building of centralized green electrical generating facilities and also due to the installation and retrofitting of green technologies on commercial and residential buildings. Thus, the 1250 MW of lost work that we consider here is a foregone future for young Imperial County residents. This lost work could have proved to be a major

stepping stone for Imperial County youth towards well-paying and lasting careers in an expanded and better skilled Imperial County construction workforce. In other words, this 1250 MW of work would have been a gift that kept on giving after the solar capacity, itself, was complete.

All collectively bargained agreements in California construction require paying training contributions into registered apprenticeship programs. Table 6 shows the hourly training contribution by craft for the 2011 collectively bargained agreements applicable to Imperial County. They range from 24 cents per hour of work for Operating Engineers to 86 cents per hour for electricians. The next column in Table 6 shows the percent of all work done by each craft based on the force curve provided by SunPower for the California Valley 250 MW photovoltaic solar project.[1] Total hours for this project were calculated by multiplying 2080 hours (52 weeks times 40 hours per week) against the 680 full time equivalent blue and white collar workers projected to build this 250 MW facility. The next column multiplies total hours times each craft's share of these total hours and then times each craft's hourly apprenticeship contribution. The result is an estimate of the apprenticeship training investment emerging from the building of the California Valley project with the caveat that this calculation used the training contributions that would apply to work in Imperial County. The last column multiplies these training investment sums by 5 to scale up apprenticeship training investment from a 250 MW facility to 1250 MW of photovoltaic solar generating capacity.

Table 6: Investment in worker training by craft from the construction of 250 MW and 1250 MW of solar generating capacity

Occupation	Training Contribution per Hour	Share of Total Hours	Training investment from a 250 MW Project = Total Hours for a 250MW Project *Share*Training Contribution	Total Investment in Training from a 1250MW Project = 250MW investment * 5
Carpenter	$0.42	0.34%	$1,432	$7,161
Op. Eng.	$0.24	1.79%	$4,073	$20,366
Pile/drive	$0.42	9.05%	$33,744	$168,720
Ironworker	$0.72	11.97%	$142,269	$711,348
Laborer	$0.68	19.67%	$178,034	$890,169
Electrician	$0.86	43.48%	$518,919	$2,644,882
Total			$918,489	$4,552,444

Sources: training contribution rates: http://www.dir.ca.gov/OPRL/pwd/index.htm
Total and share of hours on project:
http://www.californiavalleysolarranch.com/pdfs/Economic_Impact_to_SLO_-_Final.pdf
[Total hours on 250 MW project = 680 FTE job years * 2080, total hours on 1250 MW project = 5*total hours on 250 MW project]

The results in Table 6 may surprise those not familiar with the amount of formal training that actually occurs in unionized construction. More than half of this investment on a project like the SunPower California Valley project would have gone towards the training of new electricians. SunPower estimates that there would be 204 FTE electrician job-years on their 250 MW project. Because this project is anticipated to run for almost 3 years, there would be about 100 FTE electricians on this project in any one year (equaling about 300 electrician job-years over 3 years). For 1250 MW of solar generating capacity, we could have anticipated about 5 times as many electrician job-years or about 1500 job-years for electricians over five years. This means that about 300 FTE electricians per year would have worked on these Imperial County projects.

With a journeyworker-to-apprenticeship ratio of 3:1, 300 FTE electricians in total would imply 225 FTE journeyworker electricians and 75 FTE electrician apprentices on the job each year over a 5 year period. The electricians' apprenticeship program lasts five years and involves 1,120 hours of classroom training and as well as 8000 hours of on-the-job training.

Union contractors building 1250 MW of solar generating capacity in Imperial County would have at the same time invested more than $4.5 million in apprenticeship training over five years.

> During the first three years of apprenticeship, [electrician] apprentices go through (a) compressed and vigorous curriculum two nights a week – one night for lecture and one night for hands-on applications of their skills. Apprentices are required to pass various competency assessments to successfully complete their classes. In the last two years of apprenticeship, apprentices have the choice of selecting a "career path" or specialty field. Each career path comprise of several continuing education and skill improvement classes. Typical "career path" classes consists of the following: AutoCAD, Advanced Motor Controls, Low Voltage, Electrical Certification Prep, Electronics (Analog and Digital), Fire Alarm Systems, Instructional Leadership, Service Equipment, Test Equipment, Photovoltaics, Job/Project Management, Programmable Logic Controllers.[21]

While in reality, these 75 FTE electrician apprentices eventually would have been rotated off this solar work in order to work on other types of jobs and expand their skills and experience, for simplicity, let us assume these 75 workers would have stayed until the 5 years were up and the 1250 MW of generating capacity was built. The $2,644,882 invested in their training from this job over five years would have amounted to ***a human capital investment of $35,262 for each apprentice or $7,052 per apprentice per year over five years.***

To provide a perspective on this per apprentice investment, California spends approximately $13,000 per student per year for four years in the University of California system.[22] Thus, not counting the value of the on-the-job aspects of this apprenticeship training, this 1250 MW set of facilities would have invested in classroom training for each student the equivalent what the state invests in University of California student over three years ($35,000 vs. $39,000). In addition to this $35,000 investment in classroom training paid for by contractor contributions into the apprenticeship program, apprentices receive on-the-job training under the supervision of a journeyworker. While no precise figure can be placed on this on-the-job instruction, it could easily close the gap between what is invested in these apprentices and what the state invests in University of California students over three years.

Furthermore, in contrast to university students, apprentices earn while they learn: the apprentice wage starts around 50% of the journeyworker wage the first year and moves upwards about 10 percentage points per year through the apprentice's indenturership. These earnings, of course, also include solid family health insurance coverage. So continuing this comparison to formal higher education: in contrast to University of California students, each apprentice that would have been employed building this 1250 MW of capacity in Imperial County would have been, in effect, on a full scholarship with benefits. Among other losses associated with approving the Sempra tieline is the foregone human capital investment, foregone scholarships, foregone creation of a skilled local labor pool and foregone careers that would have been created by apprenticeship training on this lost work.

As mentioned above, most apprentices would have been rotated out before the completion of this solar capacity. These moved out would have received comparable investments in their training derived from the apprenticeship training contributions generated by jobs elsewhere onto which they would have been rotated. Thus, in general, once apprenticeship openings would have been created by the construction of a 1250 MW photovoltaic electrical generating capacity in Imperial County, due to collectively bargained agreements, the process of investing more than $70,000 per year in twice-per-week classroom training for each apprentice would have been set in motion. This classroom training would have been made real by on-the-job supervised experience and enriched by job rotation. In short, building 1250 MW of solar generating capacity in Imperial County would not only have created jobs, it would have created more than $4.5 million in human capital investment and accumulation which is the foundation for a lifetime of work in a career such as an electrician or iron worker or other craft worker in the construction industry.

The $2,644,682 invested in electrical apprenticeships from this job over five years would have amounted to a human capital investment of $35,262 for each of 75 apprentices or $7052 per apprentice per year over five years.

To provide a perspective on this per apprentice investment, California spends approximately $23,000 per student per year for four years in the University of California system.

Because they earn while they learn, in contrast to University of California students, each apprentice that would have been employed building this 1250 MW of capacity in Imperial County would have been, in effect, on a full scholarship with benefits.

This training would have come at a useful time because over the entire United States the trained construction labor force is aging.[18] Even in the prolonged aftermath of the Great Recession, trained older construction workers from the Baby Boom generation continue to retire. The training of skilled construction workers in Imperial County financed by the construction of solar generating capacity would have helped support the process of recreating a skilled construction labor force by providing some of the investment needed to replace the Baby Boom bulge of skilled construction workers as it accelerates its movement into retirement.[19]

Over their worklife, the value to a young Imperial County worker of obtaining five years of on-the-job supervised electrical training and more than $35,000 in employer-union investment in classroom training would have been substantial. Because of the skills developed through extensive formal apprenticeship training, apprentices who turn out as union electricians earn substantially more than they otherwise would absent that training. The current hourly wage rate in Imperial County for union

electricians is $36.65 which for 2000 hours in a year amounts to an annual individual income of $73,300.[6] (2000 hours allows for two weeks of unpaid vacation or unemployment per year.) In addition, this union journeyworker currently receives $10.48 per hour in health insurance contributions and $4.35 in pension contributions. At 2000 hours per year, this amounts to about $13,000 in health insurance coverage and $8700 in pension investment. With a median family income in Imperial County of just under $37,000, this individual income of $73,300 plus benefits amounts to a substantial annual economic gain compared to a worklife without this upfront human capital investment of $25,000 in classroom training plus 5 years of supervised on-the-job training.[7]

In rough terms, in Imperial County, the difference between the skilled worklife of an electrician and one without this human capital investment amounts to about $36,300 per year ($73,300 minus $37,000), plus additional pension and health benefits. Assuming that the apprentice turns out as a skilled journeyworker electrician at age 25 and works until age 65, that amounts to 40 years of additional income of $36,300 per year. Using an inflation-adjusted real discount rate of 2 percent, the net present value in today's dollars of that additional income is $903,000 per worker. This means that an approved Sempra tieline across the border and the construction of 1250 MW of green-energy-for-export in Mexico costs each Imperial County would be electrician apprentice almost $1 million in foregone income, with the correspondingly diminished worklife, loss of family friendly benefits, reduced economic contributions to the local economy and reduced taxes paid into the local community.

In Imperial County, the difference between the skilled worklife of an electrician and one without this human capital investment amounts to about $36,300 per year ($73,300 minus $37,000), plus additional pension and health benefits.

The net present value in today's dollars of that additional income over a 40 year worklife is $903,000 per worker. That would have generated in today's dollars, an additional $24,475,000 in net present value personal income in Imperial County with all the additional consumer business and additional tax revenues that would have spun out from these new skills and this new income.

We have shown that approximately 75 apprentices would have turned out as journeyworker electricians over five years from building a 1250 MW solar capacity in Imperial County. If those 75 workers stayed within the county construction labor force over their careers, that would have generated an additional $24,475,000 in personal income in Imperial County over 40 years (calculated in terms of net present value in today's dollars). Similar personal earnings losses obtain for the other crafts. Even unionized laborers who do not run a registered apprenticeship program nonetheless invest significant sums to build the skill level of their members. A general calculation of the present value of the total lifetime personal income loss associated with losing 103 newly skilled construction workers (514 FTE apprentice job-years divided by 5) is as follows: each worker would have earned approximately $35,000 per year more than they will earn absent this training. Each worker would have experienced these gains annually for about 40 years. The net present value of these losses would be $637,000 per worker. These workers also lose top notch health insurance and pension benefits.

Across crafts, in Imperial County, these lost benefits amount to about $10 per hour. In general terms, this is about twice what they will receive in unskilled jobs in the county not counting differences in social security contributions. At 2000 hours of work per year, this benefit loss sums to about $10,000 per

year. So the wage and benefit loss derived from this failure to invest in human capital amounts to $45,600 per year over what these young workers will earn without the doors to skill investment having been opened with the loss of this 1250 MW of solar capacity.

The net present value of this loss of wages and benefits over a 40 year worklife from age 25 when they would have turned out as a journeyworker to age 65 when they presumably would have retired is more than $1.2 million per apprentice. For the 103 lost apprenticeship positions as a group, this is an almost $127 million present value loss in earnings and benefits over what they will earn without this training.

And with the loss of this 1250 MW of solar farms, Imperial County loses as well. These lost earnings and benefits will not be spent locally; they will not stimulate the local economy; they will not add to the local tax base. Equally important, increased local human capital and corresponding skills go missing. This will leave the local construction industry less able to respond to the economic development possibilities that otherwise would have emerged over the 40 year work lives of these lost skilled workers.

The proposed Sempra tieline is not just about electricity. It is also about foregone opportunities, lost worklives and diminished economic development prospects.

This is why the apprenticeship training and investment dimensions of 1250 MW of photovoltaic construction is a gift that keeps on giving to multiple recipients: the workers themselves, the employers that will need them and the business community that will serve them. Salient among those potential lines of local economic growth and employment would be the various aspects of the green economy that are emerging from the Great Recession, responding to rising energy costs and likely to be important in the future Imperial County economy due to its solar potential.

Furthermore, these newly skilled workers rather than posing a potential burden on public services could also become mainstays of the local health delivery system and other local public services due to the additional health insurance contributions and tax contributions they could to the local economy. Building solar capacity in Imperial County in fact helps build the health delivery system of the County while building the local tax base over a 40 year period. All three benefits are lost when this work is lost. The proposed Sempra tieline is not just about electricity. It is also about foregone opportunities, lost worklives and diminished economic development prospects. Setting aside these broad worklife considerations, we now narrow our focus to the specific worksite jobs lost and the upstream and downstream jobs that are foregone if and when the tieline is approved.

V. 14,893 Lost Jobs and $551 Million in Lost Earnings

Table 7 shows the number of job-years created by building a 1250 MW photovoltaic electrical generating capacity in Imperial County.[6] Starting with the assumption derived above in Table 1 that the projects would require 3000 FTE job-years over a 5 year period with 480 local workers and 111 travelers as discussed in Table 3, an input-output computer model, IMPLAN, was used to calculate the number of jobs that would be created off-site either from the demand for construction materials and supplies or from the demand for consumer goods and services stemming from the labor incomes of these 600 FTE workers.[7]

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Table 7) On-site jobs (direct), supply chain jobs (indirect) and consumer demand jobs (induced) lost by foregoing 1250 MW photovoltaic electrical generating capacity in Imperial County, county, state and U.S. impacts.

	Impact Type	Imperial County	California	U.S.
	Total New FTE Job-Years			
1	Direct employment on construction site	2445	3001	3001
2	Jobs-years created by demand for input materials, supplies and services	339	1706	4128
3	Job-years induced by new demand for consumer goods & service	595	4982	7569
4	Total new job-years	3419	9787	14693
	Jobs-per-Year for 5 Years			
5	Jobs per year on construction site	489	600	600
6	Jobs-per-years created by demand for input materials, supplies and services	80	341	966
7	Job-years induced by new demand for consumer goods & service	119	816	1513
8	Total new jobs-per-year for 5 years	688	1957	2979

Table 7 shows the jobs-loss for Imperial County, for the state of California, and for the U.S. as a whole of not building 150 MW of generating capacity in Imperial County. The upper panel shows the jobs loss in total FTE job-years while the lower panel shows the same loss as an annual average number of FTE jobs. (The lower panel simply divides the totals in the upper panel by 5 years). Looking at Imperial County first, not all of the 600 construction jobs per year that the projects would have required would have gone to Imperial County residents. (See Table 3). While 111 workers on the construction site would be travelers, 489 would be locals, working annually for 5 years for a total of 2445 FTE job-years of local work lost if the Sempra tieline is approved.

An additional 80 local workers annually would have had new jobs in the local supply chain that within Imperial County supports construction. Most of these 80 supply-chain jobs would have been in engineering services; commercial and industrial machinery renting, repair and maintenance; trucking; automotive maintenance and repair; ready-mix concrete manufacturing and wholesale trade (primarily construction hand-tools and materials such as fencing). The workers who would have been newly employed within the local supply chain, in turn, would have created new consumer demand in Imperial County which also would have created additional jobs from this "indirect" effect.

An additional 119 workers would have found new jobs serving the increased consumer demand associated with the employment of 489 local workers on this work. (Also the model assumes that travelers would spend 20% of their income locally on gas, food and in some cases, rental housing.) The biggest sectors of the Imperial County economy which would have added new jobs due to this increased consumer demand (the "induced" effect) are food services and drinking places, household services, physicians, dentists and other health practitioners, grocery stores, and other retail stores.

The main benefit in Imperial County from the construction of this capacity would have been the jobs building the solar farms, themselves. The spinoff-jobs are an important side-benefit but because Imperial County is economically small (albeit geographically large), and thus, the ability of the County to fill in the supply chain and meet consumer demands is limited. When we step back to the level of California, as a whole, more of what is needed to build this new capacity could be supplied by the California economy and more of what the workers on this job would have demanded in terms of consumer

goods and services could also be supplied by the California economy. To see this, in the California column in Table 7, there are 600 new workers and 3000 FTE job years. This reflects an assumption that the travelers would have all come from California. This may not be true. Some may come from Southern Nevada or Arizona. If so, then the California column slightly overstates the California-impact of the loss of these new jobs building this capacity because these out-of-state travelers would have spent the bulk of their new income in their home state. But for the moment, let us assume all the travelers would have been from California.

With this simplifying assumption, Table 7 shows a big jump of more than a 6 fold loss of new jobs both in the supply chain and in the consumer chain due to the foregone opportunity to employ 600 new workers on these projects including 111 travelers. So while the omission of 489 newly employed Imperial County construction workers creates the loss of an additional 193 new jobs elsewhere (80 supply chain and 113 consumer chain new jobs). The omission of 600 newly employed California workers (489 from Imperial County and 111 from elsewhere in California) creates the loss of an additional 1357 new jobs in the state's industrial supply and consumer sectors. With the very high unemployment rate in California, the foregone jobs across the state are a painful loss.

For every foregone new construction job lost in Imperial County by not building this electrical capacity in the U.S., almost 4 new jobs will be lost elsewhere somewhere in the U.S.

The 600 construction jobs lost in Imperial County lead to 2370 new jobs lost elsewhere in the U.S. economy, each job-loss continuing for 5 years, for a total of almost 15,000 FTE job-years of new work lost over a 5 year period.

And these jobs losses come at just the wrong time. While new jobs are always needed and lost jobs always regretted, in the wake of the Great Recession, new jobs are needed now more than ever.

When we scale up to the U.S. economy, as a whole, the construction supply and consumer demand chains lengthen and even more new jobs are lost from foregoing the original 600 jobs. For every foregone new job lost in Imperial County by not constructing this electrical capacity, almost 4 new jobs are lost elsewhere somewhere in the U.S. Imperial County's 489 jobs plus the additional 111 travelers (who now in the analysis could have come from Nevada, Arizona or other states) lead to 2370 new jobs lost elsewhere in the U.S. economy, each job-loss continuing for 5 years for a total of almost 15,000 FTE job-years of new work lost over a 5 year period. All 15,000 of these new job-years are lost when this domestic capacity is replaced by facilities in Mexico using a 1250 MW transmission line to bringing this green electrical generation from across the border.[10]

Because these lost jobs are across a range of industries, occupations and locations, we need to attach an average wage income representing all of these lost jobs. **The median weekly earnings of the nation's 98 million full-time wage and salary workers of $755.[11] For 52 weeks, this amounts to $39,260. For 14,893 lost job-year across the United States, this amounts to a total net present value of lost wage income of $551 million due to approving the Sempra cross-border transmission tieline.**

3. Operation Employment Loss of 40 Jobs Lasting 25 Years Each for a Net Present Value Loss of $78 Million in Earnings

Table 1 column g shows that across the three other projects reviewed in this report, there were, on average, 31.1 megawatts of nameplate capacity per local administrative, operation and maintenance worker on these sites. We use this average to calculate the number of operations workers that would have been needed for 1250 MW photovoltaic electrical generating capacity in Imperial County. Dividing 1250 MW by 31.1 yields an estimated 40 administrative, operation and maintenance workers required for this larger Imperial County generation capacity. All of the analysts of these other facilities assumed that their sites would have at least a 25 year usable lifetime. We will assume the same.

Thus, 40 annual FTE operations workers times 25 years yields 1000 new job-years that would have been needed to operate this photovoltaic generation capacity in Imperial County. We assume the average annual wage and benefit incomes for operation workers derived from the reports on these other facilities. This amounts to $62,250 in wage income and $23,214 in annual benefits including Social Security, Medicare and Unemployment Insurance for a total of $103,464 in annual total compensation for 40 workers that is lost when the Sempra tieline is approved. This amounts to a loss of more than $4 million in new worker pay in Imperial County annually for a total loss of more than $100 million in today's dollars over the life of the facility. The net present value of this loss assuming the operation jobs would not have started until after the five years required to build this capacity is $78 million using a 2% real, inflation-adjusted, discount rate.

> *The total loss in government tax revenues at all levels would be just short of $300 million. This, at a time, when the California state budget and the budgets of most county, municipal, school district and other governmental entities are in severe crisis.*

4. Lost Tax Revenues of Almost $300 Million

Building 1250 MW solar generating capacity in Imperial County would have increased local, state and federal tax revenues *directly* through employing workers on these projects, *indirectly* through employing workers and creating new business activities supplying these projects; and it also *inducing* new business activities and employment in serving the consumer demands of the workers on these projects and the consumer demands of workers and proprietors supplying these projects.

Using IMPLAN, we calculate that over 5 years of construction, the total loss in government tax revenues at all levels would be just short of $300 million. (Table 8) Over $100 million in state and local revenues would be lost. These calculations are based on Table 9 and Table 10 which assess the statewide loss. This allows consideration not only of lost new tax revenues that would have been generated within Imperial County but also lost new tax revenues that would have been generated outside the county. Thus, this considers the job-generating expenditures of traveling construction workers that would have worked on the project but spent their income in their home county. It also considers suppliers outside of Imperial County but within California that would have served the needs of this construction work in Imperial County. While the bulk of increased local tax revenues losses will be in Imperial County because most of the workers would have spent most of their income within their home county, the category local tax includes taxes collected at the local level anywhere in California.

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Table 8: Lost tax revenues from the foregone statewide direct, indirect and induced employment and business effects from building a 1250 MW solar power in Imperial County

Description	Employee Compensation	Proprietor Income	Indirect Business Tax	Households	Corporations	Total Tax Revenues
Total State and Local Tax	$3,304,238		$54,342,620	$34,623,931	$15,606,956	**$107,877,745**
Total Federal Tax	$73,926,501	$9,265,920	$8,537,508	$74,504,441	$14,487,245	**$180,723,616**
Total Stocal, State and Federal Tax	$77,232,739	$9,265,920	$62,880,128	$109,128,372	$30,094,201	**$288,601,360**

Table 9: Imperial County plus travelers statewide effect only on state and local tax revenues

Description	Employee Compensation	Proprietor Income	Indirect Business Tax	Households	Corporations
Dividends					$10,407,620
Social Ins Tax- Employee Contribution	$623,168				
Social Ins Tax- Employer Contribution	$2,681,070				
Indirect Bus Tax: Sales Tax			$25,769,411		
Indirect Bus Tax: Property Tax			$20,529,821		
Indirect Bus Tax: Motor Vehicle Lic			$609,185		
Indirect Bus Tax: Severance Tax			$16,022		
Indirect Bus Tax: Other Taxes			$5,142,488		
Indirect Bus Tax: S/L NonTaxes			$2,375,693		
Corporate Profits Tax					$5,199,336
Personal Tax: Income Tax				$27,314,493	
Personal Tax: NonTaxes (Fines- Fees				$5,855,108	
Personal Tax: Motor Vehicle License				$931,409	
Personal Tax: Property Taxes				$331,272	
Personal Tax: Other Tax (Fish/Hunt)				$191,648	
Total State and Local Tax	$3,304,238		$54,342,620	$34,623,931	$15,606,956

Table 10: Imperial County plus travelers statewide effect only on federal tax revenues

Description	Employee Compensation	Proprietor Income	Indirect Business	Households	Corporations
Social Ins Tax- Employee Contribution	$36,756,516	$9,265,920			
Social Ins Tax- Employer Contribution	$37,171,985				
Indirect Bus Tax: Excise Taxes			$3,820,854		
Indirect Bus Tax: Custom Duty			$1,779,409		
Indirect Bus Tax: Fed NonTaxes			$2,937,244		
Corporate Profits Tax					$14,487,245
Personal Tax: Income Tax				$74,504,441	
Total Federal Tax	$73,926,501	$9,265,920	$8,537,508	$74,504,441	$14,487,245

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8. Comparing Our Results to the Other Recent Impact Studies

To provide a standardized comparison of our results to those of the previous recent studies reviewed in this report, in line 1, Table 11 summarizes the total job-years, *within the county* of direct construction employment, indirect supply-chain employment and induced consumer-chain employment found by various analysts for the three photovoltaic solar farms shown in Table 1.

In Table 11 in line 1, the direct construction worker job-years and other construction-site personnel required for the building of these various projects are shown. Line 1 in Table 11 is the same as line 15, Table 1 with the exception that for the Aspen Group analysis in columns c, d and for our analysis in f only local county construction workers are included.[xi] This reflects the fact that the Aspen report and our report took into consideration construction travelers in analyzing county specific employment effects. The predicted total within-county indirect supply chain job-years and induced consumer chain job-years are shown in lines 2 and 3 of Table 11. Total direct, indirect and induced job-years from construction (but not subsequent operation) are shown in line 4.

Our calculations of job impact per megawatt constructed fall in the middle of these other four reports while leaning slightly towards the more skeptical Aspen approach.

To compare across reports, lines 5 through 8 in Table 11 divide job-years for each type of job creation by the nameplate capacity of the project or combined projects. Column f shows our results and column g shows the average results for the other four reports, excluding ours. The Aspen Group is in the Table twice because as mentioned above, Aspen provided a low-wage (LW) and a high-wage (HW) scenario. Aspen's double entry lowers the averages for workers per megawatt of capacity shown in column g, but this is perhaps fair because Aspen's is the only report under review that does not have a connection to the various project developers. Our job-year predictions fall between Aspen's more-skeptical analysis and the average for all the other analyses excluding ours.

Our direct employment on the construction site workers per megawatt is midway between Aspen's and the others due to the fact that we, like Aspen, distinguish between traveling and local construction workers while the other reports do not. But because we, unlike Aspen, consider all apprentices to be local and all laborers to be local, our direct job-years per megawatt rate is higher than Aspen's. This difference drives the remaining differences shown in Table 11. With more local direct employment per megawatt compared to Aspen, there ends up being more indirect and induced employment compared to Aspen. On the other hand, with less direct employment in construction per megawatt of capacity compared to the other reports, we obtain fewer indirect and induced job-years per megawatt compared to these other reports. In terms of the overall job-years multiplier per megawatt of photovoltaic capacity installed, Aspen reports 2.4; we report 2.8; the average of the other three reports is 4.5 and the average for all the reports other than ours is 3.5.

Table 2.1: A comparison of the total job-years of direct employment, indirect supply chain employment and induced consumer chain employment effects of photovoltaic construction in this and other recent reports[2]

	A	B	C	D	E	F	G
1	Project	CVSR	Topaz	CVSR&Topaz HW	CVSR&Topaz HW	Desert Sunlight	Our Analysis	Average excl. Ours
2	Location	San Luis Obispo	San Luis Obispo	San Luis Obispo	San Luis Obispo	Riverside	Imperial County	
3	Capacity	250 MW	550 MW	800 MW	800 MW	550 MW	1350 MW	
4				Total Workers				
5	Direct	681	1200	1440	1410	1351	2441	
6	Indirect	259	225	198	180	121	249	
7	Induced	480	746	330	340	334	595	
8	Total	1391	2171	1968	1930	1798	5439	
9				Workers per Megawatt of Nameplate Capacity				
10	Direct	2.7	2.2	1.8	1.8	2.5	2.8	2.2
11	Indirect	0.9	0.4	0.2	0.2	0.2	0.3	0.4
12	Induced	1.9	1.4	0.4	0.4	0.6	0.5	0.9
13	Total	5.6	3.9	2.5	2.4	3.3	2.8	3.5

Thus, we fall in the middle of these reports leaning slightly towards the more skeptical Aspen approach. The primary difference among these reports is in the treatment of construction travelers. We discuss our treatment of this issue above some length with a summary of our approach shown in Table 3.

Conclusions

The proposed Sempra 1250 MW tieline connecting the California grid to envisioned new wind farms in Mexico is about foregone opportunities, lost human capital investment, lost worklives, lost tax revenues, and diminished economic development prospects; and also, it is about which regulatory authority, California or Mexico, should oversee the environmental impacts of building green generation capacity for the California grid. And, it is about undoing some of the economic good and jobs stimulated by the first set of subsidized, utility-scale solar projects fast-tracked by the Interior Department.

This report focused on the economic losses to Imperial County, the state of California and the nation as a whole stemming from San Diego Gas & Electric/Sempra's proposal to import green-generated electricity from Mexico to meet its legally required quota of renewable energy generation in California instead of building that generation in California, itself. We show that if green generation capacity is built in Mexico, it displaces generation that would be built domestically. It is very unlikely, given the relative cost of renewable energy generation relative to fossil fuel energy generation that San Diego Gas & Electric will exceed its legally mandated renewable energy quota. So building green energy is a zero sum game. If it is built there, it will not be built here. In this report, we analyzed the substantial loss of jobs, the loss of income and the loss of tax revenues associated with not building this 1250 MW of renewable energy electrical generation capacity in the United States.

Should Sempra be allowed to build its proposed tie line , we demonstrate that the most likely immediate loser would be the workers, businesses and taxpayers of Imperial County, California. Sempra proposes to build its tieline across the Mexican border near the Imperial County-San Diego County border

(see map, Figure 1). Sempra proposes to connect to a transmission line carrying electricity from Imperial County to San Diego County. And Imperial County is rich in prospective photovoltaic electrical energy possibilities. So the zero sum game plays out with Imperial County the loser.

How much does Imperial County lose? For starters, Imperial County loses 2445 job-years on the lost construction sites themselves. In addition, Imperial County loses another almost 1000 job-years of off-site spinoff jobs in the supply chains and consumer chains that would have served the foregone construction work. In total, Imperial County will lose 3439 job-years of employment at a time when it is facing an unemployment rate of 27.9%, the highest county unemployment rate in the nation.

But in addition to this lost work, Imperial County also loses out on more than $4.5 million in human capital investment that would have gone into the training of more than 100 apprentices on this lost construction work. The fact that this door to better skills and better pay will not open if the Sempra decline is approved means that more than 100 local Imperial County youth will each lose annually more than $36,000 in additional income (plus lost benefits) that they would have otherwise earned if their skills had been upgraded on this lost work. Over the 40 years of their worklives, in net present value terms, these 100 plus young people will each lose more than $1.2 million in wages and benefits due to the fact that the door to opportunity will be closed on them when the Sempra decline is approved. Collectively, this amounts to a net present value of $127 million in lost income and benefits for workers in Imperial County. This in turn lowers the long-term tax base of the County, reduces demand for local goods and services, and serves as a continuing drag on local economic development.

Imperial County also loses out on 40 operation and maintenance jobs that would start when the construction was over and would last for 25 years. This is a total of 1000 lost job-years. With wages of more than $60,000 and benefits and payroll taxes taking total compensation to over $100,000, these lost jobs amount to a loss of $4 million annually in local payroll in Imperial County. The net present value of this lost payroll over 25 years starting 5 years from now is $78 million in today's dollars.

But Imperial County is not the only loser in any approval of Sempra's decline. California will lose 07787 job-years, more than 6000 additional job losses over and above those lost in Imperial County alone. California's loses are greater simply because, as a small county, Imperial County imports from other regions of the state many of the supply-chain and consumer-chain goods and services that would have fed this new Imperial County work. So when Imperial County loses, California loses. And because this work is going to Mexico and not another state in the Union, the U.S. labor market as a whole loses out. We calculate that almost 15,000 job-years will be lost in the U.S. economy in its entirety from the loss of 1250 MW of generating capacity in Imperial County.

What is the value of these lost jobs? With unemployment rates stubbornly high and job growth excruciatingly slow, the human value of these lost jobs is not fully calculable in money terms. Protracted unemployment hurts children, strains marriages, drives up stress, forces families to forego health care, leads to foreclosures and blighted neighborhoods. But if we are to reduce these lost job-years to narrowly defined dollar terms alone, the median full-time wage in the U.S. is $39,260. So each lost job-year costs an unemployed individual who could have had one of these jobs almost $40,000 per year plus lost benefits. The net present value of these almost 15,000 lost jobs-ears is more than $550 million in lost wages. Piled on top of these lost wages are the loss of health and pension benefits, and the loss of payroll taxes into unemployment insurance, workers compensation and social security.

From the government's perspective, the loss of jobs associated with Sempra's tieline translates into a loss of local, state and federal tax revenues. Taken together this sums to a loss of tax revenues amounting to almost $300 million. So in a period of high unemployment, Sempra's tieline means jobs are lost; in a period of government fiscal crisis, Sempra's tieline means that tax revenues are lost. These losses should be seriously considered in any evaluation of the merits of Sempra's proposal to import captive green energy from Mexico.

The good news is, decision makers have the authority and ability to keep these jobs, skilled apprenticeship training opportunities, and tax benefits in Imperial County, in California and within the United States. During this prolonged aftermath of the Great Recession, when jobs are needed most, and nowhere more than in Imperial County, will state and federal leaders act to share the economic benefits of building and operating renewable energy generation in California; or will they allow these jobs to slip away, leaving residents in Imperial County with merely the unfulfilled hope of a greener, more economically prosperous future?

Endnotes

[1] US DOI, " Salazar, Abbey Describe Progress of Solar Energy on Public Lands," January 28, 2010, http://www.doi.gov/news/pressreleases/2010_01_28_release.cfm (last accessed July 4, 2011).
[2] US DOI, "Secretary Salazar Approves Second Large-Scale Solar Energy Project on Public Lands in Nevada," November 15, 2010, http://www.doi.gov/news/pressreleases/Secretary-Salazar-Approves-Second-Large-Scale-Solar-Energy-Project-on-Public-Lands-in-Nevada.cfm (last accessed July 4, 2011).
[3] US DOI, "Secretary Salazar Approves Ninth Commercial-Scale Solar Energy Project on Western Public Lands. 110 megawatt plant in Nevada will create 450 jobs," December 20, 2010: http://www.doi.gov/news/pressreleases/Secretary-Salazar-Approves-Ninth-Commercial-Scale-Solar-Energy-Project-on-Western-Public-Lands.cfm (access July 4, 2011); US BLS State and Metro Area Employment, http://www.bls.gov/sae/home.htm (last accessed June 30, 2011).
[4] US DOI, " Construction Begins on World's Largest Solar Power Facility, Blythe Solar Power Project to Provide Clean Energy and Jobs for Riverside Community," June 27, 2011, http://www.doi.gov/news/pressreleases/Construction-Begins-on-Worlds-Largest-Solar-Power-Facility.cfm (last accessed July 4, 2011).
[5] US BLS State and Metro Area Employment, http://www.bls.gov/sae/home.htm (last accessed June 30, 2011).
[6] http://implan.com/V4/Index.php ; http://www.nrel.gov/analysis/jedi/about_jedi.html (last accessed July 4, 2011).
[7] http://www.whitehouse.gov/the-press-office/remarks-president-jobs-and-clean-energy-investments

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[8] Noelle Straub, " RENEWABLE ENERGY: Interior touts fast-tracking of 13 solar projects." Environment and Energy Daily, January 29, 2010, SECTION: ON THE HILL Vol. 10 No. 9. http://www.e2.org/ext/doc/20100129EEDaily-1OInterior13solarProjects.pdf;jsessionid=67UFBBAC84C2B904BCEC60D2953B841E (last accessed July 3, 2011).

[9] Indeed, there is a larger debate regarding whether all sorts of green jobs can be outsourced. Observers in India see the green job initiative in the U.S. as a boon to Indian companies:

> Obama sounded resolute in September when he iterated that he would take big steps towards energy security in 2011 to reduce the world's largest economy's dependence on fossil fuels. If that happens, it will be good news for India - for a small but fast-growing segment called 'outsourced green jobs'. The global green economy – ranging from solar energy to eco-friendly chemicals, from smart electricity grids to carbon accounting offshoring - is estimated at over $5 trillion, of which the US accounts for a sizeable one-fifth. As the sector continues to chug along - it was one of the few in the US that grew through the recession – green jobs are being shipped to India. According to researcher Brown-Wilson Group's Green Outsourcing report for 2009, 22,000 green jobs have been already outsourced to India last year. And, by the time the US green economy creates five million jobs, 20 per cent, or one million, would be outsourced to India.... [For example,] Chisti Inc., a California company started by Bhopal-born entrepreneur Shekhar Chitnis, is in talks with companies to get this job outsourced to its partner-offices in eight cities in India. Offshoring of "carbon tax/carbon credit accounting (work) is inevitable", Chitnis told BT.... But another emerging area, say industry insiders, is blue-collar green jobs in India. Tata BP Solar's India factories have now emerged as one of the top destinations for BP's solar photovoltaic manufacturing after it closed its Portuguese and Australian units in 2008 and 2009 and announced the closure of its US facility in 2010....California-headquartered Solar Semiconductor, which has a Hyderabad factory, is another instance. With the US market for solar panels opening up, its Vice President Ravi Surapaneni says the company may even set up manufacturing units in that country with experts from India running them. Wind energy equipment, similarly, could be another job creator....Surojit Bose, Associate Director for Sustainability in India, at PricewaterhouseCoopers, feels that a lot of research work in clean technology is waiting to be offshored to India if the US Senate approves the comprehensive carbon legislation.
>
> Suman Layak and Rahul Sachitanand. " Green-collar jobs, the next wave." *Business Today*. November 14, 2010. http://businesstoday.intoday.in/story/green-collar-jobs-the-next-wave/1/9359.html (last accessed July 3, 2011).

[10] Not all solar panel manufacturing will be overseas. Responding to California's renewable energy portfolio standard which requires that California utilities source 33% of their power from green energy generation by 2020 (which is discussed later in this report), on April 12, 2011, SunPower and FlexTronics announced the opening of a solar panel manufacturing plant in Milpitas, California, which will employ more than 100 manufacturing workers and turn out 75 megawatts of solar panels per year.

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This manufacturing plant will supply panels for the construction of the 250 MW California Valley Solar Ranch discussed later in this report and which will break ground in 2011 and take 32 months to complete. Similarly, the Milpitas manufacturing operation has sufficient capacity to supply this new solar farm with panels thus linking the building of this solar farm back to new supply chain jobs in U.S. manufacturing. This is an exceptional but hopeful example of how building a solar farm creates construction jobs in the U.S. plus manufacturing jobs in the U.S. supplying the needs of the local construction site.

SunPower CEO Tom Werner credited public policies for the creation of these new jobs: "Strong public policy at both the federal and state levels is paying off with job creation and capital investments from our equipment manufacturers to our dealers that install SunPower systems on homes and businesses across the U.S. and around the world...."

It is telling that the opening of this 100 employee California manufacturing plant was reported on in India. See a SunPower Corp. News Release, "SunPower's and Flextronics' New Solar Manufacturing Plant Creates Jobs, Economic Benefits and Clean Affordable Energy," reported in *India Energy News*, New Delhi, April 12, 2011.

[7] Because these enclaves are rural, they may well be sites for future solar farms. But because these enclaves are in the U.S., they can draw from California as well as Nevada and Arizona labor pools. Thus, in contrast to an enclave in Mexico, developing green generating capacity in these Nevada and Arizona enclaves will provide new U.S. jobs, some of which may go to Californians but most of which probably will go to Nevada or Arizona workers depending upon which state each possible project is in. See: Western Electricity Coordinating Council, "Map of Western Interconnection Balancing Authorities," http://www.wecc.biz/library/WECC%20Documents/Publications/Balancing%20Authorities.pdf (last accessed June 27, 2011).

[8] Kevin P. Gallagher, Free Trade and the Environment: Mexico, NAFTA, and Beyond; Stanford University Press, 2004.

[9] Solar Energy Industry Association, "Utility Scale Solar Power; Strategic Planning for Habitat Conservation," August 2010. http://seia.org/galleries/FactSheets/Factsheet_Habitat.pdf (last accessed June 29, 2011).

[10] Another consideration not covered in this report is the environmental cost overall and to Mexico of capturing Mexican green energy and pulling it onto the California grid. A large share of Mexican electricity is generated by burning high-sulfur fuel oil. Dirty emissions from burning this fuel pose a potentially large risk to both human health and the environment. So to the extent that wind energy is limited in Mexico, bringing that green energy across the border into California may increase the use of high sulfur fuel oil electrical energy generation in Mexico. This not only poses a potential threat to Mexican health and the Mexican environment, but to the extent that Mexican high sulfur fuel oil electrical generation occurs near the border with the U.S., emission pollution can potentially float across the border into the U.S. as well with concomitant risk to American health and the environment. See: M.T. Lopez, M. Zuk, V. Garibay, G. Tzintzun, R. Iniestra and A. Fernández, "Health impacts from power plant emissions in Mexico," *Atmospheric Environment*, Volume 39, Issue 7, March 2005, Pages 1259-1269.

[11] See on the California Public Utility Commission website: "ENERGIA SIERRA JUAREZ (ESJ) U.S. TRANSMISSION GEN-TIE PROJECT SAN DIEGO COUNTY MAJOR USE PERMIT APPLICATION

AMENDED PROJECT DESCRIPTION."
http://www.cpuc.ca.gov/environment/info/dudek/ECOSUB/TechStudies/ESJ_MUP_AmendPD.pdf (last accessed June 27, 2011). See also on Sempra Generation's website: "Sempra Generation Our Business. Projects in Operation. Energia Sierra Juarez." http://www.sempragenetation.com/esj.htm On Sempra's website, it states that "Potential future phases of Energia Sierra Juarez could grow to generate as much as 1,000 MW of clean wind energy..." while on the California Public Utility Commission website, regarding the transmission line it is stated: "The proposed generator tieline (Gen-Tie) would have the capacity to import up to 1250 MW of renewable energy generated in Northern Baja California, Mexico." (last accessed June 27, 2011). Because the transmission line's capacity is 1250 MW, we will assume that this is the benchmark amount of electrical generation capacity that would be supplanted in California.

[40] "Sempra Generation Our Business. Projects in Operation. Energia Sierra Juarez." http://www.sempragenetation.com/esj.htm (last accessed June 27, 2011).

[41] California Public Utilities Commission. "California Renewables Portfolio Standard (RPS)." http://www.cpuc.ca.gov/PUC/energy/Renewables/ (last accessed June 27, 2011).

[42] California Public Utilities Commission. "33% Renewables." http://www.cpuc.ca.gov/PUC/energy/Renewables/hot/33implementation.htm (last accessed June 27, 2011).

[43] Chris Mehan. "California Gov. Brown says the state can do better than 33 percent renewable." Clean Energy Authority. April 14, 2011. http://www.cleanenergyauthority.com/solar-energy-news/california-makes-rps-into-law-041411/ (last accessed June 27, 2011).

[44] Chris Mehan. "SDG&E, on its way to meeting California's RPS, signs 237 more MW of solar." Clean Energy Authority. June 20, 2011. http://www.cleanenergyauthority.com/solar-energy-news/sdg-e-signs-237-more-mws-of-solar-062011/ (last accessed June 27, 2011).

[45] The exact current renewable procurement status percentages as of June 27, 2011 were: Pacific Gas and Electric (PG&E) - 17.7%; Southern California Edison (SCE) - 19.4%; and San Diego Gas & Electric (SDG&E) - 11.5%. California Public Utilities Commission, "California Renewables Portfolio Standard (RPS)," http://www.cpuc.ca.gov/PUC/energy/Renewables/ (last accessed June 27, 2011).

[46] Summit Blue Consulting. *RENEWABLE ENERGY FEASIBILITY STUDY FINAL REPORT.* Imperial Irrigation District, April 1, 2008.

[47] County unemployment rates (preliminary, not seasonally adjusted): US Bureau of Labor Statistics (BLS), Local Area Unemployment Statistics (LAUS), COUNTY DATA, Table, http://www.bls.gov/lau/ (last accessed June 3, 2011).

[48] This chart is taken from the financial blog, Calculated Risk. The underlying data are from the US Bureau of Labor Statistics. The data through June, 2011 based on the July 8, 2011 US Bureau of Labor Statistics (BLS) Employment Situation Summary and earlier BLS data. See: http://www.bls.gov/news.release/empsit.nr0.htm. http://crfare.com/charts/charts.html#category=Employment&chart=JobLossesRecessionStartMay2007.jpg (last accessed July 8, 2011)

[49] US BLS, Local Area Unemployment statistics, http://www.bls.gov/lau/; see County Data, Map which links to http://www.bls.gov/lau/maps/twocort.pdf (last accessed June 3, 2011).

[50] County unemployment rates (preliminary, not seasonally adjusted): US BLS, Local Area Unemployment Statistics, COUNTY DATA, Table, http://www.bls.gov/lau/ (last accessed June 3, 2011).

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[17] Source: LA Times. June 17, 2011
http://www.latimes.com/business/la-fi-unemployment-california-2011-05-20,0,5196029.htmlstory
[18] U.S. Census Bureau. State & County Quick Facts.
http://quickfacts.census.gov/qfd/states/06/06025.html (last accessed June 3, 2011).
[19] County unemployment rates (preliminary, not seasonally adjusted): US BLS, Local Area Unemployment Statistics, COUNTY DATA, Table. http://www.bls.gov/lau/ (last accessed June 3, 2011). Population: US Census Bureau State & County Quick Facts.
http://quickfacts.census.gov/qfd/states/06/06083.html (last accessed June 3, 2011)
[20] US BLS, State and Local Unemployment Statistics. Local Area Unemployment Statistics (LAUS), preliminary not seasonally adjusted. http://www.bls.gov/lau/ (last accessed June 3, 2011).
[21] Author's calculation from US BLS current employment situation (CES) and quarterly census of employment and wages (QCEW) data. Peak employment month occurs in January 2008 (total US nonfarm employment), April 2006 (US construction employment), July 2007 (total California employment), February 2006 (California construction employment), April 2008 (Imperial County total covered employment) and October 2007 (Imperial County covered construction employment). Imperial County data come from the QCEW and are defined as employees covered by unemployment insurance. All other data are from the CES.
[22] US DOE, Press Release, " Department of Energy Offers Conditional Loan Guarantee Commitments to Support Nearly $4.5 Billion in Loans for Three California Photovoltaic Solar Power Plants ," June 30, 2011 http://www.energy.gov/news/10404.htm ; US DOE_Press Release_" Department of Energy Offers Conditional Commitment for $1.187 Billion Loan Guarantee to Support California Solar Generation Project," April 12, 2011 http://www.energy.gov/news/10264.htm(last accessed July 5, 2011).
[23] " NRG Energy, Inc. Reports First Quarter 2011 Results." Daily the Pak Banker, May 18, 2011.
[24] Stephen F. Hamilton, Darin Smith and Tepa Banda, "Summary of Findings," Economic Impact to San Luis Obispo County of the California Valley Solar Ranch, December, 2010. (This report was done while SunPower was the project developer. The project has since been sold to NRG.
http://www.californiavalleysolarranch.com/pdfs/Economic_Impact_to_SLO__Finals.pdf
[25] Stephen F. Hamilton, Darin Smith and Tepa Banda, Economic Impact to San Luis Obispo County of the California Valley Solar Ranch, Table A-1, "Detailed Construction Employment by Type of Worker California Valley Solar Ranch Economic Impact Analysis; EPS #20135," December, 2010.
http://www.californiavalleysolarranch.com/pdfs/Economic_Impact_to_SLO__Finals.pdf (last accessed June 6, 2011).
[26] Stephen F. Hamilton, Darin Smith and Tepa Banda, "Economic Impact to San Luis Obispo County of the California Valley Solar Ranch," Appendix 14B, December, 2010
http://www.sloplanning.org/EIRs/CaliforniaValleySolarRanch/feir/apps/Ap14B_Economic_Impacts.pdf Aspen Group, "Socioeconomic and Fiscal Impacts of the California Valley Solar Ranch and Topaz Solar Farm Projects on San Luis Obispo County," Appendix 14A
http://www.sloplanning.org/EIRs/CaliforniaValleySolarRanch/feir/apps/Ap14A_Fiscal_Impacts_Study.pdf both from County of San Luis Obispo, Department of Planning and Building, California Valley Solar Ranch Conditional Use Permit, and Twisselman Reclamation Plan and Conditional Use Permit, http://www.sloplanning.org/EIRs/CaliforniaValleySolarRanch/index.htm (last accessed June 25, 2011).

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Stephen E. Hamilton, Mark Berkman and Michelle Tran, Economic and Fiscal Impacts of the Topaz Solar Farm, March, 2011, http://topaz.firstsolar.com/downloads/TopazEconomicStudy.pdf (last accessed June 15, 2011). Mark Berkman and Wesley Ahlgren, "Economic and Fiscal Impacts of the Desert Sunlight Solar Farm," The Brattle Group, www.brattle.com, personal communication with Wesley Ahlgren, June 15, 2011, wes@evcp.com

[16] In a DOE press release, the estimated number of construction jobs for this project was put at 350 new jobs. We have chosen the lower estimate of 286 reflecting our effort to generally make modest assumption. See:" The project, which is being built in San Luis Obispo County, CA. includes the construction of a 250 megawatt alternating current photovoltaic (PV) solar generating facility and associated infrastructure. California Valley Solar Ranch is expected to create 350 jobs during construction and 10-15 permanent jobs." US DOE Press Release " Department of Energy Offers Conditional Commitment for $1.187 Billion Loan Guarantee to Support California Solar Generation Project. April 12, 2011. http://www.energy.gov/news/10264.htm (last accessed July 3, 2011).

[17] Below we will discuss the possibility in some cases that the developer had implicitly included overtime in the information provided the economic analysts.

[18] Ibid.

[19] For underlying data see Hamilton, Smith and Banda, Part II, tables 1, 3 and 4. Rounding error lead authors to sometimes present their assumption as 680 and sometimes 681 FTE construction jobs.

[20] Hamilton, Smith and Banda do much on a related point of the possible synergies between Cal Poly San Luis Obispo and the development of new technologies associated with photovoltaic power. This too would be a long term advantage that could well outlast the life of the construction job, itself.

[21] They also did separate analyses of each project. For simplicity, in Table 1, we present their combined results.

[22] This include 25 FTE workers spending 20 months (or 42 FTE job-years) constructing tie-in transmission lines.

[23] These rates come from current California state prevailing wage proclamations applicable to Imperial County. See California Department of Industrial Relations, prevailing wage determinations, http://www.dir.ca.gov/dlsr/pwd/Determinations%5CSanDiego%5CSD-023-03-3.pdf http://www.dir.ca.gov/dlsr/pwd/Determinations%5CSanDiego%5CSD-023-31-4.pdf http://www.dir.ca.gov/dlsr/pwd/Determinations%5CSanDiego%5CSD-023-103-3.pdf http://www.dir.ca.gov/dlsr/pwd/Determinations%5CStatewide%5CCC-0120-X-1.pdf http://www.dir.ca.gov/dlsr/pwd/index.htm (choose Imperial County here) (last accessed June 15, 2011).

[24] David R. Baker, "Brown signs law setting 33% mandate for utilities," The San Francisco Chronicle, April 13, 2011, Business, Pg. D1.

[25] Sources for the local Imperial County labor force include: US BLS Quarterly Census of Employment & Wages; http://www.bls.gov/cew/ ; US BLS Local Area Unemployment Statistics, COUNTY DATA, Table http://www.bls.gov/lau/ ; US Census State and County QuickFacts http://quickfacts.census.gov/qfd/states/06000.html ; CA EDD California Labor Market Review April 2011; http://www.calmis.ca.gov/file/lfmonth/Cal.MIC.pdf (last accessed June 21, 2011).

[26] There are some barriers to entry for apprentices. For electricians, they must have high school algebra and other crafts they typically must have a high school diploma or equivalent. Returning local veterans

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may be given preference given the skills they possibly acquired in the military and the to-place Helmets to Hardhats program must union construction apprenticeship programs have.

[47] Aspen Group. "Socioeconomic and Fiscal Impacts of the California Valley Solar Ranch and Topaz Solar Farm Projects on San Luis Obispo County," Appendix 14A. Tables 3-1 and 3-2, pp. Ap.14A-7 and Ap14A-9.
http://www.sloplanning.org/EIRs/CaliforniaValleySolarRanch/feir/apps/Ap14A_Fiscal_Imports_Study.pdf

[48] Apprenticeship ratios are set by collectively bargained contracts and/or the apprenticeship standards of particular registered programs and they can vary among crafts. Sometimes project labor agreements (PLAs) are signed for particular projects and under limited circumstances those PLAs may modify the required journeyworker -to-apprentice ratio. In our analysis, we assume the typical apprenticeship ratio of 3:1 journeyworkers to apprentices. If PLAs were signed to build this 1250 MW capacity and these PLAs lowered the apprenticeship ratio to (say) 3:2 or 3:3, then in our analysis, more workers could be sourced locally due to lowered skill barriers and thus the local economic impact of building this capacity would be greater. The less aggressive assumption is to assume, as we do, the standard apprenticeship ratio.

[49] In effect, we are assuming that professional workers will spend their incomes similarly to local workers. This is not entirely the case because traveling professional engineers, construction managers and supervisors may well have homes and families elsewhere that will drain away spending compared to permanent local residents. But this is a level of detail that is more granular than the level of this analysis.

[50] Calculation of the hourly wage rate weighted by craft-apprentice, local-traveling employment:

[51] CA Employment Development Department. Detailed Guide for Electricians in California. Green Electricians;
http://www.labormarketinfo.edd.ca.gov/OccGuides/DetailLaspx?Soccode=472111&Geography=0601000000 (last accessed June 11, 2011).

[52] Table A-3, "Detailed Construction Wages California Valley Solar Ranch Economic Impact Analysis: EPS #20133," footnote 3. Stephen F. Hamilton, Darin Smith and Tepa Banda, Economic Impact to San

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Luis Obispo County of the California Valley Solar Ranch, December, 2010.
http://www.californiavalleysolarranch.com/pdfs/Economic_Impact_to_SLO__Final1.pdf (last accessed June 6, 2011).
[illegible] National Electrical Contractors Association-International Brotherhood of Electrical Workers, San Diego and Imperial County, Inside Wireman Apprenticeship Program.
http://www.sdetl.org/careerinsidewireman.asp
[illegible] University of California, Budget and Capital Resources, Cost of Education Calculations at the University of California, April, 2011;
https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxidWRnZXQ6ZGljdW1lbnRzfGd4OjEoMzE5YzZiYWVjNTExNTc (last accessed June 17, 2011).
[illegible] The Center for Construction Research and Training, Construction Chart Book, "Labor Force Characteristics", "Worker Age in Construction and Other Industries," 2008, p. 12.
http://www.cpwr.com/pdfs/CB%204th%20Edition/o_18%20Labor%20Force%20Characteristics.pdf#page=7 (last accessed June 13, 2011).
[illegible] See for instance: STEPHEN SINGER, " Aging work force inspires utility worker training," KOMO New, Oct 2, 2010. http://www.komonews.com/news/business/104207944.html and Construction Labor Research Council. "CRAFT LABOR SUPPLY OUTLOOK 2005 - 2015," 2005.
http://www.buildri.org/stuff/contentmgr/files/7d3dc7c7544;3d138645164376684co00/misc/2005craft_labor_supply_report.pdf
[illegible] This corresponds to the California 75th percentile for electrician income of $73,077. CA Employment Development Department, Detailed Guide for Electricians in California. Green Electricians:
http://www.labormarketinfo.edd.ca.gov/OccGuides/Detail.aspx?Soccode=472111&Geography=0604000000 (last accessed June 11, 2011).
[illegible] US Census State and County Quickfacts. http://quickfacts.census.gov/qfd/states/06000.html (last accessed June 21, 2011).
[illegible] Local construction employee total compensation plus 11% payroll taxes amount to a total of $240,222,302. This is derived from the figure for total compensation for local construction workers in column I row 4 of Table 4 multiplied by 1.11 to include 11% in payroll taxes. An additional 20% of travelers income plus payroll taxes equals $14,445,053. Taken together, these are input into IMPLAN to calculate the resulting employment effect holding the level on the project at 3000 FTE job-years. In the California state and U.S. estimates, traveler total compensation is set at 100%.
[illegible] MIG, Inc., IMPLAN System (data and software), 502 2nd Street, Suite 301, Hudson, WI 54016 www.implan.com
[illegible] **A Comparison of IMPLAN with JEDI, an Alternative Specialized Computer Program:**

IMPLAN is a widely used program for analyzing local economic impact of new projects. JEDI is a similar input-output program developed by the Department of Energy using IMPLAN multipliers but adapted to the specific construction characteristics of various types of electrical power generation facilities.

One of JEDI's advantages in its specialized photovoltaic electrical generation construction program is that the user can adjust the program based on the percent of solar modules bought locally and manufactured locally. In this case, locally means California. Because the solar modules in a photovoltaic

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solar farm account for about 50% of all construction material costs, the extent to which a new facility creates new domestic jobs along its supply chain depends upon whether these solar panel modules are manufactured and sold locally. Indeed, the overall impact of new solar generating capacity in California will depend significantly upon whether California ramps up its ability to manufacture these photovoltaic solar panel modules to meet new demand. There is some evidence that this will happen; but this remains an open question.

This Table reproduces the job estimates from IMPLAN shown for California in Table 7. This Table compares these results with 5 estimates derived from JEDI using 5 different assumptions regarding the purchase of solar panel modules from California manufacturers. Column **a** reproduces the California job estimates from Table 7 with total FTE job years in the upper panel and average number of jobs per year in the lower panel. Column **b** shows estimates from a JEDI model assuming that no solar panels for the project are bought from California manufacturers.

The balance between supply chain jobs and consumer-based jobs differs somewhat between the IMPLAN and JEDI models. Nonetheless, in the aggregate, the IMPLAN model and the JEDI model in column **b** (the one that assumes no panels made locally) have very similar results: IMPLAN predicts 1,957 new jobs annually including 600 on-site while JEDI predicts 1,912 new jobs annually including the 600 on-site. These models diverge once we assume, in the JEDI model, that California begins making solar modules for this project.

Once the JEDI models assume some of the solar panels come from California manufacturers, the number of supply-chain jobs grows dramatically. (Scan lines 2 and 6 from columns **b** to **f** to see total FTE job-years and jobs-per-year grow as the local sourcing of solar panels goes from 0% to 100%). The consumer-chain jobs also grow but more slowly. Their growth is due to the consumer demand created by the new jobs needed among the manufacturers of solar panels to supply this 1250 MW project. In the JEDI model, when state manufacturing of solar panels goes from 0% supplied to 100% locally sourced for this project, state supply-chain employment jumps from 870 new jobs to 1,673 new jobs.

Overall in the JEDI model, these projects accounting for 1250 MW of photovoltaic electrical generation capacity and employing 600 workers per year for 5 years will generate 1,912 jobs per year for 5

years in California if none of these jobs are in solar panel manufacturing. That jumps to 3,423 jobs per year for 5 years if all of the solar panels for this project are bought from California manufacturers.

It may be, however, that if a comparable capacity were built in Mexico, that the Mexican facilities might buy their solar panels from California manufacturers. It remains an open question whether or not California solar panel manufacturing will ramp up to meet the emerging demand for photovoltaic solar panels associated with the new construction that is coming on-line. It also remains an open question whether US construction contractors are more likely to buy US solar panels compared to Mexican contractors buying US solar panels. Hypothetically, if Mexican contractors bought the same number of panels from California as California contractors would have, then these *solar-panel* supply chain effects could be similar whether the solar farms were built in Mexico or California.

Thus, conservatively, we set aside these solar-panel specific supply chain estimates derived from JEDI and focus on the IMPLAN results which are similar to the JEDI results with no locally bought solar panels.

[vi] US BLS, Usual Weekly Earnings Summary, April 19, 2011; http://bls.gov/news.release/wkyeng.nr0.htm (last accessed June 30, 2011).

[vii] Aspen reports jobs rather than job-years, and to make their report consistent with in Table 11, the number of direct local construction jobs are multiplied by 3, the assumed number of years the construction projects would last. Aspen Group, "Socioeconomic and Fiscal Impacts of the California Valley Solar Ranch and Topaz Solar Farm Projects on San Luis Obispo County," Appendix 14A p. Ap.14A-12 Tables 4-1 and 4-2 http://www.sloplanning.org/EIRs/CaliforniaValleySolarRanch/feir/apps/Ap14A_Fiscal_Impacts_Study.pdf

[viii] Stephen F. Hamilton, Terin Smith and Teja Kanda, "Executive Summary," Economic Impact to San Luis Obispo County of the California Valley Solar Ranch, December, 2010 Part II, Table 1, p. 4 http://www.sloplanning.org/EIRs/CaliforniaValleySolarRanch/feir/apps/Ap14B_Economic_Impacts.pdf ; Aspen Group, "Socioeconomic and Fiscal Impacts of the California Valley Solar Ranch and Topaz Solar Farm Projects on San Luis Obispo County," Appendix 14A p. Ap.14A-12 Tables 4-1 and 4-2 http://www.sloplanning.org/EIRs/CaliforniaValleySolarRanch/feir/apps/Ap14A_Fiscal_Impacts_Study.pdf ; Stephen F. Hamilton, Mark Berkman and Michelle Tran, Economic and Fiscal Impacts of the Topaz Solar Farm, March, 2011, Table 4-3 p. 11 http://topaz.firstsolar.com/downloads/TopazEconomicStudy.pdf ; Mark Berkman and Wesley Ahlgren, "Economic and Fiscal Impacts of the Desert Sunlight Solar Farm," The Brattle Group, Tables 4.1 and 4.2 pp. 9-10; www.brattle.com; personal communication with Wesley Ahlgren, June 13, 2011, wes@rve1.com.

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Research: 34 peer-reviewed journal articles; 4 non-peer-reviewed journal articles; 4 edited books and 1 co-authored book; 12 book chapters; 5 book reviews; finalist College Superior Research Award (2003); University of Utah, Graduate Student & Postdoctoral Scholar Distinguished Mentor, 2007

Teaching: University of Utah, College of Social and Behavioral Sciences, Superior Teacher Award (1982); Lowell Bennion University Distinguished Service Professor (1992-1993); University of Utah, Presidential Teaching Scholar (1993); Nominee, Student Choice Teaching Award, Academic Affairs Board of the Associated Students of the University of Utah, 2004; University of Utah, Graduate Student & Postdoctoral Scholar Distinguished Mentor, 2007; 15 Ph.D. theses chaired, 11 masters theses or projects chaired.

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University of Utah, Lowell Bennion University Distinguished Service Professor (1992-93)

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Economics 310: Labor Economics
Economics 512: Public Policy Towards Labor
Economics 513: Collective Bargaining
Economics 514: Wage Theory
Economics 516: Labor Market Analysis
Economics 517: Political Economy of Women's Work
Economics 715: Labor Economic Theory

(Semester System)
Economics 1740: American Economic History
Economics 3100: Labor Economics
Economics 5120: Labor Law and Collective Bargaining
Economics 7150: Labor Economic Theory
Economics 7590: Applied Econometrics
Economics 7960: Topics in Econometrics

PUBLICATIONS

1. Published and Accepted Articles (peer reviewed):

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2. "Analytical and Polemical Roots of Human Capital Theory." MidSouth Journal of Economics, Spring 1982.

3. "Industrialization, Unionization and the Labor Market Structure in the California Canneries." Industrial and Labor Relations Review, April, 1985, pp. 392-407 (co-authored with Martin Brown).

4. "On the Constancy of the Racial Wage Gap in New Jersey Manufacturing 1901 to 1980." Review of Black Political Economy, Spring 1985, pp. 71-76.

5. "Mechanization, Unionization and the Decline of the Piece-Rate System in the California Canneries." Industrial Relations, March, 1986 pp 81-91 (co-authored with Martin Brown).

6. "The Historical Origin of Job Ladders in the U.S. Canning Industry and Their Effects on the Gender Division of Labor," Cambridge Journal of Economics, June, 1986, pp. 129-45 (co-authored with Martin Brown).

7. "Craft Labor and Mechanization in Nineteenth Century American Canning," Journal of Economic History, September, 1986, pp. 743-56 (co-authored with Martin Brown).

8. "Competition, Racism and Hiring Practices Among Early California Manufacturers." Industrial and Labor Relations Review, October, 1986 pp. 61-74 (co-authored with Martin Brown).

9. "Technological Innovation and Payment Systems," Business History Review, Winter 1987 pp. 564-601 (co-authored with Martin Brown).

10. "Doubts Regarding the Human Capital Theory of Racial Inequality," Industrial Relations, Spring, 1988 pp 251-62 (co-authored with David Kiefer).

11. "The Effect of Immigration Law on Industrial Structure and Collective Bargaining in the California Food Processing Industry", Review of Radical Political Economics Winter, 1990 (co-authored with Bill Segal). (A longer version of this paper was is a report to the U.S. Labor Department and is available from the Division of Immigration Research, U.S. Department of Labor.)

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12. "The Decline of Child Labor in the U.S. Fruit and Vegetable Canning Industry", Business History Review Winter 1992 Vol. 66 pp. 723-770 (co-authored with Martin Brown and Jens Christiansen)

13. "Construction Safety Put at Risk", New Solutions, A Journal of Environmental and Occupational Health Policy, Vol. 6, No. 1 (Fall 1995) pp. 77-83.

14. "Woman, Technology and the Gender Division of Labor in Manufacturing," Research in Economic History Vol. 16, 1996 (co-authored with Jens Christiansen and Mark Prus) pp. 103-126.

15. "The Effects of Unionization and State Prevailing Wage Laws on Injuries in Construction, 1976 to 1991" (with Norman Waitzman) *Abstracts* of the American Public Health Association, 124th Annual Meeting, November 17-21, 1996, New York City, entitled: *Empowering the Disadvantaged, Social Justice in Public Health*, p. 407.

16. "A Step in the Right Direction: Friedman's New Estimates of Union Membership: The United States, 1880-1912," Historical Methods, A Journal of Quantitative and Interdisciplinary History, Volume 32, Number 2, Spring 1999, pp. 87-92.

17. "Prevailing Wage Regulations and School Construction Costs: Evidence from British Columbia," (with Cihan Bilginsoy) Journal of Education Finance, Winter 2000, Vol. 25, No. 1, pp. 415-432.

18. "Making Hay When it Rains—The Effect of Scale Economies, Seasonal and Cyclical Business Patterns, and Prevailing Wage Regulations on School Construction Costs," (with Hamid Azari-Rad and Mark Prus) Journal of Education Finance, Vol. 27, No. 4, Spring 2002, pp. 997-1012.

19. "Origin of the Factoid—Prevailing Wage Laws Are Remnant Jim Crow Laws," Review of Radical Political Economics, (with Hamid Azari-Rad), September 2002, vol. 34, no 3, pp. 275-284.

20. "Impact of the OSHA Trench and Excavation Standard on Fatal Injury in the Construction Industry," Journal of Occupational and Environmental Medicine, Vol. 44, No. 10, October 2002, pp. 902-905 with (Anthony Suruda, Brad Thomas Whitaker, Donald Bloswitz and Richard Sesek).

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21. "Race and Prevailing Wage Laws in Construction Industry, Comment on Thieblot," (with Hamid Azari-Rad) Journal of Labor Research, Vol. XXIV No. 1, Winter 2003, pp161-168.

22. "State Prevailing Wage Laws and School Construction Costs," (with Hamid Azari-Rad and Mark Prus), Industrial Relations, Vol. 42, No. 3, July 2003, pp. 445-457.

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34. Kim, JaeWhan and Philips, Peter, "Socio-Economic Factors Influencing the Failure to Measure the Blood Pressure of Children during Clinical Examinations," Journal of Clinical Hypertension (forthcoming 2011)

2. Working Papers and Submitted Manuscripts:

1. "Do Entrant and Incumbent Bidders Exhibit Different Aggressive Characters in the Construction Procurement Auction?" with Sheng Li submitted to a peer-reviewed journal September 2010)

2. "Spatial Dimensions of Health Insurance Utilization in South Korea," with JaeWhan Kim, (submitted to a peer-reviewed journal October 2010)

3. " The Effect of Prevailing Wage Regulations on Contractor Bid Participation and Behavior: A Comparison of Palo Alto, California with Four Nearby Prevailing Wage Municipalities," with JaeWhan Kim (submitted to a peer-reviewed journal July 2010)

3. **Books, Chapters in Books, Edited Volumes:**

1. Three Worlds of Labor Economics, (co-edited with Garth Mangum), M.E. Sharpe, N.Y., 1988, ISBN 0-87332-455-2 and 0-87332-456-0 (pbk.), 357p.

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2. "The Male Racial Pay Gap, 1939 to 1979: A Neoclassical Story and Institutional Response," (co-authored with David Kiefer) in Garth Mangum and Peter Philips, eds., Three Worlds of Labor Economics, M.E. Sharpe, N.Y., 1988, pp. 117-43.

3. "Competition, Racism and the Substitution of White Women for Chinese Men in Nineteenth-Century California Manufacturing," (co-authored with Martin Brown) in Rajani Kanth and E.K. Hunt, eds., Explorations in Political Economy: Essays in Criticism Roman and Littlefield, 1990, pp 173-99.

4. "Explanation of Long-term Trends in the Racial Wage Gap," (co-authored with David Kiefer) in Rajani Kanth and E.K. Hunt, eds. Explorations in Political Economy: Essays in Criticism Roman and Littlefield 1990, pp 137-150.

5. "Small and Large Firms and the Gender Gap in Manufacturing Wages, "(co-authored with Susan Carter) in Katherine Abraham, ed. New Directions in Labor Markets and Industrial Relations, M.I.T. Press, Cambridge Massachusetts, 1991, pp. 213-238.

6. "The Transition from Outwork to Factory Production in the Lynn Boot and Shoe Industry, 1850 to 1880," (co-authored with Jens Christiansen) in Sanford Jacoby, ed., Masters to Managers, Historical and Comparative Perspectives on American Employers, 1850 to 1950, Columbia University Press, 1991, pp 21-42.

7. "The Effect of the Repeal of Utah's Prevailing Wage Law on the Construction Labor Market" (co-authored with Hamid Azari-Rad and Anne Yeagle) in Sheldon Friedman, Richard Hurd, Ronald L. Seeber and Rudy Oswald, eds. Restoring the Promise of American Labor Law, Cornell University ILR Press, 1994, pp. 207-21.

8. Portable Pensions for Casual Labor Markets: Lessons from the Operating Engineers Central Pension Fund, Quorum Books, 1995 (co-authored with Teresa Ghilarducci, Garth Mangum and Jeff Petersen).

9. "Samuel Gompers," (with Cory Sinclair) in Joel Mokyr, ed., Oxford Encyclopedia of Economic History, Oxford University Press, (2003).

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10. Building Chaos: An International Comparison of the Effects of Deregulation on the Construction, (co-edited with Gerhard Bosch) Routledge Press, London, 2003, 240pp, index.

11. "A Tale of Two Cities: the High and Low Road to the Development of the US Construction Industry," chapter 8 in Building Chaos: An International Comparison of the Effects of Deregulation on the Construction, (co-edited with Gerhard Bosch) Routledge Press, London, 2003, pp. 161-187.

12. "Introduction," co-authored with Gerhard Bosch, in Building Chaos: An International Comparison of the Effects of Deregulation on the Construction, (co-edited with Gerhard Bosch) Routledge Press, London, 2003, pp. 2-23.

13. The Economics of Prevailing Wage Laws, co-edited with Hamid Azari-Rad and Mark Prus. Ashgate Publishers, Burlington, VT, 2005, 262 pp. index.

14. "Construction Unions in the Midwest," (with Mark Price) in The American Midwest: an interpretive encyclopedia, Richard Sisson, Christian K. Zacher, Andrew Robert Lee Cayton, eds., Indiana University Press, 2007.

15. "Prevailing Wage Laws, Productivity and Construction Efficiency?" (Kevin Duncan, Peter Philips, and Mark Prus) CME25 Conference. Proceedings of the Inaugural Construction Management and Economics, "Past, Present, and Future." Edited by Will Hughes. First Published 2008. pp 1411-1418. ISBN 978-0-415-46059-0 (3 vols).

16. Construction Research at NIOSH, Reviews of Research Programs of the National Institute for Occupational Safety and Health, The National Academies Press, Washington, DC, 2008 (Richard Tucker, chair).

4. **Book Reviews:**

1. "Review of American Workers, American Unions, 1920-1985" by Robert H. Zeiger in the Journal of Economic History, December, 1987.

2. "Review of Canning Women, Cannery Lives: Mexican Women Unionization and the California Food Processing Industry, 1930-1950" by Vicki Ruiz, in the Journal of Economic History, March 1989.

3. "Review of Canning Women, Cannery Lives: Mexican Women Unionization, and the California Food Processing Industry, 1930-1950" by Vicki Ruiz in

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Business History Review March 1989. (These two reviews were separately invited and are distinct.)

4. "Review of The Economic Pursuit of Quality" by Thomas Michael Power in the Journal of Economic Literature Vol. XXVII No. 3, September 1989.

5. "Review of Manufacturing Inequality: Gender Division in the French and British Metalworking Industries, 1914-1939" by Laura Lee Downs in the Journal of Economic Literature Vol. XXXV, No. 1, March, 1997.

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EXHIBIT C

COMITÉ CÍVICO DEL VALLE
INFORMED PEOPLE BUILD HEALTHY COMMUNITIES
www.ccvhealth.org

May 27, 2011

The Honorable Jerry Brown
Governor of California
State Capitol, Building, Suite 1173
Sacramento, CA 95814

Dear Governor Brown:

Comité Cívico del Valle is a grassroots environmental justice organization located in Imperial County. We were founded by a retired farmworker in 1987 to help other farmworkers. As we have grown, our locus has expanded to serve the needs of underserved Imperial County residents. With our work on clean air, environmental health and related issues, we are working to fulfill our mission to improve the living conditions of our community through education, capacity building and civic participation. Our motto is that informed people create healthy communities.

We write today to ask for your help to protect green jobs in Imperial County by preventing Sempra Energy from building the proposed Energia Sierra Juarez (ESJ) cross-border transmission line.

Imperial County is a rural disadvantaged, largely Latino community suffering from 29% unemployment. According to the U.S. Census Bureau in 2008, one in five residents lived below the poverty line. Our community suffers from environmental injustices such as severe air pollution and illegal trash dumping. Fortunately, our region is also rich in renewable energy resources including solar, wind and geothermal and is close to existing transmission lines. Residents are hopeful we can rebuild our local economy by becoming California's new renewable energy capital and create desperately-needed green jobs.

Unfortunately, Sempra's ESJ cross-border transmission proposal jeopardizes this bright future because it would allow energy from Mexico to be imported onto Southern California's electricity grid, displacing energy that instead could come from green energy projects built here in Imperial County. This move to export jobs, particularly over the border where environmental standards are weaker, is the wrong direction at a time when we need to put Californians back to work.

Comité Cívico del Valle appreciates your leadership on renewable energy and your vision to create jobs through a vibrant clean energy economy. Sempra's ESJ cross-border transmission line would undermine this effort. We ask for your help today to protect green jobs and stop this flawed proposal.

Sincerely,

Jose Luis Olmedo
Executive Director

CC: Secretary Steven Chu, Department of Energy
Senator Dianne Feinstein
Senator Barbara Boxer

699 "E" Street Brawley, CA 92227 Tel. (760)351-8761 Fax. (760)351-8762

Congressman Bob Filner
California State Senator Juan Vargas
California Assembly Member Manuel V. Perez
Anthony J. Como , Director of Permitting and Siting for DOE

EXHIBIT D

Labor Council for Latin American Advancement

Empowering the Latino Workforce: Strengthening our Communities with Unions

LCLAA
815 Sixteenth Street, NW, 4th Floor
Washington, DC 20006
T: 202.508.6919/F: 202.508.6922
E: headquarters@lclaa.org
Online: www.lclaa.org

February 22, 2010

The Honorable Steven Chu
Secretary
U.S. Department of Energy
The Forrestal Building
1000 Independence Avenue
Washington, DC 20585

Dear Secretary Chu:

On behalf of the Labor Council for Latin American Advancement (LCLAA), co-founder of the National Latino Coalition on Climate Change (NLCCC), we write today in opposition to Sempra Energy's application on behalf of Baja Wind U.S. Transmission, LLC (now known as Energia Sierra Juarez U.S. Transmission, LLC) for a Presidential Permit to construct a cross-border transmission line between northern Baja Mexico and San Diego County, California (Docket Number PP-334).

The transmission project proposed in this application would undermine several stated policy goals of President Obama's Administration. Specifically, it would facilitate off-shoring American jobs, increase the United States' dependence on imported energy and allow Sempra to skirt American environmental and labor laws. This

Energy projects built in California can create jobs for American workers and supply the power Sempra is trying to import from Mexico. For example, Imperial County, California in the southern part of the state has thousands of megawatts of proposed solar, wind and geothermal projects and is close to metropolitan transmission lines. This area is a disadvantaged, largely Latino community suffering from 29% unemployment. According to the U.S. Census Bureau in 2008, one in five residents lived below the poverty line. Imperial County residents are relying on their region becoming California's new renewable energy capital to put people back to work. Unfortunately, Sempra's proposal jeopardizes this bright future because it would allow energy from Mexico to be imported onto Southern California's electricity grid, displacing energy that instead could come from green energy projects built in Imperial County.

This move to export jobs and import energy is the wrong direction at a time when we should be putting Americans back to work and strengthening our nation's energy independence. Please protect California's hope for a cleaner, greener future with good middle-class jobs by rejecting Sempra's application for a Presidential Permit for the Energia Sierra Juarez transmission project.

Sincerely,

CC: Secretary of Labor Hilda Solis
Senator Dianne Feinstein
Senator Barbara Boxer
Congressman Bob Filner, 51st Congressional District
Dr. Jerry Pell, NEPA Document Manager, Department of Energy

1

Imperial County Community Success Profiles from the Electrical Industry

Local Veteran Sees Middle-Class Pathway in the Electrical Industry Thanks to Apprenticeship Training

Alex Adame at the Imperial County Electrical Training Center, July 2011.

An Imperial County native, Alex Adame graduated from El Centro Union High School in 1998. After high school, he joined the Navy where he received electrical and mechanical training. After leaving the Navy, Alex sold cars for 6 years in El Centro, but as the Great Recession hit, the car business plummeted. A friend suggested he look into the IBEW-NECA joint labor-management apprenticeship program. Alex liked the work he did in the Navy and decided to give construction apprenticeship a try. The Apprenticeship Committee of contractors, union leaders and instructors interviewed Alex, looked at his Navy training, gave him credit for being a returned veteran and took him in.

Now a fourth-year apprentice, Alex has diversified his electrical skill set through his work on a range of jobs such as the Imperial Irrigation District's 245 MW Niland gas turbine power plant and the Winterhaven casino. Some of the skills he learned on these projects include laying overwire, building a grounding grid, "roughing in" electrical wiring, running conduit pipe, installing receptacles and "working up" power for the machinery.

Alex's training on the job is reinforced by classroom instruction at the IBEW-NECA Imperial County Electrical Training Center. His foremen helped him make the connection between what he was learning

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in his apprenticeship classes and what was needed on the job. **Alex, who once dreamed of becoming a math teacher, notes, "Classes tell you why you are doing what you are doing and understanding the math behind the electrical installation really gives you a better understanding of how it all works together."** Alex has found the instructors in the apprenticeship program to be very talented, knowledgeable and effective. "They really know how to relate the theory to work and help you understand why you are doing what you do on the job. If I knew why I am doing what I am doing, then I can figure out if something is going in wrong or something needs to be adjusted. I'm not just following orders. I am helping to build something!"

This theory-practice relationship between the job site and the classroom came into play at a solar project Alex was helping to build. He had already covered solar theory in his apprenticeship course, which helped him understand the theory behind the installation, and how to do the calculations for each module. Still it was not all theory. It was also hard physical work. Despite suffocating heat, Alex and his team installed thousands of panels per day. He takes great pride in his work and in the fact that his jobsite and classroom training enable him to understand what he is doing and to do a good, clean job right the first time.

Alex's apprenticeship training has enabled him to set ambitious career goals that he may never have considered otherwise, goals that mix elements of the electrical industry with his personal interests. He's very interested in specializing in green energy construction work, particularly solar and geothermal, and hopes to someday become a foreman. His early interest in becoming a math teacher made him realize he might like being an instructor in the apprenticeship program. In the long-term, Alex is considering electrical engineering and believes his field experience, math interests and IBEW-NECA apprenticeship foundation make him a great candidate for the field.

Imperial County Community Success Profiles from the Electrical Industry

Second Chance through Apprenticeship is a Win for Local Economy

Jose Miranda shares time with his wife and children at the IBEW 569 Local Union Picnic, June 2011

A Calexico high school graduate, Jose Miranda has lived in Imperial County all his life. After a few short-term jobs in the cable and telephone industries, and a stint in college, Jose found his life had taken an unexpected and downward turn. In 2000, after two years in jail, he knew that for the good of his family and himself, he had to make a change; so he applied to the IBEW apprenticeship program. With strong math and English scores, his background in electronics, and his commitment to turn his life around, the contractors and union officials on the apprenticeship committee were satisfied Jose's legal troubles were behind him and took him in.

Throughout his apprenticeship, Jose worked on a variety of jobs throughout Imperial County rotating between several union contractors to build as many diverse skills as possible. **During this training, he was also able to support his growing family and plan for the future with decent weekly wages, family healthcare and pension benefits.** Under the guidance of seasoned journeyworkers, Jose's work habits and drive helped him learn critical hands-on skills to accompany his classroom experience and make him successful on the job. At the time, union contractors and the IBEW had not yet built their new training facility in El Centro, so Jose had to take his apprenticeship classes in San Diego. Despite having to commute two-hours one-way to the San Diego Electrical Training Center, Jose was determined to complete the program and build a middle-class career for himself and his family in the Imperial County electrical industry.

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During Jose's fourth year as an apprentice, he was employed by Five Star Electric working on the electronic controls for KF Seeds, a seed encapsulating production line. Imperial County grows a lot of onion, rye, alfalfa and grass seeds for shipment, and these seeds need to be encapsulated so they will store and ship well. At the time, KF Seeds was exporting its raw seeds elsewhere for encapsulation. The company decided to bring the encapsulation process in-house, which would create local jobs and reduce production costs. Unfortunately, when the company's newly-ordered encapsulating equipment arrived, it did not operate correctly. Jose, along with his IBEW journeyman mentor from his early years as an apprentice, Ed Gomez, worked with KF Seeds staff and engineers to redesign how the equipment would be aligned and operated.

Jose's broad training in the IBEW apprenticeship program gave him the skill base and understanding to help get the system up and running. Without Jose and Ed, the encapsulating system might have experienced severe delays or may have been abandoned all together. **This story demonstrates how having a skilled construction labor force in the community translates into economic development opportunities for local industries and customers that need up-to-date, modern and technically competent infrastructure to run their own operations effectively.**

As he moved though his 5-year apprenticeship, Jose took on additional job site responsibilities and started mentoring younger apprentices, passing on skills he learned from Journeyworkers before him. This job site "stacking" of foremen, journeymen, experienced and new apprentices allowed Jose to move up the skill ladder with guidance, at his own pace while also pulling newer apprentices up the skill ladder behind him.

As Jose took on more responsibility and continued mentoring more apprentices, he realized that not only did he like teaching, he excelled at it. After turning out as a Journeyworker in 2009, Jose became involved in the newly built Imperial County IBEW apprenticeship program. With the opening of the new IBEW-NECA Imperial County Electrical Training Center in August 2009, Jose and his colleagues have a state-of-the-art facility to prepare the next generation of electrical apprentices who no longer have to endure the long commute to San Diego for training as Jose did.

Imperial County Community Success Profiles from the Electrical Industry

Middle-Class Career in Construction Enables Local Veteran to Give Back to the Community

Ramon Castro on the job site constructing the new wastewater treatment plant in Brawley, CA

A native of Imperial County, Ramon Castro, grew up in Brawley, California. After graduating from Brawley High School in 1996, he joined the Marines where he learned basic wiring, switchboard and digital phone trouble-shooting and aspects of fiber optics. Ramon rose in the ranks to sergeant, served in Iraq and came out of the Marines at the end of 2003 when he returned home to Brawley to start his new civilian life.

Married with four children, Ramon knew he needed a solid middle-class career that could provide good wages, family healthcare and skilled training. He applied to the IBEW-NECA apprenticeship through the Building and Construction Trades "Helmets to Hardhats" program which helps veterans transition from the military to union construction work and was accepted.

Ramon finds the range of work he has had as an apprentice both challenging and fulfilling. His experience includes school construction, a gas turbine power plant in Niland for the Imperial Irrigation District and a casino in Winterhaven, CA in Imperial County. He has also had the opportunity to work on a "green" project in the region, constructing a solar farm in Blythe, Riverside County, California. On that

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project, he worked with a team "laying glass" which sought to beat the record for productivity set in Canada laying 400 modules per day. Safety was a primary concern, especially because unlike most other forms of electrical work, installing solar panels involves live electricity - once the panel is turned to the sun, it is generating current. Also, laboring work in the desert involves adjusting to a hot, dry climate where hydration and sun protection are subtle but real safety challenges. Despite the harsh conditions, Ramon credits his stellar performance on this job site to the fact that he is a native Imperial County resident used to routinely hydrating.

Melding theory and practice has significantly advanced Ramon's ability to tackle any kind of electrical job. Now, as a fifth-year apprentice, he continues to build his skill set by helping to construct a wastewater treatment plant in Brawley, CA. His solar panel work contrasts nicely with his treatment plant work because the jobs are so different. **Additionally, ongoing classroom and lab work refine his skills and expand his theoretical understanding while the various jobs he has been on present him with real-world challenges.** As an IBEW-NECA apprentice, he is also given broad safety training and has an added sense of safety knowing he is working with a well-trained, sober crew through IBEW-NECA's "drug free workplace" program that includes random drug testing and substance abuse support services.

Having a decent paying job that can support him and his family, give his children health insurance and allow his family to grow up in his hometown puts Ramon in a position to give back to his community. During his time off-the-job, Ramon serves as Vice President of the Hidalgo Society in Brawley, raising funds to provide scholarships for local youth, cancer patients and other local causes. Ramon is thankful to the Marines, the IBEW and NECA for giving him the opportunity to build his skills and become a productive member of his hometown community.

Imperial County Community Success Profiles from the Electrical Industry

Beyond Training: The Role of Apprenticeship in Combating Substance Abuse in Local Communities

Apprentices at the IBEW-NECA Imperial County Electrical Training Center participate in routine drug-testing and have access to counseling and other support services to ensure a drug-free work place.

The IBEW-NECA Imperial Electrical Training Center is the only state-certified electrical apprenticeship facility in Imperial County. With 2,500 square feet and an option on the land next door to expand, the facility consists of labs, administrative space, a conference room and classrooms. Currently, there are three local instructors on staff and, with support from the San Diego Electrical Training Center, the Imperial Electrical Training Center offers a wide variety of classes to prepare apprentices for all sectors of the electrical industry.

High youth unemployment, proximity to the Mexican border, and widespread poverty all contribute to a severe local drug problem in Imperial County. **Apprenticeship at the Imperial Electrical Training Center includes a testing and counseling component to support a drug-free workplace. This is just one piece of an overall County effort to fight the scourge of drugs in the community.** The IBEW-NECA apprenticeship program is helping to fight that epidemic by offering an alternative to boredom and unemployment which can lead to increased drug use among youth.

Applicants who are accepted into the IBEW-NECA electrical apprenticeship program must be drug free. If the applicant can pass the drug test, he or she joins a community of young people with futures and a workplace community that is actively drug free and drug tested to keep it that way. The Imperial Electrical Training Center and the middle-class electrical careers it supports go beyond "just say no" to

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provide Imperial County youth with a better alternative to drugs--decent jobs with healthy peers and family-friendly benefits with which to build a future. As such, the IBEW-NECA Training Center is part of the larger Imperial County infrastructure dedicated to fighting the drug problem. Contributions into the apprenticeship training fund from IBEW construction projects around the county help pay for drug testing for apprentices while contributions into the health fund go, in part, towards drug counseling. **The goal is to get young workers off drugs if they have used, keep them off drugs in any case, and provide them with a viable job and a healthy life alternative to the drug culture.** Building and training local, highly skilled electricians is a part of the solution to the ongoing drug war in Imperial County.

RESPONSE TO 423-1: The comments are noted.

Pell, Jerry

From: Abreu, Alberto [AAbreu@SempraGeneration.com]
Sent: Tuesday, August 16, 2011 5:25 PM
To: Pell, Jerry
Cc:

Subject: RE: ESJ Power Allocation to the U.S. vs Mexico

Follow Up Flag: Follow up
Flag Status: Flagged

423-1

As you have noted, indeed the 1,250 MW reflects the capacity of the gen-tie line and we do in fact have interconnection requests for 1,120MW. Our presidential permit request is for 1,250MW and the amount of interconnection requests we have made to this point is incidental to the amount requested in our application for the Presidential Permit. We reaffirm our request for a 1,250MW capacity limit for the Presidential Permit.

Sempra has publicly stated many times that we believe there is enough wind capacity in the region for ESJ to sell power to both the US and Mexico markets. However, any such sales to Mexico may or may not reduce the amount injected onto the gen-tie line to below 1,250MW. As to the likelihood of any such sales to Mexico, although we think such sales are a possibility, we do not believe they should be characterized as "likely" at this time and we certainly would not characterize them that way. As to the details of the timing and amounts of sales to Mexico (or for that matter, the US), with the exception of the SDGE contract, such details are unknown at this time.

In April, SDG&E and Sempra Generation announced that they had reached an agreement to purchase and sell up to 156MW of energy from ESJ, from the Phase 1 portion of the project located in Ejido Jacume. ESJ has signed no other power supply contracts.

We believe that none of these details affect the environmental analysis or the impacts in the US associated with the project.

Thank you.

Alberto