# OTHER AGENCY AND NON-GOVERNMENT ORGANIZATION COMMENTS

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A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.
A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS.
We also have a conservation easement on a ranch, known as
Cowboy Ranch, adjacent to the BLM Devils Backbone Withdrawal
Study Area. This ranch consists of 10,000 deeded acres and
20,000 leased acres. The ranch is managed for wildlife
and provides a very important east-west corridor from
the Magdalena mountains to the Rio Grande Valley.

SunZia Southwest Transmission Project
c/o EPG, Inc.
4141 North 32nd Street, Suite 102
Phoenix, AZ 85018
2 During final route engineering and design, minor modifications or adjustments to the route can be considered as mitigation.

Comment noted
appropriate. This, however, is a different case. Without concurring on the vast majority of the BLM’s preferred route, there are relatively small adjustments that could be made to the route in the vicinity of SaddleBrooke Ranch that would have significant and positive effects for SaddleBrooke Ranch and the Pinel County.

We understand there are many considerations and interests the BLM must balance when choosing a route. However, the BLM appears to have given insufficient consideration to the effect of its preferred route on the SaddleBrooke Ranch master plan, the home investment being placed at risk by Rebano in this project, and the employment considerations relating to SaddleBrooke Ranch. Because of our belief in the long-term potential of the SaddleBrooke Ranch location, as demonstrated by the success of the SaddleBrooke community which is approximately 7 miles from SaddleBrooke Ranch, Rebano made a huge investment in SaddleBrooke Ranch even as other homebuilders were closing shop. Studies performed in the past by the Center for Economic Research at the Arizona State University College of Business and by the Center for Economic Development and Research at the University of North Texas have confirmed the tremendous economic benefits of a Rebano Resort Community for the local economy. The study prepared by ASU in June 2009 of the economic contributions of SaddleBrooke and SaddleBrooke Ranch estimates that the combined effects of spending for consumer goods and services by homebuyers in these two projects upon build-out and the ongoing operations of the homebuyers associations will generate $1.9 billion in expenditures and $1 billion in earnings per year in 1999 dollars, and support 27,560 jobs. This is in addition to all of the direct construction and other jobs during the course of development.

The zoning for the entire SaddleBrooke Ranch master plan is zoned by virtue of the golf course, streets, infrastructure, amenities and homes already constructed in the northwestern portion of SaddleBrooke Ranch. Zoning varies for the entire master plan because a developer would never start a project as massive as SaddleBrooke Ranch without some assurance of the ability of completing it. For similar reasons, we believe it is in the best interest of the public in general for the SaddleBrooke Ranch master plan as “undeveloped” in the same sense as the neighboring state land and agricultural land. Development has not yet reached the location of the BLM-preferred route in SaddleBrooke Ranch, but the location is part of a large and ongoing construction and development project in accordance with a master plan.

A relatively small adjustment in the rising in the vicinity of SaddleBrooke Ranch, taking the line to the north of SaddleBrooke Ranch before converging with the BLM-preferred route could have a tremendous economic effect, not only for Rebano, but also for the County. This change, which is indicated in pink in the attachment, would not have any effect on the route in the vicinity of the San Pedro River. This adjustment would affect only a very small portion of the route of I-10 and nothing that the vast majority of the BLM’s preferred route could remain the same. We would appreciate the opportunity to work with the BLM, Pinel County, and others to effect this minor modification. In reality, the SaddleBrooke Ranch zone, as well as many subdivisions in Route Group 4, would avoid SaddleBrooke Ranch entirely.

To any extent there is a mailing list or email list of interested parties with respect to the SunZia project, please add my name. Please let me know if you need any additional information in order to assist you in evaluating Rebano’s request to adjust the proposed route. Thank you.

Sincerely,

Peter M. Garstman
As stated in the DEIS (p. 1-7), “Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to users seeking similar services, including ancillary services…” and reiterated on p 4-274 of the DEIS, “As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service.” Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, “it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation” (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity.

Comment noted. A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor have been added to the FEIS, Section 3.10.3.3, Conservation Easements, In Chapter 3

The proposed Project requires a right-of-way width of 400 feet to accommodate two 500 kV transmission lines. There are no existing rights-of-way that could accommodate the Project.

Comment noted
Southline Transmission Project is not considered an alternative or competing project to the SunZia Southwest Transmission Project. The proposed Southline Transmission Project (345 kV), located between southwestern New Mexico and southeastern Arizona, could transport additional electricity generated from sources in those areas; however, the purpose and need for the Southline project is different than for the SunZia Project. The Southline project’s capacity would be limited to that which could be accommodated by a 345 kV transmission line and constructed within portions of Western Area Power Administration’s existing rights-of-way.

Please see response to Comment No. 1.

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It is acknowledged that the majority of the preferred alternative transmission line corridor is on private and state lands in Arizona. The DEIS analysis was conducted to address impacts at the same level of detail that could occur on all segments of each of the alternative corridors, irrespective of land ownership. It may appear that more of the analysis in the DEIS was focused on federal lands because there are established management guidelines for impact assessment on federal lands, such as Visual Resource Management Objectives, that require more extensive documentation.
August 9, 2012

Mr. Adrian Garcia, BLM Project Manager
Bureau of Land Management
SunZia Transmission Line Project
P.O. Box 27115
Santa Fe, NM 87502-0115
NMSunZiaProject@blm.gov


Dear Mr. Garcia,

The Cochise County Board of Supervisors would like to thank you for the opportunity to review and comment on the Draft Environmental Impact Statement (DEIS) for the SunZia Transmission Line Project (Project), and welcome participation as a coordinating agency throughout the NEPA process for the project. Cochise County respectfully requests formal recognition as a Coordinating Agency via a Memorandum of Understanding (MOU) to memorialize mutual expectations and commitments throughout the NEPA process.

Cochise County recognizes the myriad benefits that SunZia will provide, including facilitating access to significant renewable energy resources and improving the infrastructure and reliability of regional grid systems. We understand that we share a responsibility to assist the Bureau of Land Management (BLM) in providing assessment of SunZia’s alternatives and the potential economic, environmental and social impacts identified alternatives may have on Cochise County. It is critical that the BLM reaches out to stakeholders and potentially affected communities and parties for feedback prior to release of a Final EIS. The County recognizes the effort of the BLM in ensuring thorough review under the National Environmental Policy Act (NEPA) by being receptive to extensive input from numerous stakeholders in central and southern Arizona. The credibility of the process depends on incorporating that feedback into the Final EIS.
The BLM acknowledges that there are potentially significant environmental impacts, as well as impacts to rural communities associated with either of the alternative routes (subroutes 4B or 4C2c). The BLM Preferred Alternative was selected because it would meet BLM’s purpose and need for action; maximize the use of existing utility corridors and infrastructure; and minimize impacts to sensitive resources, river crossings, residential uses, and commercial uses. The BLM’s decision will include provisions for mitigation measures to avoid or reduce the impacts to the extent practical.

Although the BLM Preferred Route (Subroute 4C2c) is longer than the alternative Subroute 4B, a greater proportion of the route would be consolidated with existing utility corridors, where access for construction could be more available. Impacts to sensitive riparian habitat and water resources have been analyzed for each of the alternatives, and the potential for soil erosion impacts are included in the discussion of Section 4.3.2 of the DEIS. As stated, the application of Standard and Selective mitigation measures described in Section 2.4.12 of the DEIS would be effective to reduce soil erosion and other impacts to riparian habitat and water resources for either of the alternative routes.

The BLM has identified a Preferred Alternative route, Subroute 4C2c which crosses multiple jurisdictions to include the complete proposed action, based on the rationale provided above (see comment No. 2). However, the BLM’s authority is limited to the grant of application for new right-of-way crossing Federal land, and does not have authority to grant right-of-way on state, private or other non-federal lands. A relatively small proportion of the alternative corridors have been surveyed for cultural resources; only the known cultural resources that have been documented in the DEIS studies to date. Intensive cultural resource surveys will be conducted prior to construction of the Project, for which a mitigation plan will be prepared to address treatment of identified cultural resources.
visual resources (which would achieve the BLM’s visual resource management objectives), avoids any impacts to military missions at the U.S. Army’s Fort Huachuca, and has substantially less mileage (and resultant less environmental, paleontological, and social impacts). Furthermore, Subroute 4B impacts fewer known cultural resources and has impacts that are more effectively mitigated.

We wish to emphasize that the federal government does not supersede the authority of state and local control and decision making in siting transmission lines on property not owned by the federal government. It is our view that the BLM should identify the least intrusive route for this project. The BLM has failed to do so in identifying Subroute 4C as the current Preferred Alternative.

On behalf of my fellow Board members, I thank you for the opportunity to comment on this important project, and we look forward to continued participation throughout the NEPA process.

Sincerely,

Richard R. Scarl
Chairman, Cochise County Board of Supervisors

Cc:  Patrick G. Cail, District 1 Supervisor
     Ann English, District 2 Supervisor
     Michael J. Ortega, County Administrator
     James E. Vlahovich, Deputy County Administrator
     Karen Egge, Interim Community Development Director
     Beverly Wilkes, Deputy Planning Director
     Public Lands Advisory Committee
     Urenchi Kent, PAO Chief, Ft. Huachuca
     Misty Paul, Acting Director, Bureau of Land Management
     Kent Salazar, Secretary, Department of the Interior
     Ray Suazo, Director, Arizona Bureau of Land Management
     Mickey Siegel, SunZia DEIS Contractor, Environmental Planning Group
July 18, 2012

Dear Mr. Garcia:

Your letter requesting the above named project be reviewed by the New Mexico Environment Department (NMED) and you and the various bureaus for review and comment. Comments were provided by the Surface Water Quality Bureau, Ground Water Quality Bureau and Air Quality Bureau and are as follows:

**Surface Water Quality Bureau**

I have reviewed the information provided by the Bureau of Land Management regarding the SunZia Southwest Transmission Line Project from Lincoln County, NM to Arizona (NMED File No. 3753-1). The comments below pertain to surface water quality only.

**SUMMARY OF PROPOSED ACTIVITY**

SunZia Transmission, LLC, proposes to construct, operate, and maintain two 500-kilovolt (kV) transmission lines that would be located on federal, state, and private lands between central New Mexico and central Arizona. SunZia Transmission, LLC, has submitted an application for right-of-way on public land administered by the Bureau of Land Management (BLM). The transmission lines would originate at a new substation (SunZia Sub) in Lincoln County, New Mexico, and terminate at the Paint Central Substation in Pinal County, Arizona. The project would be located within Lincoln, Socorro, Sierra, Luna, Grant, Hidalgo, and/or Torrance counties in New Mexico. The BLM preferred alternative is approximately 537 miles long, and alternative routes range between 460 and 542 miles in length. The right-of-way would be typically 400 feet wide, although a right-of-way up to 3,000 feet wide would be required under certain conditions. The BLM preferred alternative attempts to maximize use of existing utility corridors and minimize impacts to sensitive resources, and minimize impacts to river channels.
BMPs and mitigation measures outlined in the DEIS and the Plan of Development will mitigate impacts. Various plans that will be included in the Plan of Development including, Erosion, Dust Control, and Air Quality Plan; Stormwater Pollution Prevention Plan; and Right-of-Way Preparation, Reclamation, and Monitoring Framework Plan will all contain specific direction for mitigating these potential impacts on soil and water resources. Standard and selective mitigation measures that are described in the DEIS and applicable here are listed:

Standard MM-4: The alignment of new access roads or overland route would follow the designated area’s landform contours where possible, provided that such alignment does not additionally impact resource values. This would minimize ground disturbance and/or reduce scarring (visual contrast).

Standard MM-5: In construction areas where grading is not required, vegetation would be left in place wherever possible, and original contour would be maintained to avoid excessive root damage and allow for regrowth. All existing roads would be left in a condition equal to or better than their condition prior to the construction of the transmission lines, as determined by the appropriate land-managing agency.

Standard MM-8: In construction areas (e.g., marshalling yards, structure sites, spur roads from existing access roads) where grading is required, surface restoration would be implemented as required by the landowner or BLM Authorized Officer. The method of restoration would normally consist of returning disturbed areas back to their natural contour, reseeding (where required), cross drains installed for erosion control, placing water bars in the road, and filling ditches.

Standard MM-18: Roads would be built as near as possible at right angles to the streams and washes. Culverts or temporary bridges would be installed where necessary. All construction and operations activities shall be conducted in a manner that would minimize disturbance to vegetation, drainage channels, and intermittent or perennial stream banks.

Selective MM-3: Overland access (i.e., drive-and-crush or cut-and-clear) would be used to the greatest extent possible in areas where no grading would be needed to access work areas. Drive-and-crush is vehicular travel to access a site without significantly modifying the landscape. Vegetation is crushed, but not cropped. Soil compacted, but no surface soil is removed. Cut-and-clear is considered as brushing off (removal) of all vegetation to improve or provide suitable access for equipment. All vegetation is removed using above-ground cutting methods that leave the root crown intact.
Access roads would be designed to limit impacts to soil and water resources. BMPs and standard mitigation measures would include holding to the natural contour of the landscape, minimizing cuts, and crossing streams and washes at right angles.

Standard MM-8: In construction areas (e.g., marshalling yards, structure sites, spur roads from existing access roads) where grading is required, surface restoration would be implemented as required by the landowner or BLM Authorized Officer. The method of restoration would normally consist of returning disturbed areas back to their natural contour, reseeding (where required), cross drains installed for erosion control, placing water bars in the road, and filling ditches.

Standard MM-18: Roads would be built as near as possible at right angles to the streams and washes. Culverts or temporary bridges would be installed where necessary. All construction and operations activities shall be conducted in a manner that would minimize disturbance to vegetation, drainage channels, and intermittent or perennial stream banks.

Compliance with the EPAs National Pollutant Discharge System is a part of the Project regulatory framework (1-19, 1-21). This will include the implementation of a Stormwater Pollution Prevention Plan, to be included in the Plan of Development.
Compliance with 20.6 NMAC is part of the Project regulatory framework. The Stormwater Pollution Prevention Plan, to be included in the POD, will specifically address notification and response requirements for containment releases and accidental discharges.

An Erosion, Dust Control, and Air Quality Plan will be included in the Final Plan of Development. This Plan includes specific requirements and goals for achieving regulatory compliance and resource protection.
Luna County has been prepared and approved by the U.S. Environmental Protection Agency (EPA). As part of the NEAR, Luna County adopted ordinance 75 which contains requirements for fugitive dust control. In accordance with this ordinance and as outlined in the draft EIS, appropriate dust control and reclamation measures (RMPs) must be implemented for any soil disturbing activities.

To clarify a statement on page 3-11 of the draft EIS, from 2009 to 2011 EPA undertook a reevaluation of the 2008 ozone (O3) NAAQS, effectively delaying attainment designations until 2012. During this time period, monitoring data showed improvements in O3 air quality and attainment of the standard. As a result, the 2009 Sunland Park O3 nonattainment recommendation made by the governor of New Mexico was rescinded.

All asphalt, concrete, querying, grading and returning facilities contracted in conjunction with the proposed project must have current and proper air quality permits. Potential emissions from any diesel generator sets should be calculated assuming continuous operation to determine whether a construction permit is required. For more information on air quality permitting and modeling requirements, please refer to 202.72 NMAC.

This project will temporarily impact air quality as a result of fugitive dust and equipment exhaust emissions generated during construction and will impact air quality in the area. However, with the appropriate dust control measures in place, the increased levels should be minimal. The project, as proposed, is not anticipated to result in nonattainment of the New Mexico or National Ambient Air Quality Standards or contribute negatively to air quality on a long-term basis.

I hope this information is helpful to you.

Sincerely,
Julie Royal
Environmental Impact Review Coordinator
NMED File #3728 ER

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<td>8</td>
<td>Removed governor’s order discussion from Section 3.2 of the FEIS.</td>
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<td>9</td>
<td>An Erosion, Dust Control, and Air Quality Plan will be included in the Final POD. This Plan includes specific requirements and goals for air quality permitting and modeling.</td>
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The BLM-preferred alternative is Subroute 4C2c, which would cross the San Pedro River at the same location as Subroute 4C3, within an existing transmission line corridor. A portion of Subroute 4C2c would be located parallel to the San Pedro River, although several miles west of the river. Construction of the Project along this route would avoid the majority of known cultural resource sites located along the San Pedro River, and avoid impacts to cultural resources within the Tucson area for Subroute 4C3. A hiatus in consultation with San Carlos (and other consulting parties) was the result of the information gathering process necessary for NEPA analysis.
BLM continues to consult with San Carlos and other tribes and welcomes additional consultation and information. A driving tour of portions of the preferred route has been offered, but has not been successfully scheduled. The tribe was notified of the availability of the DEIS by letter dated 5/23/12 and transmitted in June 2012. Discussions were held in a face-to-face meeting with the cultural staff on October 18, 2012.
Several drafts of the PA have been transmitted to all consulting parties, including the San Carlos Apache. The draft PA was not sufficiently developed enough to include in the DEIS. A HPTP will not be developed until after a class II inventory is completed and eligibility determinations made. An outline of what the HPTP will contain is included in the draft PA. The draft PA can be found in Appendix M.

(Comment re: not exchanging info on routes) Additional information was exchanged with the San Carlos Apache at a meeting at San Carlos on October 4, 2011.

The cultural resources inventories will be performed by archaeologists who are qualified to recognize and identify Apache cultural sites and sacred areas. The personnel conducting the inventories will consult with tribal personnel knowledgeable in Apache cultural, traditions and religion.
Comment to BLM
Re: SunZia Transmission Line Project
August 22, 2012
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The Tribe's concerns regarding the BLM's and SunZia's sensitivity regarding Apache cultural sites, sacred areas, plant gathering areas and identification of remains is only exacerbated by the complete lack of sensitivity in the description of cultural resources in the BLM's Preferred Alternative Subroutes 4C1c, 4C2c, as well as the discussions of Subroutes 4C1 and 4C2, fails to address the location of Camp Grant, the Camp Grant Apache Reservation and the Camp Grant Massacre site and their significance to the San Carlos Apache Tribe. See DEIS § 3.8.3.4 at 3-171.

The Camp Grant Massacre occurred at dawn on April 30, 1871. The Aztarrija Apaches and Pinaleno Apaches near Camp Grant were massacred, having previously surrendered their weapons to the U.S. Army authorities at the Camp. A group of 6 Anglo-Americans, 48 Mohave and 94 Yavapai-O'odham left Tucson for Camp Grant. They slaughtered between 110 and 144 Apaches, all but eight being women and children. Apache casualties, 27 to 30, were sold into slavery in Tucson and Mexico. The wounded and survivors fled into the surrounding countryside. Apache remains have been found throughout the area. At trial, those arrested for their participation in the Massacre were acquitted. The failure to mention these events or sites is an insult to Apache people.

The survivors and the relatives of the murder victims relocated almost immediately on the San Carlos Apache Reservation. The significance of the area covered by Subroute 4C1c and Subroutes 4C1 and 4C2 to the San Carlos Apache Tribe and people cannot be overstated.

My staff will be happy to provide the BLM with the historical import of this area and its cultural significance to the San Carlos Apache people. The omission of any mention of the cultural significance and history of Camp Grant and the Camp Grant Massacre in the SunZia DEIS is frankly a glaring oversight. In the Tribe's view, such a major omission renders the entire proposed cultural consultation process in the DEIS suspect. The Tribe would encourage that this oversight be addressed by the BLM and SunZia with vigor. The Tribe will assist you in any reasonable manner possible.

6 Need for a Confidentiality Protocol.

As the BLM is well aware, the Tribe is particularly concerned that cultural and sacred sites and information shared by knowledgeable Tribal personnel remain confidential and private. The Tribe recommends that a protocol specifically addressing this issue be developed and implemented as a part of the SunZia Project.

Ecological and Environmental Concerns

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<td>Discussion of Camp Grant in detail can be found in the culture history section of the Class II cultural resource report. The intent of the culture history in the DEIS was to provide a brief culture history overview. BLM appreciates the sensitivity of this tragic event for the San Carlos Apache, and has added additional information to the FEIS (see Section 3.8.2.2; p. 3-24 and Section 3.8.3.4).</td>
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<td>6</td>
<td>Comment noted. The confidentiality protocol outlined in the Programatic Agreement will be implemented.</td>
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The BLM's Preferred Alternative, Subroute 4C2c, unnecessarily parallels the San Pedro River, cutting across perennial feeder streams and creating an increased likelihood of negative impacts to what is identified as a unique watershed and riparian environment. Subroute 4C2c will result in negative impacts on water resources and the riparian habitat in the lower San Pedro River, and increase the risk of erosion and habitat degradation.

A route through the San Pedro River Valley would (i) cause habitat fragmentation in a relatively undisturbed environment, (ii) impact unique wildlife characteristics and habitat, including traversing a number of wildlife corridors, (iii) lead to the permanent loss of vegetation while allowing and facilitating noxious weeds and invasive plant species, and (iv) traverse a number of important conservation areas.

The BLM’s Preferred Alternative Subroute 4C2c negatively impacts the San Carlos Apache Reservation. Subroute 4C2c will destroy Southwestern Willow Flycatcher habitat. Reservations are often viewed as refuges with large areas of undeveloped land and riparian habitat capable of supporting a variety of threatened and endangered species. With reservation development, such as, as proposed along Subroute 4C2c, the burden of species preservation increasingly falls upon Tribes. With less habitat available for the Southwestern Willow Flycatcher on off-reservation lands, federal agencies will look and be looking to the San Carlos Reservation as future habitat necessary for species recovery. Any designation of critical habitat on San Carlos would undermine the Tribe's sovereignty and impact the Tribe's ability to develop its own lands for the benefit of its own people.

Undoubtedly, Subroute 4C2c would impact Fish and Wildlife Service’s Lower San Pedro River Collaborative Management Initiative. No mention of the Lower San Pedro River Collaborative Management Initiative or the route’s impacts on the Initiative’s goals was found in the SunZia DEIS. This oversight should be addressed in considering the BLM’s Preferred Alternative Subroute 4C2c.

The Tribe is also concerned that SunZia employ all practical measures to reduce bird–power line collisions. The Eagle, other migratory birds and raptors are culturally significant to the Apache people. The Tribe encourages that all reasonable efforts will be employed to minimize bird–power line collisions.

**Government-to-Government Consultations**

The Tribe looks forward to further consultations with BLM regarding the SunZia Project. The Tribe will cooperate in further consultations. The Tribe requests that further government-to-government consultations be meaningful and not regarded as simply an item to be marked on a checklist. Follow up assurances are important to the Tribe.

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**Response to Comment**

7. Subroute 4C2c and others in the San Pedro River Valley would cross areas without existing access. The DEIS acknowledges that disturbance to wildlife could occur as a result of any increase in recreational OHV use of new access roads. Selective mitigation measure 6 provides for the closure of roads, at the discretion of the landowner. This measure would be applied to areas identified in the final POD. Maintenance activities may also cause temporary, short-term disturbance to wildlife. However, the presence of a transmission line does not appear to be perceived as a barrier to wildlife present in the Project area. Fragmentation is anticipated to result primarily from the degree of new ground disturbance and the level of traffic on access roads.

Noxious weeds and other invasive plants would be monitored and treated as described in the Noxious Weed Management Plan, Appendix B2 of the POD.

Many conservation areas are described in the DEIS, and additional conservation areas are described in the FEIS as updates to the inventory.

The BLM preferred alternative crossing location on the San Pedro River was selected as it is adjacent to an existing transmission corridor, in a reach of the river without perennial flow or suitable nesting habitat for the Southwestern Willow Flycatcher. Additionally, terrain on each side of the river at this location facilitates spanning the entire floodplain at an elevation that would substantially reduce or eliminate the need for vegetation management within the existing mesquite bosque. Riparian habitat in the Southwest is dynamic. However, riparian woodland recovery at this location would depend on increased base flows in the San Pedro River, either through increased precipitation or reductions in withdrawals by upstream water users in Cochise County.

The Proposed Lower San Pedro River Collaborative Conservation Initiative includes a 2-mile buffer on either side of the San Pedro River, from The Narrows gauging station downstream to the Gila River. The BLM preferred alternative would cross the lower one-half mile of this study area, adjacent to an existing transmission corridor. This proposal is in early planning stages, and BLM is not aware that any lands crossed by the BLM preferred alternative would commit to participation in the Collaborative Conservation Initiative or that the Project would affect such a decision. The Collaborative Conservation Initiative is discussed in the FEIS, but specific potential impacts remain speculative at this point.

The Avian Protection Plan will address potential impacts and mitigation measures for Bald Eagles, Golden Eagles, and all other raptors. Measures presented in that plan will be developed in coordination with the USFWS, Arizona Game and Fish Department, and New Mexico Department of Game and Fish.

8. Mitigation measures to reduce the potential for bird collisions with transmission lines, such as special structural design and bird diverters, has been considered and will be implemented in accordance with the conditions of the right-of-way grant and Plan of Development.
The BLM agrees that such protocols would be very helpful for both the BLM and the tribes in facilitating tribal consultation. However, this is beyond the scope of a single project such as SunZia. BLM is still committed to arranging such a field visit whenever it is convenient and practical for the San Carlos Apache.

Sincerely,

[Signature]

Chairman

Ce: John Ruth, Vice-Chairman
   Tribal Council Members
   Wanda Post, Acting Director, EIS
   April arrow, BLM
   Bill Taylor, BLM
   Diane Doyi, BLM
   Ben Gort, BLM
   Scott Coker, BLM
   Tony Way, SunZia
August 22, 2012

Adrian Garcia, Project Manager
Bureau of Land Management
SunZia Southwest Transmission Line Project
P.O. Box 27115
Santa Fe, NM 87502-0115
Submitted via electronic mail to NMSunZiaProject@Bm.gov


Dear Mr. Garcia:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) and Resource Management Plan (RMP) Amendments for the SunZia Southwest Transmission Project. Please accept these comments on behalf of the Sierra Club’s Grand Canyon Chapter and our 13,000 members in Arizona and the Center for Biological Diversity and its members.

The Sierra Club’s mission is “to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth’s ecosystems and resources; and to educate and exert influence for the protection of the natural and human environments.” Our members have a significant interest in the proposed SunZia Project and its impacts on natural resources. Many of our members enjoy watching wildlife, hiking, backpacking, and other outdoor and educational activities on the lands affected by this proposed project.

The Sierra Club is committed to helping reduce greenhouse gas emissions and limiting global climate change/disruption. Transforming the nation’s electricity sources from polluting fossil fuels to clean renewable energy and reducing energy use through efficiency and conservation are all essential to meeting our carbon reduction goals. We are working to rapidly increase our nation’s energy efficiency and use of renewable energy resources by advocating for improved appliance and building efficiency and standards to promote them, as well as a rapid ramp-up of distributed generation (mainly rooftop solar), community scale, and large-scale renewable energy, including solar, wind, and geothermal generating plants. We believe all of these will be necessary to meet our greenhouse gas reduction goals. In the short term, some proposals for large-scale renewable and associated transmission lines will be needed. We seek to minimize any impacts of that proposed transmission on wildlife, air and water quality, and other important environmental values and believe it is incumbent upon the Bureau of Land Management (BLM) to strive for this as well.

The Center for Biological Diversity is a national non-profit conservation organization headquartered in Tucson, Arizona, with more than 375,000 members and supporters, more than 10,000 of whom reside in Arizona and New Mexico. The Center is dedicated to the protection of threatened and endangered species.
and their habitats. Our members have a keen interest in the SunZia project and its impacts on the species and places we work to protect.

The BLM is required to consider existing RMPs when deciding whether or not to grant a right-of-way (43 CFR Part 1610.0-5(b)). Several of the alternatives and/or aspects of them are not in accordance with the RMPs for the area. The BLM had determined that transmission lines such as the proposed SunZia Southwest Transmission Project were not suitable on various lands involved in this proposal, so no transmission right-of-way corridors were included in the RMPs for these areas. The Safford RMP includes several avoidance areas affected by the proposed project, including Swapp Springs and Hot Springs Areas of Critical Environmental Concern within the Muleshoe Ranch Cooperative Management Area (CMA). As stated in Section 2.6 of the DEIS, “the construction of and operation of the proposed SunZia transmission line alternatives would not conform to the RMP due to the various one of the following conditions: the right-of-way would cross an area designated in the RMP as right-of-way avoidance, or the proposed Project would not comply with VRM objectives” (pg. 2-104). Transmission right-of-way was purposely excluded from these areas because of impacts to valuable natural resources. The DEIS discusses some of the impacts this project would have on the resources and values in these lands, many of which would be long-term and/or irreplaceable. Because of these effects and because such projects were previously determined to be inappropriate for these lands, the BLM’s preferred alternative should be the No Action alternative, and this project should not move forward.

If one of the action alternatives is selected, the BLM must maximize the percentage of the route that occurs along previously disturbed areas, including parallel lines and rights of way. As stated in Section ES.3.4 (pg. ES-5), only 56 percent of the BLM’s Preferred Alternative would parallel existing or designated utility corridors. This means that a significant portion of the route would result in new development on public lands and the associated impacts to resources. BLM must avoid the Lower San Pedro River Valley and the Aravaipa Watershed, at a minimum.

While there are issues with the proposed SunZia Southwest Transmission Project through New Mexico, most of our comments focus on the Arizona portion. We also support and incorporate by reference the comments submitted by Defenders of Wildlife, Casaded Working Group, Sky Island Alliance, Tucson Audubon Society, and Friends of the Aravaipa Region.

1. PURPOSE AND NEED

As environmental advocates, we seek to ensure that the need for new transmission and related facilities is not eclipsed by irreversible harm to unique and important ecosystems. We also want to confirm that new transmission will fulfill its primary objective of carrying renewable energy instead of becoming a major conduit for fossil fuel power. To this end, the BLM has not adequately justified the purpose and need for the SunZia Transmission Project.

2. BLM has not supported its assertion that constructing the SunZia line will "encourage the development of additional renewable energy."

The Federal Energy Regulatory Commission (FERC)’s open access laws prohibit limiting a transmission system to any particular type of generation. Approximately 50 percent of SunZia’s capacity will be reserved for qualified anchor tenants, and the remaining 50 percent will be auctioned out.

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Response to Comment

1. The BLM Preferred alternative would not be located within the Muleshoe Ranch CMA or any other portion of the Safford RMP avoidance areas, and therefore a plan amendment would not be required for this alternative.

2. The statement in Section ES 3.4 of the DEIS refers to BLM’s objectives for selection of a preferred alternative. It is acknowledged that it is not possible to fully achieve each of these objectives for any action alternative. The preferred route selection however, balances opportunities to utilize existing utility corridors while also minimizing resource impacts.

3. As stated in the DEIS (p. 1-7), “Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services...” and reiterated on p 4-274 of the DEIS, “As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service.” Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, “it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation” (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity.

As stated in the DEIS (p. 1-9), “Pursuant to FERC Order 888, it is noted that the locations of individual proposed projects or transmission line interconnections cannot be identified to third parties by transmission owners.” Although the specific location of the proposed projects cannot be identified, DEIS Table 1-2 provided an illustration of generation interconnection requests, including size and fuel, that were identified through transmission interconnection queues of load serving utilities within SunZia’s path and represent projects located in counties which could reasonably interconnect with the existing system or SunZia. The purpose of this illustration was to provide an example of need for transmission service within the study area.

Several alternative routes connecting New Mexico and central Arizona were evaluated in the siting studies for the proposed SunZia 500 kV transmission lines conducted during the scoping process. Some of the alternatives (including the Preferred Alternative) were co-located along the existing TEP 345 kV transmission line corridor, which is considered a siting opportunity for new transmission lines. The Bowie Power Station site is located approximately 15 miles from the TEP 345 kV transmission line corridor, where it was permitted to interconnect with the existing TEP transmission system at the Willow-345 kV substation.
off through an open season process. With this system, established electricity generators will be
heavily advantaged.

While the Southwestern Power Group (SWPG) has repeatedly characterized the SunZia project as
intended to deliver primarily renewable energy, various factors conflict this point.

Although the DEIS frequently mentions them, major wind projects in New Mexico have stalled.
In the years that it would take for these projects to come online, more accessible sources of electricity
generation are likely to step in and utilize SunZia first. The DEIS leaves a strong impression that the
SunZia proposal will also encourage the development of additional renewable sources. Such an
impression is misleading. Any “encouragement” would apply equally to renewables, coal, nuclear,
natural gas – any energy source. Under federal policies, transmission lines must be neutral.
Transmission operations cannot discriminate between different sources of energy.

While some of the most blatant references to renewable energy included in BLM’s 2009–2010
scoping documents have been modified, inappropriate and inaccurate references remain. For
example, BLM, describing the applicant’s purpose, states that the “Project would assist load-serving
utilities in meeting the requirements to address energy delivery obligations to meet state renewable
portfolio standard (RPS).”

Additionally, in citing the Renewable Energy Order, which makes the production and delivery of
renewable energy a priority, BLM reinforces the erroneous impression that the SunZia project
would in any way be dedicated to renewable energy. Ignored entirely is the possibility that energy
generated from renewables sources could be as easily delivered through more localized transmission
systems or distributed energy systems. A 500-mile, multi-state transmission line would not
necessarily be the best (or the only good) option for delivering energy safely and effectively.

The proposed routes for SunZia, including BLM’s Preferred Alternative, closely parallel existing
natural gas pipelines. The Bowie Power Station, a 1000 Megawatt (MW) natural gas plant already
planned and permitted for Cochise County, Arizona, is located along the proposed SunZia route.

SWPG is the developer for both SunZia and Bowie.

In fact, the SunZia project’s initial purpose was to provide transmission capacity for the Bowie power
plant. The proposed Willow substation, a central component of SunZia, is also a permitted part of
the Bowie plant. When SunZia was first as a renewable energy project in 2008, references to
Bowie disappeared, although the siting and interconnection plans remain closely linked.

SunZia has stated that SunZia is no longer needed for the Bowie plant; but data from Tucson Electric
Power (TEP) indicates that, as of 2007, the two existing transmission lines permitted for Bowie were
already at capacity. Therefore, the Bowie plant cannot be fully utilized unless TEP substantially
limits its own power transmission. The most financially prudent solution would be to build more
transmission capacity – which SunZia would readily provide.

In addition to the vague separation from the Bowie natural gas plant, BLM is touting SunZia as a
“primarily renewable” project without supplying a critical analysis of New Mexico’s potential for
wind generation. Wind-generated electricity is variable, undergoing daily and seasonal fluctuations and
currently requires some fossil fuel generation to stabilize power delivery. The BLM’s statement of
purpose does not mention this, nor does it specify exactly how much non-renewable energy would
be used to offset the fluctuations.

The BLM has not guaranteed that any of SunZia’s transmission capacity would be reserved for future
renewable sources, nor have they demonstrated that SWPG would not simply use the SunZia line for
Bowie and other fossil fuel projects, as was originally intended. In addition, BLM has not provided
data to illustrate the technical and economic feasibility of using SunZia to carry large quantities of
New Mexico wind power.

These omissions are incredibly concerning. Because BLM has provided no evidence to the contrary,
we are troubled by the possibility that SWPG is deliberately misrepresenting SunZia in order to
expedite construction. If SunZia will be technically or financially unable to deliver on its promise of
“encouraging the development of renewable energy,” the public deserves to know, the project needs
to be re-characterized, and a revised DEIS with the appropriate information should be issued.

In view of public comments received on BLM’s scoping documents, which consistently demonstrate
a widespread [marijuana] belief that the SunZia transmission lines are necessary to support renewable
energy, a clear and unambiguous correction is necessary to set the record straight.

b. BLM has not confirmed California’s willingness to purchase renewable energy.

If the purpose of the SunZia project is to transmit wind power from New Mexico to meet demand in
California, BLM must confirm California’s plans to purchase additional out-of-state power to
satisfy its Renewable Portfolio Standard (RPS).

While California’s RPS mandates that 33 percent of its electricity generation must come from
renewable energy by 2020, the allowed contribution of out-of-state sources is limited. By 2011, by
California utilities must procure at least 75 percent of their renewable energy from California sources,
leaving only 25 percent available to out-of-state sources. Unhanded renewable energy credits are
further restricted to 10 percent.

Reflecting these limitations, California has expressed a strong intent to focus on developing in-state
resources rather than relying on imports from the western grid. In a 2011 letter to the Western
Energy Coordinating Council (WECC), Governor Jerry Brown’s office indicated that California has
### The Deliverability, Destination, and Cost-Competitiveness of the Electricity Carried on the Proposed SunZia Transmission System

The deliverability, destination, and cost-competitiveness of the electricity carried on the proposed SunZia transmission system are subject to future negotiations. Subscription of SunZia's available transmission capacity is dependent on the customers of the transmission line (i.e., generators planning to sell energy) and their associated buyers (i.e., utilities, cooperatives, other energy consumers); therefore, it is unknown and speculative to predict which energy markets SunZia's future (but currently unidentified) customers may serve. Further, electricity on the transmission system is in a constant state of fluctuation and is dependent on a number of factors (e.g., changes in energy demand, addition of transmission, addition of generation resources, fossil generation, project closures due to economics, age and regulations etc.). Future electrical paths for electricity transported by SunZia will be determined based on available transmission capacity and contractual arrangements in place at the time SunZia becomes operational.

#### Response to Comment

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<td>5</td>
<td>Please, see response to Comment No. 4.</td>
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<td>6</td>
<td>As stated in the Section 4.17.4.13 of the DEIS (pg. 4-319) “The High Plains Express Transmission Project and the Centennial West Clean Line Project are multistate transmission projects that could provide added potential electrical transmission paths originating in central and eastern New Mexico, respectively. The proposed Southline Transmission Project (345 kV), located between southwestern New Mexico and southeastern Arizona, could transport additional electricity generated from sources in those areas; however, the purpose and need for the Southline project is different than for the SunZia Project. The Southline project’s capacity would be limited according to the plan to construct portions of the proposed transmission lines within existing rights-of-way.” The cumulative impacts analysis in the DEIS (Section 4.17) accurately reflects the current status of the future transmission project proposals, as there is insufficient information available about the listed project proposals to understand their purpose and need statements, benefits, or potential environmental impacts.</td>
</tr>
<tr>
<td>7</td>
<td>As noted in Section 1.3 of the DEIS, all requirements in Section 202(c) of FLPMA are addressed by the BLM in consideration of right-of-way applications for generation, transmission, and distribution of electric energy. With respect to Subsection 3 of Section 202(c), areas of critical environmental concern (ACEC) have been designated in the RMPs and considered a high priority of avoidance in development of new rights-of-way. The BLM Preferred would not require rights-of-way crossing any ACEC.</td>
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</table>
called multiple use mandate. The BLM ignores entirely these other requirements of section 102(c), notably subsection A, which requires that agencies give priority to the designation and protection of areas of critical environmental concern.

By singling out one subsection of FLPMA, section 102(c), and characterizing it as a “mandate,” the BLM fails to fully and fairly inform the public about FLPMA’s role in the SunZia project.


In another example of BLM’s linking the SunZia Project to renewable energy, BLM states the SunZia project is needed to satisfy EPA’s requirement to establish additional energy corridors.

At the present time, EPA’s authority over BLM and its decision on the SunZia project is highly problematic. In 2009, a lawsuit was filed challenging agencies’ decisions under EPA, alleging that they “created a sprawling, hopscotch network of 6,000 miles of rights-of-way” without considering environmental impacts, properly analyzing alternative actions, and more. In June 2012, a settlement agreement was reached in this litigation. Under this settlement, environmentally sensitive areas should be protected and proliferation of dispersed right-of-ways should be diminished.

II. PROPOSED ACTION AND ALTERNATIVES

The National Environmental Policy Act (NEPA) requires the BLM to consider and evaluate the full range of reasonable alternatives, alternatives that are “practicable and feasible.” As we indicated in our scoping comments, proposed routes through either the Lower San Pedro River Valley or the Arawa Canyon Watershed are completely unacceptable and should be removed from further consideration. We asked that they be removed from further consideration due to the significant environmental harms each would promote and, as such, do not consider them to be either practicable or feasible. However, rather than remove these unreasonable alternatives, the BLM added yet another unacceptable alternative along the western side of the San Pedro and through the Lower San Pedro River Valley.

a. No Action Alternative

The Council on Environmental Quality (CEQ) regulations direct that the DEIS include a description of the No Action alternative (40 CFR 1502.14(f)). In its brief description of NEPA’s No Action alternative requirement, BLM fails to actually set forth any analysis of the consequences—both good and bad—of not allowing the SunZia project. Instead, BLM only states that it is required to demonstrate the consequences of failure to meet the purpose and needs of the proposed action and its alternatives. The BLM reveals that it has decided without analysis that the No Action alternative constitutes failure to meet a need.

The BLM indicates that there is “potential for additional actions” if the SunZia project is denied. No specific information is provided to explain such potential. A full and accurate depiction of the status quo (without a SunZia transmission project) is essential to any analysis of the No Action alternative.

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8 Comment noted

9 As stated in Section 2.3.1 of the DEIS “This (No Action) alternative does not consider the potential for additional actions that could occur contingent on the denial of the proposed action or alternatives.” It would be speculative to determine the consequences of any additional actions that may occur if the SunZia project is denied.

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2 Ibid.
3 See Sierra Club et al., June 16, 2010.
Such status should include pending additional actions, such as the proposed Southern and Centennial West transmission lines. Similarly, any evidence of transmission shortages within a state should be clearly identified, if such shortages exist.

The BLM acknowledges that existing transmission service would be continued, including "proposed generation projects with existing, documented interconnection requests" (Section 2.3.1, pp. 1-10). A citation to Chapter 1, Table 1-2, is the only "analysis" of the existing interconnection requests and proposed generation projects included in the no-action paragraph. Even from the sparse information set forth in Table 1-2, these interconnection requests are promising, suggesting that the SunZia project may not be needed and may, in fact, be superfluous. But why was there no BLM description or analysis of these requests?

The public cannot be expected to effectively evaluate the impacts of various options available to BLM with such a conclusory, non-substantive No Action alternative.

b. Aravaipa Canyon Watershed

Both Subroute 4A (North of Mt. Graham) and Subroute 4B (Salter Springs Valley) would bisect one of the largest unfragmented landscapes in Arizona, the Catrono-Aravaipa-Santa Teresa wildland complex. Subroute 4A runs 132.9 miles from the proposed Willow-500 kV Substation northwest along US Route 191 and generally tracks along the boundary of the Coronado National Forest (Pinaleo Mountains), heads west, and cuts between the Catrono and Aravaipa Wilderness Areas. Subroute 4B runs from 133.0 miles and proceeds southwest from the proposed Willow-500 kV Substation, parallels two 345 kV transmission lines, and crosses two pipelines and US Route 191 before turning north through the Salter Springs Valley. It then moves west and follows the same path as Subroute 4A. This route has even more environmental impacts than Subroute 4A, but both bisect this important wildland complex.

In our scoping comments, we expressed strong opposition to routes that would impact the Aravaipa Canyon watershed by cutting through it for more than 20 miles, crossing Aravaipa Creek, and fragmenting connectivity between two wilderness areas—Aravaipa Canyon Wilderness and Catrono Wilderness. As we noted, this area is one of the largest unfragmented wildland blocks in southern Arizona. A new transmission corridor would impair wilderness characteristics and values and would likely lead to unwanted and undesirable impacts to this intact wildland complex. As we expressed previously, this is unacceptable and unreasonable and should be removed from further consideration. Currently, the applicant, SunZia, is pushing for this extremely ecologically damaging siting.

Subroute 4A and 4B would pass within 3.5 miles of the Aravaipa Wilderness Boundary. Please see comment response #11. The lands for which these subroutes traverse do not exhibit wilderness characteristics as identified by the BLM.

### Response to Comment

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<td>10</td>
<td>Please see response to Comment No. 9.</td>
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<td>11</td>
<td>Subroutes 4A and 4B, which would cross the Aravaipa Creek, are two of several action alternatives considered in the DEIS. Although either of these two alternative subroutes would cross the creek in the area between the wilderness areas as noted, there are existing roads within this area that have altered natural conditions and therefore the area would not exhibit the attributes of lands with wilderness characteristics. As noted in the DEIS (Section 4.12.5.3) for the assessment of LWC’s for SunZia, the only LWC inventory units in Arizona that were identified was the Muleshoe Unit that would be crossed by one of SunZia’s alternatives (not the Preferred Route).</td>
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<td>12</td>
<td>Text has been modified in Section 3.12.4 of the FEIS as follows: Last sentence of first paragraph on page 3-266 Citizen’s Wilderness Inventory Units have been reviewed as part of the inventory of Lands with Wilderness Characteristics on BLM lands. Subroute 4A and 4B would pass within 3.5 miles of the Aravaipa Wilderness Boundary. Please see comment response #11. The lands for which these subroutes traverse do not exhibit wilderness characteristics as identified by the BLM.</td>
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among many others. A 17-mile stretch of Aravaipa Creek is perennial and provides some of the best native fish habitat in Arizona, supporting seven species of native fish, including the federally-listed endangered speckled dace and loach minnow. Although the upper and lower portions of the creek are intermittent and ephemeral, they continue to support important riparian vegetation and provide habitat for many wildlife species. The importance of ephemeral and intermittent waters is discussed in further detail below.

According to the BLM, more than 1.90 species of birds have been documented in the Aravaipa Wilderness, including the paragia falcon, common black-hawk, bald eagle, cactus ferruginous pygmy-owl, and southwestern willow flycatcher.19 Because of this, the area is very popular for birding. Aravaipa also supports recreational opportunities for hikers, bicyclists, and wildlife watchers, among others. All of these are an important component of the economy and of resource values, which are not discussed in the DEIS.

The proposed route bisects one of only two priority cultural resource areas in the Upper Aravaipa Valley and would fragment an important connection between the Galindo Wilderness located in the Coronado National Forest and the Aravaipa Canyon Wilderness located on BLM land.

Construction of a large transmission line involves developing temporary construction roads as well as a permanent road under the line. This causes significant habitat fragmentation and invites off-road vehicles. Roads and motorized uses can have serious detrimental effects on habitats and wildlife.20 These effects include direct, indirect, and cumulative impacts, ranging from mortality from collisions with vehicles, modification of animal behaviors, altered use of habitats, facilitation of the spread of exotic, invasive, and parasitic species, adverse genetic effects, and fragmentation of connected habitats.

Further road-building, construction, and improved off-road vehicle access in this area will also contribute to erosion and sedimentation that could flow downstream through tributaries and impact threatened native fish populations and other species21,22 in Aravaipa Canyon, over 20 of which are designated with some sort of special status.

The Nature Conservancy recently conducted a detailed cumulative effects analysis regarding the Galindo-Aravaipa-Santa Teresa wildland complex and found that, in the Southwest, it is second only to the Grand Canyon region with regards to size and relative intactness.23 The Nature Conservancy found that the proposed SunZia transmission project through this area

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### 1600 Response to Comment

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<td>13</td>
<td>Dispersed recreation within the Aravaipa Wilderness was considered and assessed in the Visual Resource and Wilderness, Wilderness Study Areas, and Lands with Wilderness Characteristics sections of the DEIS (Section 3.9.3.3 and Section 3.12.3.3).</td>
</tr>
<tr>
<td>14</td>
<td>The application of standard mitigation measures along the length of Subroute 4C2c in the San Pedro River Valley and selective mitigation measures where sensitive soils have been mapped along this alternative would mitigate impacts to soils that are susceptible to water erosion thereby limiting surface destabilization and sedimentation into the watershed. Standard mitigation measures (Table 2-10) include a number of for proper road construction methods to ensure stable surfaces both for the sake of reducing Project-related impacts to the environment and continued maintenance access to the Project area. Standard mitigation measure #4 requires siting access roads along the natural landform contour wherever possible thereby reducing both ground disturbance and vegetation removal reducing the potential for erosion of surface soils. Standard mitigation measure #5 requires that vegetation be left in place where possible which would reduce ground disturbance and maintain subsurface root structure reducing the potential for erosion beyond natural levels to occur. Standard mitigation measure #8 requires surface restoration of various Project-related work areas including restoration to original landform contours, reseeding, and installation of cross drains to control water flow within the Project area which would restore disturbed site stability and reduce the potential for erosion beyond natural levels. Standard mitigation measure #19 requires that tower sites be located at least 200 feet from any stream where practicable which would limit the potential for sedimentation. The application of selective mitigation measures (Table 2-11) where soils susceptible to water erosion have been mapped in the San Pedro River Valley would further reduce the potential for erosion beyond naturally occurring levels. These selective measures include not widening or otherwise upgrading existing access roads in areas with erosion susceptible soils, utilizing existing crossings of perennial streams, placing crossings of canyons at the maximum practicable distance, utilizing overland access (i.e., drive-and-crush or cut-and-clear) to the greatest extent possible. All of these measures would further reduce Project impacts to soils susceptible to water erosion. Furthermore, the Project Plan of Development would include erosion-control and site reclamation procedures in the Erosion Dust Control, and Air Quality Plan; Stormwater Pollution Prevention Plan Methodology; and Right-of-Way Preparation, Reclamation, and Monitoring Framework Plan.</td>
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Response to Comment

15 Construction of Subroute 4A or 4B of the Project would create a novel landscape feature in the Galiuro Mountains. The DEIS (Section 4.6.3.1) acknowledges that fragmentation is a potential effect of transmission lines, including recreation and maintenance activities on access roads. However, research to date on fragmentation has not focused on transmission lines in the Southwest, and no available information indicates that the operation of a transmission line would prevent connectivity for wildlife between portions of a large habitat block. Short-term disturbance would occur during construction and maintenance.

16 A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.

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SunZia Southwest Transmission Project
Other Agency and Non-Government Organization Comments
The area that includes the Safford Basin, Aravaipa Valley and lower San Pedro Valley has not been designated a cultural landscape (it is not located on NPS lands) or a national historic district. The area does contain many archaeological sites and those in the study corridor have been discussed individually. Impacts from access roads are discussed in Section 4.8 of the FEIS.

The Bowie Power Station was permitted to interconnect with the existing TEP transmission system at the Willow-345 kV substation, and would not be constructed to interconnect with the SunZia project. The potential cumulative impacts to climate and air quality of the Bowie Power Station are discussed in Section 4.17.4.2 of the DEIS.

Text in Section 4.2.3.1 of the FEIS was modified as follows:

"The No Action alternative would mean that air pollutant emissions from construction equipment, Project-related traffic, earthmoving activities, construction and operation of several concrete batch plants, and leakage of GHGs from substation circuit breakers would not occur. It is assumed that GHG-emitting power plants would continue to operate under the same conditions in the future. The development of future transmission line projects that facilitate transport of power from renewable energy projects to market could result in a net decrease of GHG emissions. Fossil-fuel plants with lower emission technologies, or other new generation technologies, may also contribute to reductions in air pollutants and GHG gasses, however the degree of change cannot be determined."

Please see response to Comment Nos. 3 and 18.

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III. CLIMATE AND AIR QUALITY

a. Climate

The DEIS asserts that no building this project will lead to a net increase in greenhouse gas emissions because the No Action alternative would also not facilitate the transport of power from renewable energy projects to markets, and "a large portion of future power demand would be met with higher GHG-emitting fossil fuel power plants" (Section 4.2.3.1, pg. 4-18).

However, as discussed above, construction of the SunZia project does not guarantee construction of additional renewable energy projects, does not guarantee that this power would be accepted by markets, such as California, and does not guarantee that power demand will not be met with additional fossil fuel power plants. In fact, construction of this project may be used to facilitate construction or expansion of fossil-fuel plants, such as the Bowie plant. The information provided by the ILM in this section is misleading and inaccurate. A more thorough analysis should be completed in order to determine the possible outcomes from construction of this project versus adopting the No Action alternative, including the potential for this project to actually increase greenhouse gas emissions.

b. Air Quality

The DEIS asserts that there would be "no significant impacts to air quality" (4.2.3.2, pg. 4-18) resulting from construction and operation of the transmission line and concrete batch plants. There will obviously be increased dust associated with the construction activities and removal of vegetation and mitigation measures for those who are needed, but a bigger issue is that it assumes again that there will not be an increase in fossil-fuel generated electricity associated with this project. We question that assumption. If this line spur development of the Bowie Generating Station and other power plants, it will increase nitrogen oxide emissions, toxic air emissions, and other pollutants. This should be considered in the FEIS.

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1600
Response to Comment

17 The area that includes the Safford Basin, Aravaipa Valley and lower San Pedro Valley has not been designated a cultural landscape (it is not located on NPS lands) or a national historic district. The area does contain many archaeological sites and those in the study corridor have been discussed individually. Impacts from access roads are discussed in Section 4.8 of the FEIS.

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19 Please see response to Comment Nos. 3 and 18.
The water resource inventory has been revised to reflect more precise measurements of water features within the study area. As indicated in Table 4-14 of the FEIS, Subroute 4C3 would cross the greatest number of perennial and intermittent streams, wells, and sole-source aquifers, followed by the BLM Preferred Alternative 4C2c. As indicated none of the alternatives would result in moderate or high impacts to water resources after application of mitigation measures to avoid erosion and sedimentation that could pose a risk to the water resources.

ADEQ has designated a section of Aravaipa Creek as an Outstanding Arizona Water. The designated Outstanding section is not crossed by the Project; it begins four miles from the centerline. Engineering design and both standard and selective mitigation measures would reduce potential for accelerated erosion.
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ADEQ has designated a section of Buehman Canyon as an Outstanding Arizona Water. The designated Outstanding Arizona Water section is not crossed by the Project. The Project is located downstream from Buehman Canyon and any potential sedimentation events associated with the Project are unlikely to migrate upstream. Engineering design and both standard and selective mitigation measures would reduce potential for accelerated erosion.

Subroute 4C1 would have similar impacts to water resources as Subroute 4C2c. However, 4C1 would cross fewer miles of sole source aquifer (25.4 miles versus 42.0 miles) and more wells than 4C2c (28 wells versus 11).

Subroute 4C2 would have similar impacts to water resources as Subroute 4C2c. However, 4C2 would cross fewer miles of intermittent streams (36.1 miles versus 40.3 miles) and more wells than 4C2c (25 wells versus 11).

Comment noted
SunZia Southwest Transmission Project
Other Agency and Non-Government Organization Comments

The application of BMPs/engineering design, and standard and selective mitigation measures along the length of Subroute 4C2c in the San Pedro River Valley would mitigate impacts to soil and water resources. Standard mitigation measures (Table 2-10) include a number of proper road construction methods to ensure stable surfaces both for the sake of reducing Project-related impacts to the environment and continued maintenance access to the Project area. Standard mitigation measure #4 requires siting access roads along the natural landform contour wherever possible thereby reducing both ground disturbance and vegetation removal reducing the potential for erosion of surface soils and subsequent sedimentation. Standard mitigation measure #5 requires that vegetation be left in place where possible which would reduce ground disturbance and maintain subsurface root structure reducing the potential for erosion beyond natural levels to occur. Standard mitigation measure #8 requires surface restoration of various Project-related work areas including restoration to original landform contours, reseeding, and installation of cross drains to control water flow within the Project area which would restore disturbed site stability and reduce the potential for erosion beyond natural levels. Standard mitigation measure #19 requires that tower sites be located at least 200 feet from any stream where practicable which would limit the potential for sedimentation.

The application of selective mitigation measures (Table 2-11) would further reduce the potential for Project-related impacts to water resources. These selective measures include not widening or otherwise upgrading existing access roads in areas with erosion susceptible soils, utilizing existing crossings of perennial streams, placing crossings of canyons at the maximum practicable distance, utilizing overland access (i.e., drive-and-crush or cut-and-clear) to the greatest extent possible. All of these measures would further reduce Project impacts to soils susceptible to water erosion.

Furthermore, the Project Plan of Development would include erosion-control and site reclamation procedures in the Erosion Dust Control, and Air Quality Plan; Stormwater Pollution Prevention Plan Methodology; and Right-of-Way Preparation, Reclamation, and Monitoring Framework Plan.

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<td>Please see response to Comment No. 20.</td>
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<tr>
<td>29</td>
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<td>30</td>
<td>The application of BMPs/engineering design, and standard and selective mitigation measures along the length of Subroute 4C2c in the San Pedro River Valley would mitigate impacts to soil and water resources. Standard mitigation measures (Table 2-10) include a number of proper road construction methods to ensure stable surfaces both for the sake of reducing Project-related impacts to the environment and continued maintenance access to the Project area. Standard mitigation measure #4 requires siting access roads along the natural landform contour wherever possible thereby reducing both ground disturbance and vegetation removal reducing the potential for erosion of surface soils and subsequent sedimentation. Standard mitigation measure #5 requires that vegetation be left in place where possible which would reduce ground disturbance and maintain subsurface root structure reducing the potential for erosion beyond natural levels to occur. Standard mitigation measure #8 requires surface restoration of various Project-related work areas including restoration to original landform contours, reseeding, and installation of cross drains to control water flow within the Project area which would restore disturbed site stability and reduce the potential for erosion beyond natural levels. Standard mitigation measure #19 requires that tower sites be located at least 200 feet from any stream where practicable which would limit the potential for sedimentation. The application of selective mitigation measures (Table 2-11) would further reduce the potential for Project-related impacts to water resources. These selective measures include not widening or otherwise upgrading existing access roads in areas with erosion susceptible soils, utilizing existing crossings of perennial streams, placing crossings of canyons at the maximum practicable distance, utilizing overland access (i.e., drive-and-crush or cut-and-clear) to the greatest extent possible. All of these measures would further reduce Project impacts to soils susceptible to water erosion. Furthermore, the Project Plan of Development would include erosion-control and site reclamation procedures in the Erosion Dust Control, and Air Quality Plan; Stormwater Pollution Prevention Plan Methodology; and Right-of-Way Preparation, Reclamation, and Monitoring Framework Plan.</td>
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SunZia Southwest Transmission Project
J-170
Final Environmental Impact Statement and Proposed RMP Amendments
Temporary impacts would result from the construction of temporary crossings or the placement of fill used to cross intermittent or ephemeral tributaries with little to no stream flow or the construction of temporary access roads. BLM acknowledges that, while temporary, these crossings would have the potential to impact stream morphology and ecological function. The modification of stream banks could result in removal of vegetation that could take many years to recover. Sedimentation potential would increase, depending upon the extent of disturbance and the amount of countouring needed. Storm water discharge and quantity of sedimentation to the San Pedro River and its tributaries are correlated to project-related disturbances. Permanent impacts would result from permanent stream channel crossings, into which structures are placed in the streambed, potentially causing an irreversible loss of riparian vegetation on either side of the crossing.

The BLM acknowledges in the DEIS that transmission line access roads typically cross, or are close to, perennial and intermittent streams. It has been well documented that construction of new access roads increases erosion and sedimentation of water resources. All construction activities within the lower San Pedro River watershed could result in increased sedimentation to the San Pedro River or its tributaries. Periodic vegetation removal or repair to access roads could have indirect effects because of soil erosion, further increasing sedimentation.

BLM acknowledges that implementation of the SunZia Project will impact water resources within the study area. The construction of access roads, staging areas, work areas, and stream crossings will affect perennial and intermittent streams, water bodies, wetlands, weds, and springs. While impacts to water resources vary between alternative routes, BLM also acknowledges that the preferred alternative route within Route Group 4, Subroute 4C2c, would have the greatest impact on environmentally sensitive water resources. These adverse environmental impacts are both unavoidable and are completely avoidable.

We urge BLM to preserve the riparian habitats of the lower San Pedro River Valley. Any alternative through the valley pose unnecessary and completely avoidable environmental risks to globally significant riparian areas. BLM should choose the No Action Alternative and evaluate upgrades to existing lines and other measures to meet the needs of the proposal. We strongly urge BLM to reject any alternatives that enable the construction of a utility corridor through one of the most ecologically important riparian areas in North America and to select the No Action alternative. If the BLM determines that an action alternative is necessary, adverse environmental impacts can be avoided by selecting or creating a different alternative route that does not traverse the lower San Pedro River Valley. BLM should select a route for the SunZia project that avoids the lower San Pedro River valley entirely and that utilizes existing utility corridors in developed areas along or near the Interstate 10 roadway.

V. BIOLOGICAL RESOURCES

This project has the potential to affect at least 269 special-status species (Section 3.6.1.2, pg. 3-70). This level of impacts is unacceptable, especially considering that this high number does not include species that

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<td>32</td>
<td>Subroute 4C2c would have the greatest percentage of its length with potential for impacting water resources; whereas, Subroute 4C3 would have the greatest mileage of potential impacts to water resources. These increased potential for impacts are associated with greater crossings of streams and sole source aquifer.</td>
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<td>34</td>
<td>As described in Section 3.6.1.2 of the DEIS, “approximately 700 special-status species were reviewed with 269 special-status species determined to have some potential for occurring within a study corridor that included a 4-mile buffer of either side of all proposed project subroutes.” Sources that were used for the inventory are listed in this section and Appendix B1 Biological Technical Report. The impacts to the special-status species for Route Group 4 are described in Section 4.6.5.4, and indicate which of the species and habitats would potentially be affected by the proposed Project. Species surveys would be conducted in affected areas identified in the Section 7 consultation with USFWS. The impact analysis for species other than Special-status species (e.g., migratory birds, and species of greatest conservation need) is based on the potential for suitable habitat within all the alternative corridors included within the studies of the EIS. Any surveys deemed necessary would occur prior to construction.</td>
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In cases where erosion, sediment transport, or other mechanisms could affect aquatic and other species away from the centerline, the potential for impacts was acknowledged and mitigation measures would be employed if appropriate.

Changes in the range of species cannot be predicted, but effects to any special-status species would be considered over the lifetime of the Project. If, for example, a listed species not occurring in the Project area at the time of construction was found to occur there later, consultation with the USFWS would be reinitiated.

The BLM preferred alternative does not cross any areas of wet-riparian woodland in Arizona, although some mesquite bosque may be affected by vegetation management needs at the San Pedro River. This would be minimized by spanning the river via elevated terrain on both banks. Effects to riparian woodland that supports listed species such as the Southwestern Willow Flycatcher would be assessed in detail during Section 7 consultation.

Impacts on other alternatives may be somewhat higher, but would not affect any large blocks of mature or recovering riparian woodland. Each proposed river crossing location is outside or near the end of river reaches with perennial flow. Similar standard and selective mitigation measures would be used at any crossing location, to minimize the need for riparian vegetation management.

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<th>35</th>
<th>Responses to Comment</th>
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<td>35</td>
<td>In cases where erosion, sediment transport, or other mechanisms could affect aquatic and other species away from the centerline, the potential for impacts was acknowledged and mitigation measures would be employed if appropriate. Changes in the range of species cannot be predicted, but effects to any special-status species would be considered over the lifetime of the Project. If, for example, a listed species not occurring in the Project area at the time of construction was found to occur there later, consultation with the USFWS would be reinitiated.</td>
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36 The BLM preferred alternative does not cross any areas of wet-riparian woodland in Arizona, although some mesquite bosque may be affected by vegetation management needs at the San Pedro River. This would be minimized by spanning the river via elevated terrain on both banks. Effects to riparian woodland that supports listed species such as the Southwestern Willow Flycatcher would be assessed in detail during Section 7 consultation.

Impacts on other alternatives may be somewhat higher, but would not affect any large blocks of mature or recovering riparian woodland. Each proposed river crossing location is outside or near the end of river reaches with perennial flow. Similar standard and selective mitigation measures would be used at any crossing location, to minimize the need for riparian vegetation management.
American pronghorn (*Antilocapra americana*)

The management of pronghorn and their habitat represent an important conservation issue for North American grasslands, as pronghorns are an indicator of grassland ecosystem health and are valued as a wide-ranging, native game animal. Because pronghorn range widely to access the most succulent forage available at different locations at various times of the year and often return to specific foraging grounds, they are a landscape-connectivity dependent species. This means that their life history requirements necessitate an ability to move freely between resource patches, which are often spread out across large landscapes.

Pronghorn have declined in Arizona over the past two decades. In 1987, the statewide population of pronghorn was estimated at nearly 12,000, but by the year 2000 the population estimate had declined to less than 6,000. Grassland habitats in Arizona and New Mexico continue to be subjected to extended drought, habitat conversion and fragmentation from urban and agricultural development, and woodland encroachment. Therefore, the conservation and restoration of remaining viable pronghorn summer and winter ranges, as well as seasonal migration corridors, is even more important if pronghorn populations are to recover.

Pronghorn are especially sensitive to development and habitat fragmentation. This project has the potential to impact the Sulphur Springs Valley population. The DEIS discusses some of the potential impacts but does not thoroughly analyze these. For example, on pg. 4-85, the DEIS notes that potential impacts include creation of new access within previously undisturbed areas of the valley and could encourage development or support increased recreation. This is a long-term and significant impact. The DEIS then contradicts the above statement by saying that impacts during the operations phase would be minimal. The BLM needs to more thoroughly assess potential impacts to species such as this.

The clearance of shrubs in shrub-invaded grasslands associated with this project could actually benefit pronghorn in some areas. The Final EIS should also more comprehensively assess the potential impacts of road construction (i.e. habitat fragmentation), vehicular traffic, and associated disturbance upon pronghorn and pronghorn habitat quality.

**Bats**

As part of the preconstruction surveys, the DEIS says that surveys for bat roosts would be conducted within 0.25 mile of the project right-of-way and that occupied roosts will be avoided. Who will conduct these surveys? Many bat species are highly specialized and can be difficult to locate within their roosts, even by highly trained and qualified biologists. Also, what is the likelihood that roosts will be destroyed, whether occupied or not?

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### Table: Other Agency and Non-Government Organization Comments

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<td>37</td>
<td>The BLM has discussed and will continue to coordinate with the Arizona Game and Fish Department to minimize impacts to Pronghorn populations in the Sulphur Springs Valley (Subroute 4B) or Allen Flat (all 4C subroutes). Although highways, improperly designed fences, and other “hard” barriers can fragment Pronghorn habitat, transmission lines do not restrict Pronghorn movement. Vegetation management within the right-of-way that reduces shrub cover could facilitate Pronghorn use of the right-of-way as a dispersal corridor. The DEIS (Section 4.7) does acknowledge that the potential for restrictions on wildland fire use as a management tool may occur as a result of the Project, although this could be partially mitigated with other means of vegetation management.</td>
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<tr>
<td>38</td>
<td>All surveyors would be qualified, permitted, and approved by the appropriate agency for any surveys they conduct. All routes avoid large, mature riparian trees that would be the most suitable roost sites for tree-roosting bats. Any information available would be considered regarding the distribution of tree-roosting bats and specific locations where they may occur, to allow design and mitigation measures to reduce or avoid effects to those species and their roost sites.</td>
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The historical range of the species, as presented in the USFWS 2010 finding that listing of the White-sided Jackrabbit was not warranted, does not include any portion of the Project area. The historical range included the southern Playas and Animas valleys in New Mexico, approximately 50 miles to the south of the Project area. The White-sided Jackrabbit is listed as sensitive by the BLM NM State Office, and all applicable special-status species policies would be followed regarding the species.

BLM believes that the avian study was properly exercised and the results are a reasonable representation of daily movements of birds in the middle Rio Grande Valley during the winter months. There was limited determination of distance between birds and existing conductors or groundwires in the study since only two of four study sites had wires present. The most critical measurements were made of birds traveling north from Bosque del Apache in the morning and returning to Bosque del Apache in the late afternoon/evening. The elevation of these birds was determined using range finders and showed that most movement was well above where lines for the SunZia project would cross the Rio Grande. In addition to the BLM study, it has been shown that increased collisions with transmission lines do not generally occur where the transmission line in question is more than one mile from bird use areas (Brown et al. 1984, 1987). In the case of SunZia, the BLM preferred alternative crossing of the Rio Grande is several miles north of the Bosque del Apache National Wildlife refuge, where the birds of concern roost and loaf, and several miles south of the area where the birds go to forage during the day. The floodplain at this location is relatively narrow, providing less farmland that may be used for foraging than other alternative crossing locations.

BLM should consult with the New Mexico Department of Game and Fish (NMDGF) to determine what conservation measures may be appropriate for this species.

Appendix B2 provides information from avian surveys that were conducted at the San Antonio crossing of the Rio Grande River alternatives. While these surveys provide some information about avian use of the Rio Grande at these locations, they are far from complete. Surveys did not occur year-round and, in fact, missed a key time when some bird species are present or most active (April–August). The surveys were also only conducted during one year, which does not account for the occurrence of different species and varying species abundance in different years. Because of this, it is unknown

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**Other Agency and Non-Government Organization Comments**

SunZia Southwest Transmission Project

J-174

Final Environmental Impact Statement and Proposed RMP Amendments
Emergency situations may occur where disturbance of nesting raptors could not be avoided. An Avian Protection Plan will be developed, and will address issues related to compliance with the Bald and Golden Eagle Protection Act. The phrasing referred to in the comment was intended to indicate that some existing access roads may not be closed, or that no road closures would be necessary if no Golden Eagle nests are present. This has been clarified in the FEIS (Section 4.6.4.5) and addressed in the Avian Protection Plan.

Development of an Avian Protection Plan will include detailed information on selection and placement of mitigation measures to reduce the risk of collision to all birds.

43 Chiricahua Leopard Frogs are not known to occur along the Project centerline or at any location downstream from the Project, on the Ladder Ranch or elsewhere. The distribution of and potential effects to Chiricahua Leopard Frogs will be analyzed in detail during Section 7 consultation.

Other amphibians within the Project area would primarily be summer-breeding species, including several species of toads as well as the Canyon Treefrog. Temporary pools used by these species would be avoided, whether in canyons or valley-bottom livestock tanks and other similar sites. The Lowland Leopard Frog is also present in several canyons within the San Pedro River Valley. All of these canyons would be spanned by the Project, and would not be crossed by new access roads. Standard and selective mitigation measures to avoid impacts to streams and other water sources address all of these potential issues.
As the DEIS acknowledges, Ladder Ranch supports some of the last remaining populations of Chiricahua leopard frogs in New Mexico. The project crosses Ladder Ranch and has the potential to affect the streams in which this species occurs. However, the DEIS states that no effects to the species are anticipated because the project would cross downstream from any perennial flow. The BLM must consider ephemeral and intermittent waters, not just perennial streams. Ephemeral and intermittent drainages can be of great importance to this species. It is important to note that the USFWS states that, “for Chiricahua leopard frogs, defining the action area of a proposed project must consider the reasonable dispersal capabilities of the species, the likelihood extent or any downstream or upstream effects that might arise from the proposed action.”

Other amphibian species are likely to be similarly affected. The BLM needs to reconsider impacts to amphibian species, providing consideration to all areas that could be utilized by the species, not just perennial waterways.

iv. Reptiles

The DEIS also downplays potential impacts to reptiles. While the DEIS identifies the potential for construction related activity to cause direct mortality, there is no discussion of impacts related to fragmentation caused by road construction. The DEIS also recognizes that people’s attitudes toward snakes is a primary threat, as many are purposefully killed. We appreciate that the BLM has acknowledged this and seeks to reduce this risk through resource awareness training. However, will killing of snakes be prohibited or just dissuaded? How will such actions be monitored?

v. Fish

Again, the DEIS only considers impacts to areas where perennial water occurs. However, many fish species utilize ephemeral waters for dispersal, etc. The BLM must consider how the various fish species found in or near the study corridor may be affected for all water sources.

vi. Invertebrates

Information regarding invertebrate species is, unfortunately, lacking, as is acknowledged in the DEIS (Section 3.6.5.6, pp. 3-45). As noted above, without an understanding of what species occur in the project area, it is impossible to know the full extent of impacts caused by this project. As the DEIS notes, many invertebrate species are highly endemic and may only occur in relatively small areas. If such species occur within the project area, this project has the potential to disrupt the required habitat and have significant negative impacts on the species, including impacts at both the population or species level.

44 Ibid.

The potential for a “road effect” is discussed regarding the Desert Tortoise. Limited additional information is available regarding unimproved access roads and resulting fragmentation to reptile habitat. Contractor awareness training would present all applicable laws, regulations, and policies, and any additional Project-specific stipulations. Biological monitors would be present in most or all locations throughout construction, and would document and report any violations of those laws, regulations, policies, or stipulations to the appropriate agency contact and the CIC.

A single native fish species, Longfin Dace, may be present in ephemeral streams at locations crossed by the Project. Discussion has been added in reference to this species’ use of ephemeral streams. However, all of these streams would be spanned and would not be directly affected by the Project.

No known special-status or local endemic invertebrates are known to occur in areas where they may be affected by the Project in Arizona. A single link is located near a spring supporting an ESA-listed snail in New Mexico. For this reason in part, the link is not a portion of the BLM preferred alternative.
Snails

Appendix B1 states that talussnails are present in the project area and acknowledges that habitat degradation and loss are the primary threats to these species. However, the DEIS does not discuss any impacts related to this project nor any mitigation efforts.

The Rosemont talussnail (Sonorella roseomontana) is a candidate species under the ESA. In March 2012, the USFWS issued a pre-proposal notification regarding this species, stating that information indicates that the species may need protection afforded under the ESA as threatened or endangered.

The Sonoran talussnail (Sonorella magdalenensis) is similarly being considered for listing as threatened or endangered under the ESA. A notice published in the Federal Register in July 2012 states that listing of this species may be warranted, and the USFWS is in the process of reviewing the status of the species.

Provided this information, the BLM must analyze potential impacts to these species. Many small species are highly specialized and are often found in very small areas. This project could have very significant impacts on these populations and could jeopardize the species.

vii. Special-status wildlife species

The various alternatives in the DEIS would affect hundreds of special status species and would traverse and potentially negatively affect designated critical habitat for the southwestern willow flycatcher, Merriam spotted owl, Gila chub, and Rio Grande silvery minnow. The No Action alternative is the only alternative that will completely avoid negative impacts to these species and their critical habitat.

For special status species, the BLM must adhere to its special status species policy: “Objectives of the BLM special status species policy are to 1) conserve and/or recover ESA-listed species and the ecosystems on which they depend so that ESA protections are no longer needed for these species; and 2) institute proactive conservation measures that reduce or eliminate threats to BLM sensitive species to minimize the likelihood of and need for listing of these species under the ESA.”

The most prudent and cost effective way to achieve these objectives is close consultation with the U.S. Fish and Wildlife Service (USFWS) and the Arizona Game and Fish Department (AZGFD), avoidance through robust screening, monitoring, effective mitigation, and application of the precautionary principle.

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47. Talussnails may be present in the Project study area. However, none are known to occur along the Project centerline, and suitable steep, rocky habitat is avoided. The Rosemont Talussnail is restricted to the Santa Rita Mountains outside the Project area. The Sonoran Talussnail occurs in the southern Tucson Mountains, on Tumamoc Hill near Subroute 4C3. However, no suitable habitat would be crossed by this subroute as the line would be sited in the bed of the Santa Cruz River at this location.

48. Comment noted
In section 4.8.3.1, the DEIS states that “significant impact on biological resources could result if any of the following were to occur from construction or operation of the proposed action.” One of the impacts listed is “[f]ragmentation resulting from the addition of new infrastructure to large, currently intact blocks of habitat.” As such, we anticipate that habitat fragmentation associated with the construction and/or improvement of roads, as well as disturbance from maintenance activities associated with SunZia and subsequent disturbance associated with increased public access, would have a significant impact on the following terrestrial special status wildlife species with relatively large, intact habitat blocks in the affected region: jaguar, ocelot, jaguarundi (if present), Mexican gray wolf, desert bighorn sheep, New Mexico meadow jumping mouse, Arizona striped whiptail, Sonoran desert tortoise, Tucson shovel-nosed snake, northern Mexican garter snake, northern aplomado falcon, cactus ferruginous pygmy owl, and Sprague’s pipit, among others. Most, if not all, of these species have been documented to be sensitive to habitat fragmentation and human disturbance. Should the project move forward to construction, the project proponent should consult with the USFWS and the state wildlife agencies for both Arizona and New Mexico to determine site-specific and/or off-site mitigation measures to avoid, minimize, and offset impacts from fragmentation and disturbance to these species. A crucial mitigation measure that should be implemented globally is to tightly restrict vehicular access to transmission line access roads, so as to avoid an increase in human-related impacts that are facilitated by access, such as direct mortality from vehicle collisions and poaching and disturbances that affect habitat quality such as noise, pollution, accelerated erosion, and the accidental introduction and spread of non-native species. Additional information about some of these species follows.

**Lesser long-nosed bat** (*Leptonycteris curasoae yerbabuenae*)

The lesser long-nosed bat is listed as endangered under the ESA. Because it migrates long distances and is one of the nectar-feeding bat species, it must time its travel to coincide with the flowering or fruiting activity of its food plants. The flight routes they depend upon have been threatened by wildland habitat conversion and fragmentation, and maternity roost sites (located in caves and abandoned mines) are sensitive to human disturbance. The SunZia study corridor is located at the northern limits of the range of the lesser long-nosed bat, and, as noted in the DEIS, two known roosts are within four miles of the project centerlines. There is also the possibility that additional, undocumented roosts could exist within the study area, as it contains concentrations of aguaves that could be used as food sources by this species. The lesser long-nosed bat is known to be capable of traveling long distances, in the range of 20 to 60 miles, in a single night to forage. The proximity of the study corridor to other known roosts makes it likely that these populations forage within the study corridor occasionally.

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### Response to Comment

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<td>49</td>
<td>Impacts to all listed species will be addressed in detail during Section 7 consultation. Note that no alternative would affect the Mexican Spotted Owl or its designated critical habitat, and that designated critical habitat for the Rio Grande Silvery Minnow would be spanned. The BLM will follow all applicable special-status species policies, to ensure that the recovery of listed species is facilitated and that the Project does not contribute to the need to list additional species.</td>
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<td>50</td>
<td>No known roosts of Lesser Long-nosed Bats would be affected by any alternative. Mitigation, including stipulations related to salvage and replanting of forage plants, will be determined during Section 7 consultation.</td>
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</table>
In addition to the above general comments about bats, the DEIS also notes that lesser long-nosed bats are likely to use different roosts in different years to be closer to better foraging areas (Section 3.6.6.1, pg. 2-84). If an important roost site is disrupted or destroyed as part of this project, that could have significant impacts on this species. However, such an impact is not discussed in the DEIS.

The BLM should consult with the USFWS regarding conservation measures for this endangered species. Agave and saguaro that would need to be removed should be transplanted near the removal site, and additional plants should be planted for mitigation (and to account for possible unsuccessful transplants) at a minimum of a 3:1 ratio. In addition, the Final EIS must adequately analyze potential cumulative effects of energy development that would be enabled by the construction of SunZia.

**Mexican long-nosed bat (Leptonycteris nivalis)**

The DEIS cites a study from 1994 that indicates that the species is not anticipated to occur in the study corridor. Does the BLM have any information more recent than 1994 to support this statement? The BLM should not rely on survey records from nearly 20 years ago in order to determine absence of a species. Thorough surveys must be done for species such as this. Without that information, the BLM cannot estimate potential impacts from this project.

**New Mexico meadow jumping mouse (Zapus hudsonius nelsoni)**

The DEIS says that small mammal surveys will provide information on the local status of the New Mexico meadow jumping mouse (pg. 4-76). Are these surveys planned? What happens if this species is located within the area to be developed? Will surveys also be conducted just prior to construction to ensure that this species is not present in the construction area, and will construction be halted if the species is located?

**Mexican gray wolf (Canis lupus baileyi)**

The Mexican gray wolf does not currently occur in the project area, but this area does include suitable and historic habitat for this critically endangered species. The Mexican gray wolf is a subspecies of the gray wolf, and is the most endangered type of wolf in the world. After being extirpated in the United States and with only a few animals remaining in Mexico, Mexican wolves were bred in captivity and reintroduced to the wild in Arizona beginning in 1998. The goal of the reintroduction program, which is only a first step toward full recovery, was to restore at least 100 wolves to the wild by 2006; unfortunately, at the end of 2011, there were only 58 wolves in the wild in Arizona and New Mexico. This species remains critically endangered.

Potential impacts to the Mexican Wolf will be considered during conference with the USFWS. Discussion has been added in reference to the Sonora, Mexico reintroduction and how that may affect movement through the Project area.
is now underway. North/south habitat linkages for this species are particularly
important to protect. New access roads associated with SunZia could provide new
access to wolf habitat. The level of vehicular access is directly related to the relative
level of habitat security for this species as these wolves are particularly at risk to illegal
killings.

The DEIS fails to adequately evaluate the impact of the proposed SunZia project on the
Mexican gray wolf. It states that “the potential for the species occurring at present or in
the future within the study corridor or being affected by any phase of Project
development or operation is very low” (pg. 4-71). That assumption is not defensible as,
even with the current low numbers in the wild, Mexican gray wolves have ranged across
various portions of the proposed SunZia project planning area in search of new territory.
Such occurrences will likely occur more often as the population grows and disperses.
The Five-Year Review of the Mexican gray wolf recovery program found that
movement distances for lone wolves averaged 87 ± 18 km (54 ± 6 mi).16 In addition,
newly introduced Mexican wolves in northern Sonora, Mexico, could also range into the
SunZia project planning area.

The RL M must fully analyze the potential effects of creating new roads and public
access, including vehicular access, into occupied and potential Mexican gray wolf
habitat. SunZia and BLM should consult with the USFWS regarding conservation
measures for this species and policy changes anticipated in the new revised recovery
plan and associated rulemaking – as the recovery plan will likely be finalized prior to the
construction of SunZia.

Jaguar (Panthera onca)

The DEIS assumes that no impacts will occur relative to jaguar, provided how little
information is known about the occurrence of this species in the U.S. However, jaguars
have been positively identified in Arizona and may travel through the study corridor.

“Jaguars in the United States are likely dispersing males from breeding populations in
northern Mexico. Movement corridors are important to maintain; however, human
developments may block access to corridors or fragment contiguous habitats needed to
sustain a home range. Fences and highways may be particularly damaging for
movement corridors.”17 The United States portion of the jaguar’s range coincides with
the proposed transmission route in Cochise, Pima, Santa Cruz, and Hidalgo counties,18
making it essential that SunZia planning limit habitat fragmentation and preserve
movement corridors for this species. Areas with moderate to high quality jaguar habitat
should be given particular consideration, including the area in and surrounding Steins
Pecos at the Arizona/New Mexico border, the area within approximately 2.5 miles east of
Willcox, Arizona, and between Tuscon, Arizona, in the west and State Highway 191 in

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**Response to Comment**

No Jaguars have been recorded in or near the Project area or north of Interstate 10 in several
decades. The DEIS (Section 3.6.6.1) acknowledges that this could occur, but is somewhat
unlikely given the current status of Jaguars in Arizona and northern Sonora. (From the FEIS:
 All recent Jaguar records in the United States have been of single males and have come from
mountains along the border with Mexico; none from within the study corridor. However,
individuals could possibly travel farther north into the study corridor in the future. Critical
habitat was proposed for the Jaguar in 2012, but none within or north of the study corridor
after the USFWS considered the lack of recent records and barriers to dispersal formed by
Interstate 10 and other infrastructure (USFWS 2012)). No portion of the critical habitat
proposed by the USFWS in 2012 would be affected by the Project. However, other potential
effects to the species will be analyzed in detail during Section 7 consultation.
The DEIS, (Section 3.6.6.1), notes that Ocelots appear to have moved through the Project area recently, and are occasionally sighted in southern Arizona. Ocelots are known to prefer dense shrub cover, which is primarily found in riparian corridors in the Project area. No areas outside riparian corridors appear to have habitat structure similar to known Ocelot habitat, and impacts to the species are not expected to occur outside riparian areas. (From the FEIS: The precise location of the sighting is not available, but the sighting could be near or within the southern portion of the study corridor.)
Although the USFWS does not consider Arizona part of the historic range of the Jaguarundi, the BLM has discussed potential impacts out of prudence, given the history of anecdotal reports. However, without confirmed information that the species may occur in the Project area, impacts are not expected to occur.

An Avian Protection Plan will be developed for the Project, which will address potential impacts to Bald and Golden Eagles. All facilities will be constructed to APLIC standards to prevent the risk of electrocution, and measures to minimize the risk of collision will be implemented where determined to be warranted. Note that electrocution risk is essentially precluded on 500 kV systems by the engineering requirements for separation between energized components.
impacts of potential development in any particular area cannot be quantified with any accuracy and precision. This does not mean that population-level impacts do not need to be examined, but it does make filling information gaps for this species crucial, both at the local scale through efficient study of the proposed project area as well as the landscape scale through population-level surveys and monitoring.

Final eagle management guidance from USFWS is expected later this summer or fall. This guidance is intended to set fee structure, permit period duration, and preservation and compensatory mitigation standards for programmatic incidental take permits, providing a mechanism to modify them if necessary to safeguard eagle populations. This effort will require the rapid development of a detailed understanding of eagle regional populations, which will inform the implementation of many development planning efforts across the range of the species.

The BLM should consult with USFWS regarding what surveys should be conducted to predict potential eagle mortality and, if warranted, consider applying for an eagle incidental take permit. Although fatalities most often occur at smaller (<69 kV) distribution lines, electrocution and collisions are known causes of mortality for the golden eagle.22 The design and layout of SunZia’s towers, transmission lines and guy wires should minimize risk to eagles. We recommend SunZia develop an Avian Protection Plan (APP) and follow best practices laid out by USFWS,23 NMDGF,24 and the Avian Power Line Interaction Committee (APLIC).25

Bald eagle (Haliaeetus leucocephalus)

Much of the information regarding the golden eagle provided above also applies to the bald eagle. In addition, the DEIS downplays potential impacts to this species by assuming that this species does not occur in areas where permanent water is lacking (Section 3.6.6.1, pg. 3-91). However, no citation is provided to justify this statement. While it is true that bald eagles are most often found in areas with open water, they can be seen in areas without these permanent sources, especially during non-breeding or migration periods. In fact, some bald eagles spend a significant amount of time in areas far from water.26 The BLM must take this into account and not assume that the only impacts to this species will occur along waterways within the study area.

Mexican spotted owl (Strix occidentalis lucida)

The DEIS states that no impacts are anticipated for the Mexican spotted owl (pg. 4-74). A threatened species under the ESA, and, therefore, no mitigation measures are proposed. However, the project would cross through critical habitat for this species. Critical habitat is essential for the conservation of species such as these. The DEIS notes that no habitat suitable for this species occurs within approximately 0.5 mile of the reference centerline of the project. The final alignment/placement of the line has not yet been determined, though, so how can this determination be made?

Threats to this species include loss of habitat, particularly old growth forests, disturbance, and impacts from climate change. Locating the transmission corridor away from forested areas and consulting with USFWS to ensure consistency with the species’ recovery plan will be essential in corridor planning.

The DEIS acknowledges that this species may occur in the project study areas, in the Galindo Mountains/Amarilla Canyon, Rincon Mountains, and in the southeastern portion of the Magdalena Mountains. We question if 0.5 miles is an appropriate distance for determining impacts to this species, as the project area may contain foraging habitat. Avoidance, minimization, and mitigation measures consistent with the recovery plan (and implemented in consultation with USFWS) may be warranted for any instance in which the transmission corridor crosses constituent elements of designated critical habitat. The DEIS indicates no mitigation measures for this species.

The BLM should consult with the USFWS regarding conservation measures for the Mexican spotted owl. If the project is determined to have key constituent elements or foraging habitat for this species, mitigation measures should be identified and implemented.

Northern Aplomado falcon (Falco femoralis)

Listed as endangered in southern and western Texas, this species exists as an experimental population in New Mexico. Falcons are threatened by habitat destruction and disturbance at nest sites and may experience direct mortality due to collisions with construction cranes, trucks, or wires and powerlines. Noise and human activity may displace the birds, and removal of nesting sites impacts their reproductive activities.

Both of the primary new build alternative routes in southern New Mexico would cross suitable habitat for this species. Transmission, planning, and construction of the proposed line should be consistent with the species reintroduction plan and its objectives to avoid negative impacts to the falcons. In addition, the Final EIS must adequately analyze potential cumulative effects of energy development that would be enabled by the construction of SunZia. For example, recent wind development (Muchu Springs) in the Natt Grasslands area, the same area where SunZia is proposed to be built, has led to the decision to not reintroduce these endangered birds into highly suitable habitat in the Natt Grasslands due to potential conflicts with wind turbines. We anticipate SunZia will enable future wind, solar, and natural gas development to occur that could not only directly impact suitable habitat and the likelihood of successful natural dispersal and establishment of the new populations but could also preclude or diminish reintroduction efforts in suitable habitats. Therefore, the impact to Aplomado falcon recovery and recovery efforts must be better analyzed.

| 60 | A substantial proportion of proposed routes through Aplomado Falcon habitat are parallel to existing transmission, minimizing additional impacts to the species. Further impacts related to disturbance or loss of existing raptor nests would be minimized through standard and selective mitigation measures. |
1600 Response to Comment

61 Picacho Reservoir, the only site within the Project area where the Yuma Clapper Rail has been recorded, is an overflow reservoir for the San Carlos Irrigation and Drainage District. As such, it only fills when other reservoirs in the system are at or near capacity, and it may remain dry for several years. When full, water in the reservoir is then withdrawn as needed for irrigation. No plans exist to maintain the site as a permanent wetland, and the site is not anticipated to support Yuma Clapper Rails in the future to a greater degree than under current conditions.

62 Comment noted. As stated in the standard mitigation measures, all transplantable saguaros would be salvaged and replanted to minimize impacts to nectar-feeding bats and the Cactus Ferruginous Pygmy-owl.

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The DEIS (p. 4-73) states, “Large areas of available but unoccupied habitat, coupled with the naturally low densities of Aplomeans Falcons, would preclude significant negative effects of Project construction related to habitat loss.” While it is true there are large areas of unoccupied and suitable habitat for the falcon in the project study area, we do not see any basis for the assumption that naturally low densities of this species would preclude significant negative effects from occurring. Effects to this species will depend largely upon the final route that is selected and that route’s proximity to occupied habitat and nest locations. Modifying or creating hazards in suitable and unoccupied habitat could preclude birds dispersing or being reintroduced there, which could have significant negative impacts on the species’ ability to be recovered.

The BLM should consult with the USFWS regarding conservation measures for this species and conduct mitigation consistent with the current recovery plan. The Final EIS must adequately analyze direct, indirect, and cumulative effects of the selected SunZia route to the Aplomeans falcon. Specifically, BLM must analyze the impacts of SunZia, and the foreseeable energy development it would enable, upon Aplomeans falcon habitat suitability, recovery, and recovery efforts.

### Yuma clapper rail (Rallus longirostris yumanensis)

The DEIS assumes that the proposed project would not present a significant risk to Yuma clapper rails because they only infrequently use the project area. However, infrequent use does not automatically signify that impacts will be low. Picacho Reservoir and similar areas may become increasingly important as habitat changes occur in other areas of this species’ range. Such impacts must be recognized and analyzed.

### Cactus ferruginous pygmy-owl (Glaucidium brasilianum cactorum)

The cactus ferruginous pygmy-owl was listed as endangered under the ESA in 1997, but was delisted in 2006 “for reasons unrelated to recovery.” In 2011, the USFWS determined that listing was not warranted, but clearly the species is in imperiled and as such is listed as sensitive by the BLM. Habitat for the cactus ferruginous pygmy-owl is located throughout the project corridor area.

Threats to pygmy-owls include loss of habitat including that in riparian areas and the spread of invasive species such as buffalograss that cause unnaturally hot fires to burn, destroying saguaros and other native vegetation.

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Other Agency and Non-Government Organization Comments and Proposed RMP Amendments

SunZia Southwest Transmission Project J-186 Final Environmental Impact Statement

Response to Comment

See following page(s)

Figure 4-5: Map of project area showing proposed project route.

Pinyon-juniper woodlands are commonly found primarily in the Sonoran Desert and are characterized by dense stands of pinyon trees and big sagebrush. Pinyon-juniper woodlands support a diverse array of wildlife, including birds, small mammals, reptiles, and insects.
All available mitigation measures will be considered to minimize the collision risk for all migratory birds. In addition to siting and engineering options, final selection and placement of bird diverters will be identified in the Avian Protection Plan. APLIC’s updated 2012 guidelines for reducing collision risk will support development of the Avian Protection Plan.

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**Sandhill crane (**Grus canadensis**)**

Sandhill cranes are migratory birds of open freshwater wetlands, but the different subspecies utilize habitats that range from bogs, sedge meadows, and fens to open grasslands, pines savannas, and cultivated lands. Sandhill cranes occur at their highest breeding density in habitats that contain open sedge meadows in wetlands that are adjacent to short vegetation in uplands. A portion of three distinct populations of sandhill cranes winter in Arizona. Cranes from both the Rocky Mountain (RM) and mid-Continent (MC) populations winter in the Sulphur Springs and Gila River valleys of southeastern Arizona. The BLM must analyze and avoid migratory flyways and important habitats for sandhill cranes to prevent collisions and population-level impacts. Areas of concern for sandhill cranes in the project area include the Rio Grand River corridor, the Willcox Playa, and Crane Lake, located in the northern portion of the Sulphur Springs Valley in southeastern Arizona, which supports the second largest over-wintering concentration of this migratory bird.

The USFWS estimates that 1.74 million birds die each year as a result of colliding with transmission lines. We recommend avoiding spanning bodies of water or placing lines between heavily-used bodies of water and landscape contexts in which the overhead static wire is obscured or hard to see. Although a limited number of studies have been conducted on the use of markers or “bird diverters” to reduce collisions, BLM should confer with the USFWS to determine and implement best practices for reducing transmission line and guy wire collisions with sandhill cranes and all bird species. We

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**Notes:**

5. See Arizona Game and Fish Department species account at [http://www.azgfd.gov/h_flygams_2.shtml](http://www.azgfd.gov/h_flygams_2.shtml).
1600 Section 7 consultations will address effects to the Southwestern Willow Flycatcher, including mitigation measures to prevent adverse effects to designated critical habitat at the Rio Grande crossing location.

64 The DEIS (Section 3.6.6.1) notes that Sprague’s Pipits may or may not avoid tall structures in wintering habitat, but adequate information is not available. If tall structures do cause avoidance, siting near existing transmission lines would be the most effective form of mitigation. Much of the BLM preferred alternative within Sprague’s Pipit habitat is adjacent to existing transmission lines.

66 BLM’s policies regarding Sonoran Desert Tortoise would be followed, as would the Arizona Interagency Desert Tortoise Team “Recommended Standard Mitigation Measures For Projects In Sonoran Desert Tortoise Habitat”.
Note that raven predation facilitated by transmission lines has not been found to cause increased mortality in juvenile Sonoran Desert Tortoises. Unlike the Mojave Desert, natural perches are readily available, and Sonoran Desert Tortoises use habitat with abundant rock and shrub cover.

SunZia Southwest Transmission Project
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encourage SunZia to develop an AIP and to follow best practices laid out by USFWS, NMDGF, and the APLIC.  

Southwestern willow flycatcher (Empidonax traillii extimus)  

The endangered southwestern willow flycatcher is found at various locations in the project area, within designated critical habitat along numerous riparian corridors (the species’ breeding habitat) in the region. They are threatened by habitat loss, particularly in these riparian areas.

The BLM should consult with the USFWS regarding conservation measures for the southwestern willow flycatcher. Avoidance, minimization, and mitigation measures consistent with the recovery plan (and implemented in consultation with USFWS) may be warranted for any instances in which the transmission corridor crosses a floodplain or other riparian habitat area. Engineering of structures to slow riparian flycatcher habitat is the preferred avoidance method, and vegetation preservation and/or restoration actions should be implemented where SunZia interacts with flycatcher habitat.

Sprague’s pipit (Anthus spraguei)  

Sprague’s pipits could be significantly affected by this project. This species is very sensitive to habitat fragmentation, and it also avoids areas with structures such as those proposed in this project. As the DEIS notes, “Postconstruction restoration in areas of habitat suitable for Sprague’s pipit may not be an effective mitigation, since the birds would likely not occupy areas near tall structures” (pg. 4-75).

No mitigation measures are proposed for this species. This project could significantly alter available habitat for this species and represents an unacceptable impact.

Sonoran desert tortoise (Gopherus agassizi)  

The Sonoran desert tortoise is a candidate species for listing pursuant to the ESA. The USFWS Federal Register Notice, 12-Month Finding on a Petition To List the Sonoran Population of the Desert Tortoise as Endangered or Threatened, provides a great deal of information on this species. As part of this, USFWS announced a finding for the Sonoran desert tortoise of warranted but precluded by the need to address other higher priorities.

As its common name denotes, it is found in the Sonoran Desert. Sonoran desert tortoises are most closely associated with the Arizona Upland and Lower Colorado River subdivisions of Sonoran desertscrub. Majors desertscrub vegetation types. They occur most commonly on rocky, steep slopes and bajadas, and in paloverde-mixed.
Core, higher density populations of this species tend to be “island like” and associated with suitable habitat. The species is very vulnerable to connectivity disruptions, especially as associated with the development of roads and other infrastructure. Additionally, predators for ravens can increase the mortality for desert tortoises as ravens use transmission lines as a means to scout out and prey upon young tortoises.\(^2\)

Selenium desert tortoises are very susceptible to the construction and maintenance activities related to this project. The BLM proposes some mitigation measures to address this problem, but inadequate information is provided to determine if these measures are suitable. For example, preconstruction surveys will only be useful if conducted just prior to construction by a qualified biologist in order to determine if tortoises are in the path of construction. Even then, tortoises can be extremely difficult to locate, and direct mortality will still occur. Indirect effects, including habitat loss and degradation, increased recreation, and road effects, will greatly increase the impacts to this species.

The BLM must more adequately analyze the potential impacts to this species and should consult with the USFWS and AZGFD regarding conservation measures.

**Tucson shovel-nosed snake (Chionactis occidentalis klamath)**

This small, 10–17” shovel-nosed snake is primarily restricted to sand dunes and sandy-silt flats on creosote-bush and salt pan valley floors, but they can also be found in washes and on rocky hillsides with pockets of sand.\(^3\) The geographic range of this subspecies is currently confined to the most and areas of Pima and Maricopa counties. Tucson shovel-nosed snakes burrow as well as crawl and are adapted for “swimming” rapidly through loose sand. The species is nocturnal/crepuscular, typically staying underground during the heat of the day and foraging for insects above ground at night. Currently an ESA candidate species, Tucson shovel-nosed snakes were found to be “warranted but precluded” in March 2010; the finding states that they are threatened throughout their entire range by habitat loss and fragmentation due to development, roads, potential solar power facilities, agriculture, wildfires, and lack of adequate management and regulation. The USFWS is required to submit a Proposed Rule or a not-warranted finding on this candidate species no later than the end of fiscal year 2014.

The BLM must analyze the impacts of road construction and associated habitat fragmentation resulting from the SunZia project and the possibility of additional branches.

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The DEIS (Section 3.6.6.1) discusses potential effects to the Gila Chub. The USFWS will only consult on a single action in Section 7 consultation. The BLM preferred alternative does not cross any streams supporting the Gila Chub. If the BLM preferred alternative is modified to include habitat for the species, this change would be reflected in a reinitiation of Section 7 consultation.

Potential impacts that may occur at the Rio Grande crossing are not anticipated to affect the Rio Grande Silvery Minnow. Mitigation measures would be employed to prevent sediments from being carried into the Rio Grande. Note that the floodplain throughout the range of the population is heavily farmed and developed and development of the Project would not substantially change existing conditions.

Spanning of the stream outflow is anticipated to be an adequate measure to eliminate the risk of effects to hydrology in Socorro Springsnail habitat. However, geotechnical studies would be required prior to construction. If evidence was found that hydrology would be affected, siting of structures would be adjusted. (Note that this link is not a part of the BLM preferred alternative).

Potential impacts to each special-status plant species have been assessed to the degree possible with existing information, and will continue to be updated with any new information. None of the species discussed in the comments are known to occur on any alternative, although the presence of potentially suitable habitat is noted as appropriate.

Gila chub (Gila intermedia)

This endangered minnow species is primarily threatened by habitat degradation on the banks of the streams that they inhabit and from upstream runoff in their watersheds. Limiting watershed impacts (erosion, sedimentation, etc.) from construction and preserving riparian corridors will be essential in avoiding impacts upon this species. The mitigation impacts described in the DEIS do little to adequately address threats to this species.

The BLM should consult with the USFWS regarding conservation measures for the Gila chub. It is crucial that measures to avoid, minimize, and control erosion caused by ground disturbance are implemented and monitored for effectiveness.

Rio Grande silvery minnow (Hybognathus annectens)

Regarding the Rio Grande silvery minnow, the DEIS notes that the project would affect the sites remaining population of this species. No actions should be permitted that could further threaten this last remaining wild population. The DEIS does not sufficiently discuss potential impacts to this species, nor does it recognize that impacts to this population could jeopardize the species’ survival.

Socorro springsnail (Pyrgulopsis anoueae)

The DEIS acknowledges that very little is known about the Socorro springsnail, including its distribution within the study corridor. The only known location of this species is within 500 feet of one of the project links. The only mitigation measure offered is to spare the spring outflow and center the drainage between structures (Section 4.6.1.5, pp. 4-70).

What about the effects of project roads? Erosion and sedimentation? Increased recreational access? Given the lack of knowledge about this species and its potential distribution, as well as the fact that it has been extirpated from other known localities, it is vitally important to eliminate threats at all known or potential sites where it may occur. This project has the potential to cause population-level impacts that may jeopardize the species.

b. Special-status plant species

The DEIS admits that little is known about the distribution of many of the special status plant species that may be affected by this project. For example, the recovery plan for Toxen’s pungenttoad (Hoplopleura todesi) suggests that populations of the species may occur within the study corridor (pg. 7-101). As another example, the DEIS states that “suitable habitat is probably present over a wide area within the study corridor” for the Chihuahua sunflower (Helianthus petiolaris) (pg. 3-101, emphasis added).
in order to better estimate how the project may impact species such as this, thorough studies are needed in order to identify populations. Without this knowledge, impacts cannot be adequately analyzed.

When populations of special-status plant species are found, they must also be avoided, which should be made clear in the Final EIS. For example, when discussing the Acroloca ciliata (Echinocerus \textit{punctatus} \textit{scutellatus}), the DEIS states that, “where possible, destruction of plants would be avoided” (pp. 4-80). When and why would this not be possible?

The BLM should consult with the USFWS and state agencies regarding conservation measures for special-status plant species found within the study corridor.

c. Appendix Bi – additional special status species

Appendix B1 addresses additional special status species that are not listed under the ESA, including those considered sensitive by land management agencies or by New Mexico or Arizona. This list represents hundreds of sensitive species not discussed within the DEIS. Although the appendix provides information about the species and potential threats to those species, it does not discuss how this proposed project may affect those species. This is a serious oversight. Without this information, the BLM cannot determine the full impacts of this project on the affected environment. The BLM must analyze impacts to these species prior to determining whether this project should move forward.

d. Critical habitat

Depending on which alternative is selected (and which links within that alternative), the proposed project would affect critical habitat for a variety of species, including, but not limited to, Mexican spotted owl, Southwestern willow flycatcher, Gila chub, Rio Grande silvery minnow, shrimpseed, and loach minnow. The DEIS does not adequately recognize the importance of these areas and the significance of any effects on them. Critical habitat is “essential for the conservation of a threatened or endangered species.” The project may significantly alter portions of critical habitat, thereby potentially affecting the species at the population level. The Final EIS must address impacts to these critically important areas.

e. Mitigation measures

As the BLM notes, “impacts of linear features on wildlife are mostly negative and may be difficult to mitigate” (Section 4.6.2.2, pp. 4-59). However, the BLM also frequently notes that, with mitigation measures, effects will be minimal on many species. The DEIS does not contain adequate information to justify this statement. In fact, based on the information provided in the DEIS, as well as the information we discuss above, impacts to many species will be quite significant. More information is needed about the various mitigation measures proposed, and the estimated effects on the species discussed in the EIS.

The DEIS frequently mentions that a “posted reasonable construction speed limit could minimize potential collision risk” with a variety of species of concern. What would this posted speed limit be?

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<table>
<thead>
<tr>
<th>1600</th>
<th>Response to Comment</th>
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<tbody>
<tr>
<td>73</td>
<td>Comment noted. All applicable laws, regulations, and policies would be followed to avoid or minimize effects to special-status species.</td>
</tr>
<tr>
<td>74</td>
<td>Designated critical habitat for the Southwestern Willow Flycatcher and Rio Grande Silvery Minnow would be crossed by the Project, regardless of alternative. Designated critical habitat for the Gila Chub would be crossed by Subroute 4C3. Potential impacts to these species are discussed in Section 4.6, and will be assessed during Section 7 consultation. No other critical habitat would be crossed by the Project.</td>
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<tr>
<td>75</td>
<td>Mitigation measures have been identified as part of the Project description (Section 2.4.12, Table 2-10) and selective mitigation measures (Table 2-11) which will be required during the design, construction, and/or operation phases of the Project. A mitigation plan will be included in the Final POD, which will include management of construction activities, training, and monitoring.</td>
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and how will it be enforced? Even at low speeds, vehicles and roads have significant impacts on wildlife and can result in high mortality rates due to a variety of factors, including road design, driver awareness, etc. Similarly, without strict enforcement, it is highly unlikely that those traveling on the project area would adhere to the speed limit, especially members of the general public who may access the area for recreation, etc. Is there any funding available to ensure enforcement activities? If a suitable speed limit and enforcement plan are in place, the posted speed limit should not be included as a mitigation effort as it is unlikely to reduce wildlife mortality or injury.

Similarly, the DEIS notes that debris and trash will be properly contained and removed from the project site. Who will oversee this mitigation measure to ensure that no litter is left on-site?

Table 2.10 states that all supervisory construction personnel would be instructed on the protection of cultural and ecological resources (pg. 2-87). Why is this training not required for all construction personnel, rather than just the supervisors? The supervisors cannot oversee every action taken by their staff and will not be able to ensure that personnel do not take inappropriate actions toward these resources. Also, will the person(s) conducting this training be properly trained themselves? Will they have appropriate knowledge of all resources that may be encountered? Will identification of sensitive species and proper monitoring techniques be part of this training?

The DEIS states that “fences and gates would be repaired or replaced to their original, undisturbed condition” (Table 2.10, pg. 2-88). We encourage the BLM to use this opportunity to modify any fences that are currently not wildlife compatible, as appropriate.

Table 2.10 says that preconstruction surveys will be conducted for special status species in areas of known occurrence or suitable habitat. Who will conduct these surveys? It is important for a biologist who is familiar with each species to conduct the surveys to ensure that all species’ individuals that occupy the area are identified. This may require multiple biologists as many species are very specialized and can be difficult to locate without proper training.

When in relation to the start of construction will these surveys be conducted? Ideally, surveys for special status species should be conducted well in advance of construction so that any populations can be avoided. In fact, because so little is known about the occurrence of many of the species discussed in the DEIS, these surveys should have been completed prior to completion of the DEIS. Without a thorough understanding of what species are present in the project corridor and surrounding area – or where they are located within the project area – efforts to these species cannot be adequately assessed.

Surveys should also be conducted immediately preceding construction or use of an area to determine what species are present. These surveys should not be limited to only special status species but should include all plants and animals in order to minimize negative impacts. If an animal or plant is found within the construction path, it should either be moved or avoided, as appropriate, or construction should cease until the animal has moved or other appropriate action has been taken.

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A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.

The DEIS discusses where significant impacts may occur (Section 4.6.5), and considers how the Project may affect the function of habitat that is crossed. Some habitat types, including their resident wildlife, are relatively resilient to the type of disturbance caused by transmission lines. Along alternatives on Chupadera Mesa, the dominant vegetation community is a juniper savanna, as noted in the comment and DEIS. This is a relatively patchy community, with patches of trees interspersed with grassland. Although the Project would cause a long, linear edge across that habitat, it would remain within the range of normal conditions present in that habitat. Dense juniper woodland elsewhere on Chupadera Mesa is largely avoided, as are other habitats highly sensitive to fragmentation such as riparian woodlands.
The DEIS (Section 4.6.4.7) discusses the Arizona’s Wildlife Linkages Assessment to the extent it was complete at the time the DEIS was released. No new information has become available for the FEIS. The BLM is aware that additional planning may occur, but does not speculate on the outcome of that planning.

Fragmentation is discussed in the DEIS, and in greater detail in the FEIS (Section 4.6.3.1 and discussions of individual alternatives, Section 4.6.5). Available information from within the study area or similar habitats does not indicate that transmission lines are significant fragmenters, with the exception of some grassland species. The Sprague’s Pipit may be sensitive to tall structures in nesting habitat in the northern Great Plains, although this has not been investigated in wintering habitat in the Southwest. Potential indirect effects including recreational traffic are noted in the discussion regarding fragmentation.
h. Perennial versus ephemeral and intermittent waters

The DEIS takes into account the conditions at the location of all major ephemeral cross-dings. Typically, ephemeral streams that would temporarily support aquatic species, or facilitate aquatic species dispersal, would be spanned unless existing crossings are present and adequate. See also response to comment 45. No Apache Trout or Chiricahua Leopard Frogs would be present at any stream crossing in the Project area, unless carried downstream from known locations by strong floods. No suitable habitat for either species is present downstream from any crossing location.
According to the Center for Desert Archaeology (CDA) and the National Trust for Historic Preservation (National Trust)\(^5\):

\[\ldots\]

...the proposed route of the SunZia Southwest Transmission Project J-196 in eastern Pinal County that traverses the Safford Basin, Aravaipa Valley and lower San Pedro Valley is of particular concern. Preservation of this intact cultural landscape provides for important interpretation of sites as part of a larger context rather than in isolation as this area includes over 50 archaeological sites in the lower San Pedro Valley alone with approximately one-third of them containing architecture and probable human remains. A minimum of 46 sites include villages that were inhabited for a century or more and include houses, ball courts, and large burial areas, as well as a multitude of other structures and archaeological deposits.

Another important area that is potentially affected by the route is the foothills of the Pinaleno Mountains. This area contains important Mohavean, Hohokam, and Mimbres prehistoric sites, none of which have been adequately studied or evaluated. These sites are significant to both the Hopi and Zuni people and both have ancestral ties to the area. Some of these sites have been vandalized already, but still have important information to provide and value to native peoples. A transmission line in this area would also likely exacerbate the vandalism.

\[\ldots\]

81 The visual resource assessment methodology was based on the BLM VRM System (Manual 8400) and includes the inventory of scenic quality which is characterized by landscape units and rating classifications. The visual resource impacts disclosed in the DEIS follow BLM approved methodology and direction given by BLM Visual Resource Specialists. The BLM methodology is the nationally accepted standard for assessing visual contrast for projects like SunZia (Section 4.9.2).

82 Comment noted. Mitigation measures suggested in the text excerpt provided will be verified and mapped based on final engineering for the final POD. The purpose of the POD is to identify necessary construction actions and required mitigation measures to ensure the protection of sensitive resources identified in the DEIS to the extent practicable. Impacts to soils were addressed in the DEIS (Section 4.3.3).

80 Projects such as this, and mitigation in the form of archaeological excavation, allow for the opportunity to intensively study the remains of past cultures, thereby benefitting the public with expanded scientific knowledge. Access to the archaeological sites is necessary for this development. Access is a concern and standard mitigation measures have been developed to address access, such as the use of locked gates and blocking roads that are not necessary for regular maintenance.
83 A discussion of desert pavement and biological soil crusts has been added to Chapters 3 and 4 of the FEIS. This discussion includes where these resources could potentially occur within the Project area and measures to be implemented to mitigate potential impacts.

84 Selective mitigation will be applied to all riparian crossings to reduce visual impacts to the extent practicable. Although the towers will still be visible, measures to reduce the duration of the view will be implemented. All crossings will be crossed perpendicularly and tower spans will be maximized to offset the tower placement from the edge of the river. Maximizing the span may also reduce the need to remove riparian vegetation if the tower can be placed outside of this zone or in a location where the vegetation is less dense or already disturbed. Section 2.4.12, Table 2-11.
years ago I found 1 photo taken in 1973 of those hills. They had been so beautiful before the towers were there.  

Mr. Edpell and his wife will be treated to move towers should the Western San Pedro SunZia route be selected.

The following image shows how easily seen the large towers will be in the San Pedro Valley. The red line depicts the large transmission towers.

![Image of transmission towers](image)

Figure 1. A photograph that has been marked to show the transmission line route, courtesy of Norman Moulder.

A movie set company in the valley, which brings in an amount of money in excess of one million dollars into the local economy annually, expects to go out of business if the San Pedro route is chosen due to the visual impacts.  Similarly, visitors to Awanapa or the nearby mountains will not be pleased with the views to come should that route be selected. It would be fallacious to assume that an equal if not stronger argument could not be made against the destruction for that route.

The ugly scar of erosion is also a serious concern. Desert soils are also particularly prone to erosion. The following image shows erosion caused by the cutting of a road in the San Pedro Valley many years ago. Such conditions continue to get worse.

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85 Comment noted
High impacts to viewers, including residences, recreation users, and travel route users are anticipated for viewers within the immediate foreground distance zone (within ½ mile). BMPs or standard mitigation measures would be implemented where appropriate to reduce visual impacts (see text change response to comment #2).
Under NEPA, BLM must update its inventory of lands with wilderness characteristics along the potential SunZia routes and cannot simply rely on the underlying Resource Management Plans (RMPs) along the potential routes. See N. Plains Res. Council v. Surface Transp. Bd., 668 F.3d 1067, 1085-87 (9th Cir. 2011) (rejecting agency’s reliance on “stale” inventory data as violating NEPA’s “hard look” requirement). Manual 6310 identifies situations in which BLM must update its inventory, including when: “BLM has new information concerning resource conditions, including public or citizens’ wilderness proposals” and when a “project that may impact wilderness characteristics is undergoing NEPA analysis.”

Lands with wilderness characteristics, including Citizen Proposed Wilderness areas and Wilderness Study Areas (WSAs) should be protected by the BLM and must be considered when evaluating changes to the RMPs. Citizen Proposed Wilderness lands have been inventoried by various groups and have wilderness qualities including naturalness, solitude, and opportunities for primitive and quiet recreation. The lands provide important wildlife habitat and the sensitive nature of these lands and their resources and values makes transmission development inappropriate there. Habitat fragmentation is now widely accepted as one of the leading causes of species endangerment and extinction. Therefore, maintaining the integrity of roadless areas and roadless area complexes is crucial to preserving the integrity and security of wildlife habitat. For this reason, new transmission corridors and associated access roads should follow existing disturbance corridors and avoid traversing currently roadless areas.

IX. SOCIAL AND ECONOMIC CONDITIONS

The BLM economic analysis of the DEIS is incomplete and inaccurate. It does not consider the impacts on the significant investments in areas that would be affected by the proposed project. Most of the economic benefits would be short-term and associated with construction of the transmission lines, while the negative economic impacts would be long-term and irreversible and unquantifiable.

1. Ecotourism

Many of the areas most significantly affected by this proposed project – the San Pedro River and its tributaries, the Aravaipa Creek area, Sulphur Springs Valley and the Wilcox Playa – are well-known ecotourism attractions. Birders, hikers, and wildlife watchers come from all over the United States and the world to enjoy this region. Birders are particularly drawn to these areas due to the amazing diversity of birds that inhabit and migrate through these ecologically significant lands. Wilcox hosts an annual “Wings Over Wilcox” event that focuses on the birthing in the area. In 2013, it will be celebrating the 20th anniversary of this event, an important component of the local economy.

The DEIS fails to analyze the impact of the proposed project on ecotourism including direct, indirect, and cumulative impacts. The DEIS underestimates and fails to adequately analyze the economic role of public lands, river valleys, playas, and natural open space, plus the wildlife these support for the local communities and if ignored existing research documenting the economic importance of protected public land resources. Income from tourism is a sustainable source of income, but requires that the resource is managed and protected. The proposed SunZia transmission line has the potential to forever damage sustainable regional resources for a questionable purpose and need.


88 Comment noted. Please see text change response to comment #12.

89 The economic role of public lands is acknowledged in the DEIS. As stated in Section 4.13.4.5 “impacts (direct and indirect) to recreation and tourism have been identified by the public during the scoping process. The description of land use impacts to recreation areas or trails resulting from Project construction or operation have been described in Section 4.10.5 and visual impacts to recreation users have been described in Section 4.9.3. The Project would not substantially change the use of recreation areas or trails, and the number and type of recreation users would not likely be change, therefore economic effects to recreation are not anticipated. Changes in the tourist economy would therefore not be expected.”

It is acknowledged that there are many ecotourism attractions throughout the study area, although it is noted that the BLM Preferred Alternative would not cross Aravaipa Creek, and would not affect the Wilcox Playa area or any of the crane watching sites identified on the Wings Over Wilcox festival map.

Cumulative impacts to economic resources including recreational activities associated with ecotourism have been identified in Section 4.17.4.13 of the DEIS. As stated cumulative impacts on recreational resources could occur as a result of utility scale solar and wind developments, which could in turn affect ecotourism. It is likely that ecotourism will continue to be a positive trend although the level of impact cannot be quantified without speculative assumptions regarding future levels of recreation and tourism within the analysis area.
b. Watchable wildlife

Watchable wildlife programs play an increasing role with state wildlife agencies and land managers. As other forms of wildlife recreation continue to decline, watchable wildlife programs are more popular than ever. In Arizona, the Arizona Game and Fish Department is seeking to "Identify, assess, develop and promote watchable wildlife recreational opportunities." In a 2006 study, the Outdoor Industry Foundation reported that all outdoor wildlife-related recreational activities generated $736 billion annually for the United States economy and, of that, watchable wildlife generated $43 billion annually. They reported 66 million Americans participated in wildlife viewing, which supported 400,000 jobs. Estimated economic returns included retail sales averaging $8.8 billion, trip related expenditures of $8.5 billion, and state and federal tax receipts of $2.7 billion. There are some aspects of outdoor recreation not captured by these numbers as well, including visitors who come for sight-seeing, family gatherings, and for educational benefits.

A 2011 study by the National Fish and Wildlife Foundation estimated the combined value of outdoor recreation, nature conservation and historic preservation at creating more than 0.4 million jobs, generating $1.07 billion in local, state, and federal tax revenues resulting in a minimum total economic impact nationally of $9.6 trillion. The U.S. Fish and Wildlife Service contributed about $4.1 billion in economic activity and supported over 330,000 jobs through its management of 553 National Wildlife Refuges and thousands of smaller natural areas throughout the country.

According to a 2004 study of National Wildlife Refuges, there were 36.7 million visitors who generated $1.64 billion of economic activity in local economies. About two-thirds of the total expenditures were generated by non-consumptive activities, meaning it was neither fishing (27 percent) nor hunting (5 percent). The authors of this study also conducted a willingness-to-pay research to determine the value of these refuges beyond what it actually cost to visit. They found that visitors showed a consumer surplus of more than $1.3 billion, with $816 million of this amount attributed to non-consumptive values.

X. IMPACTS OF ROADS

The DEIS accurately describes the impacts that access roads can have on resources. Roads pose significant threats to the land and resources, including impacts on wildlife through direct and indirect mortality and habitat fragmentation. In addition to creating new roads in already disturbed areas, many of the

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subroutes would cross currently roadless areas. We are strongly opposed to construction of roads in these areas.

Rocks affect human wildlife, with an estimated one million vertebrates killed daily. America's highways. Road, paved or primitive, facilitate inadvertent or deliberate disruption of wildlife. According to prominent conservation biologists, habitat fragmentation is the most serious threat to biological diversity and is the primary cause of the present extinction crisis.  

Roads fragment habitat by creating otherwise large patches into smaller ones resulting in negative impacts to interior habitat. Roads also directly eliminate wildlife habitat by occupying space within the ecosystem and by altering adjacent habitat. Roadside habitats experience increased temperature extremes and solar input and pollution from exhaust, herbicides, garbage, dust, and noise. These conditions increase habitat disturbance by a minimum of 500-600 meters on either side of a small rural road and a much larger distance for highways.  

Wildlife is affected directly and indirectly by roads. Mule deer frequently harassed by all-terrain vehicles (ATVs) may alter their feeding and spatial-use patterns, and produce fewer offspring the following year. Mountain lions avoid improved dirt and hard-surfaced roads and select home range areas with lower densities of these road types.  

In the Southwest, roads and associated activities are the primary cause of extensive array cutting during this century. Severe array formation negatively affects soils, vegetation, and archeological resources. Vehicular traffic destroys biological resources by crushing vegetation and microbials created. The resulting soil compaction retards the recovery of vegetation. In addition, off-road vehicles (ORVs) can cause unsustainable erosion rates, expedite the spread of non-native invasive plants, cause user conflicts, and damage cultural sites.  

| 91 | Comment noted. Although the presence of a road without traffic does carry its own effects, the level of use of a given road also affects the degree of impacts. Closure of access roads to recreational traffic or permanent road closure and rehabilitation would be implemented in sensitive locations, to be identified in the POD. |
| 92 | See comment 91. |
| 93 | See comment 91. |
| 94 | See comment 91. |

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Trenholme and Prinsell, 2000. (Full reference above.)  

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SunZia Southwest Transmission Project  
Other Agency and Non-Government Organization Comments  
J-202  
Final Environmental Impact Statement and Proposed RMP Amendments
Some measures to mitigate the effects of temporary and permanent roads will be incorporated, but these measures are not adequately discussed, nor are they likely to sufficiently reduce the threats to the resources. Adequate information is not provided in the DEIS to determine if the mitigation efforts that are identified will be sufficient. For example, the DEIS states that “upon completion of construction activities, temporary access roads would be reclaimed according to the procedures specified in the Final POD” (Section 2.4.10.1, pg. 2-70). No further indication is provided as to what the reclamation procedures would entail, so we cannot determine if they will adequately address this threat. Similarly, the DEIS mentions that a Project Noxious Weed Management plan will be developed, but no parameters or timetables are specified. This is pertinent information that should be included in the DEIS so that the public can provide substantive comments.

The only mitigation measure that is provided is closing some of the roads once construction is completed and if the roads are no longer needed. However, how will these roads be monitored during the construction phase to ensure that the public is not negatively affected? How long after construction will the roads be closed? The longer these roads remain open, the more potential there is for abuse by recreationists. How will roads that remain open (some of which will be gated) be monitored to ensure that the public is not overusing them, creating illegal spurs, or tampering with the closure? The DEIS also notes that road closure may not be possible in all areas (pg. 4-99). Where would road closure not be feasible?

Section 2.4.101 (pg. 2-70) states that overland road construction methods—either overland drive and crush or overland cut and clear—may be implemented where feasible in order to reduce the severity of disturbance. However, the impacts of these methods are not discussed in the DEIS. While such methods may have less of an impact on some resources, they can have significant impact on other resources. Will the areas to be used for overland road construction be thoroughly surveyed for special status species and other important resources? If not, it is likely that the potential for direct mortality or injury of these species will increase. Drivers traveling cross-country may not be able to see what lies in their path as easily as they could on a maintained road. It is highly likely that cross-country travel would increase wildlife-vehicle collisions as the animals (and their barriers, if the species resides underground) would not be as noticeable as they would on a cleared road. Related to this, what cross-country speed limit will be imposed, and how will this be enforced? Lower speeds must be required for cross-country travel. Finally, how will areas that are used for overland road construction methods be monitored and reclaimed? These methods are likely to result in more illegal road spurs used by the public as recreationists may see where other vehicles have traveled off-road and will follow suit.

Table 2-10, which identifies standard mitigation measures, states that “all vehicle movement outside the right-of-way would typically be restricted to designated access, contractor acquired access, or public...”

<table>
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<th>1600</th>
<th>Response to Comment</th>
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<td>95</td>
<td>upon selection of a final route and availability of detailed engineering information, a final POD will be developed. As part of this document, a Noxious Weed Management Plan will outline prevention, control, and management measures specific to the noxious weeds identified along the ROW. Also a detailed reclamation plan will outline specific restoration measures that will be implemented.</td>
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<td>96</td>
<td>Comment noted. To be addressed in the final POD. The extent or probability of unwanted OHV use on the ROW is difficult to predict and quantify in an analysis. The BLM has concern for unwanted OHV use in specific areas where access is currently limited.</td>
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<td>97</td>
<td>Comment noted. To be addressed in the final POD.</td>
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<td>98</td>
<td>Comment noted. To be addressed in the final POD. Upon selection of a final route and detailed engineering, resource surveys will be conducted to determine the location of sensitive species, invasive plants, cultural resource sites, and other resource data. This information will be provided in detailed POD mapping of the ROW. A travel management plan is also included in the POD.</td>
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<td>99</td>
<td>Comment noted. The POD allows for some flexibility for variance that may be necessary due to unforeseen circumstances during construction. Movement of vehicles would be restricted to identified travel routes outside the ROW to ensure construction traffic is retained to these routes. Typically these routes are fully improved and can accommodate the needs of construction trucks, equipment, etc. to and from their destination.</td>
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The cumulative impact analysis in Section 4.17 fully evaluates potential cumulative impacts associated with development that was identified in the Past, Present and Reasonably Foreseeable Future. It is acknowledged that development of energy resources that could interconnect with the Project may occur within proximity to the proposed substations, as described in the energy development scenarios.

Reasonably foreseeable future energy developments have been identified in Table 4-30 of the FEIS, which includes the Bowie Power Station, the Afton Solar Energy Zone, and the NREL identified QRA’s. The FEIS has been updated to include recent changes in the Solar PEIS and RDEP in Section 4.17.3 of the FEIS.

Updated information regarding the Southline Transmission Project has added to the FEIS in Section 4.17.3 of the FEIS.

The proposed Southline Transmission Project, a 345-kilovolt (kV) and 230-kV high voltage electric transmission line and substations was not considered in the DEIS cumulative impacts analysis. The proposed routes for Southline are in close proximity to SunZia’s proposed alternatives between Wilcox, Arizona and Deming, New Mexico. Therefore, this region in particular deserves detailed cumulative impacts analysis for both of the proposed transmission projects, to include biological (e.g. habitat fragmentation, disturbance, avian impacts, etc.) and cultural resource impacts. The cumulative impacts map in the DEIS (Figure 4-1, 4-28) only delineates the southern proposed route of Southline, however,
103 See response to Comment No. 100.

104 It is acknowledged that there are numerous small projects that could contribute to larger collective impacts, although it is not possible to identify these individual projects. However, the Energy Development Scenario is an analytical tool that provides a means to assess impacts to resources from otherwise unknown energy development projects that could cumulatively contribute to significant impacts. This method of analysis provides an estimate of likely cumulative impacts based on past, present and reasonably foreseeable future actions.

105 The cumulative impacts of climate change have been addressed in Section 4.17.4.2 of the DEIS. Also please see response to Comment No. 18.

106 As stated in Section 4.17.3.1 of the DEIS “typically city and county comprehensive and general plans, BLM RMPs, utility transmission plans, etc., are updated every 10 years to identify planning and infrastructure priorities, directions, and budgets for the foreseeable future.” As defined in the BLM Handbook (Section 6.8.3.4), to constitute a reasonably foreseeable future action, a project must be concrete enough that consideration of its effects would be useful to the decision-maker.

Additional information regarding the description of the Southline Transmission Project has been provided in the FEIS, Section 4.17.3.2, although the impact analysis for the Southline Project has not been completed as of publication of this FEIS, and therefore there is insufficient information to fully evaluate the cumulative effects with respect to that project.

107 Please see text change response to comment #12. Per guidance in Conducting Wilderness Characteristics Inventory of BLM Lands Manual (MS-6310), all BLM lands with proposed applications need to go through an inventory for lands with wilderness characteristics. For the assessment of LWC’s for SunZia the only LWC inventory units in New Mexico that were identified based on the manual (MS-6310 was Nutt Mountain that would be crossed by one of SunZia’s alternatives (not the Preferred Route). The Preferred Route would also cross a pending LWC unit adjacent to Stallion WSA. For the assessment of LWC’s for SunZia the only LWC inventory units in Arizona that were identified based on the manual (MS-6310) was Muleshoe that would be crossed by one of SunZia’s alternatives (not the Preferred Route). Thus the potential to preclude wilderness designations is reduced for the Project.
The DEIS also fails to adequately evaluate the cumulative impacts related to the introduction and spread of non-native invasive plants or potential increases in woody vegetation associated with fire suppression. The DEIS fails to evaluate the cumulative impacts and potential changes to fire frequency, fire regimes, and fire management associated with the proposed transmission line. Fire-adapted grasslands may be converted to more woody vegetation with fire exclusion and suppression associated with protecting the transmission line.

The cumulative impacts analysis with regards to biological resources is deficient and does not provide an adequate representation of possible effects. Rather than provide analysis for each species and area affected, it generalizes all effects. Some species may be more heavily affected by projects and actions occurring in the region of the project, but this analysis does not give any indication of those effects. We realize how difficult it would be to assess cumulative impacts for each of these species and the affected habitat, but the BLM must acknowledge that the information provided in its cumulative impacts analysis is of little use to fully understanding the effects to these resources.

This project, when combined with all other projects and actions occurring in the area, results in significant habitat loss, degradation, and fragmentation. As the DEIS notes, “development of the proposed project, in conjunction with other present and future projects, would contribute to the ongoing fragmentation and loss of natural habitats in the Southwest” (pg. 4-296). Direct mortality through electrocution, collision, etc., is also of great concern. The DEIS states that “standard and selective mitigation measures for the proposed project would minimize any contribution to these cumulative effects to the extent feasible” (pg. 4-292). However, this project would still add to the impacts to these resources. Causatively, these actions may result in impacts to species at the population level or may jeopardize some species’ survival.

The DEIS provides information about sources of human-caused avian mortality (pg. 4-253), although the information presented is not useful for ascertaining the cumulative impact of this project. For example, the DEIS references a study that indicates that transmission line collisions are estimated to cause 13–17 percent of all human-caused bird deaths in North America. This statement does not give any indication of what species of birds are affected, nor the degree of impact to each species. The only useful information that can be gleaned from this is that transmission lines present a significant risk to the bird class.

Species that are already at risk from other factors and long-lived species with low reproductive rates may experience population-level threats from collisions. While the DEIS acknowledges the cumulative effect of this project on such species may be quite significant. Although mitigation measures are offered to reduce collisions, bird deaths are still expected to occur from this project. The DEIS does not adequately address such impacts other than to mention that they could occur.

Similarly, the impacts from road construction and access into new areas is not suitably addressed. As noted above, roads have very significant impacts on the environment, including increased erosion, recreation and human presence, habitat fragmentation and destruction, increased vehicle use and associated wildlife-vehicle collisions, and much more. The cumulative impacts analysis glosses over such impacts.

1600 Response to Comment

108 The DEIS discusses potential impacts related to invasive plants (Section 4.6.4.3), as well as the potential effects of the Project on fire management (Section 4.7).

109 Comment noted

110 Comment noted

111 Information on birds and transmission line collision is very incomplete, as few site-specific studies have occurred except at a small number of locations known to create a high risk to specific bird species. Across North America, accurate statements are difficult to make except that there is a generally observed pattern of higher risk for large, heavy-bodied birds. However, even this may be a result of detection bias. The referenced study (Lilley and Firestone 2008) presented a range of estimates from several other authors, for all major categories of human-caused bird mortality. Again, little or no information on species or groups of birds affected was available, in the paper cited or its sources. The numbers of birds that collide with transmission lines annually is highly speculative, and the range of estimates cited by Lilley and Firestone (2008) included a lower estimate of “tens of thousands” to the 174 million noted in the DEIS.

112 As stated in Section 4.17.4.6 of the DEIS, “All transmission lines add to the bird collision risk created by existing transmission lines, communication towers, and other structures.” However, it cannot be ascertained that the cumulative effect of this Project would be quite significant as stated by the commenter.

113 Earth: The cumulative effects section regarding soil resources (Pp. 4-284 to 4-286) includes a discussion of future actions that may, along with the Project, result in a cumulative increase in soil erosion within the Project area. These cumulative effects stem from future projects that may intersect or be located near the Project or the unauthorized use of Project access roads by OHVs. Mitigation measures would be implemented to prevent unauthorized use of Project access roads (Table 2-11).
The DEIS anticipates that “impacts to species listed under the ESA are unlikely to be cumulatively significant for future renewable energy developments” because each project would implement mitigation measures to reduce such impacts (pg. 4-296). However, as noted above, such actions can be minor on their own but, when added to the other actions, can be significant. Mitigation rarely eliminates effects on any resource. Even if these measures do reduce impacts, some effects, such as habitat loss, result in permanent and significant negative impacts.

In its discussion of wind energy facilities, the BLM generally assumes that wind facilities have a minor effect on bat species. One of the justifications provided for this is that “wind energy facilities are generally sited in open habitat lacking bat roosts” (pg. 4-296). This assumption is completely in error. Although many facilities are located in the immediate vicinity of cave-dwelling bat roosts, they are frequently located in areas utilized by bats for foraging and migration and, therefore, can and do have significant impacts on bat species.

The cumulative impacts analysis also seems to compare potential impacts between different types of projects or other factors, rather than assess the cumulative impacts of all projects. For example, the DEIS states that “other types of future developments...are expected to result in the greatest loss of habitat in the region” (pg. 4-298). As another example, the analysis states that “all measures with the greatest man-made cause of unintentional bird mortality” (pg. 4-298). Such information is not useful unless analysis is provided about how this project adds to those impacts.

XII. CONSULTATION AND COORDINATION

We, like many of our colleagues (See comments from Defenders of Wildlife et al., Careful Working Group, Sky Island Alliance, Tucson Audubon Society, and Friends of the Ajo Mountains) are extremely disappointed in the public process for this proposed transmission project. This proposal has the potential to destroy more acres of land than nearly anything else we have seen in recent years, plus the BLM is proposing to build it in some of the most ecologically sensitive and unfragmented areas in southern Arizona. It is extremely controversial and because of that the BLM should have taken care to listen more closely, engage the public, and provided opportunities for the public to comment and ask questions in a more open and transparent manner. It should have also extended the comment period as the DEIS and accompanying materials is lengthy and in places confusing. It is a lot to digest in the time period offered, let alone provide adequate and comprehensive comments.

XIII. SUMMARY

Stena Chb strongly supports a timely transition from fossil fuel based electricity production to an energy system that incorporates much more energy efficiency and conservation and clean renewable energy. Global Climate Change/Disruption is one of the greatest challenges we face as a nation and for the planet overall. That being said we strongly question whether this proposed transmission line will facilitate additional renewable energy resources and whether the dollars being considered for this project could not have a greater impact in a project that focuses on transmission line upgrades, energy efficiency measures, and generating the electricity closer to where it will be consumed, including through both distributed generation and some larger scale projects. Trying to site this proposed transmission project in some of Arizona’s most sensitive and unfragmented areas is totally unacceptable.

The DEIS was made available for public review and comment on May 25, 2012. The BLM held ten public meetings and scheduled a 90-day public comment period that ended on August 22, 2012. In total, the public scoping for the SunZia project has included a total of 22 public meetings and 255 days of public comment.

A 45-day public comment period is generally the time provided for a DEIS. The BLM’s planning regulations and guidance require a minimum 90-day public comment period for land use plan amendments. The SunZia project may involve several BLM land use plan amendments thus the 90-day comment period was provided. The SunZia DEIS comment period meets BLM requirements and affords interested parties opportunity and time to review the document and submit substantive comments. In addition, the BLM regulations implementing the National Environmental Policy Act regulations require that all substantive comments received before reaching a decision must be considered to the extent feasible. This means that substantive comments received after the 90-day comment period have also been considered before the Final EIS was issued.

The statement regarding cumulative impacts to listed species takes into account the listed species present in the cumulative effects analysis area that may occur in areas suitable for wind and solar development, as well as the siting of identified reasonably foreseeable future renewable energy facilities. The DEIS notes that cumulative impacts may occur to the Aplomado Falcon, a nonessential experimental population. The FEIS (Section 3.6.6.1) clarifies that this is a nonessential experimental population of a listed species.

The FEIS (Section 4.17) clarifies that there is a contrast between the types of effects wind farms may have versus transmission lines. Transmission lines are primarily likely to affect bats if roosts are directly affected (caves, mines, or riparian woodlands in the Project area), while wind farms may cause direct mortality of bats in flight. The species at risk from wind farms would not be affected by construction of the Project, thus no cumulative effects would occur.

The cumulative effects analysis describes potential incremental impacts to resources resulting from the proposed action and past, present and reasonably foreseeable future actions. Section 4.17.4 of the DEIS describes potential cumulative impacts to resources resulting from the Project and different types of potential RFFs listed in Table 4-30 of the DEIS. Impacts of the Project and the RFFs combine to represent the cumulative impacts of all projects.

Additionally, the Energy Development Scenario provides another level of analysis by forecasting energy development that could result from increasing transmission capacity in areas that exhibit natural qualities for siting renewable energy developments. The Energy Development Scenario estimates likely types of energy development projects, general geographic locations, and amount of land area required for these developments as incremental impacts within the geographic areas of effect. The total cumulative impact includes the impacts of these projects and incremental areas of impact by the SunZia project.
The BLM has considered other options including alternate transmission routes and transmission technologies such as system upgrades, but they were eliminated because they would not be practicable and feasible as described in Section 2.3.3 of the DEIS. Criteria for the evaluation of alternatives considered but eliminated is described in this section as follows:

“According to the BLM NEPA handbook, an alternative may be eliminated from detailed analysis if (1) it is ineffective (it would not respond to the purpose and need); (2) it is technically or economically not feasible; (3) it is inconsistent with management objectives for the area (i.e., does not conform with land use plans); (4) its implementation is remote or speculative; (5) it would be substantially similar in design (function and purpose) to another alternative already analyzed; and (6) it would have substantially similar effects to another alternative already analyzed.”
August 22, 2012

Adrian Garcia, Project Manager
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P.O. Box 4430
Santa Fe, NM 87502-0443
Via electronic mail to adrian.garcia@blm.gov
NJSunZiaProject@blm.gov

Re: Comments on Proposed SunZia Southwest Transmission Line Project DEIS

Dear Mr. Garcia:

The Tucson Audubon Society (TAS) appreciates the opportunity to provide comments on the Draft Environmental Impact Statement (DEIS) for the proposed SunZia Southwest Transmission Line Project (SunZia). SunZia proposes to construct two parallel high capacity 500-kilovolt (KV) transmission lines that would span between 460 and 542 miles across federal, state, and private lands between central New Mexico and central Arizona. The Bureau of Land Management (BLM) is the lead federal agency for this project, while the project applicant, SunZia Transmission, LLC is a private company.

TAS is a 501(c)(3) non-profit NGO established in 1946 and representing approximately 5000 households scattered throughout the southeastern Arizona region, primarily in Pima County. TAS mission is to protect and promote the stewardship of the biodiversity of southeast Arizona by connecting people to their natural world through the study and enjoyment of birds. TAS has partnerships with private and governmental entities and works to conserve and protect habitats where wildlife is at risk to the many factors that threaten its existence— including climate change and the degradation and fragmentation of watersheds and habitat caused by development. http://www.tucsonaudubon.org/

TAS submits comments on behalf of its membership based on the potential adverse impacts to birds and other wildlife of the proposed construction and operation of the SunZia Transmission Line. Our comments relate to public process and to the local, regional and hemispheric adverse impacts (direct, indirect, and cumulative) on special status species and unique and rare habitats, migratory species, resilience in the face of climate change, the sustainable health and economy of our region, and our quality of life. Specifically, we believe it is critical to set a direction for the region that focuses on the best available scientific and commercial information.
The DEIS was made available for public review and comment on May 25, 2012. The BLM held ten public meetings and scheduled a 90-day public comment period that ended on August 22, 2012. In total, the public scoping for the SunZia project has included a total of 22 public meetings and 255 days of public comment.

A 45-day public comment period is generally the time provided for a DEIS. The BLM’s planning regulations and guidance require a minimum 90-day public comment period for land use plan amendments. The SunZia project may involve several BLM land use plan amendments thus the 90-day comment period was provided. The SunZia DEIS comment period meets BLM requirements and affords interested parties opportunity and time to review the document and submit substantive comments. In addition, the BLM regulations implementing the National Environmental Policy Act regulations require that all substantive comments received before reaching a decision must be considered to the extent feasible. This means that substantive comments received after the 90-day comment period have also been considered before the Final EIS was issued.
The economic role of public lands is acknowledged in the DEIS. As stated in Section 4.13.4.5 “impacts (direct and indirect) to recreation and tourism have been identified by the public during the scoping process. The description of land use impacts to recreation areas or trails resulting from Project construction or operation have been described in Section 4.10.5 and visual impacts to recreation users have been described in Section 4.9.3. The Project would not substantially change the use of recreation areas or trails, and the number or type of recreation users would not be likely to change, therefore economic effects to recreation are not anticipated. Changes in the tourist economy would therefore not be expected.”

Cumulative impacts to economic resources including recreational activities associated with ecotourism have been identified in Section 4.17.4.13 of the DEIS. As stated cumulative impacts on recreational resources could occur as a result of utility scale solar and wind developments, which could in turn affect ecotourism. It is likely that ecotourism will continue to be a positive trend although the level of impact cannot be quantified without speculative assumptions regarding future levels of recreation and tourism within the analysis area.

Please see response to Comment No. 2.

The Section 106 process (of the NHPA) was initiated and is ongoing; additional cultural resource surveys will be completed prior to construction. Regarding the alternative route from the Safford area west (Subroute 4A), significant impacts to Mt. Turnbull/Santa Teresa Mountains or the Pinaleño Mountains/Mt. Graham have not been identified.
The alternative routes presented during the scoping process included alternative routes located east and west of the San Pedro River. The BLM Preferred Route (Subroute 4C2c) is a modification of the route west of the river, which was modified in response to information and concerns provided during the scoping process. Other alternatives within the San Pedro River Valley were considered and eliminated or modified to include portions of routes considered in detail as stated in Section 2.3.3 of the DEIS.

The Project would serve the need to deliver electricity from renewable energy generation sources, although the use of transmission lines cannot be limited to exclude other sources. As stated in the DEIS (p. 1-7), “Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services...” and reiterated on p 4-274 of the DEIS, “As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service.” Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, “it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation” (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity.

The Bowie Power Station site is located approximately 15 miles from the TEP 345 kV transmission line corridor, where it was permitted to interconnect with the existing TEP transmission system at the Willow-345 kV substation. Several alternative routes connecting New Mexico and central Arizona were evaluated in the siting studies for the proposed SunZia 500 kV transmission lines conducted during the scoping process. Some of the alternatives (including the Preferred Alternative) were co-located along the existing TEP 345 kV transmission line corridor, which is considered a siting opportunity for new transmission lines.

The range of alternatives considered included potential transmission line routes that could provide electrical interconnections with renewable energy resources located primarily within the Qualified Resource Areas (QRAs) for wind energy, in south-central New Mexico, and the QRAs for solar energy located in southwestern New Mexico (e.g., BLM designated Afton Solar Energy Zone) and southeastern Arizona. Alternatives due west from the northern portion of the study corridors in New Mexico would not be practical or feasible to achieve this objective.

Recent projections from the Western Electricity Coordinating Council (WECC) in a table titled, “2022 Common Case Loads and RPS Requirements in WECC Region, Modified as needed for DG Assumptions” (http://www.wecc.biz/committees/BOD/TEPPC/20120106/Lists/Minutes/1/2022%20Renewables_FINAL_20120206.xlsx last visited October 2, 2012) show that approximately 55,765 GWh of new renewable generation will need to be added to the WECC Region (i.e., California, Nevada, Arizona, and New Mexico) between 2011 and 2022 in order to meet RPS. By comparison, DEIS Table 1-1 indicates projected need for 58,654 GWh of renewable...
Comment noted. Recent information provided regarding conservation efforts in the San Pedro River Valley have been added to Sections 3.6.7, 3.10.3, and 3.10.4 of the FEIS.

SunZia is a proposed southwestern New Mexico-southeastern Arizona transmission project that would connect the Afton generating station northwest of El Paso with the Saguaro generating station north of Tucson, ultimately connecting to Pinal Central and the Palo Verde hub through the Tucson Electric Power Company’s new 500-kv lines. It essentially parallels the SunZia proposal over this distance and would actually access solar energy resources predominantly in southwestern New Mexico without the dire ecological consequences to unique resources proposed by SunZia, which are, in contrast, unable to be mitigated. Also in contradiction to SunZia, Southline’s public process has been engaging, responsive, open and transparent. Unlike SunZia, Southline appears economically feasible, would provide numerous opportunities to improve southern Arizona’s grid capacity and reliability and would, for the most part, be built in consultation with local interest groups and the general public.

www.tucsonaudubon.org
12 Southline Transmission Project is not considered an alternative to the SunZia Project. The Southline Project is described as a reasonably foreseeable future (RFF) project in the cumulative effects analysis for SunZia Project, although the environmental impacts for the Southline Project have not yet been evaluated.

13 As stated in Section 3.10.4 of the DEIS, consultation and coordination with state and local governments was conducted including the review of the all affected general and comprehensive plans within the study area. Please also see response to Comment No. 11 regarding conservation plans.

14 The BLM preferred alternative in the Sulphur Springs Valley is immediately adjacent to a pair of existing transmission lines. To the extent possible, the BLM preferred alternative route through the San Pedro River Valley avoids high-quality riparian habitat and permanent streams. An Avian Protection Plan will be developed, and will provide details on the selection and placement of additional mitigation measures such as bird diverters to minimize the collision risk.
See following pages
The Pima County Comprehensive Plan Update Regional Plan Policies, including the CLS were reviewed. The SunZia Project does not conflict with the CLS as stated in the comment because, as stated on page 36 of the Regional Plan Policies, “These policies apply to new rezoning and specific plan requests, time extension requests for rezonings, requests for modifications or waivers of rezoning or specific plan conditions, including substantial changes, requests for Comprehensive Plan amendments, Type II and Type III conditional use permit requests, and requests for waivers of the subdivision plat requirement of a zoning plan.” The SunZia Project will require none of the stated actions, and therefore is not in conflict with the stated goals or requirements of the CLS.

As noted in the comment, the BLM preferred alternative would create lower impacts for some resources relative to other alternatives in the San Pedro River Valley (Table H-6, H-7). The DEIS notes that components of Pima County’s Conservation Lands System would be crossed. This discussion has been expanded in the FEIS (Section 3.6.7, 4.6.4.6).
The DEIS discusses potential impacts to special-status species throughout the Project area. No impacts to Mexican Spotted Owls are anticipated. No suitable nesting habitat for Southwestern Willow Flycatchers would be affected, although the BLM preferred alternative (Section 4.6.5.4) crosses designated critical habitat. Potential Cactus Ferruginous Pygmy-owl habitat is noted to be widespread throughout much of the Arizona portion of the Project area (Section 3.6.6.1).
The proposed SunZia Project poses significant threats to the CLS, but the DEIS does not quantify or even quality impacts to the CLS, a crucial component of the larger SDCP. Without further evaluation of the CLS and other components of the SDCP such as Pima County’s proposed MSHCP and ITP, the DEIS does not satisfy the federal mandate that a DEIS shall include discussions of possible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.”  40 C.F.R. § 1502.16(c).  Furthermore, the DEIS does not align with 40 C.F.R. § 1506.2(d) which states that, “To better integrate environmental impact statements into State or local planning processes, statements shall discuss any inconsistency of a proposed action with any approved State or local plan and laws, whether or not federally sanctioned. Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law.”

Pima County has sought to find a balance between development and conservation where priority conservation and preservation lands are identified and conserved using robust scientific methodology. There is certainly precedence for this approach. Not all public lands have a “multiple use ethic.” Some are established in order to protect specific values, including natural hydro-geologic processes and wildlife, Wilderness areas, wildlife refuges, national parks, and national monuments are just a few of these areas, which have a more protective higher mandate than “multiple use.”

The Arizona Game & Fish Department’s (AZGFD) Strategic Plan for the Years 2007–2012, Wildlife 2012, states that the goals of its wildlife program are “to conserve and preserve wildlife populations and habitat; to provide compatible public uses, while avoiding adverse impacts to populations and habitat; to promote public health and safety; and to increase public awareness and understanding of wildlife resources.”

The National Park Service mission is to “preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations.” Portions of Saguaro National Park East and the Rincon Wilderness Area will be able to view the proposed power line.

The mission of the BL&M’s National Landscape Conservation System, which includes the Upper San Pedro River Riparian National Conservation Area (the Nation’s first) and the Las Cienegas National Conservation Area (NCA), a pending important Bird Area (IBA), is “to conserve, protect, and restore these nationally significant landscapes that have outstanding cultural, ecological, and scientific values for the benefit of current and future generations.” Again, the protection of these attributes is prioritized over other activities. One SunZia route could impact the La Cienegas NCA.

18 See comment response #15 above.

19 Descriptions of affected state and local land use plans are provided in Section 3.10.4 of the DEIS. Section 4.10.5 of the DEIS summarizes impacts to existing land use, and state and local land use plans. Where inconsistencies with land use plans have been identified, mitigation measures (e.g., Selective Mitigation measure SE 8, which would minimize amount of sensitive features disturbed and/or reduce visual contrast) would be implemented to avoid or minimize specifically impacts to planned land use and associated visual resource impacts.
The entire region enjoys the various diverse habitats within the Coronado National Forest’s multiple units, much of which is designated multiple use. Yet even the very definition of ‘multiple use’ in the Multiple-Use Sustained Yield Act of 1960 recognizes ‘that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.’

The National Wildlife Refuge System Administration Act of 1966 mandates the standard of compatibility, i.e., uses of refuge lands must be determined to be compatible with the purposes for which individual refuges were established. This standard was later clarified in the National Wildlife Refuge System Improvement Act of 1997. Conservation is the priority, then various compatible uses. The DEIS fails to adequately analyze a proposal for a new National Wildlife Refuge is currently in the scoping phase for the lower San Pedro River Valley.

The DEIS implication that the current SunZia proposal could be permitted in compliance with FLPMA because the lower San Pedro River Valley is already impacted and by inference fragmented by human uses is flawed. The analysis is inadequate under NEPA and FLPMA.

We would call your attention to the significant investment to conserve the cultural, historic, and biologic resources of the lower San Pedro River Valley by private parties, non-profit organizations, and state and federal agencies. Along the lower San Pedro River, the BLM, the BOR, the AZGFD, Pima County, TNC, SRP, and private landowners have protected close to 40,000 acres and invested over $25 million dollars in acquisitions of conservation/preservation lands and water rights (Baker, 2010).

The Nature Conservancy’s (TNC) April 2012 map, shown on the next page (p.12), illustrates the proximity and potential for fragmentation of the proposed SunZia alternatives to conserved areas along the lower San Pedro River Valley and Aravaipa Creek. It documents the extraordinary efforts and investment, by diverse stakeholders, in attempting to preserve and conserve over 500 archaeological sites of cultural and historic importance, as well as the unique and irreplaceable biological resources of the watershed. However, when considering the river and its tributaries in its entirety, TNC estimated in the spring of 2012 that more than 793,550 acres of public and private restoration and conservation sites are encumbered by easements.
Some of the lower San Pedro River Valley easements are listed in more detail below:

1. San Pedro River Preserve: TNC is restoring this 6,900-acre property—formerly a cotton and pecan farm—and re-seeding it with native grass. Water is being restored to the river and the plant community is rebounding. Partners: Bureau of Reclamation (BOR).

2. Aravaipa Canyon, Flanked at either end by a TNC preserve, this 38,800-acre wilderness is noted for its majestic cliffs, bighorn sheep and a creek which supports a thriving population of native fish. Partners: BLMI, AZDPS.

3. H & L Land & Gable: TNC is restoring the rangeland and native grasses on this 175-acre property, thereby improving the floodplain and returning water to the river. Partner: Arizona Department of Water Resources.

4. TB Ranch: TNC is managing this 3,100-acre property to eliminate invasive species and restore the wetlands and the largest riparian bosque remaining in the Southwest. Partners: Resolution Copper Company, US Fish & Wildlife Service (USFWS), BLM.

5. Mercer Ranch Rancher: Mike Mercer has planted native grass along the river’s floodplain and is using significantly less water than on previous crops. Partners: USFWS, Mercer family.

6. Buedeman Canyon: From lands high up in the Santa Catalina Mountains, water flows down this canyon—a critical wildlife corridor—to feed the San Pedro. This parcel contains designated “Outstanding Arizona Waters” by ADEQ. TNC donated the parcel to Pima County in January of 2012. Partners: TNC, Pima County, Forest Service.

7. Bingham Clenga: This restored spring-fed marsh sits on 25,400 acres with cat tails, native grass, mesquite, cottonwood and willow. Owned by Pima County. Partners: TNC & Pima County.

8. A-T Ranch: TNC is managing this 3,100-acre property to preserve the wildlife corridor extending from the forests of the Santa Catalina Mountains to the river. Purchased by Pima County with $2 million of voter approved Open Space Bonds for conservation purposes. The preferred alternative would bieic the ranch with a demised right-of-way (ROW). Partners: TNC & Pima County.

9. Hot Springs Canyon: Five landowners and TNC signed conservation agreements covering 1,700 acres of this critical wildlife corridor that connects the Muleshoe Ranch to the San Pedro River. Partners: Cascabel Heritage Association, Saguaran-Juniper Association, BLM, private landowners.

10. Muleshoe Ranch Cooperative Management Area: TNC manages this 57,500-acre property in the Gallinas Mountains to restore native grasslands and streamside areas, creating excellent habitat for rare native fish. Partners: BLM, Forest Service, AZDPS.

11. 3 Links Farm: TNC purchased and placed conservation easements on 2,300 acres, restricting future development and restoring water to the river. Now this once-dry, six-mile stretch of river is permanently flowing, and the beavers have returned. Partners: BOR, SRP, private landowners.
See following page(s)
Local, regional, and state land use plans were reviewed for future and planned land uses, and mapped accordingly, which was then incorporated into the impact assessment. A discussion of conservation easements throughout the study corridor has been added to the FEIS (Section 3.10.3.3).

Section 4.13.4.5 of the DEIS potential negative economic impacts have been identified as follows. Additional and updated information regarding these economic issues have been provided in the FEIS.

“Impacts to grazing lands that could occur as a result of loss of vegetation from Project construction have been estimated and included in the assessment of land use impacts for BLM lands (see Section 2.4 and Section 4.10.5). Grazing and ranching operations could be temporarily affected by Project construction, where access is restricted by construction activities. Mitigation measures would be applied to minimize the impacts during construction in coordination with land owners and managers, such as structure installation and repair of fences and gates. Overall, permanent ground disturbance would be approximately 6 acres per mile of right-of-way. Typically, grazing could continue within the Project right-of-way during operation of the transmission lines, and more than 80% of the vegetation within the right-of-way would not likely be disturbed by construction of these facilities, and would remain open for grazing… Studies have been reviewed regarding the potential effects to property values in proximity to HVTLs. These studies examine a range of contributing factors to real-estate value impacts from HVTLs, such as the effects of visibility and their extent of encumbrance (e.g., restrictions, easements, and encroachments), while controlling for general market factors, property types, and site-specific conditions. The studies have found that often no effect to property values occur based on the presence of HVTLs; in studies where effects were found, the effects generally resulted in a 10 percent or smaller reduction in property value (Chalmers et al. 2009; Delaney et al. 1992; Jackson 2010; Jackson et al. 2010).”

Temporary economic impacts resulting from the proposed Project have not been identified. Also please see response to Comment No.25 regarding tourist economy.
The economic role of public lands is acknowledged in the DEIS. As stated in Section 4.13.4.5 “impacts (direct and indirect) to recreation and tourism have been identified by the public during the scoping process. The description of land use impacts to recreation areas or trails resulting from Project construction or operation have been described in Section 4.10.5 and visual impacts to recreation users have been described in Section 4.9.3. The Project would not substantially change the use of recreation areas or trails, and the number or type of recreation users would not be likely to change, therefore economic effects to recreation are not anticipated. Changes in the tourist economy would therefore not be expected.”

It is acknowledged that there are many ecotourism attractions throughout the study area, although it is noted that the BLM Preferred Alternative would not cross Aravaipa Creek, and would not affect the Wilcox Playa area or any of the crane watching sites identified on the Wings Over Wilcox festival map.

Cumulative impacts to economic resources including recreational activities associated with ecotourism have been identified in Section 4.17.4.13 of the DEIS. As stated cumulative impacts on recreational resources could occur as a result of utility scale solar and wind developments, which could in turn affect ecotourism. It is likely that ecotourism will continue to be a positive trend although the level of impact cannot be quantified without speculative assumptions regarding future levels of recreation and tourism within the analysis area.

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recreation sales (gear and trips combined) of $32.5 billion per year are greater than annual returns from pharmaceutical and medicine manufacturing ($16.2 billion), legal services ($25.3 billion), and power generation and supply ($26.3 billion).

The U.S. Fish & Wildlife Service contributed about $4.2 billion in economic activity and supported over 32,000 jobs through their management of 55 National Wildlife Refuges and thousands of other natural areas in the United States. A detailed study of visitation to National Wildlife Refuges (Caudill and Henderson, 2006) looked further into the impacts on the local communities around these reserves in 2004. In 2004, there were 36.7 million visitors who generated $1.64 billion of economic activity in regional economies. Caudill and Henderson went further into their analysis and showed that about two-thirds of the total expenditures were generated by non-consumptive activities and not fishing (21%) or hunting (9%), which illustrates the value these natural areas have for passive enjoyment of nature. The authors also conducted willingness-to-pay studies to determine the value of these refuges beyond what it actually cost them to visit. They found that visitors showed a consumer surplus of more than $1.3 billion. This is $11.6 million of this amount attributed to non-consumptive visitation.

The most recent economic analysis using USFWS data calculated by Arizona State University estimates Arizona’s worth $1.2 billion dollars to Arizona each year — over $300 million in Pima County, over $195 million in Pinal County, over $25 million in Cochise County, and over $13 million in Graham County each year.

http://tucsonaudubon.org/maestros/roles/conservation/AZ_County_Impacts_-_Southwick.pdf

This analysis revealed that Arizona created 15,058 full-time jobs and accounted for salaries and wages of $425,391,051, or nearly $343 million in total household income. Arizona’s angler’s spending over $177 million in state sales taxes ($46,756,637 and state income taxes of $10,821,628) and federal income taxes of $70,544,307. Homeowners near parks and protected areas are repeatedly seen to have property values more than 20% higher than similar properties elsewhere.

Ecosystem Services, Economics and Climate Change

The term “Ecosystem values” refers to clean air, clean and abundant water, fish and wildlife habitat and other values that are generally considered public goods. “Ecosystem services” include all the functions and natural processes performed by nature that would otherwise have to be paid for by people through the construction of facilities. These services include climate regulation, water treatment, water supply, carbon sequestration, nutrient cycling, habitat provision, and many others that all help moderate and regulate climate, water, and various resources needed for human comfort, security and quality of life. Wetlands, forests, grasslands, river systems, and lakes all provide environmental services.

For example, the total value of ecosystem services provided by the acreage of natural habitats in National Wildlife Refuges in the United States totaled $32.3 billion/year, or $290 thousand/acre/year (Ingram and Foster, 2008). In fact, the total amount of ecosystem services provided by these categories of natural land amount to about $1.5 trillion, which is more than 10% of the GDP in 2009 when land in the contiguous United States is tallied.

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Consider birds, which contribute irreplaceable ecosystem services: according to the American Bird Conservancy’s 2007 report.

“Birds play an important role in maintaining the ecosystems on which humans depend to maintain our quality of life and civilization. For example, birds eat billions of insects each year that left unchecked could decimate our crops. Birds also play an important role as pollinators, providing a fundamental service to agricultural production that simply cannot be replaced by other means. According to the Smithsonian Migratory Bird Center, birds eat up to 90% of budworms and up to 40% of all non-outbreak insect species in eastern forests. The value of this insect control has been estimated to be as much as $5,000 per year per square mile of forest.”

http://www.abcbirds.org/habitsreport.pdf

“Birds are also support “canaries in the coal mine”, or indicators of environmental health and change. Rapid declines in bird numbers have alerted us to the harm being caused to the environment by toxic chemicals. And birds, by virtue of their insect control services, can help prevent the spread of insect borne diseases such as malaria and dengue fever, both formerly prevalent in the wetlands of the and southwest. The knowledge we gain from birds directly affects our quality of life and our understanding of how economic development can be made more environmentally sustainable.”

Maintaining sustainable rural and urban landscapes is important for the public health, safety, and quality of life for all those who live in Arizona and New Mexico. The results from the 2012 Colorado College State of the Rockies Conservation in the West poll find that Arizona and New Mexico voters across the political spectrum — from Tea Party supporters to those who identify with the Occupy Wall Street movement and voters in-between — support upholding and strengthening protections for clean air, clean water, natural areas and wildlife. Voters also view Arizona’s and New Mexico’s parks and public lands as essential to their state’s economy and quality of life.

http://www2.coloradocollege.edu/stateoftherockies/conervationinthewestsurvey_media_coverage.html

Sustainable forestry, agriculture and ranching practices can help to maintain and restore the vitality of our communities while also helping to preserve our culture, natural landscapes and ecosystems. It only makes common sense that it should be our general policy to support the maintenance, enhancement and restoration of ecosystem values and services throughout the state, focusing on the protection of land, water, air, soil and native flora and fauna upon which our human health and safety depend.

We encourage landowners within the potentially impacted area(s) to explore gaining access to additional sources of revenue such as emerging ecosystem services markets that help landowners diversify their incomes, improve the ecological functions of their lands and pass along their lands and the lands’ associated benefits to future generations. The term “Ecosystem services market” describes a system in which provides of ecosystem services can access financing to protect, restore and maintain ecological values.

Employment and economic opportunities are important in order to maintain our quality of life while providing assurances that development will occur in suitable locations so that ecological
values will be maintained and improve. We must recognize the need for biological connectivity and the overall ecological viability of conservation and restoration efforts at a landscape scale, such as has already occurred along portions of the lower San Pedro River Valley and Aravaipa Creek and environs. The conservation and restoration of these rare ecosystem services will help avoid carbon emissions, help address impacts associated with climate change and help natural resources adapt to these impacts.

It is widely accepted that the Sonoran ecosystem is currently in the throes of a profound drought and that these types of drought have occurred historically in the region. On June 23, 1993, the Arizona Division of Emergency Management declared a statewide drought emergency (PCAS93002) which remains in effect as a "current open disaster" at this time. However, new findings appear to indicate that weather changes associated with global climate change may exacerbate the negative impacts of previous climate patterns.

University of Arizona climate models document current, and predict future, above average warming trends in the Sonoran desert ecosystem which may exacerbate the extremes of previous precipitation patterns. Jonathon Overpeck, director of the U of A’s Institute for the Study of Planet Earth, was a lead author on the April 2007, Nobel Prize-winning Intergovernmental Panel on Climate Change report linking atmospheric greenhouse gas increases to human activity. "The climate in the Southwest is changing faster than anywhere else in the U.S.," he said. "The implications of climate change have already started in Arizona. We’ll have to deal with warmer temperatures, less precipitation and more drought..." These temperature changes that are coming, are huge, will demand a lot of water and will make the drought of the past look pale because they will be so much hotter," he testified before the House Science and Technology Committee at a hearing on water supply challenges for the 21st century (AZ Daily Star 6/15/2008). Published May 2008, the Synthesis and Assessment Product 4.3 (SAP 4.3): The Effects of Climate Change on Agriculture, Land Resources, Water Resources, and Biodiversity in the United States is the most extensive examination of the impacts of climate change on important U.S. ecosystems undertaken to date. It concludes that, in arid region ecosystems that have not evolved with a fire cycle, the probability of loss of iconic, charismatic mega flora such as saguaro cacti and Joshua trees will greatly increase and that:

- Climate change is already affecting U.S. water resources, agriculture, land resources, and biodiversity, and will continue to do so.
- Higher temperatures will negatively affect livestock. Warmer winters will reduce mortality but this will be more than offset by greater mortality in hotter summers. Hotter temperatures will also result in reduced productivity of livestock and dairy animals.
- Forests in the interior West, the Southwest, and Alaska are already being affected by climate change with increases in the size and frequency of forest fires. Insect outbreaks and tree mortality. These changes are expected to continue.
- Much of the United States has experienced higher precipitation and streamflow, with decreased drought severity and duration. Over the 20th century. The West and Southwest, however, are notable exceptions, and increased drought conditions have occurred in these regions.

Weeds grow more rapidly under elevated atmospheric CO2. Under projections reported in the assessment, weeds migrate northward and are less sensitive to herbicide applications.

There is a trend toward reduced mountain snowpack and earlier spring snowmelt runoff in the Western United States.

Invasion by exotic grass species into andlands will result from climate change, causing an increase in fire frequency. Rivers and riparian systems in andlands will be negatively impacted.

A continuation of the trend toward increased water use efficiency could help mitigate the impacts of climate change on water resources.

The growing season has increased by 10 to 14 days over the last 19 years across the temperate latitudes. Species distributions have also shifted.

Seager et al. (2007) examined future subtropical drying by analyzing the time history of precipitation in 19 climate models. Of the total of 49 individual projections conducted with the 19 models, even as early as the 2021-2040 period, only 3 projections show a shift to a wetter climate. These simulations provided initial conditions for 21st-century climate projections. In the multimodel ensemble mean, there is a transition to a sustained drier climate that begins in the late 20th and early 21st centuries in the southwestern United States and parts of northern Mexico. In general, large regions of the relatively dry subtropics dry further, whereas wetter, higher-latitude regions become wetter still. The American Southwest experiences a severe drying. This pattern of subtropical drying and moistening at higher latitudes is a robust feature of current projections with different models of future climate.

Seager explains the drying of subtropical land areas that, according to the models, is imminent or already underway is like anyone any climate state we have seen in the instrumental record. It is also distinct from the middecadal megadroughts that affected the American Southwest during Medieval Times. The most severe future droughts will still occur during persistent La Niña events, but they will be worse than any since the medieval period, because the La Niña conditions will be perturbing a base state that is drier than any state experienced recently (Seager et al. 2007, Science, 25 May 2007, Vol. 316, pgs. 1181-1184).

Powell, in his 2011 Pima County Inventory of Conserved Open Space Perennial Water, found that the county’s San Pedro open space lands contained significant springs and tinajas that may contribute to many species adapting to climate change: Youtay lotion, where Lowland leporid frogs were found; two tinajas each in Youtay Canyon and Espiritu Canyon: Grapevine Spring, and tinajas pools in Budgee and Bullock Canyons, where Lowland leporid frogs and spandif dace were found. All of these sources contribute to the surface water availability in the San Pedro watershed.
Additional information regarding climate change has been added to Section 4.17.4.2 of the FEIS as follows.

“With respect to the consequences for the climate of the Project area, federal and state land managers, scientists, stakeholders, and partners at an August 2010 workshop noted that climate change models for the southwestern deserts predict general warming and drying with increasing precipitation variability year to year, leading to increasing conflicts between competing water uses. Workshop attendees also agreed that increasing environmental stress is expected as a consequence of shifting ecosystem boundaries and species distributions, expansion of non-native species, and other potential effects leading to increasingly unstable biologic communities (Hughson et al. 2011).

Record-setting wildfires are likely due to rising temperatures and related reductions in spring snowpack and soil moisture. Increased frequency and altered timing of flooding will increase risks to people, ecosystems, and infrastructure. Ozone pollution, which in many areas of the southwest increases as summer temperatures rise and clouds decrease, may also increase as a result of climate change. (US Global Change Research Program, 2012)

More intense, longer-lasting heat waves will result in increasing demands for air-conditioning, depleting electrical generation and distribution capacity, resulting in increased risks of brownouts and blackouts. In addition, electricity supply will be affected by changes in the timing of river flows and where hydroelectric systems have limited storage capacity and reservoirs, since increased year-to-year variability of precipitation is expected. (US Global Change Research Program, 2012)”
The engineering requirements of 500kV systems eliminate the risk of electrocution for birds, through the required spacing between energized components and paths to ground. Raptor use of the Project, as hunting perches or nesting substrate, may occur. In many areas, existing natural perches and nest sites may be common. In areas lacking existing perches and nest sites, raptor deterrents may be considered if information indicates that raptor predation on species of concern would be facilitated. Raptor deterrents and other similar measures would be identified in the Avian Protection Plan. Vegetation management and reclamation would be designed to mitigate the negative effects of erosion and decreased cover in the right-of-way.
As discussed in the DEIS (Section 4.6.5), locations where tall or dense vegetation is present and would require management over the life of the Project are a very small portion of any alternative, typically at river crossings and ephemeral streams. Where possible, design and structure siting would minimize the need for vegetation management.
The AZGFD map of fragmentation in Arizona, available from http://www.habitat.org/habitmap, is shown below. The darker the blue, the less habitat fragmentation. The lower San Pedro watershed/Aravaipa-Celilo-Sena-Teresa region remains the second least fragmented landscape in Arizona, surpassed only by the Grand Canyon area.
TNC’s cumulative effects analysis (appended) found that this wild land complex is second only to the Grand Canyon region in the Southwest in terms of its size and relative intactness. The TNC cumulative impacts analysis states:

“The take home from these analyses is that the SunZia transmission route proposed to cross the Galluro-Araraipe-Santa Teresa area would split in half the second largest unfragmented landscape remaining in the southwestern U.S. and introduce habitat disturbance into an area where, for example, there are no paved roads and no roads that cross over the axis of the Galauras from Araraipe Valley to the San Pedro River Valley, or from Araraipe Valley over the Santa Teresas into the Gila River Valley. With the Southwest’s largest remaining intact area, the Grand Canyon, already in protected status, it raises the question of whether mitigation measures are even possible for disturbances to the region’s second largest intact landscape” (emphasis added).

In their scoping comments, TNC stated:

“Over the last three decades The Nature Conservancy and many other agencies and organizations have been working steadily to protect the Lower San Pedro Basin. This area has become a focal point for conservation and mitigation investments because of the opportunity to protect and restore a relatively undisturbed river system, cross-valley wildlife movement, and ecological processes such as fire that maintain ecosystem health. Partners in this effort include the Bureau of Land Management, Bureau of Reclamation, Salt River Project, Arizona Game and Fish Department, Pima County and a number of private landowners. The Resolution Copper Company has offered to protect

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The conclusion of the analysis in the DEIS is that mitigation measures could be effectively implemented to minimize the potential for habitat fragmentation in these areas. For example, SE 4, 5, 6 and 8 would reduce the disturbance caused by access road construction and avoid sensitive features.

Standard and selective mitigation measures along with proper roadway engineering BMP’s would be implemented. Proper road design measures would include landform conformance, water bars placed across the roadway, and erosion control measures. Conforming roadways as close to the natural landform as possible limits surface flow and capture down the road surface leading to increased stability of the roadway surface and general disturbance of the land surface. Water bars in the roadway limit surface flow on the roadway and disperse surface flow intermittently along the roadway rather than at limited points along the roadway. Furthermore, revegetation and reclamation plans would be implemented and would result in limited soil compaction, accelerated erosion, and impacts to in-progress rangeland improvements. Selective mitigation measures for limiting access to roads used for construction (e.g., SE 4) would be implemented in order to minimize unauthorized OHV use and associated impacts.

The DEIS notes that removal of riparian vegetation would have a negative effect on terrestrial and aquatic habitat, as reflected in the impact analysis for vegetation and discussed throughout Section 4.6 for individual special-status species. Design and structure siting would minimize the need for vegetation management. Vegetation management methods, including the selection of mechanical vs. chemical treatments, frequency, selection and application of approved herbicides (if chemical treatment is used), would be detailed in the final Vegetation Management Plan.
Improper use of herbicides to control vegetation could result in runoff to streams with negative impacts on water quality and aquatic life. Construction and maintenance of roads associated with the proposed project could result in permanent loss of all habitats in the developed area, disruption of animal movement and dispersal, and creation of a continual disturbance that affects animal communities in the adjacent fragmented portions of their habitats throughout the life of the project. These linear impacts can become a vector for exotic invasive species, fire, and illegal activities such as drug smuggling.

Fire is a very real and significant threat in the arid southwest desert uplands and grasslands, especially so with the rapid expansion of the exotic invasive species, especially African buffelgrass (Pennisetum ciliare).

"The cattle-related introduction and intentional sowing of African grasses in the Sonoran bioregion has not only affected the biotic composition of semidesert grasslands, but has profoundly changed vegetation structure, fire intensity and frequencies and migratory wildlife corridors within several subregions of the Sonoran Desert proper." (Namhan and Holdsworth 1968, p.2)

Van Devendor and Dimmit (2000) state that the introduction of buffelgrass into fire-intolerant desert communities results in a permanent conversion to a buffelgrass savanna with reduced plant cover and diversity. In some cases the conversion to buffelgrass has been so complete

that consequences are irreversible in the short term (Burquez et al. 1998, pg.21). Van Devendor and Dimmit (2000) state that buffelgrass is

"the most serious ecological threat to the Palo Verde-Saguaro-Ironwood desert shrub in the Arizona Upland (AZU) subdivision of the Sonoran Desert" and that, "in time, buffelgrass fires could convert the Arizona Upland into a savanna-like landscape as Saguaro (Carnegiea gigantea), Foothill Palo Verde (Parkinsonia micropyllos), Ironwood (Olneya tesota), Organ Pipe Cactus (Stenocereus thurberi), etc. are killed."

Buffelgrass invasion of grasslands and columnar cacti of the Sonoran desert biome result in unnatural fire regimes, as documented by a May 23, 2008 controlled burn of 160 acres of buffelgrass invaded land owned by the City of Tucson in the Atras Valley. University of Arizona researcher Chris McDonald and local firefighters expressed surprise at the "extreme" fire behavior that burned at 1700 degrees and moved at approximately the speed of the wind over a relatively flat terrain. Many desert trees, shrubs, and cacti, including saguaros, are not fire adapted and cannot withstand fires.
Other problematic invasive species include but are not limited to Blue Panic (Pennisetum antidotale), a Federal Noxious Weed, Siamudra Grass (Cynodon dactylon), Sahara Mustard (Brassica tourneforti), another African grass, Lehman’s Lovegrass (Eragrostis lehmanniana), Russian Olive (Elaeagnus angustifolia), Giant Reed (Arundo donax), and invasive shrubs such as mesquite (Prosopis spp.). Exotic species that are of greatest management concern are those that are highly invasive and that strongly modify their environment. Table 1 of Appendix H - Exotic Plant Species in Riparian Ecosystems of the US Southwest, from the 2002 Southern Willows Flycatcher Recovery Plan, has extensive information on invasive species of concern to riparian areas inhabited by the Southwestern Willow Flycatcher, including the San Pedro River and its tributaries.

As the conversion of native to non-native plant communities is primarily a human-facilitated issue, and because many current fires are human-caused, the issue of fire in an environment of increasingly fragmented landscapes which facilitates invasive non-native plant communities is a legitimate threat to public health and safety and the survival of our ecosystem in general.

**Riparian Habitat**

TAS is engaged in wildlife and conservation issues and focuses on research, education, advocacy, recreation, and conservation through habitat protection and restoration, with specific emphasis on the importance of riparian systems to resident and migratory species, especially birds, in the aid southwest.

Southwestern riparian habitats, the lush ribbons of vegetation running along our streams and rivers, contain the highest density and diversity of bird species outside tropical rain forests. Habitats along watercourses are known for their high density and diversity of animal species. Yet as early as the November 1988 issue of Wildlife Viewz, the AZGFD stated that 90 percent of the Arizona’s riparian habitat had been lost.

The Arizona Department of Environmental Quality (ADEQ), pursuant to A.C.C. R18-11-112, has designated “unique waters” or “Outstanding Arizona Waters” as having exceptional recreational or ecological significance and/or providing habitat for threatened or endangered species. Designations include Aravaipa Creek from its confluence with Stove Gulch to the downstream boundary of Aravaipa Canyon Wilderness Area (Aravaipa Canyon and lower San Pedro basins); and Boedecker Canyon Creek from its headwaters to approximately 9.8 miles downstream (lower San Pedro basin).

The American Bird Conservancy’s report on the “Top Twenty Most Threatened Bird Habitats in the United States” lists Southwestern Riparian Habitat as the fifth most threatened in the nation. This increasingly rare habitat type, epitomized by the Lower San Pedro River watershed, is described as occupying only a tiny fraction of the land area while supporting the largest concentrations of animal and plant life, and the majority of species diversity in the desert southwest, a designated “hotspot” of biological diversity. The report states “The scarcity of water in the Southwest makes rivers and streams particularly important for sustaining the region’s communities. This dependence places a severe strain on natural ecosystems. Achieving riparian habitat conservation depends on public agency buy-in to broad-scale land management plans and the successful provision of incentives to private property owners to restore their degraded land. Riparian areas take time to recover... Currently, though, efforts to restore riparian areas are being considerably outpaced by the rate at which they are being lost, making these vibrant ecosystems an ever-rarer feature of the Southwest.”

http://www.abcbirds.org/newsandreports/habitatreport.pdf
The Arizona Partners in Flight Bird Conservation Plan states, “Riparian woodlands comprise a very limited geographical area that is entirely disproportionate to their landscape importance, recreational value, and immense biological interest (Lowe and Brown 1973). It has been estimated that only 1% of the western United States historically constituted this habitat type, and that 95% of the historic total has been altered or destroyed in the past 100 years (Kreuger 1995).” Riparian woodlands are among the most severely threatened habitats within Arizona. Maintenance of existing patches of this habitat, and restoration of mature riparian riparian woodlands should be among the top conservation priorities in the state.


Riparian woodlands in the desert southwest are an extremely important resource because they constitute less than one percent of the desert landscape, yet typically support more than fifty percent of the breeding birds. Indeed, the positive effects of even a degraded riparian area in central Arizona extend up to one km into the adjacent uplands (Zaro and Jalkie 1985). Riparian woodlands also provide shelter and critical food resources for dozens of species of migratory birds that stop in these woodlands during their spring and fall migrations. From 2006 – 2008, Kirkpatrick et al. found that riparian areas contained 66 percent more species and 75 percent more individual birds compared to adjacent uplands, with this pattern holding true for both the breeding and non-breeding bird communities. They believe:

First, should long-term drought conditions persist and/or ground water levels fall to the point where surface water flows are reduced or eliminated, populations of breeding (e.g., Black Phoebe, Common Yellowthroat, Yellow Warbler, Song Sparrow, and Lesser Goldfinch) and migrant (e.g., Yellow-rumped Warbler and Wilson’s Warbler) species are likely to decline. Second, should long-term drought conditions persist and/or ground water levels fall to the point that riparian vegetation is negatively affected, populations of breeding species such as Bell’s Vireos, Yellow Warblers, and others are likely to decline. Third, species that inhabit low-elevation riparian woodland are considered Arizona PIF priority species: Southern Willow Flycatcher (Empidonax traillii), Western Yellow-billed Cuckoo (Coccyzus americanus occidentalis), and Lucy’s Warbler (Vermivora luciae). The Southern Willow Flycatcher and the Western Yellow-billed Cuckoo are considered wildlife of special concern in Arizona, and are federally listed as endangered and candidate species, respectively (Federal Register 1996). An additional 18 species that inhabit low-elevation riparian woodland are considered Arizona PIF preliminary priority species: Brown-crested Flycatcher (Muscisaxicola rufiventris), Northern Beardless Tyrannulet (Campylorhynchus imberbe), Bell’s Vireo (Vireo bellii), Yellow Warbler (Dendroica petechia), Rufous-winged Sparrow (Amphispiza borellii), Abert’s Towhee (Pipilo aberti), and Summer Tanager (Piranga rubra).

Some 80 percent of vertebrate species in the arid Southwest region are dependent on riparian areas for at least part of their life cycle; over half of these cannot survive without access to riparian areas (Noss and Peters 1995). Arizona and New Mexico have lost 90 percent of pre-settlement riparian ecosystems (Fig 3e; Noss et al. 1995). TNC lists the Fremont cottonwood-Gooding willow riparian community as highly imperiled. In Arizona and New Mexico, more than 100 federally and state listed species are associated with cottonwood-willow bosques (Noss and Peters 1995).

Among U.S. Federal Register notices listing plants and animals as endangered species, water impoundment and diversion are among the most frequently cited threats mentioned. Trampling vegetation in reservoirs behind dams and changes in river flow are among the most severe pressures on threatened plants and nesting birds in the U.S./Mexico borderlands. The regional decline of 38 of the 82 breeding bird species which formerly used riparian woodlands is a case in point. In combination with water diversion, groundwater pumping has affected nearly all river valleys in Arizona’s portion of the Sonoran Desert. In the heart of agriculture areas, groundwater overuse has been most precipitous, leading to ground subsidence, salinization and the demise of riparian forests (Nabhan and Holdsworth 1998, pg. 2).

However, according to Webb, Leake, & Turner (2007, The Ribbon of Green, Tucson: U. of A. Press, pg. 225), “Riparian vegetation has generally increased along the [San Pedro] river north of the U.S.-Mexico border…[and] closely follows the alternating pattern of perennial–ephemeral flow that characterizes this watercourse along its greater than 150-mile length in Arizona.” Moreover, “…the case of riparian vegetation change on the San Pedro River represents one of the largest increases in woody riparian vegetation in the Southwest. Many researchers have noted that this river, once swampy, now sustains a verdant forest.”

In the majority of the Sonoran desert, remnant fragments of mesquite bosques remain and restoration is hampered by road, roadway, and utility infrastructure, as well as commercial, residential, agricultural, and recreational development. The lower San Pedro is the exception.

Under Executive Order 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands, and preserve and enhance their natural and beneficial values. These habitats should be conserved through avoidance, or mitigation should occur to ensure no net loss of wetlands functions and values. BLM best management practices (BMPs) for wetlands must be used during construction, upgrades, and reutilization of any proposed transmission lines and towers and support structures for transmission lines must be located outside the limits of the 100-year floodplain consistent with Executive Order 11988 on floodplains. Construction and maintenance, not to mention public access and use, associated with placement and maintenance of a transmission line in or adjacent to riparian areas will degrade watersheds hydro-geological processes and habitat in resources already impaired by a decadal, if not historic, drought and climate change.

Therefore, it should not be surprising that we have grave concerns regarding the proposal to locate any portion of the transmission line within, or adjacent to, any riparian area, especially the San Pedro River Valley and its environs. Thus, we have consistently and strongly advocated complete avoidance of the valley and its tributaries, such as Aravaipa Creek.

Aravaipa Creek

Aravaipa Canyon and the Galiuro Mountains are at the heart of one of the widest and most intact wilderness complexes in the Southwestern United States. Adjacent to the two designated wilderness areas are contiguous roadless public lands that have been identified by the Arizona Wilderness Coalition’s Citizens’ wilderness inventory as suitable for wilderness designation.

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The riparian area has been identified within the San Pedro River Valley; impacts are described in Section 4.6.4.2 of the DEIS, and mitigation measures (e.g., SE 8 – allow conductors to span sensitive features) would be effective to minimize disturbance to riparian areas. Similarly, mitigation measures would be used at the Aravaipa Creek crossing.
The Aravaipa Canyon Wilderness Area has nine side canyons and is surrounded by tablelands. Administered by the BLM, it was designated in 1984 and includes 19,700 acres along the 11-mile long central gorge of the canyon, which cuts through the northern end of the Oatman Mountains. TNC’s Aravaipa Canyon Preserve, consisting of about 7,000 acres, includes lands at both the east and west ends of Aravaipa Canyon as well as lands on the canyon’s south rim (TNC, 2006). In 2007, the 1,250-acre Cobra Ranch near the east end of the canyon was donated to the TNC. Cobra Ranch contains Stove Gulch, a drainage area estimated to contribute nearly half of the groundwater flowing to the headwaters of Aravaipa Creek (TNC, 2007).

According to TNC,

“The Galuro-Aravaipa-Santa Teresa area encompasses over 100,000 acres of intact, high value wildlife habitat. The area maintains the full complement of wildlife from large mammals (mountain lion, black bear, bighorn sheep, moose, deer, white-tailed deer), to highly limited species such as Coulter’s turkey and the threatened Mexican spotted owl. The Aravaipa area, alone, includes over 500 species of plants and birds, 45 mammals, and 67 amphibians and reptiles. The streams on the Muleshoe Ranch and Aravaipa Canyon are the best refuge remaining for the state’s imperiled native fish species. The abundance of the area’s bighorn sheep population has enabled the Game and Fish Department to transplant.”

A new development corridor would be detrimental to the security and integrity of outstanding wildlife habitat in this wild land complex.

The perennial flow of Aravaipa Creek links three mountain ranges, three wilderness areas and maintains migratory corridors for both large mammals and birds, making it a crucial component to maintaining biodiversity and ecological integrity in southeastern Arizona. Aravaipa Creek is a major tributary to the lower San Pedro River and contains an intact native fish assemblage, including the endangered Spikedace (Meda guttata) and Leach Minnow (Fundulus cinctus). The presence of a robust population of these fishes in Aravaipa Creek, and the largely unregulated hydrology of its waters, led to a 45.1-mile reach of Aravaipa Creek and its upper tributaries – Deer Creek and Turkey Creek – being designated as Spikedace critical habitat. Similarly, critical habitat for these species exists within Hot Springs Canyon (5.8 miles plus 3.4 additional miles within Back Canyon, an upper tributary) and in Redfield Canyon (4.0 miles). Hot Springs and Redfield Canyons are also tributaries to the lower San Pedro River near Cascabel. The DEIS fails to adequately analyze impacts to these areas and resources.

The August 20th, 2009 scoping comments by SIA, the CSDP and others state:

“Three Areas of Critical Environmental Concern (ACEC) lie within the Aravaipa Canyon Watershed Management area including Turkey Creek, Table Mountain and Desert Grasslands. Table Mountain and Desert Grasslands are also designated as Research Natural Areas (RNA). Areas of Critical Environmental concern are defined by the BLM to be areas where “special management attention is required to protect and prevent irreparable damage to public land and/or related waters containing resources, values, etc.”
systems, processes, or hazards identified, designated, and protected through the land-use planning process. These areas must have significant cultural, scenic, and/or fish or wildlife resources, or other natural processes or systems, and must have substantial significance or value. This requires qualities of more than local significance and special worth, consequence, meaning, distinctiveness, or cause for concern. Research Natural Areas are areas that contain important ecological and scientific values and are managed for minimum human disturbance. They are primarily used for non-manipulative research and baseline data gathering on relatively unaltered community types. They make excellent controls for similar communities that are being actively managed.

The Turkey Creek ACEC consists of 2,325 acres that adjoins a portion of the Arawa Canyon Wilderness at its southeast end and contains two riparian woodlands. The area has significant cultural and scenic values and is an important wildlife resource and riparian area. The area is threatened by off road vehicle (ORV) use, unregulated camping and current and potential resource extraction.

The Table Mountain ACEC contains two plant communities of concern. These include an Alligator Juniper savanna at the top of Table Mountain that exists in less than 20 locations and a white oak woodland containing Mexican Blue Oak in the adjoining Sycamore and Saddle Canyon. The total area encompasses 1,220 acres to the south of the canyon and of concern in this area is ORV use, prescribed fire and preventing mineral withdrawal and vegetation impacts.

The Desert Grasslands ACEC is significant due to its relict desert grasslands which are an important baseline for management objectives. Desert grasslands are widely used by the majority of grazing in the desert southwest but also provide critical habitat for 13 state-listed wildlife species and are important for watershed stabilization. The retention of undisturbed tracts of relict desert grasslands is of value to BLM management and scientific research (BLM, 1991). The Desert Grasslands area is greatly threatened by ORV use, livestock grazing, and could benefit from a prescribed fire plan. It consists of 840 acres with three areas of undisturbed desert grasslands on two different soil types."

**Special Status Species in the Arawa Canyon Watershed are listed below:**

<table>
<thead>
<tr>
<th>COMMON NAME</th>
<th>SCIENTIFIC NAME</th>
<th>STATUS</th>
</tr>
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<tbody>
<tr>
<td>Allen's Big-eared Bat</td>
<td>Idionycrtis phylotis</td>
<td>S</td>
</tr>
<tr>
<td>American Peregrine</td>
<td>Falco peregrinus <em>anatum</em></td>
<td>SC, WC</td>
</tr>
<tr>
<td>Sage</td>
<td>Salvia armerita</td>
<td>S</td>
</tr>
<tr>
<td>Arawa Wood Fern</td>
<td><em>Trachypsis</em> <em>rubra</em> var. <em>saroensis</em></td>
<td>S</td>
</tr>
<tr>
<td>Arizona Giant Sedge</td>
<td><em>Carex spissa var. ultra</em></td>
<td>LT, WC</td>
</tr>
<tr>
<td>Biko Eagle</td>
<td><em>Helianthus leucocophus</em></td>
<td>WC</td>
</tr>
<tr>
<td>Belted Kingfisher</td>
<td><em>Ceryle alcyon</em></td>
<td>WC</td>
</tr>
</tbody>
</table>

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**Black-billed Whistling-duck** | _Dendrocygna autumnalis_ | WC |
**Buff-colored Nightjar** | _Carpornis ridgwayi_ | S |
**California Beardless** | _Penelope discolor_ | HS |
**Cave Myotis** | _Myotis velifer_ | S |
**Common Black Hawk** | _Buteo jamaicensis_ | WC |
**Desert Duck** | _Cactostomus clarki_ | S |
**Fringed Myotis** | _Myotis pygmaeus_ | S |
**Gila Chub** | _Gila intermedia_ | WC |
**Gila Topminnow** | _Poecilocystis occidentalis_ | LE, WC |
**Lava Minnow** | _Tiarogia ocellata_ | LT, WC |
**Longfin Dace** | _Agosia chrysogaster_ | S |
**Lowland Leopard Frog** | _Rana yavapaiensis_ | WC |
**Mexican Spotted Owl** | _Strix occidentalis occidentalis_ | LT, WC |
**Northern Goshawk** | _Accipiter gentilis_ | WC |
**Northern Gray Hawk** | _Aegolius acadicus_ | WC, S |
**Red-tailed Hawk** | _Buteo jamaicensis_ | WC |
**San Carlos Wild Bucker** | _Eormeron capitate_ | SR |
**Sedona Gouder** | _Cactostomus insignis_ | D |
**Sonoran Desert Tortoise** | _Ameles agassizi_ | LT, WC |
**Spotted Dace** | _Phoxinus occlusus_ | S |
**Spinedace** | _Moia falci_ | LT, WC |
**Tuexno Agave** | _Agave tuexno var. beta_ | SR |
**Western Red Bat** | _Lasius flavus_ | WC |
**Western Yellow-billed Cuckoo** | _Dendocygna autumnalis_ | WC |

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**Other Agency and Non-Government Organization Comments**

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**Final Environmental Impact Statement and Proposed RMP Amendments**

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Key Ecological Attributes of the Lower San Pedro River Valley

The San Pedro River originates in Sonora, Mexico and flows northward for approximately 100 miles to its confluence with the Gila River near the Town of Winkelman, Arizona. It is the last major undammed river in the American Southwest, and exhibits a remarkably intact riparian system including extensive stands of Fremont cottonwood (Populus fremontii) and Gooding's willow (Salix gooddingii) gallery forest and large mesquite (Prosopis velutina) bosques. Duncan and Stingle (2004) describe the San Pedro River as one of the most significant perennial undammed desert rivers in the United States.

An approximately 40-mile reach of the upper San Pedro River between the International Boundary and St. David is encompassed by the BLM's San Pedro Riparian National Conservation Area (RNCA), one of only two RNCA's in the nation. The San Pedro RNCA was designated in order to protect the ...unique riparian area and the aquatic, wildlife, archeological, paleontological, scientific, cultural, educational, and recreational resources of the public lands surrounding the San Pedro River.”

In special recognition of the San Pedro RNCA's extraordinary avian diversity, it was designated North America's first Global Important Bird Area in 1996. A Monitoring Avian Productivity and Survivability (MAPS) bird banding and research site has been established on the San Pedro RNCA. The Arizona Important Bird Area program has applied for current Global IBA status for the SPRNCA IBA for the high concentrations of the Belt's Vireo, a Global qualifying species.

The San Pedro River serves as a corridor between the Sky Islands of the Madrean Archipelago in northern Sonora and southern Arizona in its southernmost reaches and, in the north, Arizona's Central Highlands. The river is not only a major corridor between varied habitats and ecosystems; it represents a ribbon of water and riparian vegetation in an otherwise arid environment. The river thus exhibits a remarkable high biodiversity, both in resident and migratory species.

More than 100 species of breeding birds and another approximately 250 species of migrant and wintering birds occur in the area, representing roughly half the number of known breeding species in North America. The San Pedro River serves as a migratory corridor for an estimated 4 million migrating birds each year.

Notably, 36 species of raptors, including the Gray Hawk (Astronotus nitratus = Buteo nitidus), Mississippi Kite (Ictinia mississippiensis), Common Black Hawk (Buteogalis anthracinus), and Zone-tailed Hawk (Buteo albonotatus) can be found within the San Pedro River watershed. The San Pedro RNCA is thought to support 40 percent of the nesting Gray Hawks in the United States. The lower San Pedro River, like the upper reaches, also supports appreciable numbers of nesting Western Yellow-billed Cuckoos (Coccyzus americanus occidentalis), currently a candidate for Federal listing as a threatened or endangered species. Direct loss and degradation of low-elevation riparian woodland habitats have been cited as the primary causes for the declines in the Distinct Population Segment (DPS) of Yellow-billed Cuckoo in the western portion of their range. [http://www.fs.fed.us/r3/projects/sp/sprsegmenta/yellowbilledcuckoo.pdf] The abundance of mammals, reptiles, and amphibians is also high, over 60 species of the former and more than 40 species of the latter. Fourteen species of native fish formerly occurred in the San Pedro River; two persist today. The upper reaches of the San Pedro River and its watershed also support populations of the endangered Huesca water umbel (Lilaeopsis schafferiana var. recurva), a semi-aquatic plant.

Investigations conducted in the 1940s and 1970s documented between 96 and 111 bird species solely within the approximately 2500 acre mesquite bosque currently owned by BHP-Billiton (Arnold 1940, Gavin and Stow 1975). Surveys conducted by the BLM in the Billiton property from 2005 to 2012 have documented 148 species [www.birds.org]. The lower reaches of the San Pedro River are currently subject to intensive survey efforts, largely conducted by AZGFD biologists, for the endangered Southwestern Willow Flycatcher (Empidonax rutilis rutilis). Its mission to control insects in riparian areas is an essential function benefiting people as well as plant life.

River and stream impoundments, ground water pumping, and overuse of riparian areas have altered up to 90 percent of the flycatcher's historic habitat. The aforementioned survey effort has shown the reach between Three Links and the Gila River confluence to be densely occupied by Southwestern Willow Flycatchers. Indeed, in 2005, the most-recent year for which complete survey data have been summarized, the reach thus-described contained 56 Southwestern Willow Flycatcher territories consisting of 367 adult birds (English et al. 2006). These lower reaches thus contain over 89 percent of the Southwestern Willow Flycatcher territory of the entire San Pedro River within the United States. The San Pedro RNCA hosted the remaining less than one percent of the territories (adults and single (pair), it must be noted that the middle reaches of the river, between St. David and Three Links, are largely unsurveyed due to limited habitat and poor access to private land. Few to no surveys have been conducted in Sonora.

The high importance of the lower San Pedro River for the recovery of the Southwestern Willow Flycatcher contributed to its designation as critical habitat for the species. The current critical habitat includes approximately 60 river miles of the lower San Pedro River between a point approximately 3.5 river miles south of the hot springs on the Gila River confluence. In 2011, the U.S. Fish and Wildlife Service proposed to redesignate (and increase the length of) the Southwestern Willow Flycatcher critical habitat over a 79 mile reach of the lower San Pedro River.

The protection of riparian resources and the desire to provide flood protection and plentiful clean drinking water to the residents of the Phoenix valley and others is what originally prompted the SRP, a utility, and the BOR to purchase and conserve federally required mitigation lands along the lower San Pedro River. These lands are encumbered by easements and are specifically managed, under the Roosevelt HCP, to conserve Southwestern Willow Flycatchers and mitigate for the impacts of the rising waters associated with the construction of the Roosevelt Dam and flooding territories there. The BLM and the BOR own the parcels within the reach, TNC and the BLM also own and co-manage lands within the Aravaipa Canyon and Moloshoe Ecosystem Management Areas, both on major tributaries to lower San Pedro River.
TNC has identified the San Pedro River as "One of the Last Great Places."
TNC is working with the U.S. Fish and Wildlife Service’s Partners for Fish and Wildlife Program to restore an aquatic spring-fed Gila (wetland) and reestablish endangered Gila Topminnow (Pseudotriops occidentalis occidentalis) and Lowland Leopard Frog (Rana palustris) on the TBM Ranch.

The Department of Interior’s American Great Outdoors (AGO) Initiative will focus on the three areas in the desert borderlands, the Mule Range, the Upper San Pedro River, and the Lower San Pedro River. The AGO Initiative operates from the premise that protection of our national heritage is a non-partisan objective shared by all Americans. It turns to communities for local, grassroots conservation initiatives that also promote recreational opportunities which support sustainable economies based on working landscapes, cultural and historic heritage and ecotourism.

The Department of Agriculture’s (USDA) Natural Resource Conservation Districts (NRCDs) have revealed their new Working Lands for Wildlife Habitat Initiative www.nrcs.usda.gov/website/ecs/docs/national/programs/financial/wl/whip3/index.htm which in Arizona will focus on cooperative efforts to assist ranchers and farmers in preserving their heritage and way of life while strengthening rural economies and conserving the federally endangered Southwestern Willow Flycatcher (Empidonax traillii extenua), a small Neotropical migratory bird that breeds in the arid southwestern United States. 

http://www.nrcs.usda.gov/website/ecs/docs/national/programs/financial/wl/whip3/index.htm Arizona recognizes it as a ‘species of greatest conservation need.’ It was listed as endangered under the Endangered Species Act (ESA) on February 17, 1995. The ESA, sec. 3, defines critical habitat as (1) the specific areas on which are found those physical or biological features (i) essential to the conservation of the species and (ii) that may require special management consideration or protection and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon determination that such areas are essential for the conservation of the species. The Working Lands for Wildlife Initiative will prioritize $34 million in restoration actions on a large regional scale to offer financial and technical assistance to farmers, ranchers and forest landowners to restore and protect targeted habitats and most cost effectively focus assistance.

The destruction of tropical rain forests where the flycatcher winters makes the conservation of breeding habitats in the southwest United States even more urgent. Interestingly enough, the survival of riparian ecosystems may depend on the flycatcher as well. "Studies have shown that predation on insects by birds actually results in the improved health of trees and forests."

http://www.fws.gov/southwest/es/arizona/Documents/Species/Show/WWF/SWFFC.pdf The San Pedro Watershed's ecosystem services are extraordinary and offer tremendous biodiversity at the confluence of four different ecosystems.

Scientists from the Environmental Protection Agency (EPA), the New Mexico State University (NMSU) and others have recently modeled the San Pedro River watershed as one of only two test areas in the nation, mapping metrics reflecting ecosystem services and biodiversity features using U.S. Geological Survey Analyses Program's, data, including land cover, land stewardship, and deductive habitat models for terrestrial vertebrates species http://fas-case-12.nmsu.edu/case/efs/ illustrations below. The Lower San Pedro River watershed supports...
significant biodiversity, especially avian, and surpasses even the Middle Rio Grande River in biodiversity.
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<th>Response to Comment</th>
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Mapping and quantifying ecosystem services have become strategic national interests for integrating ecology with economics in order to help explain the effects of human policies and the subsequent impacts on both ecosystem function and human welfare.
Updated information on the Conservation Initiative has been added in the FEIS (Section 3.6.7.9). It is noted that the BLM Preferred Alternative would cross the San Pedro River at nearly the same location as the existing 345 kV transmission lines (The Narrows), which is the southern limit of the Conservation Initiative study area.
http://www.fws.gov/southwest/docs/SPRCEEPlanningUpdate1.pdf. The DEIS fails to adequately analyze the potential impacts of SunZia on this proposal. In fact, surprisingly, the preferred alternative has the greatest potential impacts of any of the alternatives on environmentally sensitive water resources.

**Birds and Important Bird Area (IBA) Designation**

IBA designation is particularly relevant to protecting critical habitat utilized by birds during some part of their life cycle (breeding, feeding, nesting, and migrating) as well as conserving the general biodiversity of wildlife species. Migration and molt are very tiring for birds, and for some species migration is the time of greatest mortality. To date, of the 2,500 state level Important Bird Areas identified nationally, only 449 have been prioritized as Global Important Bird Areas. These sites include Important Bird Areas significant for more than 65 globally threatened species. Global and Continental Important Bird Areas are determined through a prioritization process, which involves the review of identified State-level Important Bird Areas by the U.S. IBA Technical Committee — they represent high priority sites for conservation actions. http://www.audubon.org/?page_id=92 and http://www.audubon.org/audubonprioritizedareas.html.

**Credit:** Tice Supplee, Audubon Arizona
An Avian Protection Plan will be developed in collaboration with the USFWS, AZGFD, and NMGFD, to ensure that the BLM fulfills its responsibilities with regard to the MBTA.

Comment noted. Please see response to Comment No. 35.
The comment notes that nocturnal migrant birds typically fly “in the lowest 300 meters” above the ground, or 600 meters as supported by a second citation. As discussed in the DEIS (Appendix B2), nocturnal migrants also typically fly above a minimum elevation above the ground, presumably to avoid the risk of collision with trees, sudden changes in terrain, and other features. This behavior also lowers the risk of collision with unlighted, stationary objects such as transmission lines, although that risk can be increased during inclement weather.

The DEIS discusses a number of known areas of bird concentration, and measures taken to avoid them through route selection. The Avian Protection Plan will provide final details on selection and placement of mitigation measures to further reduce the risk of bird collision.

APLIC guidelines to minimize the risk of electrocution. As noted in the DEIS, 500kV systems require spacing between energized conductors and paths to ground that are beyond the wingspan of any native bird species. Electrocution risk requiring design modification for mitigation would primarily be anticipated in substations that step down to lower voltages.
This site is important to numerous special status avian species including the Northern Beardless-Tyrannulet (Campylorhynchus imberbe) and Brewer's Sparrow (Spizella brewerii). It is comprised of a rare, unique, or exceptional representative habitat/eco-logical community - a low elevation riparian river. Western rivers are increasingly imperiled and provide critical resources for migratory pollinators traveling the hemispheric flyways. In the arid southwest, the San Pedro River is unsurpassed in importance.

The IBA hosts significant concentrations of breeding birds: Southwestern Willow Flycatcher (Empidonax Traillii eximius) at more than 40 percent of the Arizona breeding population, Mississippi Kite (Ictinia mississippiensis) at more than 40 percent of the Arizona breeding population and Gray Hawk (Aquila nictida = Buteo nictida) at more than 30 percent of the Arizona breeding population. Land birds occurring in significant numbers/density or diversity include Bell's Vireo (Vireo bellii) and Yellow Warbler (Vermivora flavus).

Arizona Wildlife Action Plan Species of Conservation Concern in the Sonoran Desert include: Mississippi Kite (Ictinia mississippiensis), Gray Hawk (Aquila nictida = Buteo nictida), Common Black Hawk (Buteo atratus), Common Black Hawk (Buteo atratus), Black Kite (Buteo platypterus), Red-tailed Hawk (Buteo jamaicensis), Olive-sided Flycatcher (Contopus cooperi), and Zone-tailed Hawk (Buteo albonotatus).

Continental Species of Concern include: Elf Owl (Micrathene whitneyi) with 40 breeding pairs/120 individuals, Western Yellow-billed Cuckoo (Coccyzus americanus) with 20 breeding pairs/80 individuals. Southwestern Willow Flycatcher (Empidonax Traillii eximius) endangered in Arizona with 20 breeding pairs/80 individuals. Lucy's Warbler (Vermivora luciae) 40 breeding pairs/120 individuals, and Abert's Towhee (Melospiza aberti) with 40 breeding pairs/120 individuals.

Global Species of Concern, for which the IBA was globally recognized: Bell's Vireo (Vireo bellii) (IUCN NT and Audubon Watchlist Red) with 30 breeding pairs/90 individuals.

Vegetation communities include iconic cottonwood-willow gallery riparian forests and mesquite (Prosopis (lifistata) botque woodland and terraces along the San Pedro River, mixed broadleaf forests in tributary canyons and washes. Upper Sonoran desert scrub on lower elevation uplands, Sonoran and Chihuahuan semi-desert grasslands at intermediate elevations and Madrean oak woodlands in the surrounding mountain ranges. Conti forest occur at the very highest elevations. This largely unfragmented watershed includes habitats representing the Chihuahuan Desert, Sonoran Desert, Southern Arizona Semi-desert Grassland, and Mexican Oak-Pine Woodland and Oak Savannah, all of which join together in the lower San Pedro River Valley.

Saguaro (Cereus gigantea), Foxtail and Blue Palm Verde (Cordia microphyllum and C. floridum), Ocotillo (Fouquieria splendens), and a variety of cacti and small shrubs cover the Sonoran desert uplands. Mesquite (Prosopis spp.), Cardon Acacia (Acacia greggii), Burrobrush (Hymenoclea monogyna), and Desert Pencil (Baccharis sarothroides) line xeric washes, while Coconding Willow (Salix greggii), Fremont Cottonwood (Populus fremontii), and Velvet Ash (Fraxinus velutina), and Netleaf Hackberry (Celtis reticulata) cluster along water drainage ways, interspersed with Sonoran Desert grassland typified by grasses (Bouteloua spp.), Three- awns (Aristida spp.), and Muleearギhia ssp.

Cochise County IBA parcels include the Three Llins Farm consisting of 2.156 acres that lie along the San Pedro River. It was purchased by TNC as part of their long-standing program to protect the San Pedro River and its riparian habitat. Here the banks of the San Pedro River are lined with an exceptional Fremont cottonwood-Coconding Willow forest and mesquite bosque. This River's forest is host to 345 species of birds including 13 species of breeding raptors, and is a major migratory pathway for Neotropical birds such as Gray Hawk and the rare Western Yellow-billed Cuckoo. It is also the presence for more than 80 species of mammals. 40 species of reptiles and amphibians, 100 species of butterflies and 20 species of bats. Beaver have migrated to the property since the conservation's acquisition. These Llins is a retired farm that has had 836.9 acres placed in permanent conservation easements by TNC. The easements encompass six linear miles of the San Pedro River (3.75 kilometers) subdivided into five parcels sold to conservation owners. Agricultural wells have been dismantled and a large proportion of the water rights are in the process of being retired from the property with the goal of increasing in stream flow in the San Pedro River. As a result of TNC's actions, a majority of the former agriculture fields are now dominated by mesquite. The river has been fenced from livestock and is a mix of closed canopy cottonwood/willow gallery forest with an open understory of Tamarisk and Hackberry. Ash, Arizona Walnut and sedges of willow stands. The uplands are Chihuahuan Desert Scrub typified by Creosote Bush (Larrea), Blackbrush and Yucca (Yucca elata). Two one-kilometer long transect lines following the river channel have been established at this property. TNC is collecting spatial vegetation data at established transects that cross-section the river.

Pima County properties include the county-owned Bingham Clonogram - a small 503 acre
parcel with an artesian fed spring, the site has a small marsh habitat and mature gallery
cottonwood-willow forest along the river channel. Pima County is actively restoring riparian
and seacoast wetland ecosystems. A fire in 2004 burned the willow and tamarisk vegetation around
the marsh that was suitable Southwestern Willow Flycatcher habitat. Pima County also owns
and manages the 41,000 acre A-7 Ranch, the 12,000 acre Six Bar Ranch (purchased with $11
million in voter approved bonds), and the 1000 acre Bushman Canyon, all tributary to the lower
San Pedro River.

The uplands from Pima County north are Sonoran Desert Scrub and mixed cactus habitats.
Saguaro (Cereus gigantea), Foothill and Blue Palo Verde (Cercidium microphyllum and C.
frondium), Crocuses (Fouquieria splendens), and a variety of cacti and small shrubs cover the
uplands. Mesquite (Prosopis juliflora), Catalpa Acacia (Acacia greggi), Burrobrush (Hybacinthia
monogyna), and Desertbroom (Brachia sarothroides) line xeric washes, while Gooding
Willow (Salix gooddingii), Fremont Cottonwood (Populus fremontii), Velvet Ash (Fraxinus
velutina), and Netleaf Hackberry (Celtis reticulata) cluster along wetter drainage ways
interspersed with Sonoran Desert grasslands typified by grama grasses (Bouteloua spp),
Three-awn (Aristida spp.), and Muhlenbergia spp.

**Final County** contains the majority of identified properties within the IBA. San Manuel
Crossing is a small BLM parcel (1.56 acres) in Township 9 South and Range 18 East;
Southwest Quarter of Section 31 and Township 10 South and Range 16 East, Southwest
Quarter of the Northwest Quarter Section 6. One 1 kilometer long transect line following the
river channel has been established at this property. A mile further south from this area is a
property acquired by SRP for Southwestern Willow Flycatcher and Western Yellow-tailed
Cuckoo mitigation known as Spirit Hollow that encompasses approximately one linear
kilometer of river located at Township 10 South and Range 18 East, East Half of Section 8 and
the North Half of the Southwest Quarter of Section 9. The site is almost entirely
cottonwood/willow gallery forest. An additional 50 acres adjacent and south of Spirit Hollow has
been acquired by the U.S. BCR for Southwestern Willow Flycatcher mitigation and is being
managed by SRP.

**6B Ranch** is located east of the town of Mammoth. The 3,200 acre property covers seven river
miles, is owned by Resolution Copper Company, and is being for conservation purposes as a
part of a proposed legislative and exchange with the federal government. Two one kilometer
long transect lines through the mesquite bosque have been established at this property. The
property is contiguous with another 7 miles of river to the south owned by BHP-Biltmore mining
compny. Combined, these two properties represent the largest intact mesquite bosque in
Arizona at approximately 1000 acres. The BHP-Biltmore and also has cottonwood/willow gallery
forest that is contiguous with the San Manuel Crossing properties and has equally high
conservation values for birds. The highest numbers of nesting Southwestern Willow Flycatcher
on the San Pedro River have been documented at this location. Resolution Copper is in the
process of creating a nature trail through this property and allowing access for hikers and
watchable wildlife enthusiasts. TNC is actively doing restoration work for the endangered
Chiricahua Leopard Frog.

**Aravajé Crossing** (approximately 150 acres) has the next highest densities of Southwestern
Willow Flycatcher habitat. The Triangle Bar property was previously owned by the

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The BLM preferred alternative in this location would be located immediately adjacent to two existing transmission lines. Unguyed structures would be used in this location, and overall visibility to birds of all transmission lines may be increased through colocation. However, additional mitigation measures such as bird diverters remain under consideration, to be identified in the Avian Protection Plan.
The playa is seasonally flooded to a shallow depth. Outlying playa area is the satellite lakes/wetlands and Coachies Lakes (or a lake Coaches), alkali flats, and Wilcox Playa Wildlife Area, containing Crane Lake. The Playa itself is a former bombing range, owned by the Department of Defense and administered by the U.S. Army Corps of Engineers. It is not managed at all, and is posted in trespass. On the upper east side of the playa is the AZDFG-managed Wilcox Playa Wildlife Area, consisting of 655 acres. The purpose of the Wildlife Area is primarily for industrial use of the wetland habitat and providing for hunting opportunities. There are three permanent ponds, and one 50-acre impoundment at the Wildlife Area. Over-wintering Sandhill Cranes (Grus canadensis) and migratory and wintering shorebirds, waterfowl, and waterbirds use the playa, the Wildlife Area (Crane Lake), and Cochise Lakes, for roosting, nesting, and feeding. Sandhill Cranes depend heavily on the surrounding agricultural lands of the broader Sulphur Springs Valley for feeding, particularly in fields of waste corn.

The site is important to special status avian species such as Swan’s Hawk (Buteo swainsonii), Scaled Quail (Callipepla squamata), Chestnut-colored Longspur (Calcarius ornatus) and Cassin’s Sparrow (Amphispiza cassinii). It supports significant concentrations of shorebirds (greater than 100) and cranes (greater than 200). Wilcox Playa and Crane Lake, within the northern portion of the Sulphur Springs Valley, support the second largest over-wintering concentration of Sandhill Cranes (Grus canadensis) in Arizona, typically 4,000 to 9,000 birds (White Water Draw is the area with the largest number of over-wintering cranes — between 10,000 to 22,000 and increasing). Crane numbers are typically 5,000 to 8,000 birds using the Playa, and another 4,000 to 6,000 birds using Crane Lake (with much variability of Crane Lake).
There are occasional years when crane numbers spike when a large number of birds (greater than 13,000) from White Water Draw switch to roosting in this area (using either the Playa or Crane Lake). By the late 1940s, the expansion of agriculture within the Sulphur Springs Valley (through the advent of groundwater pumping), provided the waste crop food (corn) to attract Sandhill Cranes to over-winter in the valley. The wetter period of the mid 1980s brought large increases in crane numbers, and since then numbers have been steadily increasing at both White Water Draw and the Wilcox Playa/Crane Lake. Cochine Lakes and the area of nearby alkaline lakes, also provide important habitat for a great number of bird species.

Most significantly both in spring and late summer shorebirds can stop-over in very substantial numbers at both the playa and along Cochine Lakes (numbering 400-600 individuals at Cochine Lakes). These in-migration shorebird species using the playa and Cochine Lakes, include: Wilson's Phalarope (Phalaropus tricolor) (April, May, July, August, September), Willet (Catoptrophorus semipalmatus) (April), Least Sandpiper (Calidris minutilla) (April, August, September), Western Sandpiper (Calidris mauri) (April, August, September), Long-billed Dowitcher (Limnodromus scolopaceus) (May, September), Black-necked Stilt (Himantopus mexicanus) (July, August, September), and American Avocet (Recurvirostra americana) (July, August, September), plus lesser numbers of other shorebird species (Kildeer (Charadrius vociferus), Marbled Godwit (Limosa fedoa), Spotted Sandpiper (Actitis macularia), Solitary Sandpiper (Tringa solitaria), Greater Yellowlegs (Tringa melanoleuca), Long-billed Curlew (Numenius americana), Baird’s Sandpiper (Calidris bairdii), Red-necked Phalarope (Phalaropus lobatus). Small numbers of some shorebirds occasionally breed within the IBA, including American Avocet (Recurvirostra americana) and rarely Snowy Plover (Charadrius alexandrinus) (Aubudon Watchlist 2007-2010, AZGFD Species of Greatest Conservation Need 2008).

One waterbird species, the White-faced Ibis (Plegadis chihi), is notably abundant also during migration (April) reaching numbers occasionally in the low 100s (<300). Cochine Lakes support many species of ducks and geese. Ducks over-winter on the lakes in large flocks, primarily composed of American Wigeon (Anas americana) (low 100s), Northern Shoveler (Anas clypeata) (low 100s), and Green-winged Teal (Anas crecca) (15-50). In the spring months of March and April and again in the fall months of September and October, large numbers of waterfowl pass through and use Cochine Lakes, including Ruddy Duck (Oxyura jamaicensis) (low 100s), Lesser Scaup (Aythya affinis) (occasionally 100+), Ring-necked Duck (Aythya collaris) (less than 50), and Cinnamon Teal (Anas cyanoptera) (less than 50). In rare very wet winters, waterfowl in huge numbers (greater than 15,000, half of which are Green-winged Teal), come to feed and rest within the Playa. Mallards (Anas platyrhynchos) “Mexican” ducks nest within the Wilcox Playa Wildlife Area. Small numbers of Pied-billed Grebe (Podilymbus podiceps) and rarely Eared Grebe (Podiceps nigricollis) may also nest.

The alkaline muds are important to feeding shorebirds and so are the margins of the Playa and Cochine Lakes. Peregrine Falcon (Falco peregrinus) and Merlin (Falco columbarius) are frequently in the IBA in the winter preying on the duck and shorebird community.

Scaled Quail (Callipepla squamata) (Aubudon Watchlist 2007-2010), Cassin’s Sparrows (Ammodramus cassinii)
(Aimophila caspia) (ArizPif Priority 1999), Band-tailed Pigeon (Patagioenas fasciata) – very rare (IUCN Vulnerable; Audubon WatchList 2007 Red), and Swainson’s Hawks (Buteo swainsoni) (Audubon WatchList 2007:Yellow) nest on the perimeter of the playa. Occasionally, flocks of Chestnut-colored Longspurs (Calcarius ornatus) (March, October < 100) (Audubon WatchList 2007:Yellow), and Mourning Dove (Zenaida macroura) (National PIF WatchList: 2004, Homer Harshman, personal communication), overwinter and/or pass through during migration, bringing in the grasslands within this IBA.

The Willcox Playa is located in the Sulphur Springs Valley, an internationally recognized destination for birding ecotourism particularly highlighting raptors. The valley hosts the largest concentration of wintering hawks in the United States, providing winter habitat for 14 species of hawks, including Great Horned Owl (Bubo virginianus), Northern Harrier (Circus cyaneus), Prairie Falcon (Falco mexicanus), Bald (Haliaeetus leucocephalus) and Golden Eagle (Aquila chrysaetos), Harris’s (Parabuteo unicinctus), Ferruginous (Buteo regalis), Red-tailed (Buteo jamaicensis), and Rough-legged (Buteo lagopus) Hawk. Ferruginous Hawks are regularly seen around colonies of Botta’s Pocket Gophers (Thomomys bottae), their favorite prey.

**Summary**

As long ago as November 1988, the AZGFD found that 90 percent of the Arizona’s riparian habitat had been lost in Wildlife Views (AZGFD 1988). The San Pedro River watershed, Aravaipa Creek, the Willcox Playa and the Sulphur Springs Valley are all critical migratory and breeding corridors for millions of birds (4 million annually), especially riparian-dependent species, including some very sensitive species. This crucial portion of the Pacific flyway provides stop-over habitat for migrating avian species from the tip of South America to the Arctic. Recognized as supporting exceptional levels of biodiversity (400 bird species recorded), part of which must be maintained for pest mitigation of habitat destruction at Roosevelt Dam, according to the Roosevelt HCP, the San Pedro River watershed supports over half and nearly one-third of the avian diversity in the U.S. It contains high-quality examples of imperiled natural communities; the Fremont Cottonwood-Gooding Willow riparian community, and old-growth mesquite bosques. These values conspire to designate the San Pedro River and the Willcox Playa two of only eight Important Bird Areas in the state having “global” status.

The reach of the San Pedro River from “the Narrows”, just north of Benson, northward to the San Pedro-Olive River confluence at Winkelman, has been identified as both a State and Global Important Bird Area by the Arizona IBA Science Technical Committee (January 2007) and by a National Audubon (IBA Technical Committee January 2008), respectively. IBA Science Committee members (12) in Arizona are from the AZGFD, the USFWS, as well representatives from all of the other federal agencies in Arizona. Although Globally Important Bird Area status carries no regulatory authority, it does bring biological information and habitat protection importance awareness to the public’s attention, as well as bring quantitative data and habitat information to the governments and agencies, assisting in science-based and use and land management planning in order to conserve high-value wildlife resources at the state, hemispheric and even global levels.

In short, the San Pedro River watershed is a unique biological area of global significance, a true jewel in our region that all should work to protect in perpetuity from the various and diverse
Response to Comment

39 The Southline Transmission Line has a different purpose and need from the SunZia Southwest Transmission Project, and therefore is not an alternative.

40 Comment noted

The Southline Transmission Line has a different purpose and need from the SunZia Southwest Transmission Project, and therefore is not an alternative.

Our conclusion
The Ajoaipa Creek area and entire San Pedro River Valley watershed has been the focus of conservation and mitigation for many groups and agencies for decades. BLM is aware of the proposal for a new National Wildlife Refuge in the exact area of their preferred alternative. Roadways, towers and infrastructure construction and maintenance will lead to fragmentation of the habitat, reducing the value, function, and biodiversity of the region. This one project, the proposed SunZia Powerline, would undermine and destroy much of all of the conservation work, partnerships, and mitigation activities that have taken place in the past to preserve this rare habitat. We strongly recommend adoption of the No Action Alternative.

A new power line corridor, with multiple high towers, access roads, and habitat clearance, would severely compromise these significant globally important Bird Areas in Arizona. BLM’s multiple use goals would be destroyed and made a mockery of by this development, for it would destroy the extraordinary ecosystem function and services of this unique area, together with a range of other values and uses that these intact, unfragmented habitats support. The No Action Alternative is the only reasonable alternative.

Respectfully submitted,

Paul Green, Ph.D.  Christina McVie
Executive Director | Tucson Audubon  Conservation Chair | Tucson Audubon

Tricia Gerodette  Christina McVie
President | Huachuca Audubon Society  Conservation Chair | Tucson Audubon

References and Addenda follow.

www.tucsonaudubon.org
August 20, 2012

Bureau of Land Management
Adrian Garcia, Project Manager
SunZia Transmission Line Project
P.O. Box 27115
Santa Fe, NM 87502-0115

Re: Comments on SunZia Transmission Line Project Draft EIS/RMPA

Dear Mr. Garcia:

We appreciate the opportunity to provide comments on the SunZia Transmission Line Project Draft Environmental Impact Statement. We recognize that new transmission lines are an integral part of the shift to renewable energy supplies in the Southwest, and welcome the chance to participate in their siting.

The mission of The Nature Conservancy is to conserve the lands and waters on which all life depends. The Nature Conservancy has invested significant time and resources in developing and applying science to our mission. Recent focus has been on the placement of energy infrastructure with the goal to help find siting solutions that work for project proponents and yet minimize impacts to the natural environment.

Overall, we commend the BLM for your work with this project to co-locate routes with existing right-of-way alignments, which minimizes new environmental impacts while reducing costs associated with both construction and maintenance. We appreciate that most of the alignments avoid perennial streams and broadleaf riparian vegetation communities. We also appreciate the detailed Best Management Practices provided in Tables 2-10 and 2-11 of the DEIS.

Below, we provide general comments on expected direct, indirect, and cumulative impacts from this project, followed by route-specific comments. We have serious concerns about the potential impacts of siting this project in some areas, including the San Pedro River Valley, the Gilauro Mountains, both Rio Grande crossings, the Nauvoo Grasslands, and the Lordsburg Playa. We recommend avoiding several of these areas, and suggest mitigation measures if they cannot be avoided.

Potential for Mitigation

The Nature Conservancy supports a systematic approach to use mitigation for maintaining or enhancing environmental values in situations where development is being planned, despite detrimental environmental impacts (Kiesecker et al. 2009). In many ways, this is just an evolution of the mitigation hierarchy first established for U.S. wetland mitigation by the Environmental Protection Agency and Department of the Army in 1990. As currently described in statute (40 CFR § 1508.20) mitigation includes:

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The standard mitigation measures described in Section 2.4.12 of the DEIS include best management practices. The selective mitigation measures (Table 2-11 of the DEIS) are recommended for specific resources and for each of the Project alternatives. For example, selective mitigation measures 4, 5, 6, and 8 are recommended for Subroute 1A1 as they would effectively mitigate impacts to soil resources (see Section 4.3.2 of the DEIS page 4-30). The selective mitigation measures are included in the POD and will also be included for the final Project construction, operation, and maintenance plan, which will include site-specific construction plans.
2 The Galiuro-Pinaleno-Dos Cabezas linkage is discussed in the DEIS (Section 3.6.8.1). Throughout the Project area, new or replaced fencing would be constructed at the direction of the landowner. However, AZGFD’s wildlife-friendly fencing guidelines would be followed wherever possible as approved by the landowner. Other infrastructure associated with the Project is not anticipated to provide a barrier to wildlife movement. The Catalina-Rincon-Galiuro Linkage was identified in the Arizona Wildlife Linkages Assessment, but was not analyzed in detail or modeled to determine the biologically best corridors. As noted in the FEIS (Section 3.6.8.1), linkages without this detailed information were not addressed.

3 Offset or compensatory mitigation will continue to be considered, through Section 7 consultation or through agreements between the proponent, state wildlife management agencies, and management agencies or landowners as a condition of the right-of-way grant.

4 The information provided does not reflect typical conditions within the proposed right-of-way in the Galiuro Mountains. Isolated patches of woodland are present, often in drainage bottoms where spanning may be feasible. Individual trees may need to be removed, but this would not occur at a scale similar to that presented in the comment.

Section 4.7.3.3 discusses the potential for the presence of the Project to affect fire management and use. Typically, transmission lines constrain the conditions in which controlled burning may be planned, but do not necessarily preclude fire use. This depends on site-specific conditions at the time of a planned burn, and cannot be reasonably predicted until individual burn plans are developed. However, the FEIS notes in this section that steep terrain or dense vegetation may require a full-suppression response for the protection of infrastructure, regardless of conditions at the time of the fire.

Unplanned ignitions may occur throughout the Project area, or any other area with transmission lines, and are treated on a case-by-case basis. The potential for the Project to affect whether any unplanned ignition may or may not be used as a management tool is acknowledged, but cannot be predicted.
For portions of several routes, the presence of the SunZia transmission lines would likely impair a different sort of vegetation management: the use of fire to restore or maintain healthy conditions in upland vegetation communities. Fire is a natural ecological process, and its absence can cause significant negative changes in community composition and function. Recent gains in our understanding of this have led the BLM, U.S. Forest Service, and other land managers to develop extensive fire plans that include the use of both natural and prescribed ignitions. However, wildland fires are generally not compatible with transmission line structures and operations, due to concerns for arcing and carbon deposition. The SunZia lines will likely become a reason to suppress fires in their vicinity and preclude planned fires that might affect the lines.

Cumulative Effects
The cumulative effects analysis in the DEIS is insufficient, in that it includes just the SunZia project study area. As a regional project, the analyses should include at least the whole area of Arizona and New Mexico.

To evaluate cumulative effects associated with the proposed SunZia transmission lines at an appropriate
The DEIS acknowledges that transmission lines have negative effects on wildlife, potentially including listed species. The DEIS also notes the importance of protected habitat blocks in the Galiuro Mountains (Section 3.6.7., 3.6.8), and this discussion has been expanded in the FEIS. However, transmission lines have not been demonstrated to fragment habitat to the degree of many other linear features. Arizona’s Wildlife Linkage Assessment, an effort by ADOT, AZGFD, and Northern Arizona University to identify wildlife linkages in Arizona, focused for example on highways, major roads, canals, railways, border infrastructure, and urbanization as the major regional factors contributing to fragmentation. The assessment also noted that the effects of transmission lines and other sources of fragmentation may be considered at a later date.

No “major” fragmenters as considered in Arizona’s Wildlife Linkage Assessment cross the Galiuro Mountains, and Subroute 4A or 4B of the Project would represent the most substantial infrastructure in that area. However, no evidence is available that indicates that the Project would prevent that habitat block from functioning as a whole. The DEIS acknowledges that standard and selective mitigation measures for design and construction would be implemented in this area, to minimize the amount of new access that would be created, to minimize the risk of erosion on steep slopes, and to avoid disturbance of wildlife during construction and maintenance.

Please see response to Comment No. 5.

Please see response to Comment No. 5.
Figure 3a. Existing Infrastructure: Unfragmented landscapes >20,000 acres in Arizona & New Mexico, as divided by roads and current power lines.

Figure 3b. Cumulative effects of new infrastructure: Unfragmented landscapes >20,000 acres in Arizona & New Mexico, as divided by roads, current and proposed power lines.

See following page(s)
The conclusion from these analyses is that the SunZia transmission route proposed to cross the Galapago-Aravaipa-Santa Teresa area would split in half the second largest unfragmented landscape remaining in the southwestern U.S. It would introduce habitat disturbance into an area where there are no paved roads, no dirt roads over the Santa Teresa into the Gila River Valley, and only one nearly impassable jeep trail that crosses over the axis of the Galapagos-Aravaipa Valley to the San Pedro River Valley. With the Southwest’s largest remaining intact area, the Grand Canyon, already impacted, it raises the question of whether mitigation measures are even possible for disturbances to the region’s second largest intact landscapes.

A different analysis, conducted independently by the Arizona Game and Fish Department, showed most of the lower San Pedro River Valley as part of a single unfragmented block of land that included the Rincon, Gila, and Santa Teresa Mountains (habimap.org, accessed 1 August 2012).

Arizona Route-specific Comments

Preferred alternative, west of San Pedro (4C2e and related routes 4C2, 4C2a, 4C2b)

We recommend avoiding this route.

The Nature Conservancy and many others have long identified the Lower San Pedro River Valley as a top priority for biological conservation in the Southwest. It supports more than 350 bird species and provides important habitat for millions of migratory birds. The San Pedro River Valley has higher recorded bird species richness (number of species) and density (number of birds per hectare) than the Rio Grande Valley (Brand et al. 2009). It has been identified by the National Audubon Society as a Globally Important Bird Area. It includes designated Critical Habitat for Southwestern Willow Flycatcher and Gila Woodpecker, and proposed Critical Habitat for Spineless and Loach Minnow. It supports more than 750 plant species have been identified in the riparian corridor and adjacent uplands. The watershed supports more than 80 mammal species, 12 amphibians, 55 reptiles, about 100 butterfly species, and 250 bee species. Historically it supported 13 native fish species, though several have been lost (Stromberg and Tellman 2009).

Tributary streams with perennial or intermittent flow have similar values to the mainstem San Pedro River. One study found that more species of migratory birds along the San Pedro Valley use isolated wetlands than sites along a continuous riparian corridor, and the relative abundances of most migrating birds were similar (Skagen et al. 1998). Link C441 would cross an intermittent reach of Buehman Canyon, which supports a significant riparian community.

Over the last three decades the Nature Conservancy and many other agencies and organizations have been working steadily to protect the Lower San Pedro Basin. Partners in this effort include the Arizona Game & Fish Department, Arizona State Parks Department, Bureau of Land Management, Bureau of Reclamation, Fema County, Saguaro Juniper Corporation, Salt River Project, and U.S. Fish & Wildlife Service. The Resolution Copper Company has offered to protect additional lands in the valley through a proposed land exchange. Together, these partners and other private landowners have protected approximately 192,000 acres and invested over $2.5 million in acquisition of conservation lands and appurtenant water rights. That investment required 68 separate land transactions, beginning in 1970 and continuing through 2012, and does not include adjustments for inflation.

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<tr>
<th>1602</th>
<th>Response to Comment</th>
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<td>8</td>
<td>The AZGFD has provided BLM with information based on the newly developed Habimap, including the unfragmented areas layer, as it related to the proposed Project. This information can be found in Comment letter 1949, Arizona Game and Fish Department.</td>
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<td>9</td>
<td>Comment noted, and additional information has been reviewed. Link C441 would cross Buehman Canyon at a narrow point, where terrain would provide an opportunity to span the canyon and avoid any impacts to riparian vegetation. Although engineering has not been completed, aerial imagery and topographic maps indicated that the bed of the stream is approximately 200 feet lower in elevation than the nearest feasible structure pad sites. No new road crossing would be developed at this location. Site-specific engineering in sensitive locations will be coordinated, reviewed, and approved by a local interdisciplinary team prior to the issuance of a notice to proceed for each segment of the Project, to minimize or mitigate impacts.</td>
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SunZia Southwest Transmission Project
Other Agency and Non-Government Organization Comments
J-259 Final Environmental Impact Statement and Proposed RMP Amendments
The majority of those investments—about 144,000 acres—were made to satisfy mitigation requirements for habitat losses elsewhere in Arizona that were the unavoidable by-product of projects important to economic development. Jeopardizing the integrity of those conservation projects by construction of the SunZia transmission lines could trigger the need for additional and possibly less-successful mitigation. In particular, liink C441 would cross through state trust lands managed by Pima County to provide a mitigation bank as part of their Habitat Conservation Plan; construction of the lines would reduce the conservation credit they receive for those leases.

The construction and maintenance of the SunZia lines would fragment portions of several large intact landscape blocks. The western side of the Lower San Pedro River Valley includes areas of two large blocks: Rincon Mountains (approximately 255,000 acres) and Santa Catalina Mountains (116,600 acres). The fragmentation analysis described above showed that this route would sever about 31,000 acres off the Rincon block and 17,000 acres off the Santa Catalina block, while reducing the elevation gradient of both.

If avoidance is not possible, we recommend at least the following mitigation measures.

If there is a decision to site the SunZia lines along this route, the following is a minimum set of mitigation measures that should be required.

- Minimize bird mortality through use of the best available technology to prevent bird collisions with the transmission lines, overhead ground wires, and guy wires. Use tower designs that minimize the need for guy wires.
- Minimize damage to riparian forests along the San Pedro River by shifting the alignment of an ephemeral reach or using sufficiently tall towers to span them without vegetation clearing and maintenance.
- Minimize damage to riparian forests in Buehman Canyon by using hilltop placement of towers or sufficiently tall towers to span them without vegetation clearing and maintenance. Avoid construction of roads that would create new access into the canyon.
- Minimize impacts to Paige Canyon by not running parallel down the canyon. This would avoid opening the length of the canyon to recreational off-road driving impacts.
- Minimize impacts to Allen Flat grasslands by siting lines adjacent to the existing roads, thus avoiding the need for new access roads and vegetation clearing in the habitat patch interior.
- Minimize the effects of fragmentation by not creating a continuous maintenance road along the route. Use landscape features such as cliffs to maintain permanent barriers to continuous travel.
- Compensation should be provided for the loss of mitigation and conservation lands, and for direct and indirect impacts to wildlife habitat.

We recommend avoiding this route.

The rationale for avoiding this route is almost entirely the same as given for the Preferred Alternative.

The construction and maintenance of this alternative would fragment portions of the largest intact landscape block in the region. The eastern side of the Lower San Pedro River Valley includes areas of the Galiuro/Mawaiwa/Santa Teresa habitat block (approximately 1,058,000 acres). The fragmentation

| 11 | See response to Comment No. 5. Although the Project would cross large habitat blocks in the areas discussed, portions of those blocks would not be severed or isolated. |
| 12 | - An Avian Protection Plan will be developed, and will identify the selection and placement of mitigation measures such as bird diverters. The Plan will also specify any design measures such as the use of unguyed structures at river crossings or other locations with an identified bird collision risk.  
- The BLM preferred alternative crossing location on the San Pedro River is located in an ephemeral reach, with mesquite bosque but no riparian woodland present, and is adjacent to existing transmission lines. Structures at this location would be placed on elevated terrain outside the floodplain, and vegetation management is anticipated to consist of selective trimming of individual trees. See response to Comment No. 9 regarding structure placement at Buehman Canyon.  
- Detailed engineering has not been completed at Paige Canyon and Allen Flat, but modifications to the tower placements and access roads would be considered to the extent feasible. Comment noted. Access roads will remain open or be reclaimed based on maintenance needs and agency or landowner preference. Landscape features that may serve as barriers may be present in some locations. Site-specific engineering in sensitive locations will be coordinated, reviewed, and approved by a local interdisciplinary team prior to the issuance of a notice to proceed for each segment of the Project, to minimize or mitigate impacts.  
- Compensatory mitigation will be developed collaboratively between the proponent and cooperating agencies, and as appropriate for any other applicable agency or landowner. |
| 13 | See response to comments 5 and 11. |
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14 See response in comment 12.
- Link C660 would cross the San Pedro River below the lower end of a perennial reach, but in an area currently without riparian woodland. The river would be spanned at this location, although vegetation management is anticipated to be necessary. This alternative was developed in consideration of the permitted San Manuel Interconnect transmission line, which may be colocated with the Project in a utility corridor at the river crossing. Hot Springs Canyon would be crossed at an ephemeral location. The terrain would support spanning of the canyon, and no new road crossing would be developed.
- See response in comment 12.
- See response in comment 12.
- See response in comment 12.

15 Comment noted

16 Text has been modified in Section 3.12.4 of the FEIS as follows:
- Last sentence of first paragraph on page 3-266
  Citizen’s Wilderness Inventory Units have been reviewed as part of the inventory of Lands with Wilderness Characteristics on BLM lands.
  Per guidance in Conducting Wilderness Characteristics Inventory of BLM Lands Manual (MS-6310), all BLM lands with proposed applications need to go through an inventory for lands with wilderness characteristics. For the assessment of LWC’s for SunZia the only LWC inventory units in Arizona that were identified based on the manual (MS-6310) was Muleshoe that would be crossed by one of SunZia’s alternatives (not the Preferred Route). There are existing roads within this area that have altered natural conditions and thus wilderness characteristics. There is no documentation identified that provides guidance for managing these two wilderness areas as a single complex.
Access roads to be closed will be identified by the BLM and other land managing agencies in an effort to prevent unwanted OHV use. These roads will be identified in the final POD after engineering and design have occurred for the preferred route for closure and deterrents to prevent OHV use can be implemented on a case-by-case basis.

Comment noted. Fire management and use is highly dependent on site-specific conditions at the time of a fire, and the FEIS notes that the Project could constrain fire use under some conditions (Section 4.7.3.3). Fire use would likely require coordination between the operators of the Project and land management agencies to create a burn plan for prescribed fire, or to determine the appropriate response to an unplanned ignition.

Potential effects to native fish in Turkey Creek and Aravaipa Canyon are discussed in the DEIS (Section 4.6.4.5, 4.6.5.4). The degree of these effects would depend on the final access plan, application of selective mitigation measures including helicopter-assisted construction, road maintenance, and determination of whether access roads would remain permanently or be closed.
Figure 4. Prescribed fire burn units for the BLM South Rim Allotment. SunZia route added for clarity.
Damage to the conservation values of the Aravaipa/Galiuro area cannot be adequately mitigated. If, however, there is a decision to site the SunZia lines along this route, the following is a minimum set of mitigation measures that should be required.

- Establish clear multi-agency agreements that wildland fire use in the Galiuro Mountains, using both natural and prescribed ignitions, would not be constrained.
- Require a high standard for prevention of soil erosion that would contribute sediment to Aravaipa Creek. That should include measures for both construction and operation phases.
- Use landscape features such as steep canyon walls to create permanent control points for access roads across the Galiuro Mountains. These should preclude access from both east and west sides, along with breaks in the middle. This will require not using mechanically-created access routes, even temporary ones, in strategic locations.
- Minimize damage to riparian forests along the San Pedro River by crossing at an ephemeral reach or using sufficiently tall levees to span them without vegetation clearing and maintenance.
- Compensation should be provided for the loss of mitigation and conservation lands, and for direct and indirect impacts to wildlife habitat.

## North of Mount Graham (4A)

*We recommend avoiding this route.*

The rationale for avoiding this route is almost entirely the same as given for the Sulphur Springs Valley route.

In addition to fragmentation of the Galiuro/Aravaipa/Santa Teresa habitat block as described above, this route would sever arms off the Pinaleño Mountains habitat block (253,400 acres), separating about 16,000 acres.

*Link B153b would cross an intermittent reach of Aois Creek, and likely affect the conservation investments made by Arizona Game and Fish Department there.*

## If avoidance is not possible, we recommend at least the following mitigation measures.

- Establish clear multi-agency agreements that wildland fire use in the Galiuro Mountains, using both natural and prescribed ignitions, would not be constrained.

### Other Agency and Non-Government Organization Comments

- **SunZia Draft EIS Comments**

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| Response to Comment | 20 | See response to comment 18.  
Standard and selective mitigation measures would minimize erosion, further aided through planning of access roads or use of existing access.  
Opportunities to use terrain to minimize recreational use of access roads may exist, and will be considered during development of a detailed access plan.  
The proposed San Pedro River crossing location for subroutes 4A and 4B is in an ephemeral reach.  
No existing conservation easements are present at the proposed San Pedro River crossing location for subroutes 4A and 4B. However, privately owned land at this location is proposed to be included in a conservation land exchange and may be transferred to the BLM in the future. |
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<tr>
<td>21</td>
<td>See response to comments Nos. 5 and 11.</td>
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<tr>
<td>22</td>
<td>A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.</td>
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<tr>
<td>23</td>
<td>See response to comment 20.</td>
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</table>
Subroute 4C3 was noted in the DEIS (Table H-6, H-7) as the alternative with the lowest impacts to biological resources.

25 The BLM preferred alternative crossing location on the San Pedro River is located in an ephemeral reach, with mesquite bosque but no riparian woodland present, and is adjacent to existing transmission lines.

- Subroute 4C3 would cross an ephemeral reach of Cienega Creek, using existing access adjacent to Interstate 10. Slightly elevated terrain would likely assist in minimizing vegetation management needs. No closed-canopy riparian woodland is present at this location, although individual cottonwood trees are present and future recovery of riparian woodland may occur.
- Subroute 4C3 would cross an ephemeral reach of Davidson Canyon, in a location where slightly elevated terrain would likely avoid impacts to xeroriparian vegetation. Existing access is present at this location.

Compensatory mitigation will be developed collaboratively between the proponent and cooperating agencies, and as appropriate for any other applicable agency or landowner.

26 The economic role of public lands is acknowledged in the DEIS. As stated in Section 4.13.4.5 “impacts (direct and indirect) to recreation and tourism have been identified by the public during the scoping process. The description of land use impacts to recreation areas or trails resulting from Project construction or operation have been described in Section 4.10.5 and visual impacts to recreation users have been described in Section 4.9.3. The Project would not substantially change the use of recreation areas or trails, and the number or type of recreation users would not be likely to change, therefore economic effects to recreation are not anticipated. Changes in the tourist economy would therefore not be expected.”

It is acknowledged that there are many ecotourism attractions throughout the study area, although it is noted that the BLM Preferred Alternative would not cross the Bosque del Apache National Wildlife Refuge.

Cumulative impacts to economic resources including recreational activities associated with ecotourism have been identified in Section 4.17.4.13 of the DEIS. As stated cumulative impacts on recreational resources could occur as a result of utility scale solar and wind developments, which could in turn affect ecotourism. It is likely that ecotourism will continue to be a positive trend although the level of impact cannot be quantified without speculative assumptions regarding future levels of recreation and tourism within the analysis area.
the Refuge to be more than $20.3 million. The sandhill crane is a favorite among birders and hunters alike. The shallow water roosting sites and irrigated grain fields attract vast numbers of cranes to the area every winter.

Because of its importance as a continental flyway, U.S. Fish and Wildlife Service and its partners have been working to conserve and restore migratory bird habitat for many years. Considerable federal and partner investments will be adversely impacted by the placement of the SunZia Southwest Transmission Line Project in the Middle Rio Grande Valley. For example, in 2001, $18 acres of wetland habitat was acquired and 2,500 acres of wetland habitat was restored in the Middle Rio Grande Valley by U.S. Fish and Wildlife Service and its partners through a $1 million North American Wetlands Conservation Act (NAWCA) grant and over $2 million in outstanding funds. An additional $1 million NAWCA grant was acquired in 2005 in phase two of this project to restore an additional 2,000 acres of wetland habitat and included over $2.5 million in partner funds. In 2011, the Rio Grande Agricultural Land Trust acquired six easements in the area as part of a NAWCA grant for riparian restoration and easement purchase. Since 2001, the federal investment in the Middle Rio Grande is approximately $9.5 million and has led to the restoration and protection of 7,500 acres.

The Middle Rio Grande Valley in New Mexico has experienced increasing human impacts that are compromising the long-term capability of these areas to provide adequate forage and roosting habitats to sustain cranes at current levels (Assoc. of Fish and Wildlife Agencies 2009). The trend toward alfalfa and vegetable production in place of small grains and the sale of farmland for real estate development has greatly reduced the availability of suitable winter food resources in the Middle Rio Grande. Due to limited wetlands and food resources, dense concentrations of roosting sandhill cranes have become increasingly susceptible to avian cholera outbreaks. Uncertainty in the future of water availability, increasing urban expansion, and changes in farming practices will further reduce the future value of the Middle Rio Grande Valley to cranes. Because of these existing and increasing threats to sandhill crane populations, any new impacts should be examined carefully.

Numerous studies have found that collisions with transmission lines are a significant cause of mortality for sandhill cranes (Ward et al. 1987, Wittingstad 1988, Wright et al. 2009) and that such collisions are most likely in their daily flights between roosting and feeding areas (Beverage 1994, Fassn 1987, Wright et al. 2009). The BLM preferred placement (Subroute 1 B) and alternative placement (Subroute 1 A) of the transmission lines cross the Rio Grande in critical habitat for sandhill cranes in New Mexico and both routes can be expected to have considerable impact on the sandhill crane population.

Underground burial of the transmission line is the only effective way to avoid significant impact to the sandhill crane population. There are no examples of undergrounding 300kV transmission lines in the United States and only a handful from elsewhere. The cost of using underground technology for the Middle Rio Grande Valley was evaluated in the SunZia Southwest Transmission Project Underground Technology and Cost Analysis (Cost Analysis) and, based on the data provided in the input, appears to be prohibitively expensive. However, the Cost Analysis does not account for total project costs including expenses such as maintenance of diverters on above ground lines and cost of mitigation. A recent study from Alberta Electric System Operator (http://www.aesop.ca/downloads/UndergroundStudySubgroundFeasibility.pdf) found that while installation costs for underground 260kV transmission systems were estimated to be 7 to 10 times higher, the total project costs were only 2 to 3 times higher than the overhead option. TNC recommends an overall feasibility study be done for underground burial that includes mitigation costs and maintenance costs. In a recent study on

### Table: Response to Comment

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<td>A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.</td>
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<td>28</td>
<td>Appendix B2 discusses the potential for migratory bird collisions with the Project. An Avian Protection Plan will be developed to address these issues.</td>
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<td>29</td>
<td>The engineering study that was completed for the underground mitigation alternative did not include operation and maintenance costs. However as noted in Section 4.16.1 of the DEIS, “The potential long-term outages associated with an underground 500 kV transmission line would be unacceptable for a circuit carrying bulk power to major load centers... Operational risks and maintenance concerns would also be greater with underground transmission than with overhead lines.”</td>
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SunZia Southwest Transmission Project
Other Agency and Non-Government Organization Comments

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Final Environmental Impact Statement and Proposed RMP Amendments
If avoidance of overhead transmission is not possible, we recommend at least the following mitigation measures:

1. Minimize collisions by installing diverter devices to make transmission lines more visible. Brown and Drewian (1993) found that powerlines equipped with plate diverters and long, closely-spaced spiral vibration dampers reduced mortality. A diverter that combines motion, light reflection, and luminescence (FireFly™, Firefly Diverters, LLC, Greenwells, Utah) is a new technique that may effectively reduce avian mortality at powerlines (Wright et al. 2009). However, the effectiveness of the FireFly technology needs to be more carefully studied. Installation of diverters will not ensure reduced mortality and consistent maintenance is required to ensure effectiveness of diverters.

2. Partially offset impacts to feeding areas by protecting agriculture lands. A recent study of cranes in the Platte River of Nebraska found that the likelihood of cranes using foraging habitats decreased with increasing distance from roosting habitat (Rucklidge 2011). The study also found the likelihood of use varied by crop type and showed that cranes had increased likelihood of using larger fields. Manipulation of crops within the crane flyway may be effective in changing flight patterns and minimizing the risk of collision. We recommend working with the U.S. Fish and Wildlife Service to study specific foraging preferences and movements of the Middle Rio Grande sandhill crane population to identify areas with best potential for changing current flight behavior patterns and to direct mitigation funds to assuring conservation easement and habitat restoration programs in those areas identified by the study.

Although the conclusion of the Analysis of Potential Avian Collisions with Transmission Lines at Four Locations on the Rio Grande in New Mexico (EPG Study, SunZia DEIS Appendix E2) is that the construction of the SunZia project “would have no significant effects on the population status of any species living in or migrating through the Rio Grande Valley,” TNC believes that collision fatalities and the resulting population effects on sandhill cranes are difficult to predict accurately and EPG's conclusion is not supported by its study for the following reasons:

1) The survey periods are incomplete and do not contain the entire migration cycle. The year on survey, December 2009 – March 2010, excludes much of the fall migration. The year two survey, August 2010 – December 2010, misses the late winter and spring migrations. The EPG

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30 Selection and placement of bird diverters will be addressed in the Avian Protection Plan.

31 Comment noted. Measures to manipulate crops or otherwise manage agricultural land to minimize negative impacts to Sandhill Cranes, either through reducing collision risk or preserving foraging habitat, would be negotiated between the proponent and the landowner. Measures such as these remain under consideration, and a cooperative agreement between the proponent, BLM, and cooperating agencies will be developed to address mitigation measures for the collision risk prior to a notice to proceed. The Project is not located within 1 mile of Sandhill Crane roosting sites.

32 The avian collision risk study, Appendix B-2 of the DEIS, was conducted independently by the University of New Mexico. EPG prepared the report for inclusion as an appendix of the DEIS. Although the mortality estimates in the study focused on construction of the Project with and without bird diverters, all available measures remain under consideration. The Avian Protection Plan will provide site-specific detail on the final selection of mitigation measures, and monitoring to assess the effectiveness of mitigation. Updated guidelines on reducing collision risk for birds will be released by APLIC in 2012, and this information will guide development of the Avian Protection Plan. All available measures will be considered and applied as appropriate to ensure compliance with the Migratory Bird Treaty Act.
survey results are not an accurate reflection of true population numbers.

2) EPG’s mortality estimates are based on assumptions about the effectiveness of a new technology (FireFly) from one study (Murphy et al. 2009) in which the authors conclude that a more rigorous study with experimental design is needed to draw any inferences about the effectiveness of this technology at decreasing crane mortality. Murphy et al. (2009) also assert that mitigation of collisions should integrate multiple tools, should not rely on minimizing from diverter devices, and must be custom tailored for each site.

3) The EPG Study implies that the calculated low levels of mortality will have no population level impact and therefore can be ignored. Any killing of a migratory bird is a federal crime under the Migratory Bird Treaty Act and should be avoided. The expected mortality is additive mortality. Cumulative future impacts cannot be known or assumed to be negligible, thus any new mortality should also be avoided.

Nutt Grasslands (Route Group 1)

The alternatives of Route Group 1 will impact the relatively undisturbed Nutt Grasslands in northeastern Luna County and will cross the Nature Conservancy’s Double Lightning Conservation Easement. Construction of new utility towers is prohibited in the terms of the easement. The

The Nature Conservancy SunZia Draft EIS Comments
Cumulative impacts resulting from future renewable energy development are discussed in the DEIS. Any additional updates or new information on future renewable energy developments has been included in the FEIS (Section 4.17). The Macho Springs wind energy facility in the Nutt Grasslands was discussed in the DEIS, but no new information has been provided regarding that project.

1. The Noxious Weed Management Plan is Appendix B2 of the POD, and details measures that will be implemented to prevent or treat the spread of invasive plants.

2. An Avian Protection Plan will be developed, following APLIC’s 2006 guidelines to prevent bird electrocution and the 2012 guidelines (in press) to minimize collision risks.

The BLM preferred alternative in this area was placed in a low pass through the Peloncillo Mountains to avoid steep slopes and heavily vegetated areas, where impacts would be highest. Standard and selective mitigation measures would be used to further minimize ground disturbance and other negative effects to wildlife.
The BLM preferred alternative has been modified to select Subroute 3A, rather than 3A1, to avoid impacts to Lordsburg Playa.

Lordsburg Playa (Subroute 3A1 – BLM Preferred Alternative and Subroute 3B – South)

We recommend avoiding this route.

Subroute 3A1 crosses the Lordsburg Playa, a vast ephemeral saline lake that provides habitat to considerable numbers of waterfowl including sandhill cranes after large rain events. The alkaline soils are also home to several rare plants including the endangered night blooming cereus. Although this route parallels an existing pipeline right-of-way, the impacts to waterfowl from a new transmission line project will likely be substantial and in no way related to previous disturbance from the pipeline installation.

Conclusion
Thank you for the opportunity to comment on this document. We look forward to further involvement with this process.

Sincerely,

Patrick Graham
Arizona State Director

Terry Sullivan
New Mexico State Director
The BLM’s action in considering the Applicant’s right-of-way application is provided under the authority to the Secretary of the Interior (BLM) to “grant, issue, or renew rights-of-way…for generation, transmission, and distribution of electric energy” (43 Code of Federal Regulations [CFR] 2800). The BLM is responsible for complying with NEPA with respect to the construction and operation of the SunZia Project, but has no jurisdiction over regulating interstate transmission. FERC is responsible for analyzing and making decisions based upon (1) the justness and reasonableness of rates; (2) the potential for undue discrimination; (3) the potential for undue preference, including affiliate preference; and (4) regional reliability and operational efficiency requirements. The BLM is responsible for complying with NEPA with respect to the construction and operation of the SunZia Project, but has no jurisdiction over regulating interstate transmission.

The Applicant’s objectives, as stated in Section 1.4 of the Draft EIS, include “…to increase available (transfer capability) in an electrical grid that is currently insufficient to support the development, access, and transport of additional energy-generating resources including renewable energy, in New Mexico and Arizona.” As reflected in the proposed action, the SunZia Project was designed to increase transmission capacity (i.e., transfer capability) by at least 3,000 MW, and could ultimately be designed for an increase of up to 4,500 MW. The Applicant identified the 3,000 MW mark as a minimum increase based on the existing demand for increased transmission capacity to relieve congestion, improve reliability, and provide future energy sources, including renewables, with access to market, balanced by marketing factors and engineering constraints.

The Bowie Power Station (Bowie) was permitted to interconnect with the existing TEP 345kV Greenlee-Winchester-Vail transmission line at the Bowie Willow-345kV substation. The Bowie Willow substation does not afford Bowie a direct interconnection with the SunZia Southwest Transmission Project. The Applicant states that, although the SunZia Project may have been initially conceptualized as an interstate generation-tie line for Bowie with a transfer capability of 1,500 MW (thus only adding an additional 500 MW of capacity to the electrical grid), the configuration of the proposed SunZia Project (two 500kV transmission lines adding an additional 3,000-4,500 MW of capacity to the electrical grid), and Bowie are not “connected actions,” as each has an “independent utility” from the other.

Some historical background on how SunZia became associated with the Bowie plant, in 2004 then-governor Bill Richardson of New Mexico requested that the Southwest Area Transmission Planning Group (SWPG) propose new 500-kV transmission lines to export wind-generated electricity from New Mexico. One of the hypothetical paths that SWPG proposed passed through the location of the SouthWestern Power Group’s (SWPG’s) power plant. Seeing this as an opportunity to provide needed transmission capacity for the plant and to expand markets for the plant’s power, SWPG proposed SunZia as a dual-purpose project, both to meet its own needs and to provide transmission capacity for renewable generation facilities. The latter was in keeping with Governor Richardson’s directive to SWAT. SWPG would never have proposed SunZia had it not been for the transmission needs of its own power plant and the proposed location of SWAT’s hypothetical line.

All of SunZia’s presentations for nearly the first two years of the project (2008-2008) prominently featured the Bowie Power Station as a principal user of SunZia transmission capacity, and SWPG made no attempt to conceal this. Indeed, SWPG was very open about this with everyone concerned, SWAT and the Western Electricity Coordinating Council in particular. It was only when the project failed to attract investors and was expanded to central New Mexico did SWPG hide its intentions and attempt to portray SunZia as a pure renewable energy project.
SWPG’s own need for this project did not cease merely because this project was expanded and strengthened.

The BLM is now complicit in concealing SWPG's motives and needs to be forthright about the company's purpose. While the use of SunZia by SWPG for the Bowie power plant will leave significant transmission capacity available for renewable generation facilities, SWPG yet intends to use SunZia to distribute Bowie power, and the SunZia Environmental Impact Statement must acknowledge this to avoid litigation.

When SunZia (read “the SouthWestern Power Group”) submitted its first Petition for a Declaratory Order for SunZia to the Federal Energy Regulatory Commission (FERC) on January 29, 2018, SWPG made the unprecedented request to reserve for its own use an amount of transmission capacity equal to its percent interest in the project (see that attached pages from the petition). This amounted to 1,200 MW of capacity, 200 MW more than the full rated output of its Bowie power plant. SWPG has no plans to build any generation facilities other than the Bowie plant, making it the only generation facility that SWPG would use this transmission capacity with. Neither SWPG nor its parent company the NMG Group has any interest in renewable generation or plans to build any. This petition was a brazen attempt to secure the needed capacity for the Bowie plant, flagrantly violating open-access laws, and the FERC denied the request.

The attachment contains all links to all of the documents that support this case so that BLM staff can download and examine them. Some of these links may be broken in converting the Word document to pdf format, so parts of the URLs may have to be manually entered. The evidence is substantial and solid, and it will behoove the BLM to honor this information and incorporate it in the SunZia Environmental Impact Statement. This would help avoid potential litigation and additional project delays. I am sending this to other relevant people in the BLM so that they have this information and are pointedly and fully aware of it.

Sincerely,

Norm “Mick” Meader
Co-Chair, Casas del Sol Working Group
(520) 573-0971
mmeader@cox.net

Mr. Jesse Jern, Director, BLM New Mexico State Office, jjern@blm.gov
Mr. Raymond Siano, Director, BLM Arizona State Office, rsiano@blm.gov
Ms. Padella Sanford, Chief, RM Governance Division, pmsanford@blm.gov
Mr. Cory Wells, IT Project Manager, RM Governance Division, blm_wmc_solutions@blm.gov

Attachment
Re: COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT AND RESOURCES MANAGEMENT PLAN FOR SUNZIA SOUTHWEST TRANSMISSION PROJECT (MAY 2012, DES-12-26) AMENDMENTS BY WINKELMAN NRCD AND REDINGTON NRCD

Gentlemen:

We are hereby transmitting to you the comments of Winkelman NRCD and Redington NRCD on the Draft Environmental Impact Statement and Resources Management Plan, May 2012, DES-12-26 for the proposed SunZia Transmission Project ("DSIP").

These comments supplement and are in addition to all prior comments and submissions by the Districts. Please consider, address and resolve these comments consistent with our request in the attached comprehensive comments on the DESIP.

The Districts are prepared to meet with responsible representatives of BLM to coordinate all of the above identified issues and resolve inconsistencies and conflicts with the Districts’ plans and mission statements. We would expect that
Comments on Draft Environmental Impact Statement and Resource Management Plan for SunZia Southwest Transmission Project (May 2012, DES-12-26 Amendments) by Winkelman NRPCD and Redington NRPCD
August 20, 2012

To:

NM SunZia Project @ blm.gov
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SanZia Southwest Transmission Project
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Please accept and fully consider the comments submitted by Winkelman Natural Resource Conservation District (“Winkelman”) and Redington Natural Resource Conservation District (“Redington”) on the Draft Environmental Impact Statement and Resource Management Plan Amendments (May 2012, DES-12-26) for the proposed SunZia Transmission Project (“Project”). These comments supplement comments already submitted on October 9, 2011 by Winkelman and Redington, in meetings, and in written and oral communications with the Bureau of Land Management (“BLM”) in which Winkelman and Redington expressed numerous concerns about the potential environmental impact of the SunZia Project on their Districts.

Additionally, throughout the scoping process, Winkelman and Redington submitted comments and evidence relating to the impacts on the San Pedro watershed together with requests for correction of information contained in the scoping documents including its final appeal of January 20, 2012.

These comments also supplement the Districts’ specific requests for coordination of those adverse impacts with the long-range plans of Winkelman and Redington.

Arizona’s Natural Resource Conservation Districts

Winkelman NRPCD and Redington NRPCD (collectively “Districts” or “NRPCDs”) are the local political subdivisions of the State of Arizona with responsibilities that include the San Pedro River watershed and Anaqua Creek habitat areas. The Districts were established by the Arizona Constitution, Article XIII, § 7 and A.R.S. § 37-1001 et seq. to protect the natural resources within their jurisdictions consistent with the natural resource policy of the State of Arizona and the District’s own land use plans.

The Districts were established in 1941 by the State of Arizona in legal subdivisions of the State. They are organized by the vote of landowners within the District and management is by a Board of Directors elected by local citizens. The Districts are a form of local government authorized to identify and address resource conservation needs within their jurisdictions. There are 41 conservation districts spanning the entire breadth of Arizona, 32 of which are established under State law and 9 established under tribal law. The elected District Board of Supervisors has the responsibility for determining the resource conservation needs for the District, for developing and coordinating long range plans and programs for natural resource conservation and implementing them under the Districts’ annual plan of operation. The Districts work with and coordinate their efforts with Federal and State government, organizations, agencies and individuals to accomplish soil and water conservation.

Arizona’s conservation district law is embodied in legislation and establishes the State’s natural resource policy, carried out on a local level by the Districts.

It is declared the policy of the legislature to provide for the restoration and conservation of lands and soil resources of the state, preservation of water and the control and preservation of soil erosion, and thereby to conserve natural resources, conserve wildlife, protect the tax base, protect public lands and protect and restore the state’s rivers and streams and associated riparian habitats including fish and wild life resources that are dependent on those habitats, and in such manner to protect and promote the public health, safety and general welfare of the people. (A.R.S. Rev. Stat. Ann. § 37-1001)

A. Winkelman NRPCD

Winkelman NRPCD is located in the eastern part of Pinal County, the southwest corner of Gila County, a small portion of the southeast corner of Graham County and a small area in northeast Pima County. To the north lies the Final Mountains, to the east the Galluro Mountains, to the south are the Catalina Mountains and to the west lies the desert land near Picacho Reservoir. Substantial portions of two of Arizona’s major rivers, the San Pedro and the Gila, wind through the District. Winkelman NRPCD includes 1.6 million acres of land of which less than 1500 acres is irrigated farmland. The remaining acres are not within town, cities or mine lands are rangeland. The land ownership is a
The NRCDs' are legally recognized governmental subdivisions of the State of Arizona. As such, they have legal status under the Governor's Consistency Review. A 60-day Governor's Consistency review is required by 43 CFR 11.31(a) for all Resource Management Plans (RMPs) and RMP Amendments. The SunZia ELSDM includes proposed RMP Amendments which require compliance with the Governor's Consistency Review as well as the National Environmental Policy Act (NEPA).

The mission of the NRCDs is to protect, conserve, and preserve the land, water, and other resources, so the protection of the environment and as prevent soil erosion, and to protect the beneficial use of public lands within their boundaries. A state, private property owners in making visible and responsible use of their land and are defined in statute.

INTRODUCTION

The combination of private, State and Federal lands. Portions of the Tohono and Coronado National Forest lie within the District's boundaries. Winkelman NRCD also includes BLM lands, Arizona State Trust Lands, and private lands.

Winkelman NRCD has established conservation district land management plans which are updated from time to time to carry out the public policy of the State on a local level. Winkelman NRCD is governed by five elected supervisors who meet at a regular basis to carry out its land range plans and service mandates. Winkelman NRCD coordinates its resource conservation efforts with Federal and State agencies including the BLM and takes its responsibilities seriously.

B. Redington NRCD

Redington NRCD was established in 1947 and encompasses 250,000 acres of land in the San Pedro River Valley of southeastern Arizona. It includes approximately 21 miles of the San Pedro River which runs north-northwest through the middle of the District and is the area's most defining geographical, ecological and social-historic feature. Redington NRCD's southern boundary lies just north of the Narrows, a meandering stretch that divides the upper and lower San Pedro basins. The western boundary runs along the crest of the Rincon and Santa Catalina Mountains which separate the San Pedro and Santa Cruz watersheds. The eastern boundary lies along the Alder Wash and Keelberg Canyon. The eastern boundary is an irregular north/south line through Range 20 East of the Gila-Salt River Meridian. It begins just north of the Narrows and ends on the southwestern flank of the Gallina Mountains.

The single largest landowner in the area is the Arizona State Land Department holding trust lands for public schools and other trustees totaling 168,000 acres. Federal lands are approximately 77,000 acres and private lands are 45,000 acres.

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Although the NRCDs plans and policies provide guidance and resources to landowners to implement conservation practices, the land use planning authority resides with the counties or incorporated jurisdictions. Permission to acquire right-of-way or easements (and construct within easements or rights-of-way) is granted by Arizona State Land Department, Bureau of Land Management, or private landowners. The SunZia project alternatives are consistent with the corridor location recommendations of the West-wide Energy Corridor Programmatic EIS provided designations for utility corridors on federal lands. Federal lands (primarily under BLM jurisdiction) are dispersed throughout the area; there are no opportunities for contiguous corridors crossing federal lands within Graham, Pima, and/or Pinal counties between the proposed Willow-500kV Substation and the Pinal Central Substation.

Authorization of a right-of-way for the BLM preferred alternative route within the San Pedro River Valley would conform with federal law, regulation, and policy, and to existing land use plans, minimizing the need for land use plan amendment. It is noted that a land use plan amendment would be required for the alternative Subroute 4C1 (east of the San Pedro River).

As part of the NEPA process, proposed RMP amendments were identified and analyzed in the DEIS. As stated in Section 1.11 of the DEIS, “the BLM must review relevant land use plans and RMPs to determine if a proposed project is in conformance with the management decisions and objectives of those plans” pertaining to new rights-of-way on BLM land. The results of the analysis indicate that the BLM Preferred Alternative would include RMP amendments within the Socorro and Mimbres BLM planning areas; however, no plan amendments would be needed for the BLM Preferred Alternative within the Arizona BLM planning areas (see Section 2.6 of the DEIS, Proposed Plan Amendments). A thorough analysis was completed and documented in the DEIS to address each of the specific issues noted by the commenter. Also as required by NEPA, all reasonable and feasible alternatives that were identified during the scoping process were included in the analysis. Alternative routes that were carried forward for detailed analysis in the DEIS included alternative routes along I-10 through the Tucson area, which were identified by the NRCDs and other interested parties. These alternatives were presented in the third scoping period conducted in the spring of 2010.
<p>| 4 | The BLM followed the necessary protocol with regard to public participation in the review of the DEIS. During the public open house meetings that were held in July 2012, attendees were offered the opportunity to discuss concerns and ask questions of the individual BLM and Project team members. The BLM received written public comments throughout the 90 day public review period. |</p>
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preparing to present their views on the adverse impacts of the SunZia transmission line project. Public participation was again forthcoming. This had a chilling effect on public participation and sent a strong signal that the BLM is not interested in public input, that public comments would be ignored and that any further written comments by interested parties would be disregarded as in the past, BLM’s actions have made a mockery of the entire administrative process.

There were only two people who were authorized by the BLM to speak publicly at the DEIR public meetings, BLM Project Manager Adrian Garcia and FPG representative Mickey Siegel. Their presentation at the Tucson and San Manuel meetings was approximately 45 minutes in length, and the audience was given instructions that any questions or comments regarding their presentation would be addressed on a one-on-one basis between the members of the public and various members of the BLM and FPG staff that would be available afterward. When a member of the audience stepped in front of the protocol and requested a clarification or posed a question or even raised their hand during the presentation, they were quickly told that all questions would be handled afterward according to the protocol that had been described.

It was very disconcerting that the main person describing the project on behalf of the BLM was Mickey Siegel, who had in April of 2001 represented one of SunZia’s owners (SWNG) in their application for a Certificate of Environmental Compatibility for the routing of a co-located gas line and a co-located transmission line for SWNG’s Bowie Power Plant. This placed Mr. Siegel in the position of potentially protecting his former client’s interest in securing additional transmission capacity for the Bowie Plant by describing the SunZia project in a way that would promote acceptance of the proposed transmission project by the public.

Indeed, Mr. Siegel spoke exclusively about renewable energy resource during his presentations at the Tucson and San Manuel meetings. When he was speaking at the San Manuel meeting about renewable energy resources in the vicinity of the Bowie Plant, a member of the small audience asked, “What about natural gas resources in this region?” Mr. Siegel responded that he was only covering renewable energy resource zones and that any questions needed to be held until after the presentation when they would be answered by a member of the staff.

By controlling the message about the purpose of the SunZia project, by ignoring much of what was submitted in written form regarding this issue in the pre-construction coordination, and Q&A process, and by withholding any questions or comments during or immediately after the presentations at the public meetings, the BLM was denying the public and stakeholders any opportunity to effectively challenge the narrative about renewable energy that was being presented by the environmental consultant, FPG, in the public meetings and in the DEIS.
As stated in the DEIS (p. 3-215), “Winkelman and Redington NRCDs (Districts) plans restrict new utilities within the San Pedro River and Aravaipa Creek watersheds.” The Districts believe that construction of new utilities would conflict with the Districts’ plans. Attempts to resolve this issue have included the evaluation and analysis of several alternatives that would avoid crossing lands within the Districts’ boundaries, and development of mitigation measures that would effectively reduce impacts to lands and resources within the San Pedro or Aravaipa Creek watersheds.

The need for the BLM’s proposed action (to grant a right-of-way on Federal lands), arises from the FLPMA, which establishes a multiple use mandate for management of federal lands, including energy generation and transmission facilities as outlined in Title V of the FLPMA. As stated in the DEIS (p. 1-5), “BLM recognizes the need for upgraded and new electricity transmission and distribution facilities to improve reliability, relieve congestion, and enhance the capability of the national grid to deliver electricity, as directed in the EPAct.” These are examples of problems which the SunZia project would resolve.

The comment states that “BLM lands comprise only 14.9 miles of the total 161.2 mile long Preferred Alternative Route (4C2c) through NRCD lands.” This segment refers to the “Subroute 4C2c”, although the complete BLM Preferred Route would require rights-of-way crossing approximately 190 miles of BLM land. While the BLM can only grant rights-of-way on BLM land, the DEIS provides analysis for each of the complete alternative routes (i.e., from the proposed SunZia East Substation to the Pinal Central Substation) at the same level of detail within all affected jurisdictions, irrespective of land ownership, in compliance with NEPA and the CEQ guidelines.

A complete, site-specific analysis was conducted and documented in the DEIS based on the project description, including the draft Plan of Development. Although the POD would be approved at a future date after engineering has been completed, the impact analysis and mitigation plan was based on a well-defined and reliable project description that includes an estimate of the ground disturbance resulting from construction of new access roads. If project design details change, the final POD will address such changes with the necessary analysis and corresponding revisions to mitigation measures.
9 Although none in Arizona, segments of the SunZia project are located within the designated West-wide Energy Corridor within New Mexico (BLM preferred and other alternatives). The EPAct of 2005 does not require that all transmission lines be constructed in designated corridors. Also see response to preceding comment (no. 1) regarding the absence of West-wide corridors on non-federal lands.

10 As stated in Section 1.4, “New Mexico and Arizona are characterized as regional power exporting areas, due to the availability of power from renewable resources in excess of the power consumption in each state.” However there is currently no net power surplus in New Mexico or Arizona. The DEIS addresses this issue in Section 1.3 and 1.4 of Chapter 1, and 4.17 of Chapter 4. One component of the need sought to be addressed by the applicant is to facilitate the exportation of future, yet to be developed, resources from these rich areas of potential renewable energy development. Therefore, the statement is not misleading as written.

11 The SunZia project includes proposed 500 kV transmission lines and substations, but power generation projects are not part of the proposal and the analysis of direct environmental effects of power generation projects is not part of the EIS studies. Although the locations of those proposed projects are unknown, the cumulative effects of potential power generation projects are evaluated in the DEIS (Section 4.17) based on estimates of future energy development scenarios.

12 It is acknowledged that some vacant undeveloped lands are managed for open space or improved rangeland. However, where such lands have been designated for open space or conservation by the respective land management agencies or landowners, or contain improvements, the overlaid sensitivity of such lands was specified accordingly and added to the composite of opportunities and constraints. A low sensitivity would therefore only have been applied to areas that have no other specified land use or more sensitive resource value layer; it is a lower level of sensitivity, although not necessarily an opportunity for a utility corridor.

13 Soils, hazards, and wildlife movement corridors were considered in the analysis of opportunities and constraints. In the regional setting where the majority of the area contains moderately erosive soils and wildlife corridors (in most major washes, for example), the inclusion of those resources as primary siting criteria would not qualify as a means of “filtering” between resource layers because the geographic pattern is generally uniform. The level of impact to soils and wildlife movement corridors is typically proportionate to the amount of new ground disturbance that would result from the construction of the project, and site-specific mitigation measures would be applied to effectively reduce the impacts of soil erosion, hazard potential, and inhibition of wildlife movement.

14 See response to comment no. 8.
The Arizona State Land Department is responsible for approving access roads on state land in Arizona and, as a cooperating agency, participates in the analysis of impacts, mitigation, and monitoring. Private landowners approve access roads on private lands, in accordance with county or state authorities where applicable (e.g., intersections with county roads, state highways, or encroachment in public rights-of-way). Implementation and enforcement of mitigation measures on non-BLM land is achieved by state, local, or other federal agencies within their jurisdictions.

Table 3-29 identifies noxious weed species for which suitable habitat may be present within the study corridor. In addition to the effects identified in the DEIS, the DEIS frequently refers to the POD regarding specific information along the ROW during construction. It is anticipated that Noxious Weeds will occur along the ROW and require treatment as specified by the land owner. The POD includes a detailed Noxious Weed Management Plan which will require preconstruction surveys for identification of noxious weeds. Once these weeds have been identified, a plan to control the spread will be implemented. Recommended control measures (mechanical or chemical) will comply with all federal, state, county, and other local requirements. Preventative measures, control measures, and agency-specific requirements are outlined in the plan as well as a list of BLM-approved Herbicides and SOPs. The preliminary Noxious Weed Management Plan was based on the principals and procedures outlined in the BLM Integrated Weed Management Manual 9015. As stated in the Draft POD, Appendix B2 (3.3 Control Measures) “The BLM authorized officer will review and approve [the] Noxious Weed Management Plan prior to implementation. Control measures may include one or more of the following methods…” that may include mechanical, cultural, biological or chemical controls. On non-BLM lands, land management agencies or landowners would provide authorization for noxious weed control.

This statement implies that helicopter placement of structures is an effective way to mitigate impacts to the degree that it reduces the amount of ground disturbance from new access road construction. Depending on site conditions, helicopter use may not be feasible or practical in certain areas, and new access roads could be needed in addition to helicopter placement of structures.

Several criteria were applied objectively to evaluate the benefits of the preferred alternative, without bias toward any one of them. Although the BLM’s criteria include minimization of direct impacts to residential and commercial land uses, the objective to minimize high impacts to sensitive resources such as conservation areas or riparian vegetation was also considered in the selection.
The Safford RMP would not require an amendment if the BLM preferred alternative is implemented. The analysis of the plan amendment effects on land use and recreation resources for alternative Subroute 4C1 is documented in the DEIS (Section 4.18.1.9, p. 4-325). Also see response to comment no. 2.

Baseline climate statistics are provided in Chapter 3 of the DEIS in order to analyze the project’s impacts to air quality and biological resources. For the cumulative effects analysis, renewable energy resource development potential was based on wind and insolation data provided by the Western Renewable Energy Zones report (WGA and DOE, 2009) cited in the DEIS (Section 4.17.3.3, p. 4-270).

It is acknowledged that water use is an important issue in the San Pedro Valley. While the sources of water to be used for dust suppression have not yet been identified, water is typically purchased and hauled to construction sites from available wells, and water use is controlled according to provisions in the Dust Control Plan element of the POD.

The definition and description of protocols for jurisdictional determination have been added to the discussion of regulatory framework (Section 3.5.1.3) in the Water Resources section of the FEIS.

According to the estimate from USGS maps, Subroute 4C2c is located within 600 feet of perennial streams for 6.1 miles (described in 3.5.1.2 Methods). Refined estimates that include affected areas for jurisdictional waters have been provided for Subroute 4C2c as indicated in Section 3.5.5 Summary of Inventory Results, Table 3-28 in the FEIS.

Table 3-40 lists cultural resources found within the Route Group 4 study corridors. No historic landscapes or cult geographies were located in this area during the records check.

Inventory and impact assessment methodology is provided in Chapter 3 and 4 for visual resources. The visual assessment included a complete analysis of all lands, regardless of jurisdiction, for scenic quality and viewing locations including associated KOPs (travel routes, recreation, residences).

Section 3.1.9.3 (assume that commenter refers to 3.9.1.3), includes a reference to the Open Space and Trails Master Plan as an amendment to the 2001 Comprehensive Plan, which provides guidelines for site design strategies to “preserve, scenic, aesthetic, historic and environmental resources.” However, the Pinal County Comprehensive Plan (2009) was reviewed during the preparation of the DEIS (Section 3.10.4 Planned Land Use), which describes objectives to minimize visual impacts, but does not include regulations pertaining to visual resources.
Table 3-47 is a list of agencies with statewide land management or permitting authority in New Mexico and Arizona.

Land uses were categorized for the study corridor inventory according to the categories defined in Section 3.1.10.2, Methods. The definition of this category is as follows: “Grazing/Multi-Use/Vacant – all land uses that did not fit under a specific category, or were not specifically designated for a specific use by the responsible jurisdiction or land management agency.” (DEIS, p. 3-216) This category includes privately owned lands, as well as state or federal (public) lands leased for grazing; the underlying description is “vacant” because they do not contain any other specified land use and are generally undeveloped, although they do contain utilities and range improvements such as tanks and fences. Note that the “Agriculture” category includes corrals and larger structures as well as active farming and facilities related to crop production which may be surrounded by grazing or other vacant lands. The Arizona State Land Department leases land for grazing, which does not include conservation. Also see response to comment no. 12.

Although the Preferred Alternative would cross the Arizona Scenic Trail resulting in high impacts to recreation users, it should be noted that the crossing would be perpendicular to the trail which would reduce the viewing duration for trail users (as opposed to paralleling the trail which would increase viewing duration).

The access road for construction of the transmission lines would be an unpaved road with limited access, not suitable for general vehicular use (i.e., not a “superhighway”). If housing camps are needed during construction, they would be located in existing communities where services are available and suitable for overnight use, such as recreational vehicle parks. Construction of the Project would result in transient communities. Fire-fighting requirements are described in the Fire Protection Plan, Appendix A4 of the Preliminary Plan of Development.
35 The impacts to resource values and importance within the San Pedro River Valley are described for each of the resources discussed in Chapter 4 of the DEIS; e.g., Earth Resources, Water Resources, Biological Resources, Socioeconomics.

36 As stated, “the primary impact associated with the construction and operation of Subroute 4C2c would be potential restriction of mineral resources…” However, as noted further in this discussion mitigation measure SE 8 (Structures would be placed to avoid, or allow conductors to span sensitive features…) would be effective to avoid or reduce these impacts.

37 Data for 100-year floodplains was obtained from FEMA for all Arizona counties within the Project area. This mapping includes all washes within the Project area that have been determined by FEMA to a 1-in-100 chance of flooding in a given year.

38 The USDA has not provided concurrence by letter.

39 The use of BMPs and standard and selective mitigation measures (Chapter 2, Section 2.5, pp. 2-85 to 2-95) along with the creation and implementation of the Stormwater Pollution Prevention Plan; Erosion, Dust Control, and Air Quality Plan; and Right-of-Way Preparation, Remediation, and Monitoring Framework Plan would restore disturbed, erosion-susceptible areas to stability. Dust control is an integral part of the Project’s mitigation strategy and is required under its regulatory framework. Along with the BMPs and standard and selective mitigation measures defined in the DEIS, and Erosion, Dust Control, and Air Quality Plan would be written and implemented as part of the Project Plan of Development. BMPs along with standard and selective mitigation measures would be applied to drought-affected soils as well as non-drought-affected soils. The goals for restoration, reclamation, and revegetation are the same, and would be effective in either drought or non-drought conditions.
Subroute 4C2c was selected based on consideration of impacts to all resources.

Impacts to biological soil crusts would primarily be minimized by minimizing ground disturbance. Additional measures, such as salvage and proper storage of topsoils for restoration, are discussed in the POD and would be employed where appropriate.

Further discussion of impacts was added to Section 4.3.2.3 Soil Resources:
Potential Project-related impacts to biological soil crusts are associated with the direct impacts of surface-disturbing activities such as blading of new access roads and indirect impacts of increased public recreational access of OHVs. Based on the rarity of ideal biological crust supporting soil types (Section 3.3.53) within the Project area it is unlikely that the Project would encounter these unique resources. However, if biological soil crusts were identified during Project activities, existing standard and selective mitigation measures would be implemented in order to limit any impacts. Measures including restricting access to mapped and designated roadways and spanning and avoiding sensitive areas would reduce potential impacts.

Desert pavements may occur within the Project area on low slope surfaces that have been undisturbed by previous ground-disturbing activities such as grazing or construction. Potential Project-related impacts to desert pavements are associated with the blading of new access roads on undisturbed surfaces which would break up the surface decreasing the stability of the desert pavement and increasing the potential for both wind and water erosion. Standard and selective mitigation measures such as restricting construction access to defined travelways would limit any potential direct impacts to those travelways; whereas, closing or reclaiming access roads that are not necessary for the operation and maintenance of the Project would limit indirect impacts from increased public recreation access.

Proposed mitigation measures would be applied to the extent and intensity that is warranted by the resources that would be affected. Use of access roads by recreational users is discussed under cumulative effects, Section 4.17.4.6.

Subroute 4C2c was selected based on consideration of impacts to all resources.

Comment noted

Impacts to existing and future land uses are discussed in this section. The impacts described in the comment are impacts to other resources, thus the conclusion. Impacts to land uses from potential illegal activities are assumptions and are not discussed here. Visual impacts are discussed in the visual resource section. Impacts to wildlife habitat are discussed in the biological resources section. Impacts to water quality are discussed in the water resource section. Impacts to soil resources are discussed in the soil resource section.
The results of the analysis of the Project’s impact on land and resources uses were documented in Section 4.10 Land use and Recreation Resources. The dispersed recreational opportunities within the San Pedro River valley, which are activities that largely comprise ecotourism activities and agritourism, include hiking, bicycling, equestrian, fishing, birding and wildlife watching, and hospitality services (as described in Section 3.10.5.3 of the DEIS). Planned land uses as described in the Pinal County Comprehensive Plan, and other plans, have been considered in the analysis of impacts. No significant residual impacts to land use and recreation resources have been identified for the BLM Preferred Subroute 4C2c, as noted in Section 4.10.5.3.

The study area for the proposed National Wildlife Refuge (or Collaborative Conservation Initiative) is two miles wide, centered on the San Pedro River. The proposed refuge would not necessarily include all lands within that study area, and the USFWS continues to identify potential participants. Thus, the potential for the Project to affect that planning process exists, although no direct conflicts have been identified to date. The Project (BLM preferred alternative) would cross the southernmost one-half mile of the refuge study area, and would also cross a small portion of the western edge of the study area in a single location near Redington. Other alternatives to the north would potentially have a greater impact on the proposed refuge.

The viewshed analysis was run to determine where the project may be visible within the wilderness. The analysis demonstrated that the project would be visible from certain elevated, or superior, viewing locations (i.e., mountain tops and ridges). Dispersed recreation viewers may have views of the project from these ridges/mountain tops; however, ample opportunities for solitude within the Wilderness Area remain. Visual impacts to wilderness viewers were disclosed in Section 4.9.4.4.

The results of the analysis of social and economic impacts are described in Section 4.13 Social and Economic Conditions. It is acknowledged that impacts to rural communities may occur including traffic, noise, dust, and other temporary construction related activities in localized areas (sections 4.2, 4.3 and 4.15). As stated in Section 4.13.4.1, population impacts during the construction period would be minimal, a maximum of 206 workers per transmission line and 55 workers per substation site, and dispersed within transmission line corridors throughout 11 counties in two states, depending on construction phases. The operations employment would be minimal and spread between 3 cities in New Mexico and Arizona.

Fire-fighting requirements are described in the Fire Protection Plan, Appendix A4 of the Preliminary Plan of Development, which includes mitigation measures according to BLM and Forest Service professionals’ recommendations.

Studies have been reviewed regarding potential effects to property values in proximity to transmission lines as stated in Section 4.13.4.5. Additional information regarding impacts to non-federal grazing lands has been included in the discussion in Section 4.10.5 of the FEIS. Also see response to Comment No. 46 with regard to recreation and tourism impacts.
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Response to Comment

52 Visual impacts to recreation and agricultural resources are described in Section 4.9.3, Visual Resources Impact Analysis Results, which include recreation activities attributed to ecotourism. No significant visual or economic impacts to these activities have been identified. (Also see response to Comment No. 46). The statement regarding effects to property values is based on previous studies regarding potential effects to property values. The methodologies are described in individual studies (Chalmers et al. 2009, Delaney et al. 1992, Jackson 2010, and Jackson et al. 2010).

53 As indicated in Section 3.14 in the DEIS, EO 12898 (U.S. Department of Housing and Urban Development [HUD] 1994) requires federal agencies to address high and disproportionate environmental impacts on minority and low-income populations. Should potentially significant and adverse impacts attributable to the proposed Project fall disproportionately on these populations, environmental justice impacts would result. As noted in Section 4.14, Table 4-20 of the DEIS, High impacts occur in areas where the Project could create direct, long-term, and significant impacts to existing environmental justice populations.

The methodology of assessing impacts to environmental justice populations was applied consistently within rural and urban areas. As stated in Section 4.14.2, although the type of impacts to rural and urban areas would be similar in most cases (e.g., the condemnation of a residence), the level of impact was also determined according to the proximity and density of the environmental justice population to the potential impact. For example, rural residential properties could experience moderate impacts from a distance of two miles of the transmission lines, while a residence just outside a mile from the lines could experience low impacts because of the existing lines or the presence of other structures commonly associated with a built urban environment. For these reasons populations within a 3-mile buffer are more likely to be affected by the Project (higher impacts occur up to a distance of three miles; noise and visual impacts dissipate at greater distances). Census tracts provide the most meaningful geographic unit to measure population components within the area of potential effects in rural areas, but the impacts are assessed according to inhabited structures within proximity to the Project corridor’s centerline. The results indicate higher and disproportionate impacts to urban areas, due to higher population densities in proximity to the Project.

54 Data reported in Table 4-23 is accurate. As noted in Section 3.14.1 in the DEIS, individuals may identify both as Hispanic and other minorities, and therefore totals could exceed 100 percent of the population.

55 Please see Comment No.53.

56 As noted in the DEIS, Table 4-30 (Section 4.17, p. 4-251), cumulative impacts from farming and grazing activities have occurred in all portions of the study area, including the NRCD lands. Similarly, other land-altering activities such as the construction and operation of transportation and utilities have contributed cumulative impacts. Discussions of cumulative impacts to individual resources are included in Section 4.17.4.

57 The BLM developed the “Energy Development Forecast Analysis” (Section 4.17.3.3), consistent with BLM’s approach in identifying “reasonably foreseeable development scenarios” (RFDs) in other NEPA processes, as “an attempt to provide an analytical tool…to provide a means to assess the cumulative effects of the types of renewable
The energy development scenarios were prepared based on overall potential for renewable resources in proximity to the proposed project, transmission facility options, and typical renewable energy development units (see DEIS p. 4-271). Further, the DEIS, p. 4-271, states that the energy development scenarios are reasonable based on physical potential (areas of renewable resource potential), RPS, development applications for leases to site renewable energy generation facilities on public land (federal and state), and interconnection requests (Table 1-2, illustrating the majority of interconnection requests in the study area are for renewable resources); all of this publicly available information supports an interest to develop primarily renewable resources.

In response to development interest regarding a substantial available wind resource, the project includes a termination that is accessible to the wind-rich region and it is reasonable that a fair amount of transfer capacity may be comprised of energy from wind resources. The development scenarios consist of two options: 1) a 3,000 MW option; and 2) a 4,500 MW option. The 4,500 MW option includes 3,000 MW (66% of the project) of DC technology which would flow east-to-west and originate in the area of high wind potential (estimates of over 11,900 MW of untapped resource, which is more than 3 times the capacity of the DC line). As proposed, the DC line would not have on and off ramps; it is conceivable that this line could be comprised entirely of wind generation.

The HPX feasibility study was a joint effort to “evaluate the preliminary technical and economic feasibility” (emphasis contained in the original report). While the feasibility study acknowledged that a balanced scenario performed best under a range of circumstances, it also stated that the results would indicate that HPX would provide economic benefits to customers in the HPX states over a variety of resource mixes and CO2 tax scenarios, with the sole exception of a fossil only scenario. As such, HPX’s economic feasibility appears to be sufficiently positive and consistent with emerging public policy to warrant further investigations. The HPX report does not rule out the use of a higher percentage of renewable energy.

In response to the comment regarding GHG emissions, the following paragraph in Section 4.17.4.2 in the DEIS (Cumulative Effects, Climate and Air Quality, Global Climate Change pg. 4-280) has been revised in the FEIS as follows: “With respect to climate change, renewable energy such as wind and solar have limited GHG emissions, as compared with a conventional fossil fuel-fired generating facility. Current trends indicate that GHG emissions from generation facilities are declining because of regulations, fuel costs, and market demand. In general, further reductions in GHG emissions could accelerate in the future to the extent that renewable energy sources become more accessible to the electrical grid.”
The area of analysis for each resource is defined in Section 4.17.4 Cumulative Effects by Resource. For example as stated in 4.17.4.5 “The geographic scope of analysis for water resources is considered the local watershed…”.

The energy development scenarios were defined in an effort to identify the most reasonable opportunities and trends. A thorough and comprehensive data search was conducted to identify past, present and reasonably foreseeable future actions as reported in Section 4.17.3.2 of the DEIS. A more precise definition of project features and specific time frames would require speculation, and would not provide any more meaningful analysis.

Although future development within the cumulative analysis area as described in this study may take place if the reasonably foreseeable future actions are implemented, the proposed Project would not cause urbanization and related cumulative effects.
Although other generation facilities could be constructed in Arizona, those projects would not fulfill the purpose and need for the Project, which is to transmit electricity from locations primarily in New Mexico and portions of southeastern Arizona to western power markets. 

Subroute 4C2c was selected based on consideration of impacts to all resources. 

The Record of Decision that results from the SunZia EIS, would only provide approval of the right-of-way for the SunZia project. Although a future transmission line could for example be proposed to collocate with the SunZia project, it would be subject to the same level of analysis as the SunZia project. 

Specific engineering of the transmission lines and access roads has not occurred. Impacts from increased illegal and legal OHV use of project and cumulative project access roads are unknown.
such as pavement deterioration or rating and erosion of unpaved roads (such as Redington Road) which would be subject to increased traffic and transport of heavy loads. Effects of required road reconstruction are not addressed.

There appears to be no discussion of traffic conditions, road networks, or impacts to traffic or roads. This should be added as a separate section for analysis.

Section 4.17.4.13 - There is no discussion of the cumulative effects on existing recreation such as birding, wilderness use, hiking, and scenic drives, or future recreation which is an economic goal specified in the Pinal County Comprehensive Plan. This economic opportunity would be adversely affected by degradation of visual quality of life and natural resources/biodiversity at the ecosystem level.

Section 4.17.5 - The cumulative effects of proposed RMP amendments cannot accurately be assessed when the baseline conditions detailed in the RMP are more than 20 years old.

Section 4.18.1.2 - Soil Resources concludes that there would be direct and indirect impacts to soil resources if the RMP is amended to allow a corridor in a designated area. Why has the Preferred Alternative been allowed on soils which will be impacted adversely? Slope is not adequately analyzed. The Preferred Alternative is on much steeper terrain, with greater potential for erosion, than other alternatives.

Section 4.18.1.4 - The San Pedro River crossing should be discussed specifically.

Section 4.18.1.7 - This section contains the very generalized discussion of visual effects to historic landscapes. A detailed discussion of historic landscapes and culturally valued landscapes in the San Pedro River Valley should be added. Moreover, the potential recreation and scientific importance of the cultural resource context of the San Pedro River Valley is inadequately discussed. It has a high value because numerous sites which provide evidence of prehistoric occupation, such as the numerous mammoth kills sites. It also has high value because it is a relatively undisturbed landscape which still conveys, in large measure, a sense of place in which prehistoric and historic human activities occurred.

Section 4.18.1.12 - Discussion of potential (temporary) job creation should be balanced by discussion of permanent loss of tourism potential through landscape and resource degradation.

Section 4.18.1.13 - Whether or not a place contains residences is not the appropriate measure of environmental justice impacts. Rural communities can be affected by regional scale impacts to quality of life, and from incremental additional impacts to existing conditions.

66 See comment Nos. 46 and 52 with regard to the incremental impact of the Project to recreational resources. Cumulative impacts to economic resources including recreational activities associated with ecotourism have been identified in Section 4.17.4.13 of the DEIS. As stated cumulative impacts on recreational resources could occur as a result of utility scale solar and wind developments, which could in turn affect ecotourism. It is likely that ecotourism will continue to be a positive trend although the level of impact cannot be quantified without speculative assumptions regarding future levels of recreation and tourism within the analysis area.

67 Where RMP amendments have been identified, resource inventories were recently completed to verify and update baseline conditions identified in RMPs that included the visual resource inventory applicable to Visual Resource Management classifications.

68 Impacts to soil resources are common to all alternatives as ground-disturbance would occur along whichever route is chosen. The Preferred Alternative, Subroute 4C2c, is not the steepest subroute; four of the other subroutes, 4A, 4B, 4C1, and 4C2 all have longer distances crossing slopes greater than 35 percent (Table 3-16, pg. 3-37). [Note: I was unable to find Section 4.15.1.4 for soil resources.]

69 Impacts to cultural resources have been evaluated in Section 4.8.3.4; Section 4.18.1.7 addresses environmental effects of RMP amendments.

With respect to RMP amendments within the San Pedro River Valley the BLM Preferred Alternative would not require amendments to either the Safford or Tucson on RMP. Section 106 of the NHPA requires that scientific importance of cultural resources be taken into consideration as one aspect of significance (Criterion D) in the evaluation of cultural sites for eligibility; eligibility recommendations/determinations are included in the analysis of sensitivity and potential impacts for all route alternatives in the DEIS. Please also see response to Comment No. 66 with regard to cumulative effects on ecotourism and recreation.

70 Please see response to Comment No. 53.
August 22, 2012

Delivered via electronic mail (NMSunZiaProject@BLM.gov) and U.S. mail (with attachments).

Adrian Garcia, Project Manager
Bureau of Land Management, New Mexico State Office
Attention: SunZia Southwest Transmission Project
P.O. Box 27113, Santa Fe, NM 87502-0113

Re: SunZia Draft EIS Comments

Dear Mr. Garcia:

Please accept and fully consider these comments on the SunZia Draft Environmental Impact Statement (DEIS) on behalf of The Wilderness Society, Sierra Club, Audubon Rockies, Western Resource Advocates, New Mexico Wilderness Alliance, Arizona Wilderness Coalition, and Natural Resources Defense Council.

Introduction

Our groups support the environmentally responsible development of renewable energy and associated infrastructure, including transmission lines, on public and private lands as a means to reduce threats from climate change and achieve a clean energy future. This type of development is not appropriate everywhere, however, and places with sensitive and important natural and cultural resources should be protected from development of any kind.

Based on the incomplete information we have now, we think it is possible that there could be benefits to renewable energy from SunZia, but we have serious concerns regarding the relative amount and importance of those benefits and even greater concerns regarding the environmental impacts SunZia would cause.

We engage in proposed transmission projects with several goals in mind: 1) gathering and sharing information on how the project will impact regional electricity generation, including potential to increase or decrease renewable energy and fossil fuel-based electricity generation; 2) gathering and sharing information on the likely impacts to the environment and other resources from construction, operation and maintenance of the project; and 3) providing constructive recommendations to managers and project proponents that a) maximize likely benefits to renewable energy production and associated reductions in greenhouse gas emissions from the project, and b) avoid, minimize or offset impacts from the project.

Though SunZia has been in the BLM National Environmental Policy Act (NEPA) permitting process for several years, a great deal of uncertainty remains regarding a number of key elements of the project, including: the purpose and need/potential renewable energy benefits of the project; the route that will be selected as the BLM-preferred alternative route in the Final EIS (FEIS); and the potential to avoid/minimize/mitigate impacts from construction, operation and maintenance of the project if it is approved. This uncertainty is compounded by the lack of detail on these elements in the DEIS, as well as the project proponent’s opposition to the BLM-preferred alternative route in three locations in New Mexico and Arizona.
The other proposed transmission lines in the region also add uncertainty to SunZia. There are at least four other major transmission lines proposed to carry at least some renewable energy west from central and eastern New Mexico (two intrastate, one to Arizona and one to California). It is unclear how these projects all relate to each other, and how their relative benefits and impacts compare.

These uncertainties notwithstanding, it is clear that all of the potential routes for SunZia would cause significant impacts to important natural resources, and these impacts are cause for significant concern to our organizations. We are committed to continuing our engagement until these questions can be answered.

Our comments focus on four key issues:
1. Purpose and need for SunZia
2. Environmental impacts and potential mitigation measures
3. Relative merits of other proposed transmission lines in the region
4. Need for additional opportunities for public input

1. Purpose and need for SunZia

The DEIS does not adequately describe or justify the purpose and need for this project. At a minimum, the BLM should address the following in revising this section:

- Meeting energy needs in New Mexico, Arizona and California

The DEIS primarily discusses how SunZia will meet specific states’ energy demands, relying on data provided by utilities in October 2010. This information has been subsequently updated through various integrated resource plans that detail what new energy resources utilities will likely pursue and factors influencing their mix of these resources.

The DEIS does not adequately discuss how SunZia could facilitate the delivery of electricity products that would meet California’s energy needs. Two important issues for SunZia are whether the line would help generators meet California’s deliverability requirements for out-of-state renewable energy resources and whether the products shipped on the line would be cost-competitive. This discussion should explicitly consider how ongoing transmission planning and permitting efforts affect SunZia’s inter connects to California balancing areas, especially given the prioritization of critical congestion issues in this region.” Information provided in various Arizona

Other Agency and Non-Government Organization Comments

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Recent projections from the Western Electricity Coordinating Council (WECC) in a table titled, “2022 Common Case Loads and RPS Requirements in WECC Region, Modified as needed for DG Assumptions” (http://www.wecc.biz/committees/BOD/TEPPC/20120106Lists/Minutes/1/2022%20Renewables_FINAL_20120206.xlsx last visited October 2, 2012) show that approximately 55,765 GWh of new renewable generation will need to be added to the WECC Region (i.e., California, Nevada, Arizona, and New Mexico) between 2011 and 2022 in order to meet RPS. By comparison, DEIS Table 1-1 indicates a projected need for 58,654 GWh of renewables by 2020 and 70,794 GWh by 2025. The WECC analysis provides a more recent RPS analysis than Table 1-1, however, the WECC data presents similar results when compared with the DEIS data and largely substantiates the data that was presented in the DEIS.

The deliverability, destination, and cost-competitiveness of the electricity carried on the proposed SunZia transmission system are subject to future negotiations. Subscription of SunZia’s available transmission capacity is dependent on the customers of the transmission line (i.e., generators planning to sell energy) and their associated buyers (i.e., utilities, cooperatives, other energy consumers); therefore, it is unknown and speculative to predict which energy markets SunZia’s future (but currently unidentified) customers may serve. Further, electricity on the transmission system is in a constant state of fluctuation and is dependent on a number of factors (e.g., changes in energy demand, addition of transmission, addition of generation resources, fossil generation, project closures due to economics, age and regulations etc.). Future electrical paths for electricity transported by SunZia will be determined based on available transmission capacity and contractual arrangements in place at the time SunZia becomes operational.
The proposed project is an interstate transmission project between New Mexico and Arizona. Accordingly, the discussion of congestion relates to the area in which the project is proposed and the local congestion. As stated in the DEIS, “The [Department of Energy] reported that the transmission path in southern New Mexico was highly congested in 2006, and remained highly congested at publication of their National Electric [Transmission] Congestion Study in 2009” (p. 1-6). The transmission path within southern New Mexico that is referenced in this study is known as Path 47. Two existing 345 kV transmission lines within Path 47 include one that is operated by El Paso Electric (EPE), and another by Public Service Company of New Mexico (PNM). The available transfer capacity on EPE’s transmission line is 0 MW in either direction (available online at http://www.oatioasis.com/EPE/EPEdocs/ATCV1701.10.pdf at pp. 58-59, last accessed on 10-12-12); PNM’s transmission line has 0 MW of available transfer capacity in the east-to-west direction and 170 MW of available transfer capacity in the west-to-east direction (available online at http://www.oatioasis.com/PNM/PNMdocs/2012_atcdoc-pnm2-posted.pdf at page 58 last accessed on 10-12-12). In November 2010, the NM Subcommittee of the Southwest Area Transmission (SWAT) planning group presented an analysis, entitled, “SWAT Oversight Committee, NM Subcommittee Update, November 2010” (available online at: http://westconnect.com/filestorage/SWAT_NM_Nov16__2010_Phx.pdf last accessed October 11, 2012) that illustrates areas of renewable resource interconnection requests within proximity to Path 47, which has severely limited available transfer capacity, and the SunZia Project study area. This November 2010 presentation identified over 3,000 MW of renewable resource potential within transmission service provider interconnection queues. The WECC three phase rating study for the SunZia Project demonstrated that the addition of a minimum of 3,000 MW of transfer capability would not negatively impact power flows on Path 47, which was identified by DOE as a highly congested path (available online at: http://www.weccl.biz/committees/standingcommittees/PCC/TSS/Shared%20Documents/Project%20%20Undergoing%20Regional%20Planning%20Rating%20Review/SunZia%20%20Southwest%20Transmission%20Project/SunZia%20%20Phase%202%20Study%20Report_Final.pdf last accessed on October 11, 2012).

Although the DEIS cites a report prepared by the Department of Energy, the commenter recommends that recent assessments from Western Energy Coordinating Council, Southwest Area Transmission planning group, and Arizona utilities biennial transmission reports should be cited. The commenter goes on to cite the Arizona Corporation Commission’s Biennial Transmission Assessment (BTA) as a source of information for electricity demand. The current BTA, which is in draft format, “shows Arizona electricity demand forecasts 10 to 16% less than the previous transmission assessment in 2010 (6th BTA).” While the current draft BTA forecast’s that demand is less than that identified in 2010, the current forecast continues to show an overall increased demand in electricity.

The DEIS Section 2.3.3.3, Alternatives to New Transmission, discusses distributed generation, demand side management including energy efficiency, and existing transmission system upgrades and explains why each of these alternatives were considered, but ultimately screened from further consideration because they could not meet the purpose and need of the SunZia Project.

As noted within the comment, there are several market factors that influence the potential energy mix and viability of the Project. Further, as noted in the comment, there are...
uncertainties and volatility surrounding the energy market. The five bulleted “factors” referenced in the comment, are acknowledged but although these factors are generally too speculative to provide a meaningful analysis. The BLM developed the “Energy Development Forecast Analysis” (DEIS Section 4.17.3.3), consistent with BLM’s approach in identifying “reasonably foreseeable development scenarios” (RFDs) for oil and gas actions, as an “an attempt to provide an analytical tool...to provide a means to assess the cumulative effects of the types of renewable energy projects that may ultimately interconnect with the Project” (DEIS p. 4-269).

As stated in the DEIS (p. 1-7), “Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services...” and reiterated on p 4-274 of the DEIS, “As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service.” Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, “it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation” (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity.

As stated in the DEIS (p. 1-9), “Pursuant to FERC Order 888, it is noted that the locations of individual proposed projects or transmission line interconnections cannot be identified to third parties by transmission owners.” Although the specific location of the proposed projects cannot be identified, DEIS Table 1-2 provided an illustration of generation interconnection requests, including size and fuel, that were identified through transmission interconnection queues of load serving utilities within SunZia’s path and represent projects located in counties which could reasonably interconnect with the existing system or SunZia. The purpose of this illustration was to provide an example of need for transmission service within the study area.
The Gateway West DEIS details more specific information about numerous potential impacts of the project, including numbers of acres and the type of vegetation that are impacted, as well as the planned widths of access roads that will be constructed. NEPA requires BLM to complete these types of analyses and present this information in the DEIS so that the public can understand the potential impacts of the proposed project, and so that mitigation measures that the agencies devise can be better tailored to minimize impacts to affected wildlife species and landscapes.

The two DEISs differ not only in the level of descriptive specificity, but also in the level of biological analysis conducted prior to DEIS completion. The SunZia DEIS relies on remote assessment of impacts, using literature reviews and geospatial data to estimate the likelihood of overlap with species and potential impacts upon them. In contrast, the Gateway West DEIS, in response to concerns raised by BLM and USES biologists during scoping, improves upon this level of analysis by also beginning with a literature review but going on to describe a variety of upfront biological field surveys (Gateway West DEIS 3.10-8 and 3.11-11). These were used to identify, for example, locations of burrowing owl and raptor nests and Columbian sharp-tailed grouse and greater sage-grouse leks, among other important biological resources. Furthermore, the Gateway West DEIS includes clear lists of detailed issues raised during scoping (Gateway West DEIS 3.10-4 and 3.11-4), which help frame and structure the subsequent impacts analyses and help clarify what analysis gaps remain. The SunZia DEIS lacks such a feature and only describes scoping issues in general terms, for example: “[A] large volume of scoping comments identified environmental resources within the study area; especially relating to migratory birds, listed species, habitat fragmentation, preservation of wilderness and wilderness-like areas, cultural resources, aesthetics, private property, property values, and local economies” (SunZia DEIS 4-215).

Another way that the type of analysis included in the Gateway West DEIS exceeds that included in the SunZia DEIS is with the discussion of impacts and mitigation to the ESA candidate species yellow-billed cuckoo. The Gateway West DEIS acknowledges that construction impacts in suitable riparian habitat could disturb the bird, and proposes to mitigate that impact through having a “preconstruction survey for the yellow-billed cuckoo that must be conducted at any proposed crossing of suitable habitat. If birds are detected within 1 mile of the centerline (within existing habitat), construction must not occur until the young have fledged or the nest is abandoned.” (Gateway West 3.11-79) In contrast, the SunZia DEIS states “construction activities within riparian areas should take place outside of the nesting period for the cuckoo, which is approximately May through September.” (SunZia 4-76) The Gateway DEIS looks at a finer scale of impacts to the species – surveys are proposed to be conducted to ensure that the species wouldn’t be impacted. The SunZia DEIS has a general plan to just avoid the area for a few months and start construction in September, with no requirement to complete field surveys to confirm whether or not birds are nesting there.

Analysis of potential impacts to golden eagles and potential mitigation measures is also inadequate in the SunZia DEIS. The description of impacts and mitigation measures includes no details regarding the specific impacts that are expected and when construction would be avoided. For example, the DEIS states, “impacts to Golden Eagles could include construction disturbance of breeding or nesting behavior, potentially resulting in nest abandonment. Seasonal avoidance of construction in Golden Eagle nesting areas would minimize disturbance of the birds.” (4-72)

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<td>4 The area of ground disturbance would be highly correlated with the length of transmission line as reported in the DEIS by each vegetation type. The FEIS includes additional analysis of estimated ground disturbance by vegetation type (Table 4-15). Widths of access roads and other design features are described in Chapter 2, but will not be identified as occurring at a particular location until final engineering and access road design is complete.</td>
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<td>5 Some resources considered in the Gateway West DEIS, particularly Sage-grouse leks, are discrete locations and are highly sensitive to the presence of transmission lines. Similarly sensitive resources requiring early surveys were not identified within the SunZia DEIS study area, or were avoided during initial siting (e.g. springs). Field information was gathered for river crossings and selected other locations during the development of the SunZia DEIS. The majority of surveys for protected species are conducted and specific mitigation measures are defined as determined by the USFWS in Section 7 consultation for ESA. Remote sensing and existing data are adequate and appropriate methods to use for impact assessment and decision-making for many resources. Mitigation measures for individual ESA-listed and candidate species, including the Yellow-billed Cuckoo, are determined during the NEPA process and Section 7 consultation. However, surveys for all ESA-listed and candidate species would be conducted as appropriate, as stated in the standard mitigation measures presented in the DEIS. Dates for seasonal avoidance of Golden Eagle nesting sites (or other sensitive locations) are expected to vary across the large study area. Final details on any necessary surveys and dates of avoidance of those locations will be developed with appropriate agencies, and included in the final POD.</td>
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The inadequacy of these details underscores the importance of our recommendations in Section IV for additional analysis and publication of a Supplemental EIS and/or supplemental documents for public review and comment prior to publication of a FEIS.

b. Environmental Impacts

Our groups have submitted scores of pages of comments detailing the important natural resources and values in these areas that would be impacted by SunZia, and we incorporate those comments by reference. Other groups have also submitted hundreds of pages of additional comments with additional details.

We do not repeat that information in these comments. Rather, we have highlighted areas of ongoing concern and new issues that have arisen since we submitted scoping comments in 2010. We also propose actions that are needed to address these impacts.

New Mexico Impacts

- **Rio Grande River Corridor**: the Rio Grande River corridor, and in particular the Middle Rio Grande, is a critical flyway for migrating birds and many other species. For this reason, we recommended in scoping comments that BLM use an alternative that would run down the east side of the White Sands Missile Range (WSMR) and cross the Rio Grande River near Las Cruces, where impacts would be much lower. The routes east of the WSRM have been dropped from consideration in the DEIS. All of the remaining alternatives would cross the Rio Grande in the Middle Rio Grande region between the Bosque del Apache and Sevilleta National Wildlife Refuges, an area that is particularly important for wildlife.

- **Audubon New Mexico**: has significant expertise in these issues and is submitting detailed comments including information on the importance of this area for wildlife habitat and the likely impacts of SunZia. Though these impacts may be impossible to fully mitigate, Audubon New Mexico’s comments also include recommendations on mitigation measures that should be employed if SunZia is approved and built in this area. We support the information and recommendations in Audubon New Mexico’s comments and ask that BLM fully consider and address them.

- **Citizens’ Wilderness Inventory units**: many of the potential routes would intersect Citizens’ Wilderness Inventory (CWI) units inventoried by the New Mexico Wilderness Alliance (NMWA). These areas have been found by NMWA to have “wilderness characteristics,” including naturalness, solitude and the opportunity for primitive recreation. Beyond these core values, these lands also provide important wildlife habitat, cultural and scientific resources, invaluable ecosystem services including clean air and water, important economic benefits, and many other resources and values. The sensitive nature of these lands and their resources and values makes protection critical and transmission development on them inappropriate. The CWI units intersected by the SunZia routes in New Mexico are:
  - E101: Cibola Canyon, Stallion, Sierra de la Cruz
  - E113: Veranito
  - A111 and A112: Padillo Gonzales
  - E90 and A90: Stallion
  - A166: Chupadera Wilderness Addition

The following CWI units would not be crossed by the preferred route: Padillo Gonzales, Chupadera Wilderness Addition, Penasco Canyon, Sierra de las Uvas, Nutt Mountain, and Goodsight Mountains.

The Preferred Route would traverse the Cibola Canyon, Stallion, Sierra de la Cruz, and Lordsburg Playas North CWI units; however, there are existing unpaved roads within these units.

The Preferred Route would also cross the Veranito but it would be located along the edge of this CWI unit where there are existing unpaved roads.

The Magdalena Mountains (2 and 3), Nutt Mountain, and Massacre Peak CWI units would be crossed by the Preferred Route; however, it would parallel an existing 345 kV transmission line and associated access roads within these units.

Per guidance in Conducting Wilderness Characteristics Inventory of BLM Lands Manual (MS-6310), all BLM lands with proposed applications need to be inventoried to identify lands with wilderness characteristics, which would support a citizen’s wilderness inventory proposal. Within the SunZia study corridors, the Nutt Mountain LWC unit in New Mexico was identified based on the manual (MS-6310), and would be crossed by one of the SunZia transmission line alternative routes (not the Preferred Route). Also as stated in the FEIS (Section 3.12.4) as follows:

“According to the current inventory conducted in September 2012, the Preferred Route would cross an LWC unit that was identified, located adjacent to the Stallion WSA.”

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### Table: Response to Comment

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<td>7</td>
<td>Text has been modified in Section 3.12.4 of the FEIS as follows: Last sentence of first paragraph on page 3-266 “Citizen’s Wilderness Inventory Units have been reviewed as part of the inventory of Lands with Wilderness Characteristics on BLM lands.” The following CWI units would not be crossed by the preferred route: Padillo Gonzales, Chupadera Wilderness Addition, Penasco Canyon, Sierra de las Uvas, Nutt Mountain, and Goodsight Mountains. The Preferred Route would traverse the Cibola Canyon, Stallion, Sierra de la Cruz, and Lordsburg Playas North CWI units; however, there are existing unpaved roads within these units. The Preferred Route would also cross the Veranito but it would be located along the edge of this CWI unit where there are existing unpaved roads. The Magdalena Mountains (2 and 3), Nutt Mountain, and Massacre Peak CWI units would be crossed by the Preferred Route; however, it would parallel an existing 345 kV transmission line and associated access roads within these units. Per guidance in Conducting Wilderness Characteristics Inventory of BLM Lands Manual (MS-6310), all BLM lands with proposed applications need to be inventoried to identify lands with wilderness characteristics, which would support a citizen’s wilderness inventory proposal. Within the SunZia study corridors, the Nutt Mountain LWC unit in New Mexico was identified based on the manual (MS-6310), and would be crossed by one of the SunZia transmission line alternative routes (not the Preferred Route). Also as stated in the FEIS (Section 3.12.4) as follows: “According to the current inventory conducted in September 2012, the Preferred Route would cross an LWC unit that was identified, located adjacent to the Stallion WSA.”</td>
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The DEIS acknowledges the potential impacts as discussed. Regarding fire management in particular, the Sunrise Powerlink project was constructed in a highly fire-prone landscape. Although fire is also a vital part of ecosystem function in many vegetation communities in the SunZia project area, fires in the Aravaipa Canyon area are much lower in frequency and intensity than those used as an example for Sunrise Powerlink. Vegetation management to reduce the risk of unplanned fire occurrence as well as the threats fire would pose to the project itself will be in compliance with all applicable standards and policies, at an appropriate level for affected vegetation communities, while attempting to minimize impacts to those vegetation communities. The use of fire would not necessarily be precluded by the presence of a transmission line, but the Project would require consideration during development of a burn plan.

The DEIS does not state that there would be a 100-foot buffer around conductors where fire would be suppressed. Rather, this section discusses the minimum distances at which fire crews must remain from an energized line to avoid the risk of electrocution, creating an area where fire suppression could not occur.
Habitat fragmentation, erosion, and other direct or indirect impacts that may occur are discussed in the DEIS throughout Section 4.6 for each affected resource, and noted in the discussion of alternatives (Section 4.6.5). Access road design and maintenance would minimize the risk of erosion, and some roads may be closed to public use at the discretion of the landowner. Locations for potential road closure would be identified in the final POD. The proposed Lower San Pedro River Collaborative Conservation Initiative (discussed in Section 4.6.4.6), which may include lands managed as a National Wildlife Refuge, continues to be developed. The current proposal is based on a study area 2 miles on either side of the river, beginning at The Narrows to the south and extending northward to the Gila River confluence beyond the SunZia project area. All alternatives for SunZia would cross portions of the Collaborative Conservation Initiative study area. The BLM preferred alternative would cross the study area approximately 0.5 miles north of The Narrows, near the southern boundary of the study area. After crossing the river, the BLM preferred alternative is located more than 2 miles from the river, with the exception of a brief approach to 1.9 miles near the town of Redington. Impacts to biological resources from SunZia would not change as a result of establishing the Collaborative Conservation Initiative.

Per guidance in Conducting Wilderness Characteristics Inventory of BLM Lands Manual (MS-6310), all BLM lands with proposed applications need to go through an inventory for lands with wilderness characteristics which would support a citizen’s wilderness inventory proposal. The only potentially affected LWC inventory units in Arizona that were identified based on the manual (MS-6310) are within the Muleshoe area and would be crossed by Subroute 4C1 (not the BLM Preferred Route). Subroute 4A (links B153a and B153b) would not cross any portion of the Pinaleños CPW unit according to GIS data provided. Also please see text change regarding LWC inventory response to Comment No. 7.

The intent of the mitigation measures included in Section 2.5 of the DEIS is to provide for implementation of mitigation for the entire project inclusive of non-federal and federal lands.
We recommend a suite of mitigation measures that may apply in numerous places along SunZia below. However, we want to emphasize that given the very significant impacts from SunZia along some parts of the route, it may be impossible to fully mitigate some impacts. Further, given our outstanding questions regarding the purpose and need for SunZia and our serious concerns about the impacts of SunZia, we emphasize that all of those recommendations are only applicable if the BLM chooses an action alternative as the preferred alternative in the Final EIS.

12. **Route selection**: If the BLM chooses an action alternative as the preferred alternative in the FEIS, the BLM should select a final BLM-preferred route that avoids as many impacts as possible. As noted above, avoiding impacts may be impossible in some areas where limited viable route options remain (such as in the Tucson area). Based on the information we have now, and among the routes included in the Draft EIS, we have identified the following subroutines that would have (relatively) lower impacts:

- **Rio Grande River crossing**: as noted in Section 11 (b) of these comments, Audubon New Mexico is submitting detailed comments on the Rio Grande River crossing and we support their recommendations on this issue.
- **Avoidance of CWI units in New Mexico**: SunZia should not cross CWI units. In some cases all of the routes in the DEIS would cross CWI units, increasing the importance of minimizing and offsetting impacts if they cannot be avoided. Among the routes presented in the DEIS, the BLM should select the following subroutines as the BLM-preferred route in the FEIS:
  - 1-25 crossing north of Truth or Consequences: the BLM should select subroutine A260 to avoid intersecting the Penasco Canyon CWI unit (subroutine A260 are in the BLM-preferred route in the DEIS).
  - Subroutines north of the proposed Midpoint Substation: the BLM should select subroutines A409, A410, A530, and A532 to avoid intersecting the Nut Mountain, Sierra de las Uvas, and Goodnight Mountains CWI units (subroutines A409, A410, A530, and A532 are in the BLM-preferred route in the DEIS). The BLM should also adjust subroutine A409 to avoid the Nut Mountain CWI unit (subroutine A409 currently runs along the edge of the Nut Mountain CWI unit). The BLM should also adjust subroutines A449 and A530 to avoid the Massacre Peak CWI unit (subroutines A449 and A530 run along the edge of the Massacre Peak CWI unit).
  - Lordsburg Playa area: the BLM should select subroutines B160a and B160b to avoid intersecting the Lordsburg Playa North CWI unit (subroutines B160a and B160b are in the BLM-preferred route in the DEIS).

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**Response to Comment**

12. The BLM Preferred route would avoid the CWI units in New Mexico and Arizona as described by this comment. The BLM Preferred Alternative in Route Group 3 has been changed to include links B160a and B160b as modified and would avoid intersecting Lordsburg Playas North CWI unit. Micro-siting would be conducted and documented as part of the final POD after engineering and surveys have been completed.

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Additional information available at:
Best management practices (BMPs) have been included in the list of mitigation measures to be implemented as conditions of BLM’s Right-of-Way grant.

Helicopter installation (Selective Mitigation Measure-SE 13) would be a requirement in specific areas as defined in the final POD.
Minimizing road and trail construction: Where significant impacts exist but do not require helicopter installation, the BLM should require that road and trail construction be minimized, and that any temporary roads be fully reclaimed.

Limiting access to any roads and trails that are constructed: Where roads and trails are constructed, aggregative measures should be taken to limit access, including fencing, locked gates, use of natural terrain features to limit access, and security patrols.

Use of bird diverters: The BLM should require the use of bird diverters and other mitigation measures to decrease the likelihood of bird strikes in areas of known heavy bird use. These include, but are not limited to:
- The Rio Grande River crossing
- The Aravaipa Canyon region
- The San Pedro Valley

Off-site compensatory mitigation:

Because SunZia will cause significant impacts that cannot be fully avoided or minimized, on-site, the BLM should require a comprehensive off-site, compensatory mitigation plan. Compensatory mitigation plans have been required for several transmission lines, including the Sunrise Powerlink: San Diego Gas & Electric (SDG&E), the Sunrise Powerlink project proponent, provided funding to purchase and manage nine parcels of unique mitigation lands of nearly 10,000 acres of sensitive habitat in San Diego and Imperial Counties. These lands would compensate for impacts to sensitive vegetation and wildlife species during construction, operation, and maintenance of the project. In addition, at least 185 acres of offsite mitigation lands were purchased and will be managed by SDG&E to offset impacts in the Cleveland National Forest (Sunrise Powerlink Habitat Acquisition Plan and Habitat Management Plan, page 2).7

The compensatory mitigation plan for the SunZia project should include, but not be limited to, the following elements:

- Purchase and permanent protection of private or State Trust lands: The BLM should require the applicant to purchase land of high conservation value and protect it through a conservation easement or another mechanism that affords permanent protection from development of any kind. This should be required for impacts to numerous areas along the routes, including but not limited to:
  - CWI and CPW units intersected by SunZia routes in New Mexico and Arizona: if the BLM-preferred alternative in the NEPA includes any routes that intersect CWI or CPW units, the BLM should require purchase and protection of lands as mitigation.
  - The Aravaipa and San Pedro watersheds and region: The BLM should consider designating lands that have been previously identified as having significant conservation values, including approximately 36,000 acres in the Catalina-Gilauro corridor, which could be subject to conservation acquisition as part of a mitigation strategy.

- Administrative protection of BLM or Forest Service lands: The BLM and Forest Service should amend relevant land use plans to add administrative protective designations to land

7 Available at: http://www.epuc.ca.gov/environment/info/open/sunzia/habitat_access_habitat_management_plan_02110.pdf
of high conservation value. The management prescriptions for these protected areas should preclude development of any kind. These protections could include:
- Area of Critical Environmental Concern designations
- Managing BLM-identified lands with wilderness characteristics to protect those characteristics
- Special Recreation Management Area designations with a focus on non-motorized use

III. Relative merits of other proposed transmission lines in the region

There are numerous other proposed transmission lines in the region that may also carry renewable energy. These proposals include:
- Southline from Las Cruces, NM to Tucson, AZ;
- Centennial West Clean Line from central NM to the Los Angeles, CA area;
- Lucky Corridor from eastern NM to near Taos, NM; and
- Power Network NM from the same wind resource area where SunZia would originate (northeast of Corona, NM) to the Rio Puerco substation northwest of Albuquerque, NM.

It is unclear how these projects all relate to each other, and how their relative benefits and impacts compare. All of these proposals are at much earlier phases of the permitting process than SunZia, with only Southline having initiated the NEPA process and completed scoping. For this reason, we have even less information about these proposals than we do about SunZia.

Even with our limited information, however, it is apparent that some of these proposals could provide some of the same purpose and need/benefits that SunZia purports to provide. That said, the differences between the proposals and the potential that these could potentially be benefits to constructing all of them indicates that they should not simply be considered "interchangeable".

One thing that is clear is that some of the specific impacts that SunZia would cause could be avoided with these proposals – for example, none of these projects propose routes through the Awanipai Canyon region or the San Pedro Valley.

That said it is likely that all of these proposals will face significant challenges related to siting and impacts, and any of them could face similar flaws related to impacts, interconnections, financing, or other issues. These challenges could be equal to or greater than those facing SunZia – or they could be less than those facing SunZia.

We include discussion of these other proposals to emphasize that in general, managing agencies like the BLM, transmission developers, transmission planners like the Western Electricity Coordinating Council, stakeholders, and others involved in transmission and electrical generation planning should work to advance projects that provide the most benefits with the fewest environmental and other costs.

We do not have enough information on these other proposals to make a judgment at this time regarding whether any of them might provide similar purpose and need/benefits at lower environmental and other costs than SunZia. We urge careful consideration of all options as more information is developed and these other proposals advance further. Further, we urge that...
when a decision can be made, that managing agencies advance projects that provide the most benefits and fewest environmental and other costs.

IV. Need for additional opportunities for public input

Because of SunZia’s significant environmental and community impacts and uncertainty related to the final route selected, and because of the inadequate details in the DEIS described in Section II (a) of this letter, we strongly encourage the BLM to release either a Supplemental EIS and/or one or more supplemental documents for public review and comment prior to the release of a Final EIS. The Supplemental EIS and/or supplemental documents should provide, at a minimum, the following information:

1. Detailed maps of the final BLM-preferred route. These maps should be detailed enough to allow for public comments addressing impacts on the likely location of transmission towers, access roads, and associated construction, operation, and maintenance activities proposed for the project.
2. A detailed draft Construction, Operation, and Maintenance plan that describes proposed on-site features and activities designed to mitigate the project’s environmental and community impacts from the final BLM-preferred route.
3. A detailed draft off-site mitigation plan that describes proposed land protection and restoration goals—including, but not limited to, specific land acquisition, land exchanges, conservation designations, and associated mitigation funding commitments—to mitigate the project’s environmental and community impacts from the final BLM-preferred route.

Release of the Supplemental EIS and/or supplemental documents should be accompanied by a public review and comment period of at least 90 days and public meetings where the public is granted the opportunity to provide oral comments and have these included in the public record.

Conclusion

In closing, we want to reiterate that based on the incomplete information we have now, we think it is possible that there could be benefits to renewable energy from SunZia, but we have serious concerns regarding the relative amount and importance of those benefits, and even greater concerns regarding the environmental impacts SunZia would cause.

In addition to the above recommendations, our organizations are committed to continuing to explore the full range of mitigation strategies that may help minimize this project’s environmental and community impacts. To that end, we will be providing the BLM, project proponents, and members of the public with additional information and recommendations throughout the process of finalizing the project’s EIS and ROD. We invite continued dialogue and suggestions from the BLM, project proponents, and members of the public as to how we could be most helpful in this regard.

Sincerely,

Alex Dana, Renewable Energy Associate
The Wilderness Society
1660 Wynkoop St., Suite 850

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<th>1614</th>
<th>Response to Comment</th>
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<tr>
<td>21</td>
<td>The BLM Preferred route has been selected as modified, and is documented in the FEIS. Public comments received during the 90 day public review of the DEIS have been addressed in the FEIS. Detailed maps, POD, and mitigation plans will be subject to final approval by BLM and other land management agencies and local authorities prior to construction.</td>
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Denver, CO 80220

John Shepard, Senior Adviser
Sonoran Institute
44 E. Broadway, Suite 350
Tucson, AZ 85701

Daly Edmunds, Regional Policy Coordinator
Avanchan Rockies
155 N. 7th Street
Laramie, WY 82070

Gary Graham, Lands Program Director
Jeremy Lewis, Transmission Policy Analyst
Western Resources Advocates
2260 Baseline Rd. Suite 200
Boulder, CO 80302

Judy Calman, Staff Attorney
New Mexico Wilderness Alliance
242 Truman St. NE #B-1
Albuquerque, NM 87108

Ian Dowdy, AIFCP, Conservation Outreach Associate
Arizom Wilderness Coalition
PO Box 13524
Phoenix, AZ 85060-3524

Helen O'Shea, Director, Western Renewable Energy Project
Natural Resources Defense Council
111 Sutter Street, 20th Floor
San Francisco, CA 94111-3838

Attachments
- Attachment 3: GIS data for New Mexico Wilderness Alliance Citizens’ Wilderness Inventory units (on CD-ROM)
- Attachment 4: GIS data for Arizona Wilderness Coalition Citizen-Proposed Wilderness units (on CD-ROM)

SunZia Southwest Transmission Project
Other Agency and Non-Government Organization Comments

Final Environmental Impact Statement
and Proposed RMP Amendments

14
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<td>1</td>
<td>The Preferred Route (Link A161) would parallel an existing 345kV transmission line which would provide a reduction in ground disturbance because the existing transmission road would be used for Project construction. The alternative (Link A161b) would result in higher visual impacts because it would be located within close proximity to a cluster of residences in the Willow Springs subdivision where there is no existing utility corridor as discussed in Section 4.9.3.1 of the DEIS. Link A161b would impact the Socorro Springsnail in the Torreon Spring complex as described in Section 4.6.4.5 of the DEIS.</td>
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Willow Springs Ranch Phase I Owners Association, Inc.

August 22, 2012

Bureau of Land Management
New Mexico State Office
SunZia Southwest Transmission Project
P.O. Box 27115
Santa Fe, New Mexico 87502

Reference: SunZia route thru Willow Springs Ranch
Socorro County, New Mexico

Dear Mr. Garcia:

The Willow Springs Ranch Phase I Owners Association, Inc. (WSRPOA) members have previously voted in 2010 to oppose the proposed route thru our Ranch development in Socorro County, New Mexico. The vote was communicated to SunZia then and it appears to have had no consideration or effect whatsoever since the published preferred route is thru the center of our owners ranches.

Please be advised that the route following A161 is totally unacceptable to the WSRPOA ranch owners, the route following A161b is more acceptable if the transmission line must go thru the WSRPOA at all. We propose the line follow 101a, then go to line 161b, then reconnect with line E211 continuing its northward track past the west side of Socorro.

SunZia Map Source: [http://www.sunzia.netmap_pdfs/sz_map_mm_deis.pdf](http://www.sunzia.netmap_pdfs/sz_map_mm_deis.pdf)

Ranch owners over the last dozen years have purchased their lots new, totally a combined investment of several millions of dollars. WSRPOA landowner’s main goals are ranching, retirement, investment, primary and secondary homes; these massive 300 hundred foot plus dual transmission lines thru the center of our development will completely destroy our owner’s property values.

All our property owners - not just the owners the actual lines are proposed to cross thru will be affected. All property owners within visual sight of these massive lines will have greatly reduced land values - affecting appraisals, resale’s, and esthetic looks.
Accordingly, the Willow Springs Ranch Phase I Owners Association, Inc. members have voted at its July 28, 2012 annual meeting to seek all remedies available to the association, including pursuing legal rights to protect and fairly compensate all affected members; if SunZia selects the route following A161 thru the center of Willow Springs Ranch.

Thank you for including this letter into the public commentary record and we hope our proposed minor route change will get adequate consideration.

Regards,

Lewis Benavides
President
Willow Springs Ranch Phase I Owners Association, Inc.
P O Box 204
San Antonio NM 87832-0204
LBenavides@aol.com
www.wsrpa.org

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U.S. Congressman Steve Pearce
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Socorro, NM 87801

New Mexico Governor Susana Martinez
400 Old Santa Fe Trail
Room 400
Santa Fe, NM 87501

Copy: Office of the Governor
U.S. Congressman Steve Pearce
111 School of Mines Road
Socorro, NM 87801

SunZia Southwest Transmission Project
Other Agency and Non-Government Organization Comments
From: Dave Simon  
To: SunZia Southwest Transmission Project  
Subject: Rio Grande Chapter, Sierra Club Comments on DEIS  
Date: Wednesday, August 22, 2012  
Attachments: 

Please accept the attached letter as public comment on the DEIS for the SunZia Transmission Project. Thank you!

Dave Simon  
Director, Rio Grande Chapter  
Sierra Club  
142 Truman Street, N.E., Suite C-1  
Albuquerque, NM 87108  
505-289-2015 cell  
dave@sierraclub.org  
http://sierraclub.org/

Via email to: NM-SunZiaProject@brno.gov

August 22, 2012

Adrian Garcia, Project Manager  
Bureau of Land Management, New Mexico State Office  
P.O. Box 27115  
Santa Fe, NM 87502-0115

Re: Draft Environmental Impact Statement, SunZia Southwest Transmission Project

Dear Mr. Garcia,

The Rio Grande Chapter of the Sierra Club (Rio Grande Chapter) appreciates this opportunity to comment on the SunZia Draft Environmental Impact Statement (DEIS). The Rio Grande Chapter represents approximately 7,000 members throughout New Mexico and El Paso, Texas.

Introduction and Project Need

SunZia proposes up to two 500 kV transmission lines running ~500 miles from central New Mexico to between Tucson and Phoenix, Arizona. These power lines would carry electricity—including, but not exclusively—electricity generated from renewable sources such as wind, solar, and geothermal.

The Sierra Club supports environmentally responsible development and use of renewable energy. The Sierra Club recognizes that expanded generation and use of renewable energy often requires associated infrastructure, including transmission lines. New and enhanced transmission lines can be critical to the development of renewable energy by accessing the interstate power grid and bringing power to market.

The Rio Grande Chapter believes that our nation's long-term energy future depends on a combination of improved energy conservation and efficiency, dispersed/distributed renewable energy generation, and renewable energy generated from large-scale facilities. But there is no question in our mind that further development of wind and solar power in New Mexico will benefit from increased transmission capacity, and that the ability to move renewable-generated electricity in New Mexico long distances will also benefit numerous states that seek to meet any form of a renewable power standard.

The Rio Grande Chapter believes that new transmission capacity embodied by the SunZia project is needed in New Mexico. Only a small percentage of New Mexico's renewable energy potential has been tapped and there are already significant “bottlenecks” with respect to the capacity to handle renewable energy and integrate it into the interstate power grid. This is certainly true with respect to the area in proximity to SunZia's eastern terminus in New Mexico.
Section 1.4 of the DEIS describes existing transmission congestion, and the need for increased available transmission capacity to meet future energy generation development. Also, recent projections from the Western Electricity Coordinating Council (WECC) in a table titled, “2022 Common Case Loads and RPS Requirements in WECC Region, Modified as needed for DG Assumptions” (http://www.wecc.biz/committees/BOD/TEPPC/20120106/Lists/Minutes/1/2022%20Renewables_FINAL_20120206.xlsx last visited October 2, 2012) show that approximately 55,765 GWh of new renewable generation will need to be added to the WECC Region (i.e., California, Nevada, Arizona, and New Mexico) between 2011 and 2022 in order to meet RPS. By comparison, DEIS Table 1-1 indicates a projected need for 58,654 GWh of renewables by 2020 and 70,794 GWh by 2025. The WECC analysis provides a more recent RPS analysis than Table 1-1, however, the WECC data presents similar results when compared with the DEIS data and largely substantiates the data that was presented in the DEIS.

The deliverability, destination, and cost-competitiveness of the electricity carried on the proposed SunZia transmission system are subject to future negotiations. Subscription of SunZia’s available transmission capacity is dependent on the customers of the transmission line (i.e., generators planning to sell energy) and their associated buyers (i.e., utilities, cooperatives, other energy consumers); therefore, it is unknown and speculative to predict which energy markets SunZia’s future (but currently unidentified) customers may serve. Further, electricity on the transmission system is in a constant state of fluctuation and is dependent on a number of factors (e.g., changes in energy demand, addition of transmission, addition of generation resources, fossil generation, project closures due to economics, age and regulations etc.). Future electrical paths for electricity transported by SunZia will be determined based on available transmission capacity and contractual arrangements in place at the time SunZia becomes operational.

### Comment Response

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<td>As stated in the DEIS (p. 1-7), “Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services...” and reiterated on p 4-274 of the DEIS, “As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service.” Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, “it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation” (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity.</td>
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Section 2.3.3.1 of the DEIS describes alternative transmission line routes that were considered and eliminated. The alternative routes located south of the Bosque or north of the Sevilleta National Wildlife Refuge were eliminated because they were not feasible. The southern routes would cross either wilderness study areas or military lands that were excluded for new rights-of-way. The northern routes were excluded because they would cross wilderness study areas or BLM exclusion areas. Construction of underground cables was analyzed in Section 4.16. The BLM determined that mitigation measures to be implemented would be effective for construction and operation of overhead transmission lines at the Rio Grande crossing.
Sandhill Cranes, Ross's and Snow Geese and over 370 other species of birds flock to the Refuge every year for both wintering and breeding. The Refuge is a tourist destination that attracts over 160,000 visitors a year and fuels a vital tourism industry in the economically vulnerable Middle Rio Grande Valley. The dense populations of birds draw birders, photographers, artists, and visitors of all types including hunters to the Bosque annually and contribute over $10.3 million in revenue to the nearby counties of Socorro, Bernalillo and Sante Fe. (Source: 138 Fish & Wildlife (2003). Banking on Nature: The Economic Benefits to Local Communities of National Wildlife Refuge Visitorship, Washington, D.C.)

The BLM-preferred route for SunZia would put a significant wildlife hazard directly in the flight path of large migratory birds, such as cranes and geese. These birds make daily flights along a 30-mile corridor from the Bosque south of Socorro to the specially planted farm fields, conservation lands and feeding grounds of the Ladd Gordon Waterfowl Refuge north of Socorro. Their flight altitude and the height of the proposed lines are in the same 100-150' range and would result in repeated collisions and potentially high bird mortality. We believe that the bird mortality study completed as part of the DEIS has significant uncertainty associated with it and significantly underestimates the bird mortality that would result from SunZia.

The Middle Rio Grande Conservation Initiative report, by contrast, called for extensive efforts to protect habitat for migratory birds and other wildlife, expand conservation and restoration on public and private lands, and capitalize on eco-tourism and heritage tourism associated with the Middle Rio Grande Valley (e.g. by establishing a Middle Rio Grande Birding Trail). While facilitating the development of renewable energy is certainly a Department of the Interior priority, routing SunZia through one of the most sensitive parts of the Valley for migratory birds also conflicts with the Department of Interior's own mission and goals as reflected in the Middle Rio Grande Conservation Initiative.

Transportation corridors, including, including long sections of the I-25, US 60 and US 385 corridors, offer many sweeping, unobstructed views of the Rio Grande Valley. In addition, the route of the Camino Real de Tierra Adentro National Historic Trail is found throughout the area. Impacts from SunZia on the Camino Real could be significant at the proposed river crossing areas (e.g. in the “Bosque City” area). Placing a massive transmission line in this vistaed corridor requires careful consideration of impacts to wildlife, open space, cultural resources, and local economies tied that are tied to the wildlife and the quality of the landscape—and it should be avoided.

BLM should not select any routes crossing the Rio Grande near the Bosque del Apache National Wildlife Refuge or in the 50-mile section of the Middle Rio Grande Valley between the Refuge and the Bernard/Ladd Gordon complex unless SunZia can be located underground (and provided such construction has acceptable environmental impacts). The Rio Grande Chapter recommends the BLM revisit the northern route alternative near Belen, which could connect the SunZia Substation to the east with the existing energy corridor west of I-25 and cross the Rio Grande via a line-dedicated bridge (but also avoid Sevilleta National Wildlife Refuge). Such a route would utilize existing...
Text has been modified in Section 3.12.4 of the FEIS as follows:

Last sentence of first paragraph on page 3-266

“Citizen’s Wilderness Inventory Units have been reviewed as part of the inventory of Lands with Wilderness Characteristics on BLM lands.”

The following CWI units would not be crossed by the preferred route: Padillo Gonzales, Chupadera Wilderness Addition, Penasco Canyon, Sierra de las Uvas, Nutt Mountain, and Goodsite Mountains.

The Preferred Route would traverse the Cibola Canyon, Stallion, Sierra de la Cruz, and Lordsburg Playas North CWI units; however, there are existing unpaved roads within these units.

The Preferred Route would also cross the Veranito but it would be located along the edge of this CWI unit where there are existing unpaved roads.

The Magdalena Mountains (2 and 3), Nutt Mountain, and Massacre Peak CWI units would be crossed by the Preferred Route; however, it would parallel an existing 345kV transmission line and associated access roads within these units.

Per guidance in Conducting Wilderness Characteristics Inventory of BLM Lands Manual (MS-6310), all BLM lands with proposed applications need to be inventoried to identify lands with wilderness characteristics, which would support a citizen’s wilderness inventory proposal. Within the SunZia study corridors, the Nutt Mountain LWC unit in New Mexico was identified based on the manual (MS-6310), and would be crossed by one of the SunZia transmission line alternative routes (not the Preferred Route) Also as stated in the FEIS as follows:

“According to the current inventory conducted in October 2012, the Preferred Route would cross an LWC unit that was identified, located adjacent to the Stallion WSA.”

The BLM Preferred Alternative has been modified to avoid the Lordsburg Playa using links B160a and B160b as modified Subroute 3A2. The
avoid the Monitor Peak CWI unit (substitutes A160 and A170 run along the edge of the Monitor Peak CWI unit).

- Lordsburg Playa area: the BLM should select subroutes B106a and B106b to avoid intersecting the Lordsburg Playas North CWI unit (subroutes B106a and B106b are in the BLM-patrolled route in the DEIS).

**Mitigation**

While, of course, a final alternative has not yet been selected, the Rio Grande Chapter believes the DEIS lacks sufficient information about mitigation approaches, and lacks explicit commitment to a range of measures that could off-set impacts from SunZia. We believe these measures should include (first and foremost) avoiding impacts if possible (see Route selection recommendations above), use of best management practices (BMPs) in construction and operations, and compensatory mitigation off-site.

Specifically, if an action alternative is forthcoming, the Rio Grande Chapter requests:

- A detailed Construction Plan and Maintenance & Operations Plan
- Use of BMPs for mitigating impacts of transmission line planning and development (e.g. aerial-assisted construction where possible, aerial avoidance and protection techniques for power lines, limits on roads and access).
- Off-site mitigation in the form of increased administrative protection for BLM and Forest Service lands, purchase in fee-simple and/or conservation easement of wildlife habitat and open space in important and sensitive locations (such as the Rio Grande Valley, lands near WSA's and/or CWIs, and state trust lands in Arizona), and projects with BLM and the National Park Service to protect and interpret sections of the Camino Real in the Middle Rio Grande Valley.
- Establishment of a dedicated source derived from SunZia revenues that can continue to fund investments in land conservation, wildlife protection, cultural heritage protection, and renewable energy education over the lifetime of the project.

**Conclusion**

The Rio Grande Chapter sees significant potential benefits from SunZia for the continued development of renewable energy in New Mexico. The DEIS, however, lacks complete information regarding the relative importance of SunZia for renewable energy development since it is not clear how much renewable energy will be curtailed, how the project relates to future electricity demand and other transmission projects, and what the economic impact of building the line will be on other significant economic sectors of the affected counties. In light of this uncertainty, the Rio Grande Chapter believes that it is especially important to require SunZia to carry a higher percentage of renewable-generated electricity and to create conditions for a net reduction in greenhouse gas emissions in terms of its own construction and of the power generation projects that it serves.

Concerns about the environmental impacts of SunZia would cause also mean that the Rio Grande Chapter cannot at this time support the BLM-proposed alternative to the DEIS, which

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<td>Please see responses to comment nos. 1-6.</td>
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Comment noted. Please also note that the degree of impact is not necessarily proportionate to the length of the transmission line route, as there are diverse conditions throughout this portion of Pinal County, as reported in the comparison of resource impacts in the DEIS (Table 2-15).

Although the project would traverse open spaces in Pinal County and in the viewsheds of residential land uses, where possible, the Project would parallel existing transmission lines or other linear features, which have already modified the setting, and thus visual impacts to open space and residences would be reduced.
Comment noted. Although other generation facilities could be constructed in Arizona, those projects would not fulfill the purpose and need for the Project, which is to transmit electricity from locations primarily in New Mexico and portions of southeastern Arizona to western power markets.
The SunZia project includes proposed 500 kV transmission lines and substations, but power generation projects are not part of the proposal, and the analysis of direct environmental effects of power generation projects is not part of the EIS studies. The cumulative effects of potential power generation projects, including the Bowie Power Station, are evaluated in the DEIS (Section 4.17) based on estimates of future energy development scenarios.
Several alternative routes connecting New Mexico and central Arizona were evaluated in the siting studies for the proposed SunZia 500 kV transmission lines conducted during the scoping process. Some of the alternatives (including the Preferred Alternative) were co-located along the existing TEP 345 kV transmission line corridor, which is considered a siting opportunity for new transmission lines. The Bowie Power Station site is located approximately 15 miles from the TEP 345 kV transmission line corridor, where it was permitted to interconnect with the existing TEP transmission system at the Willow-345 kV substation.
Comment noted. The DEIS analysis addresses impacts to conservation areas, wildlife travel corridors, and cultural resources, and identifies mitigation measures that would be effective to reduce or avoid the Project’s impacts to those areas.
5 Comment noted. Potential impacts would be addressed through Class III survey, and preparation and implementation of HPTP.

6 The BLM Preferred Alternative would not cross Cienega Creek. The BLM Preferred Alternative would cross the San Pedro River at location where the base of the tower structures can be constructed to allow a clear span above a large portion of the mesquite bosque, and therefore avoid clear cutting in the riparian zone.
Considerable effort was spent in literature searches for the effects of transmission lines and similar actions on aridland wildlife through habitat fragmentation. Temporary effects would occur during construction, but no information is available that clearly shows that the operation of a transmission line has a significant effect on species present in the Project area. The DEIS (Section 4.6.3.1) acknowledges that recreational vehicle use of access roads may cause an ongoing source of disturbance to wildlife. However, this is not anticipated to alter the viability of the linkage described in the comment. Gating, fencing, and road closures would be implemented as necessary or as required by the land owner, as provided for in standard and selective mitigation measures.

The potential effects of the Project on fire management are discussed in Section 4.7.

Comment noted
Mr. Adrian Garcia  
Re: Comment on Draft Environmental Impact Statement - SunZia Southwest Transmission Project  
August 22, 2012  
Page 7

- When the alignment crosses lands where Pima County is not the land owner, but is the active, on-the-ground land manager, Pima County requirements for and recommendations on suitable locations for the application of Standard and Selective Mitigation Measures will be accommodated.

- The project proponent and Pima County will seek mutual agreement on additional accommodations necessary to preserve the County’s ability to rely on lands that the County manages for purposes of accomplishing our SECP objective, and providing mitigation for our Section 10 Incidental Take Permit from the U.S. Fish and Wildlife Service where those lands are crossed by the SunZia Transmission Line. Any agreements reached must be codified and enforceable.

Thank you for the opportunity to comment on this project, and we look forward to continued participation in this process.

Sincerely,

C.H. Hucttleberry  
County Administrator

Attachments

cc: The Honorable Chairman and Members, Pima County Board of Supervisors  
Ray Suarez, Arizona State Director, Bureau of Land Management  
Brian Beller, Field Manager, Bureau of Land Management  
Linda Mayo, Director, Office of Conservation and Sustainability  
Sherry Ralther, Environmental Planning Manager, Office of Conservation and Sustainability  
Kerry_Baldwin, Parks Superintendent, Natural Resources, Parks and Recreation  
Julia Fanozh, Environmental Planning Manager, Office of Conservation and Sustainability  
Diana Durozio, Special Staff Assistant to the County Administrator
As stated in the DEIS (p. 1-7), “Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services...” and reiterated on p 4-274 of the DEIS, “As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service.” Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, “it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation” (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity.

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Comment noted.

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| 1   | As stated in the DEIS (p. 1-7), “Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services...” and reiterated on p 4-274 of the DEIS, “As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service.” Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, “it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation” (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity.

Several alternative routes connecting New Mexico and central Arizona were evaluated in the siting studies for the proposed SunZia 500 kV transmission lines conducted during the scoping process. Some of the alternatives (including the Preferred Alternative) were co-located along the existing TEP 345 kV transmission line corridor, which is considered a siting opportunity for new transmission lines. The Bowie Power Station site is located approximately 15 miles from the TEP 345 kV transmission line corridor, where it was permitted to interconnect with the existing TEP transmission system at the Willow-345 kV substation. |
| 2   | Comment noted |

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**SunZia Southwest Transmission Project**

**Other Agency and Non-Government Organization Comments**

**J-322**

**Final Environmental Impact Statement and Proposed RMP Amendments**
<table>
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<th>Comment Response</th>
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<td>See following page(s)</td>
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</table>
August 22, 2012

Adrian Garcia, Project Manager
Bureau of Land Management
SunZia Southwest Transmission Line Project
P.O. Box 27115
Santa Fe, NM 87502-0115
Via electronic mail to NMSunZiaProject@blm.gov

Re: Comments on Proposed SunZia Transmission Project DEIS

Dear Mr. Garcia:

The Coalition for Sonoran Desert Protection appreciates the opportunity to provide comments on the Draft Environmental Impact Statement (DEIS) for the proposed SunZia Southwest Transmission Line Project (SunZia).

I submit the enclosed comments on behalf of the Coalition for Sonoran Desert Protection, founded in 1998 and comprised of 40 environmental and community groups working in Pima County, Arizona. Our mission is to achieve the long-term conservation of biological diversity and ecological function of the Sonoran Desert through comprehensive land-use planning, with primary emphasis on Pima County’s Sonoran Desert Conservation Plan. We achieve this mission by primarily advocating for: 1) the protection and conservation of Pima County’s most ecologically rich areas, 2) directing development to appropriate land, and 3) requiring appropriate mitigation for impacts to habitat and wildlife species.

Recommendation – adopt the NO ACTION Alternative

We recommend that the BLM adopt the No Action Alternative which the National Environmental Policy Act of 1969 (NEPA) requires you to consider as a viable alternative. We believe that the balance of theoretical benefits of this proposal does not outweigh the considerable long-term, if not permanent, negative environmental impacts of developing and operating the proposed SunZia Transmission Line.

The environmental consequences of any of the other alternatives would result in such significant degradation and potentially irreversible harm to our natural environment that it would be impossible to mitigate for the adverse impacts caused by this proposal.

We fully support the comprehensive and detailed comments submitted by our member groups regarding the DEIS – those comments submitted by Defenders of Wildlife, Sky Island Alliance, Tucson Audubon Society, Sierra Club – Grand Canyon Chapter and others.
The Pima County Comprehensive Plan Update Regional Plan Policies, including the CLS were reviewed. The SunZia Project does not conflict with the CLS as stated in the comment because, as stated on page 36 of the Regional Plan Policies, “These policies apply to new rezoning and specific plan requests, time extension requests for rezoning, requests for modifications or waivers of rezoning or specific plan conditions, including substantial changes, requests for Comprehensive Plan amendments, Type II and Type III conditional use permit requests, and requests for waivers of the subdivision plat requirement of a zoning plan.” The SunZia Project will require none of the stated actions, and therefore is not in conflict with the stated goals or requirements of the CLS.
Please see comment No. 2 response above, the SunZia Project is not subject to the CLS, and therefore is not in conflict with the stated goals or requirements established.

<table>
<thead>
<tr>
<th>CLS Categories</th>
<th>SunZia Routes Through Pima County</th>
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<tbody>
<tr>
<td></td>
<td>Preferred</td>
</tr>
<tr>
<td>Important Riparian</td>
<td>24 acres</td>
</tr>
<tr>
<td>Biological Core Management</td>
<td>838 acres</td>
</tr>
<tr>
<td>Multiple Use Management</td>
<td>124 acres</td>
</tr>
<tr>
<td>Special Species Management</td>
<td></td>
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</table>

Important Riparian Areas constitute the most biologically sensitive of CLS lands. They are "critical elements of the Sonoran Desert where biological diversity is at its highest... They are valued for their higher water availability, vegetation density, and biological productivity. They are also the backbone to preserving landscape connectivity." 1 Pima County guidelines recommend a landscape conservation objective of 95% undisturbed natural open space for Important Riparian Areas.

1 See Pima County's Comprehensive Land Use Plan and proposed Multi-Species Habitat Conservation Plan permit documents at: http://www.pimaazgov.com/Departments/Planning/Comprehensive-Plan/PDFs/Comprehensive-Plan%20Final%20Revisions%2009-16-2010.pdf
Biological Core Management Areas are "those areas that have high biological values. They support large populations of priority vulnerable species, connect large blocks of contiguous habitat and biological reserves, and support high value potential for five or more priority vulnerable wildlife species." Pima County guidelines recommend a landscape conservation objective of 80% undisturbed natural open space for Biological Core Management Areas.

Multiple Use Management Areas are "those areas where biological value is significant...and support large populations of vulnerable species, connect large blocks of contiguous habitat and biological reserves, and support high value potential habitat for three or more priority vulnerable species." Pima County guidelines recommend a landscape conservation objective of 60-80% undisturbed natural open space for Multiple Use Management Areas.

Special Species Management Areas are "areas defined as crucial for the conservation of specific native flora and fauna species of special concern to Pima County. Currently, three species are designated as Special Species: cactus ferrugineus pygmy-owl, Mead's spotted owl, and southwestern willow flycatcher." This designation is an overlay on top of the other CEM land designations. Pima County guidelines recommend "at least 80 percent of the total acreage of lands within this designation shall be conserved as undisturbed natural open space and will provide for the conservation, restoration, or enhancement of habitat for the affected Special Species. As such, land use changes will result in 4:1 land conservation (i.e., four acres conserved for every one acre developed) and may occur through a combination of on- and off-site conservation inside the Special Species Management Area. The 4:1 mitigation ratio will be calculated according to the extent of impacts to the total surface area of the percent of any parcel designated as Special Species Management Area."

Table 2. Acres of Pima County's Special Species Management Areas that would be impacted by typical 400-foot right-of-way associated with SunZia routes.

<table>
<thead>
<tr>
<th>Overlap with CLS Categories</th>
<th>SunZia Route 4C2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Important Riparian</td>
<td>284 acres</td>
</tr>
<tr>
<td>Biological Core Management</td>
<td>88 acres</td>
</tr>
<tr>
<td>Multiple Use Management</td>
<td>473 acres</td>
</tr>
<tr>
<td>Areas outside CLS</td>
<td>3 acres</td>
</tr>
</tbody>
</table>

Finally, Critical Landscape Connections are another important component of the CEM. They are "broadly defined areas that provide connectivity for movement of native biological resources but which also contain potential or existing barriers that tend to isolate major conservation areas." Two of the Critical Landscape Connections are "across the 1-10/Santa Cruz River corridors in the"
A discussion of conservation easements in the project study corridor has been added to the FEIS, Section 4.10.5 -

Additional discussion on conservation efforts has been added to the FEIS, including reference to the properties discussed in the comment (Section 4.6.4.6).

Please see response to comment 5.
Comment noted. The DEIS was made available for public review and comment on May 25, 2012. The BLM held ten public meetings and scheduled a 90-day public comment period that ended on August 22, 2012. In total, the public scoping for the SunZia project has included a total of 22 public meetings and 255 days of public comment.

A 45-day public comment period is generally the time provided for a DEIS. The BLM’s planning regulations and guidance require a minimum 90-day public comment period for land use plan amendments. The SunZia project may involve several BLM land use plan amendments thus the 90-day comment period was provided. The SunZia DEIS comment period met BLM requirements and afforded interested parties opportunity and time to review the document and submit substantive comments. In addition, the BLM regulations implementing the National Environmental Policy Act regulations require that all substantive comments received before reaching a decision must be considered to the extent feasible. This means that any substantive comments received after the DEIS 90-day comment period and before BLM issues a Final EIS will be considered as much as possible.

<table>
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<tr>
<th>Comment</th>
<th>Response</th>
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<tbody>
<tr>
<td>7</td>
<td>SunZia is a highly controversial project. In addition to the concerns highlighted above, we are concerned with the quality and nature of the public process that has been conducted by the BLM for the SunZia project to date. As such, BLM should provide additional opportunities for meaningful public engagement leading up to the Final EIS, so as to comply with the intent and purpose of NEPA issues and input gathered from such public engagement should be used by BLM to inform and guide its decision making process. BLM should consider engaging the US Institute for Environmental Conflict Resolution or other professional mediators to ensure production communication and increase the likelihood of resolving outstanding conflicts. We appreciate the opportunity to submit these comments.</td>
</tr>
</tbody>
</table>

Sincerely,
Carolyn Campbell
Executive Director
August 22, 2012

Adrian Garcia, Project Manager
Bureau of Land Management
SunZia Southwest Transmission Project
P.O. Box 27115
Santa Fe, NM 87502-6116

Dear Mr. Garcia,

These comments are being submitted in response to the Draft Environmental Impact Statement (DEIS) for the proposed SunZia Southwest Transmission Project (“Project”). Sky Island Alliance (SIA) is a non-profit conservation organization dedicated in the protection and restoration of the 60 million acres of native species and habitats in the Sky Island region of southeastern Arizona, southwestern New Mexico, and portions of Sonora and Chihuahua in northern Mexico. SIA works with volunteers, scientists, land owners, public officials, and government agencies to establish protected areas, restore healthy landscapes, and promote public appreciation of the region’s unique biological diversity.

Due to the large file size, a hard copy of this letter that includes the referenced figures and appendix is being sent via ground mail. Thank you for your consideration of these and all other relevant issues. Please continue to include SIA as an interested party on this matter and direct all future public notices and documents to me at the address below.

Jenny Neeley
Conservation Policy Director & Legal Counsel
Sky Island Alliance
305 E. University Blvd, Ste. 270
Tucson, AZ 85705
P: 520.624.7080 x27
F: 520.791.7705
jenny@skyislandalliance.org
August 22, 2012

Adrian Garcia, Project Manager
Bureau of Land Management
SunZia Southwest Transmission Project
P.O. Box 57115
Santa Fe, NM 87502-0115

Re: Draft Environmental Impact Statement (DEIS) for the proposed SunZia Southwest Transmission Project

Dear Mr. Garcia:

These comments are being submitted in response to the Draft Environmental Impact Statement (DEIS) for the proposed SunZia Southwest Transmission Project ("Project"). Sky Island Alliance (SIA) is a non-profit conservation organization dedicated to the protection and restoration of the rich biological diversity of native species and habitats in the Sky Island region of southeastern Arizona, southwestern New Mexico, and portions of Sonora and Chihuahua in northern Mexico. SIA works with volunteers, scientists, landowners, public officials, and government agencies to establish protected areas, restore healthy landscapes, and promote public appreciation of the region’s unique biological diversity.

SIA is a membership-based, volunteer organization, with over 1,000 members and 250-300 active volunteers in the region. To date, we have logged over 10,000 volunteer hours on conservation projects in the region, including monitoring regional wildlife and the movement corridors they use, restoring healthy landscapes, participating in agency planning processes, and working with many different stakeholders to protect this unique biodiversity of this region.

We appreciate the opportunity to comment on this proposed Project. We incorporate by reference these comments SIA submitted jointly with Defenders of Wildlife, as well as those comments submitted by the Casas del Bajo Community, the Tucson Audubon Society, the Sierra Club—Grand Canyon Chapter, and the Coalition for Sooner-Desert Protection, which we strongly support. We offer the following additional comments for the agency’s consideration, focusing specifically on the potential impacts of this Project on the connectivity and overall resiliency of the Sky Island region.

The "No Action" alternative is the only appropriate choice for this Project. The only action alternatives considered in the DEIS are likely to have extremely significant and unacceptable adverse impacts on either the lower San Pedro Valley or the CPU area, both of which are widely recognized for their rich biological diversity and provide critically important habitat for dozens of sensitive species. This project will also likely have significant impacts on the connectivity between the habitat, potentially impacting the long-term resiliency of the Sky Island region. However, the DEIS does not adequately assess these potential impacts. The DEIS also fails to sufficiently analyze impacts to sensitive and special status species native to the Sky Island region that may be affected by the Project.

Comment noted
In addition to these deficiencies, the DEIS is also fundamentally flawed because it fails to consider a range of reasonable alternatives that resolve the stated problems and needs for this Project, in violation of the National Environmental Policy Act (NEPA) and its implementing regulations. Finally, the cumulative impacts analysis included in the DEIS is inadequate, particularly as it relates to the growing effects of climate change in this region.

1. The Only Action Alternatives Presented For This Project Are Likely To Have Significant And Unacceptable Adverse Impacts On Key Wildlife Habitat.

The only action alternatives presented for this project are likely to have extremely significant and unacceptable adverse impacts on either the lower San Pedro Valley or the Aravaipa watershed, both of which are widely recognized for their ecological value, providing key habitat for many species native to the Sky Island region, including numerous special status species. A map of sensitive areas and adjoining linkages is attached as Figure 1.

A. Proposed routes through the lower San Pedro Valley

The lower San Pedro River Valley supports one of the last major free-flowing rivers in the desert southwest and, as such, is important habitat for many species and a key migratory corridor for neotropical birds. It is a world-renowned birding area and an important tourist destination. The Sun Pedro also supports the greatest diversity of mammal species in North America, including mountain lion, black bear, cougars, javelina, fox, coyote, bobcat, three kinds of opossum, mule and white-tailed deer, ringtail, raccoon, bobcat, beaver, porcupine, black-tailed prairie dog, and 24 species of bats, as well as many other smaller or lesser known mammal species. In addition, the San Pedro River Valley provides habitat for a great diversity of snakes and is an important migratory byway.

Recently, the lower San Pedro River Valley has been proposed by the U.S. Fish and Wildlife Service (USFWS) for the establishment of a new National Wildlife Refuge and Collaborative Conservation Initiative (CCI).

B. Proposed routes through the Aravaipa watershed

The Aravaipa Canyon is nationally recognized as one of Arizona’s most valuable biological areas. It is known for its scenic towerings cliffs, lush riparian vegetation, multiple species of native fish and wildlife, and its unique beauty. The perennial flow of Aravaipa Creek offers numerous mountain terrain, three kilometer areas, and maintain migratory corridors for both large mammals and birds, making it a crucial component to maintaining biodiversity and ecological integrity in southeastern Arizona. The Nature Conservancy recently conducted a detailed cumulative effects analysis for this Project that focused on the relevant Aravaipa Mountains' wildlife complex and found that, in


Comment Response

1 Comment noted.

2 Comment noted. The appendix provided by Sky Island Alliance was reviewed during preparation of the DEIS.
Section 2.4.10.1 of the DEIS describes the methodology used to provide an estimate of potential ground disturbance associated with access roads that would be associated with each of the alternative transmission line routes. This model identifies a ground disturbance ratio (acres per mile based on level of existing access and slope), which was applied to every 1/10th of one-mile for each of the Project alternatives to estimate ground disturbance. Ground disturbance associated with access road construction, as well as, other ground disturbing construction activities (e.g., structure pads, tensioning and pulling sites, temporary work areas etc…) were used to assess direct, indirect and cumulative effects to resources throughout the Project Study Corridors.
Effects to be considered in an environmental impact statement include "ecological (such as effects on natural resources) and on the components, structure, and function of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative." Note the emphasis may include among other things, "growth inducing effects and other effects related to induced changes in the pattern of land use, population density on growth rate, and related effects on air and water and other natural systems, including ecosystems."

When discussing the significance of a project's effects, the agency must consider both the context and intensity of the action and its effects. Consideration of the context of a project acknowledges that the significance of an effect "varies with the setting of the proposed action" and that requires consideration of several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. When considering context, both short and long-term effects are relevant.

When considering the intensity of the effect, some of the factors to consider include: "unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. The degree to which the effects on the quality of the human environment are likely to be highly controversial; The degree to which the possible effects on the human environment are highly uncertain or involve unique, or unknown risks. The degree to which the action may cause loss or destruction of significant scientific, cultural, or historical resources. [...]] The degree to which the action may adversely effect an endangered or threatened species or habitat that has been determined to be critical under the Endangered Species Act; among others."

NEPA implementing regulations require agencies to "ensure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements." In order to fulfill the purpose of NEPA, the information used as the basis for the analysis of a project's effects "must be of high quality. Accurate scientific analyses, expert agency comments, and public scrutiny are essential to implementing NEPA." Implementing regulations require that an EIS is "supported by evidence that agencies have made the necessary environmental analyses." While conducting the necessary analyses, "the agency shall make every effort to disclose and discuss at appropriate points in the draft statement all major points of view on the environmental impacts of the alternatives including the proposed action."

With the effects analysis, NEPA imposes a duty on federal agencies to take a "hard look at environmental consequences" of a proposed action. Under NEPA, "conclusory remarks [and] statements that do not equip a decisionmaker to make an informed decision about alternative courses of action, or a court to review the Secretary's reasoning" are insufficient. The agency cannot just...
4.1 The DEIS (Table H-6, H-7, throughout Section 4.6) acknowledges the sensitivity of the portion of Subroutes 4A/B in the Galiuro Mountains. The lack of existing access in this area contributed to the decision to select Subroute 4C2c as the BLM preferred alternative. However, mitigation measures to prevent erosion, deposition of sediments into jurisdictional waters, and minimize adverse impacts to ESA-listed fish species would be required in any location.

4.2 Comment noted. The DEIS (Section 4.6) acknowledges that roads and road use can affect wildlife directly and indirectly. However, information regarding the study area or the majority of species present in the Project area is not available in detail with regard to the effects of roads.

4.3 The Noxious Weed Management Plan, Appendix B-2 of the POD, describes measures to survey for and control invasive plants within the Project area. The final version of this plan will include information on any site-specific concerns.

4.4 Locations of permanent or temporary access roads will be determined during detailed engineering, and would be presented in the final POD following the Record of Decision. The DEIS (Table 2-7) and FEIS provide estimates of the range of disturbance that may be required for access roads.

4.5 The FEIS (Section 4.6.3.1) notes that transmission lines can affect wildlife through several mechanisms. However, compared to other types of linear developments, transmission lines appear to be relatively porous to wildlife in the Southwest. No information is available to indicate that transmission lines and existing access roads form a barrier to or substantially impede movement of wildlife in the Southwest, although recreational or maintenance traffic can cause ongoing, intermittent disturbance.

4.6 The DEIS bases its statements on existing conditions, as described in Arizona’s Wildlife Linkage Assessment. This document discussed railways, canals, border security, highways, and major paved roads as the primary barriers to dispersal in the region. The DEIS does not state that impacts would not occur, but that transmission lines and access roads appear to be a relatively minor source of fragmentation, particularly within the referenced wildlife linkages.

4.7 The FEIS (Section 4.6.5.5) clarifies that the nearest known reproducing population of Jaguars is approximately 140 miles south of the United States-Mexico border. No portion of proposed critical habitat for the Jaguar is within the Project area or north of Interstate 10. Potential effects to the Jaguar are addressed in detail through Section 7 consultation, underway with the USFWS.
4.8 The DEIS does not state that Ocelots can only use riparian woodlands, but that these would likely be areas with a higher potential for Ocelot use. These statements are based on the best available information on northern Ocelots, from studies conducted in Texas. Although Ocelots have been photographed on trail cameras in Sonora, detailed habitat use studies have not been conducted in the Southwest. Potential impacts to the Ocelot are addressed in detail through Section 7 consultation, underway with the USFWS.

4.9 Potential impacts to the Southwestern Willow Flycatcher are addressed in detail through Section 7 consultation, underway with the USFWS.

4.10 Section 7 consultation is ongoing with the USFWS, for the BLM preferred alternative only. No Spikedace or Loach Minnows are known to be present on the BLM preferred alternative, including downstream from any river crossings.

4.11 The DEIS does not discount the potential for impacts to amphibians. Preservation of stock tanks and natural water sources for wildlife use is included as a standard mitigation measure. Streams and major washes would be spanned, and would not be crossed by access roads. No Chiricahua Leopard Frogs are anticipated to occur along any alternative. The Ladder Ranch populations, described in the DEIS (Section 3.6.1.1), have been surveyed extensively over multiple years and have been found no closer to the Project than approximately 3.5 miles upstream in a single drainage, and much further in all other drainages. No other populations are known within reasonable dispersal range of any alternative.
Exotic plants provide habitat for wildlife that is adapted to native vegetation, and can have negative long-term effects on native biodiversity. Research has shown the importance of maintaining and managing roadsides across the landscape and the retention of areas in a roadless status.

According to the DEIS, DLJM estimated the potential impacts of the proposed road construction based on "the existing ground disturbance associated with existing access roads, or upgrading or constructing access roads. Estimates were based on assigned access levels that considered slope, miles of new or existing roads required, and potential new roads required. DLJ on 4-3. The DLJ also assumes in its analysis that the impacts resulting from access roads will be "temporary and short-term" because the Applicant promises to reclaim these areas within five years. DEIS at 4-3.

This exceedingly narrow analysis fails to take into account the fact that a road's impact can extend for hundreds of feet from its footprint. It also fails to take into account the fact that a road in this region, once created, is very likely permanent due to the extreme difficulties in determining the road and regrowing a forest in this region. These significant deficiencies call into question the reliability of the DEIS's assessment of impacts stemming from road construction.

In addition, the potential impacts of roads on hydrology, vegetation, and other resources are often considered in the planning process. The DEIS states that the assessment of impacts resulting from the proposed road construction is speculative at best, which is simply not adequate for the purposes of NEPA.

Recommendation: We recommend that the DEIS choose one of the impact categories in the table above: the DEIS should list the categories of impacts that are likely to result from road construction, including those impacts that are known to occur from roads in the region. The revised or supplemental DEIS also includes an assessment of the construction of access roads that remain on the ground permanently, which is far more likely and reasonable for future development than any other option.

C. The DEIS Fails to Adequately Consider the Likely Impacts to Wildlife Linkages

By definition, an intact healthy landscape allows wildlife to move between core areas of protected wilderness blocks where species, plant and animal, have sufficient resources to survive.
Impacts to the Tsuon-Tohohata-Santa Catalina Mountains Linkage are similarly dismissed because BLM asserts that "function of this linkage is compromised by the presence of existing linear developments, including the UPRR right-of-way and I-10." These features create a substantial barrier to wildlife movement through the area. BLM notes that the proposed project would represent a very small contribution to further fragmentation of the landscape.

There is no evidence that the impacts from the project, which includes the permanent placement of transmission line and construction of numerous, likely permanent, associated access and maintenance roads, represent a very small contribution of further fragmentation of the existing linkages. To the contrary, this project will likely significantly contribute to the ongoing fragmentation of these areas in the long term, particularly considering the permanent right-of-way that will be associated with the transmission line as well as the numerous access and maintenance roads that will very likely remain on the landscape permanently. A map of the affected wildlife linkages that illustrates the severe fragmentation already occurring is attached to Figure 3.

Recommendation: We strongly urge the BLM to select the "No Action" alternative. However, should BLM choose another alternative, it must, at a minimum, take a hard look at the existing fragmentation in these areas and meaningfully assess this project's contribution to that fragmentation in light of the significant impacts likely to result from the transmission line and associated roads.

D. The DEIS Fails to Adequately Consider the Likely Impacts to Special Species

Jaguars (Panthera onca): The jaguar is a large and wide-ranging species whose range extends from southern Arizona and New Mexico south throughout Central, and South America. The home range for male jaguars is between ten and fifty-three square miles, and the home range for female jaguars is between ten and thirty-seven square miles. However, jaguars have also been observed occurring in more urbanized areas with movements of 500 miles having been recorded. Jaguars are habitat generalists that utilize a wide range of habitat types. The past decade has witnessed a remarkable increase in the jaguar's historical range within the United States. In 1997 the USFWS listed the jaguar as endangered, and in August 2012, the USFWS proposed to designate 906,605 acres in the Sky Island region as Critical Habitat for this species.

Jaguar presence in southeastern Arizona during the 20th century is well-documented. Historical records show that at least six jaguars were killed or photographed in the Patagonia Mountains alone between 1904 and 1965. In addition, a jaguar was photographed in the Baboquivari Mountains in 1996, and from 2001 to 2009, biologists monitored at least two jaguars on several mountain ranges, including the Anza-Borrego Desert, Baboquivari, and Patagonia Mountains, as well as the Altar Valley. In 2005, SIA documented jaguar presence approximately 15 miles north of the border near the Patagonia Wilderness Area, and in 2010 and 2011, SIA documented two different jaguar movements through the Sierra Anzal Mountains. In June 2011, the Arizona Game and Fish Department (AZGFD) observed a litter of four jaguar cubs in the Sierra Anzal Mountains, and most recently, in November 2011, the AZGFD confirmed a litter’s jaguar sighting within the Sierra Anzal District of the Coronado National Forest.

This region is considered suitable habitat for the jaguar, and movement ranges across the Coronado National Forest generally provide important foraging and movement corridors for jaguars moving north through the Sonoran Desert into Arizona. With its newly proposed Critical Habitat designation, the USFWS officially considers the region to be "part" of the Sonoran Desert, and designating it as Critical Habitat is considered essential to the survival of the species.

The DEIS fails to provide complete and specific information regarding historic and current jaguar sightings and the corresponding habitats considered in the environmental impact statement. Therefore, instead of dismissing potential impacts, the BLM must analyze the impacts this project will have on vegetation and sickle-shaped canyons. In addition, this project will likely significantly contribute to the ongoing fragmentation of these areas in the long term, particularly considering the permanent right-of-way that will be associated with the transmission line as well as the numerous access and maintenance roads that will very likely remain on the landscape permanently. A map of the affected wildlife linkages that illustrates the severe fragmentation already occurring is attached to Figure 3.

Recommendation: We strongly urge the BLM to select the "No Action" alternative. Any increase in linear barriers, road densities, or other fragmentation of habitat in this region is likely to negatively impact this species. It is critical that habitat corridors be protected for the jaguar to ensure persistence of the species.

Ocelot (Leopardus pardalis): The ocelot is a predominantly nocturnal, neotropical species whose range extends from southern Arizona and northern Sonora in Mexico, south into the Sonoran Desert. Ocelot habitat varies greatly throughout its distribution, from tropical rain forest, pine forest, gallery forest, riparian forest, and deciduous forest. The Sonoran subspecies is found in Arizona and is classified as threatened in the United States. In 2011 and 2012, Arizona Game and Fish Department documented ocelots on several occasions in the Sonoran Desert, most recently in April 2012.

Despite the fact that ocelots are significantly more difficult to detect, particularly in low densities such as those found in the northern range, there have been multiple sightings in southeastern Arizona in recent years. The DEIS fails to provide complete and specific information regarding historic and current jaguar sightings and the corresponding habitats considered in the environmental impact statement. Therefore, instead of dismissing potential impacts, the BLM must analyze the impacts this project will have on vegetation and sickle-shaped canyons. In addition, this project will likely significantly contribute to the ongoing fragmentation of these areas in the long term, particularly considering the permanent right-of-way that will be associated with the transmission line as well as the numerous access and maintenance roads that will very likely remain on the landscape permanently. A map of the affected wildlife linkages that illustrates the severe fragmentation already occurring is attached to Figure 3.

Recommendation: We strongly urge the BLM to select the "No Action" alternative. Any increase in linear barriers, road densities, or other fragmentation of habitat in this region is likely to negatively impact this species. It is critical that habitat corridors be protected for the ocelot to ensure persistence of the species.
Road mortality has consistently been documented as the leading cause of ocelot decline, while areas of high road densities are likely to affect habitat preference by the cat. In 2008, the Arizona-Sonora Desert Museum recorded a road-killed ocelot on Highway 99 near Superior, Arizona. This ocelot was confirmed to be of wild origin. In addition to increased roadkill, high road densities contribute to habitat destruction, increased human disturbance, and risks of poaching.

Mountain ranges across the Coronado National Forest generally provide important habitat and migration corridors for ocelots moving north through the borderlands from Mexico into Arizona. The road-ocelot sightings reveal the geographic distribution of the endangered trans-boundary population and confirm the species' presence in Arizona.

The DEIS fails to provide complete and specific information regarding historic and current ocelot sightings in Arizona and regionally, and the information relied upon in the DEIS is outdated and inaccurate. For example, the DEIS states that, "Recent records of Ocelots in Arizona probably represent transient individuals." However, habitat is likely limited to riparian areas such as rangelands and uplands. In Arizona, routes created by human activity, and not limited to riparian areas, is increasingly being used by the ocelots recently documented in this region. Until more field research is conducted to study and determine ocelot habitat selection in this northern portion of the range, all vegetation types with dense cover and adequate prey base should be considered potential ocelot habitat.

The DEIS also states that "a dead Ocelot was recovered in 2009 from Gila County, Arizona," but also implies that it is unknown whether the cat was a feral or wild cat. DEIS at 3-56. In fact, this fact cannot be confirmed due to the lack of records, and any lack of verified records through the study corridor. Finally, the DEIS erroneously states that the "potential for the Ocelot occurring within the study corridor is low in Arizona." DEIS at 3-90. However, the best available scientific evidence indicates that the number of Ocelots occurring near or within the Project study corridor is not as low as stated.

**Recommmendation:** We strongly urge the BLM to choose the "No Action" alternative. Any increase in linear barriers, road densities or other fragmentation of habitat in this region is likely to negatively impact this species. It is critical that habitat and movement corridors are protected to the greatest extent possible to preserve genetic diversity and healthy stable populations of these widespread and critically endangered carnivores. Should the BLM choose the action alternative, the agency must consult with the USFWS and other wildlife agencies regarding consultation requirements for this species and mitigate consistent with current draft recovery plans, which is being developed by the USFWS for this species and will likely be finalized prior to the construction of SunZia.

Southwest Willow Flycatcher (Empidonax traillii extimus): The endangered southwestern willow flycatcher is found at various locations in the project area, with designated critical habitat along.

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**SunZia Southwest Transmission Project**

Other Agency and Non-Government Organization Comments

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**Sky Island Alliance**

**Final Environmental Impact Statement and Proposed RMP Amendments**

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**Recommmendation:** We strongly urge the BLM to choose the "No Action" alternative. Should the BLM choose the action alternative, it must consult with the USFWS regarding conservation measures for the Loma narrows and critical habitat in the project area. The USFWS has designated Critical Habitat for both the Loma narrows and critical habitat in the project area. The BLM must consider this information in making the decision.

Loma narrows (Trigo narrows) and critical habitat (Meda narrows): The Loma narrows are a critical habitat for numerous fish species that inhabit the project area. The BLM must consider the impacts of this project on these fish species.

**Recommmendation:** We strongly urge the BLM to choose the "No Action" alternative. Should the BLM choose the action alternative, it must consult with the USFWS regarding conservation measures for the Loma narrows and critical habitat in the project area. The USFWS has designated Critical Habitat for both the Loma narrows and critical habitat in the project area. The BLM must consider this information in making the decision.
numerous riparian corridors – the species’ breeding habitat – in the region (See Fig. 2). This species is threatened by habitat loss, particularly in these riparian areas.

**Recommendation:** We strongly urge the BLM to choose the “No Action” alternative. Should the BLM choose an action alternative, it must comply with the USEFS’ Section 7(a)(1) consultations on the BLM’s conservation measures for the northwestern willow flycatcher. Avoidance, minimization, and mitigation measures consistent with the recovery plan (and implemented in consultation with USEFS) may be warranted for any instances in which the transmission corridor crosses a bighorn or other riparian habitat area. Engineering of structures to span over flycatcher habitat is the preferred avoidance method, and vegetative preservation and/or restoration actions should be implemented where SunZia intersects with flycatcher habitat.

**Loach minnow (Thorogobus capito** and silveryside (Salticus fasciata)**: Aravaipa Canyon contains seven native fish species including the federally listed silveryside and loach minnow. The BLM notes that “no other Arizona stream is known to contain so many native fish in the absence of substantial numbers of introduced species.” The USEFS has designated Critical Habitat for both the loach minnow and silveryside in Aravaipa Canyon (See Fig. 2) and other areas in Arizona and New Mexico. Threats to both species include predation, groundwater pumping, surface water diversions, impoundments, and channelization. These changes to the flow regime may decrease the amount of available habitat.

The DEIS only considers impacts to areas where perennial water occurs. However, many fish species utilize ephemeral waters for dispersal, etc. The BLM must consider how the various fish species found in or near the study corridor may be affected for all water sources.

**Recommendation:** We strongly urge the BLM to choose the “No Action” alternative. Should the BLM choose an action alternative, it must comply with the USEFS’ Section 7(a)(1) consultations on the BLM’s conservation measures for the loach minnow and silveryside, and in consultation with USEFS’ implement avoidance, minimization, and mitigation measures consistent with the recovery plans and Critical Habitat designations for each species.

**Sensitive Frog Species:** The Sky Island region is considered a herpetological hotspot, as it contains the highest diversity of whippoorwill species and threatened species in the United States, supports rare and unique amphibians such as the Chiricahua leopard frog and Sonora tiger salamander, and plays host to amazing ecological phenomena such as the exploitive-breeding desert macaw assemblage that emerges from the ground during the monsoon and where up to ten species of toads and an occasional fiddlytoad congregate to rear and out-fled their offspring. Several sensitive frog species are known to occur in the project area (See Fig. 2).

Impacts from roads and road systems are varied but include direct mortality, vectors for invasive species and disease, loss of habitat, barriers to dispersal and other movements, reconfiguration in aquatic systems, access to illegal occupation areas, and noise and light impacts to behavior and movement.

The DEIS greatly downplays these and other potential impacts to amphibian species. In addition, the DEIS assumes that such species will only be affected in areas where perennial water occurs.

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**Notes:**
- BLR, 1988
The SunZia project includes proposed 500 kV transmission lines and substations, but power generation projects are not part of the proposal, and the analysis of direct environmental effects of power generation projects is not part of the EIS studies. The cumulative effects of potential power generation projects, including the Bowie Power Station, are evaluated in the DEIS (Section 4.17) based on estimates of future energy development scenarios. Although the potential benefits of increased renewable energy production have been recognized, it is acknowledged that mitigating negative environmental and economic impacts by an increase in renewable energy production is uncertain.

A reasonable range of alternatives was considered and analyzed in the DEIS that would meet the purpose and need. Several alternative routes connecting New Mexico and central Arizona were evaluated in the siting studies for the proposed SunZia 500 kV transmission lines conducted during the scoping process. Some of the alternatives (including the Preferred Alternative) were co-located along the existing TEP 345 kV transmission line corridor, which is considered a siting opportunity for new transmission lines. The Bowie Power Station site is located approximately 15 miles from the TEP 345 kV transmission line corridor, where it was permitted to interconnect with the existing TEP transmission system at the Willow-345 kV substation.

The Afton Solar Energy Zone (SEZ) (designated in the Final PEIS for Solar Energy, July 2012) is located within the NMSO Qualified Resource Area (QRA) as shown on Figure 4-3 of the DEIS. As part of the purpose and need of the SunZia Project, the Midpoint Substation would be a potential interconnection point for future solar energy development projects that may be located within this QRA, including the Afton SEZ. It is noted there is an existing 345kV transmission line between the Afton SEZ and the Midpoint Substation, as shown on Figure 4-1 of the DEIS.
While it is clear that, in light of these complaints both the agency and Applicant have tried to temper their description of this project's purpose and need, the fact remains that transmission of renewable energy continues to be put forth by both the BLM and the Applicant as the primary goal of this project. In fact, the BLM states that "The Renewable Energy Order (Secretarial Order 3285) - which makes the production, development, and delivery of renewable energy a top priority - as well as the energy goals of the EPAct, supports the need for the Project because implementing it would encourage the development of additional renewable energy sources." DEIS at 1-5 (emphasis added).

The Applicant’s also clearly states that transmitting renewable energy is a primary objective, asserting that "the project is needed to increase available transmission capacity in an electrical grid that is currently insufficient to support the development, access, and transport of additional energy generating resources, including renewable energy, in New Mexico and Arizona." DEIS at 17. The Applicant also states that "the Project would assist load-serving utilities in meeting the requirements to address energy delivery obligations to meet state renewable portfolio standards (RPS)" and that "the Project would be colocated with areas of undeveloped renewable resource potential to provide a path for energy delivery." DEIS at 1-5 and 1-6 (emphasis added).

The issue of whether the stated purpose and need for this project is misleading and incomplete is thoroughly addressed in comments SIA submitted jointly with Defenders of Wildlife, as well as those comments submitted by the Sierra Club, the Conservation Law Foundation, the Taos Audubon Society, and others. We concur with these comments and will not reiterate them here. However, assuming that the purpose and need of this project is in fact to transmit renewable energy, the agency has clearly failed to consider a reasonable range of alternatives that could potentially meet the stated purpose and need, in direct violation of NEPA implementing regulations.

This is evident because, while every single alternative considered intersects with the Applicant's planned Bowie natural gas plant - a non-renewable energy source - the DEIS does not include a single alternative that intersects with the Anaheim Solar Energy Zone, which was identified through the BLM’s own effort to identify areas for future renewable energy development. This blatant omission certainly lends additional credence to the accusation that the agency and the applicant have misled the public as to the true purpose and need of this project, but if this is not the case, the public can only assume that the BLM has failed to present a reasonable range of alternatives as mandated by NEPA.

Recommendations: According to NEPA implementing regulations, the purpose and need for this project must dictate the scope of reasonable alternatives presented in the DEIS. This is not the case with this project. If the purpose and need of this Project is to transmit primarily renewable energy, which seems to be the emphasis of both the agency and the applicant, then the scope of alternatives currently presented is clearly deficient and is violation of NEPA.

However, if the purpose and need is to simply increase transmission capacity for all types of energy, then the repeated statements and references to this project’s potential to transmit renewable energy in the analysis must be removed, including the presented rationale found throughout the DEIS that the negative environmental and economic impacts likely to result from this project will somehow be mitigated by an increase in renewable energy production. Either way, the DEIS does not meet the spirit or letter of NEPA as currently drafted and is inadequate.
Section 4.17.3.2 of the DEIS includes a comprehensive list and descriptions of past, present, future and reasonably foreseeable future activities within the cumulative analysis study areas. A useful analysis of the representative cumulative impacts for all resource categories was documented in Section 4.17.4 of the DEIS. The discussion of cumulative impacts of climate change was added to the FEIS as noted in response to Comment No.7.
Comment noted. Currently, BLM does not have an established mechanism to accurately predict the effect of resource management-level decisions from this project-specific effort on global climate change. Expanded discussion of global climate change impacts in the Project area has been added to Section 4.17.1.2 as follows:

“With respect to the consequences for the climate of the Project area, federal and state land managers, scientists, stakeholders, and partners at an August 2010 workshop noted that climate change models for the southwestern deserts predict general warming and drying with increasing precipitation variability year to year, leading to increasing conflicts between competing water uses. Workshop attendees also agreed that increasing environmental stress is expected as a consequence of shifting ecosystem boundaries and species distributions, expansion of non-native species, and other potential effects leading to increasingly unstable biologic communities (Hughson et al. 2011).

Record-setting wildfires are likely due to rising temperatures and related reductions in spring snowpack and soil moisture. Increased frequency and altered timing of flooding will increase risks to people, ecosystems, and infrastructure. Ozone pollution, which in many areas of the southwest increases as summer temperatures rise and clouds decrease, may also increase as a result of climate change. (US Global Change Research Program, 2012)

More intense, longer-lasting heat waves will result in increasing demands for air-conditioning, depleting electrical generation and distribution capacity, resulting in increased risks of brownouts and blackouts. In addition, electricity supply will be affected by changes in the timing of river flows and where hydroelectric systems have limited storage capacity and reservoirs, since increased year-to-year variability of precipitation is expected. (US Global Change Research Program, 2012)”
Likelihood that the SunZia Project will carry non-renewable energy sources, such as coal, that produce significant GHG emissions.

Thank you for your consideration of these and all other relevant issues. Please continue to include SIA as an interested party on this matter and direct all future public notices and documents to Jenny Neeley, Conservation Policy Director & Legal Counsel, at the address above.

Sincerely,

[Signature]

Jenny Neeley
Conservation Policy Director & Legal Counsel

See following page(s)
The ground disturbance estimates account for varying terrain conditions that would add additional disturbance for wider road path construction in areas of steep slopes.
WILLOW SPRINGS RANCH

up this area to increased public OHV access. Willow Springs Ranch is one of the most popular recreation areas in the state because of its proximity to the greater Tucson and Phoenix metropolitan areas. A new east to west corridor across this very scenic portion of the ranch would complete an internal loop within the boundaries of the existing ranch including off-road vehicle travel beyond the Project right-of-way.

The attached Google Earth diagram shows two major corridors of existing right-of-ways which are heavily traveled OHV routes through the Willow Springs Ranch (shaded in blue). There is an existing 500 kV transmission line operated by APS which opens up north south access near the eastern portion of the ranch (delineated in red on the right of the map). Two smaller transmission lines operated by WAPA are shown in red on the southern and western boundaries of the ranch. A major gas line corridor (shown on SunZia DEIS Map Volume Fig. M-10-4W utilities, [not shown on map in this document]) follows Link Identifiers C690, C691, and C693 running from the southeast to the northwest thus affording easy access across the southern region of the ranch. Both of these corridors are major routes for OHV and other vehicular traffic.

In order to be consistent with the BLM study objectives stated in paragraph 1, this route could be avoided by utilizing Crossover Links C670 or C674 if Subroute 4A or 4B are ultimately chosen or continuing along Link Identifiers C690 or C693 if any of the Subroute alternatives for 4C2 are chosen. This would maximize the utilization of existing right-of-way corridors “containing existing utilities and access for construction of new transmission lines would more likely reduce the potential for such impacts (scenic degradation and opening up access) to occur.”

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<td>4</td>
<td>Link C620 does not cross Class A scenery (Landscape Character Type 108). This link crosses Class B scenery associated with Landscape Character Types 203, 223, 225, and 235).</td>
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WILLOW SPRINGS RANCH

In conclusion, we would like to commend you for your efforts in communicating with the public on the multiple issues that a project of this magnitude brings forward. Please consider our comments when the final route is chosen. If you require further clarification or would be interested in a site visit, please do not hesitate to contact us.

Respectfully submitted,

Joachim Sacken, DVM
President-Willow Springs Cattle Co., Inc.
On behalf of the owners of Willow Springs Ranch

1926 Comment Response

See following page(s)
September 24, 2012
Bureau of Land Management
NM SunZia Transmission
attn: Adrian Garcia
PO Box 27115, Santa Fe.
New Mexico 87502

Dear Lead Agency,

In reviewing the current DEIS for the renewable energy powerline project, please revise to the original (2008) “Preferred Route” across New Mexico as “Preferred Alternative” for the eastern portion of the powerline. I specifically recommend Route numbers A1B1 and A300 (or alternatively, A230) as the Proposed Route for the SunZia DEIS.

It is wiser to follow a path cutting diagonally west-southwest from the new substation, then skirting past the northwest corner of White Sands Missile Range property just south of Highway 380, and turning immediately south, following the WSMR boundary to the point where the line must head west in order to cross the Rio Grande just south of Arrey, NM. Here are the reasons I request this route:

- It avoids all NWRs, WAs, WAs, ACEC, and conservation easements.
- It avoids relatively populated agricultural and scenic areas.
- It avoids the low-altitude migratory avian flyway through Rio bosques.
- The eastern-end route is shortest, causing the least land disturbance.

I understand the military puts up various objections to accepting the proximity of the powerline following outside their western boundary, but that is not their land, they have no jurisdiction there, and they have caused us all anguish enough in their destructive use of the “proving grounds” for long over half a century. Thus, let us protect life along the middle Rio Grande to the maximum extent by favoring the above option in the final ES.

Sincerely,

Kathryn Albrecht
San Antonio, NM, resident and
Officer, Rio Grande Agricultural Land Trust

1980 Comment Response
1 Section 2.3.3.1 of the DEIS describes alternative transmission line routes that were considered and eliminated. The southern routes (subroutes 1C1, 1C2 and 1C3) would cross either the wilderness study area that is excluded for new rights-of-way or the WSMR military lands.
The range of alternatives considered included potential transmission line routes that could provide electrical interconnections with renewable energy resources located primarily within the Qualified Resource Areas (QRAs) for wind energy, in south-central New Mexico, and the QRAs for solar energy located in southwestern New Mexico (e.g., BLM designated Afton Solar Energy Zone) and southeastern Arizona. Alternatives due west (through Globe) from the northern portion of the study corridors in New Mexico would not be practical or feasible to achieve this objective.
Section 2.3.3.1 of the DEIS describes alternative transmission line routes that were considered and eliminated. The alternative routes located south of the Bosque or north of the Sevilleta National Wildlife Refuge were eliminated because they were not feasible. The southern routes would cross either wilderness study areas or military lands that were excluded for new rights-of-way. The northern routes were excluded because they would cross wilderness study areas or BLM exclusion areas. As stated “The WSMR also requested the evaluation of a route that would continue north of the Sevilleta NWR, heading west to avoid the Sierra Ladrones Wilderness Study Area (WSA) and the Ladron Mountain/Devil’s Backbone Complex ACEC, before turning to the south and connecting with WSMR routes 1 and 2, west of the Rio Grande and south of the Sevilleta NWR. This route would not directly cross the Sevilleta NWR, but would cross a BLM right-of-way exclusion area and the Cibola National Forest. This (unnamed) route would be constrained to the east of the forest service land by the Sierra Ladrones WSA and the Sevilleta NWR, and located across the Cibola National Forest where there are no existing utility rights-of-way. According to the Cibola National Forest Land and Resource Management Plan, “(where) no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way” (1985). This route was eliminated because it would not be compatible with Cibola National Forest land management policies, and it would cross a BLM right-of-way exclusion area. Alternative Subroute 1A would fulfill a substantially similar function and purpose, as stated above.”

Comment noted. Bird use of the central Rio Grande is discussed in the DEIS (throughout Section 3.6), Appendix B1, and Appendix B2.

A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.
4 For the DEIS, simulation locations were selected to show a range of impacts to viewing locations including residences, recreation areas, and travel routes throughout the study area. The DEIS discloses impacts to viewers including residences, recreation areas, and travel routes, in particular high impacts have been identified for recreation users of the Rio Grande river crossing (Link E180), as stated in Section 4.9.3.1 of the DEIS. Also the river crossing was identified as Class A high scenic quality, which would result in a moderate-high impact for the Project.

5 As indicated in Section 3.14 in the DEIS, EO 12898 (U.S. Department of Housing and Urban Development [HUD] 1994) requires federal agencies to address high and disproportionate environmental impacts on minority and low-income populations. Should potentially significant and adverse impacts attributable to the proposed Project fall disproportionately on these populations, environmental justice impacts would result. As noted in Section 4.14, Table 4-20 of the DEIS, High impacts occur in areas where the Project could create direct, long-term, and significant impacts to existing environmental justice populations.

6 Comment noted

7 Comment noted
Comment noted. Criteria for the evaluation of alternatives considered but eliminated is described in Section 2.3.3 of the DEIS, “According to the BLM NEPA handbook, an alternative may be eliminated from detailed analysis if (1) it is ineffective (it would not respond to the purpose and need); (2) it is technically or economically not feasible; (3) it is inconsistent with management objectives for the area (i.e., does not conform with land use plans); (4) its implementation is remote or speculative; (5) it would be substantially similar in design (function and purpose) to another alternative already analyzed; and (6) it would have substantially similar effects to another alternative already analyzed.”

Although the BLM preferred alternative crossing location of the Rio Grande was not identified at the time that fieldwork for the bird collision risk study was performed, the study conducted by the University of New Mexico represents the best available information at this time. Mitigation measures to minimize the collision risk for all birds will continue to be considered, and the selection and placement of those mitigation measures will be identified in an Avian Protection Plan.
A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.
The statement that the project would be partially screened by vegetation is an accurate statement as demonstrated by the simulation. Clearing would occur at the crossing; however, due to existing vegetation that surrounds the project crossing the lower portion of the transmission line would be screened from the agency and approved KOP (viewpoint for simulation). Visual impacts were identified for the Rio Grande crossing KOP, as illustrated on Map 9-2E.

As indicated in Section 3.14 in the DEIS, EO 12898 (U.S. Department of Housing and Urban Development [HUD] 1994) requires federal agencies to address high and disproportionate environmental impacts on minority and low-income populations. Should potentially significant and adverse impacts attributable to the proposed Project fall disproportionately on these populations, environmental justice impacts would result. As noted in Section 4.14, Table 4-20 of the DEIS, High impacts occur in areas where the Project could create direct, long-term, and significant impacts to existing environmental justice populations.

The methodology of assessing impacts to environmental justice populations was applied consistently within rural and urban areas. As stated in Section 4.14.2, although the type of impacts to rural and urban areas would be similar in most cases (e.g., the condemnation of a residence), the level of impact was also determined according to the proximity and density of the environmental justice population to the potential impact. For example, rural residential properties could experience moderate impacts from a distance of two miles of the transmission lines, while a residence just outside a mile from the lines could experience low impacts because of the existing lines or the presence of other structures commonly associated with a built urban environment. For these reasons, populations within a 3-mile buffer are more likely to be affected by the Project (higher impacts occur up to a distance of three miles; noise and visual impacts dissipate at greater distances). Census tracts provide the most meaningful geographic unit to measure population components within the area of potential effects in rural areas, but the impacts are assessed according to inhabited structures within proximity to the Project corridor’s centerline. The results indicate higher and disproportionate impacts to urban areas, due to higher population densities in proximity to the Project.

The results of the analysis of social and economic impacts are described in Section 4.13 Social and Economic Conditions. Direct and indirect economic impacts are identified for New Mexico in Section 4.13.4.3 of the DEIS. It is estimated that between 1,419 and 1,488 direct and indirect jobs could be generated from construction and operation of the transmission lines within Route Group 1. It is estimated that Socorro and Sierra counties would benefit the most in Route Group 1, because they contain the majority of subroute mileage.
August 22, 2010

Adrian Garcia, Project Manager
Bureau of Land Management
SunZia Southwest Transmission Line Project
P.O. Box 27115
Santa Fe, NM 87502-2711

Re: Comments on Proposed SunZia Transmission Project DEIS

Dear Mr. Garcia,

Defenders of Wildlife (Defenders), the Coalition for Sonoran Desert Protection, Sky Island Alliance, and Tucson Audubon appreciate the opportunity to provide comments on the DEIS Environmental Impact Statement (EIS) for the proposed SunZia Southwest Transmission Line Project (SunZia).

Defenders is a nonprofit conservation organization dedicated to the protection of all native animals and plants of their natural communities, with over 100,000 members and supporters nationwide, including over 1,000 members in Arizona and New Mexico.

SunZia proposes to construct two parallel high capacity 500-kilovolt (kV) transmission lines that would span between 400 and 342 miles across federal, state, and private lands between central New Mexico and central Arizona. The Bureau of Land Management (BLM) is the lead federal agency for this project, while the project applicant, SunZia Transmission, LLC is a private company.

Transforming the nation’s electricity sources from polluting fossil fuels to clean renewable energy is an essential part of reducing greenhouse gas emissions and limiting the threat posed by global climate change. Defenders is committed to guiding our nation’s transition to clean energy in a way that protects wildlife and habitats by ensuring renewable energy and transmission projects are built “smart from the start” so as to avoid, minimize, and effectively mitigate for negative impacts to our environment, wildlife habitats, and other sensitive resources.

We recognize that new transmission lines will be needed in some cases to carry renewable energy to population centers, and create improved transmission capacity and reliability. However, renewable energy and associated transmission development are not appropriate everywhere on the landscape. Through review under the National Environmental Policy Act of 1969 (NEPA) and state siting regulations and processes are essential to determining which of the many proposed projects should be permitted to go forward. Especially clear scrutiny is warranted when proposed new transmission lines would impact areas of high conservation value.

When new transmission lines are proposed, they must serve a true need, and be appropriately located to avoid or minimize harm to wildlife, wildlife habitat, wilderness areas, and other important cultural and natural resources. Upon review of the DEIS for SunZia, we do not believe that any of the alternative routes are located to sufficiently avoid or minimize impacts to sensitive wildlife habitats and resources. The cumulative negative impacts of the project to areas of high conservation value outweigh the purported benefits of the project, and therefore it should not be permitted as currently conceived.

Sincerely,

[Signature]

Natural Headquarters
wvjpqj@defenders.org

[Address]

2100 Comment Response

| 1 | Comment noted |
The DEIS was made available for public review and comment on May 25, 2012. The BLM held ten public meetings and scheduled a 90-day public comment period that ended on August 22, 2012. In total, the public scoping for the SunZia project has included a total of 22 public meetings and 255 days of public comment. A 45-day public comment period is generally the time provided for a DEIS. The BLM’s planning regulations and guidance require a minimum 90-day public comment period for land use plan amendments. The SunZia project may involve several BLM land use plan amendments thus the 90-day comment period was provided. The SunZia DEIS comment period meets BLM requirements and affords interested parties opportunity and time to review the document and submit substantive comments. In addition, the BLM regulations implementing the National Environmental Policy Act regulations require that all substantive comments received before reaching a decision must be considered to the extent feasible. This means that substantive comments received after the 90-day comment period have also been considered before the Final EIS was issued.
II. We Support the No Action Alternative because proposed routes would adversely impact ecologically sensitive areas and wildlife resources

Defenders is unable to support any of the DEIS action alternatives due to unacceptable impacts to sensitive wildlife habitats and wild lands; therefore, we support the "no action alternative".

In our scoping comments, submitted on June 10, 2010, we clearly stated that any proposed route through the San Pedro River Valley or Aravaipa Canyon were unacceptable due to high levels of ecological sensitivity, and we requested that they be removed from further consideration. Not only were these areas removed from consideration in the DEIS, but a new route not disclosed in the scoping process, located on the west side of the San Pedro River Valley, has been put forward as the BLM's "preferred alternative".

As detailed in our scoping comments, the San Pedro River Valley is a globally significant area that is a well-documented migratory corridor for birds and other wildlife, and it contains designated critical habitat for several endangered species. Substantial public and private conservation investments have been made in the area. It is an area so special and ecologically valuable that it has recently been proposed by the U.S. Fish and Wildlife Service for the establishment of a National Wildlife Refuge and Collaborative Conservation Initiative - an effort "involving interested landowners, land managing agencies, local communities, nonprofit organizations, businesses and the public who share a vision of a healthy river system contributing to people's livelihood and a functioning, hydrologically healthy riparian corridor that supports a diverse and rich network of flora and fauna." The preferred alternative would run outside the new wildlife refuge, and in close proximity to the Saguaro National Park (east unit). This is not an appropriate area through which to route a major new energy corridor.

Also as detailed in our scoping comments, the greater Aravaipa-Cataño-Santa Teresa wild land complex is similarly unacceptable for such development and resulting habitat fragmentation. According to a cumulative effects analysis recently conducted by The Nature Conservancy (TNC), this wild land complex is second only in the Grand Canyon region in the Southwest in terms of size and relative intactness. The TNC cumulative effects analysis states:

"This table from this analysis is that the proposed transmission route projected to cross the Aravaipa-Cataño-Santa Teresa wild land complex is similarly unacceptable for such development and resulting habitat fragmentation. The preferred alternative would run outside the new wildlife refuge, and in close proximity to the Saguaro National Park (east unit). This is not an appropriate area through which to route a major new energy corridor.


[3] The Aravaipa-Cataño-Santa Teresa wild land complex is second only in the Grand Canyon region in the Southwest in terms of size and relative intactness. The TNC cumulative effects analysis states:

"This table from this analysis is that the proposed transmission route projected to cross the Aravaipa-Cataño-Santa Teresa wild land complex is similarly unacceptable for such development and resulting habitat fragmentation. The preferred alternative would run outside the new wildlife refuge, and in close proximity to the Saguaro National Park (east unit). This is not an appropriate area through which to route a major new energy corridor.

Per guidance in Conducting Wilderness Characteristics Inventory of BLM Lands Manual (MS-6310), all BLM lands with proposed applications need to be inventoried to identify lands with wilderness characteristics, which would support a citizen's wilderness inventory proposal. Within the SunZia study corridors, the Nutt Mountain LWC unit in New Mexico was identified based on the manual (MS-6310), and would be crossed by one of the SunZia transmission line alternative routes (not the Preferred Route). Also as stated in the FEIS as follows:

"According to the current inventory conducted in October 2012, the Preferred Route would cross an LWC unit that was identified, located adjacent to the Stallion WSA."
Scoping newsletters note the project proponent’s intent for the SunZia Project to facilitate renewable energy projects. As the Draft EIS for the SunZia project notes, the line, if built, would be subject to FERC Order 888 which requires owners of transmission facilities to offer services on a non-discriminatory basis. It is therefore not possible to guarantee that energy carried on the line, if approved, would derive exclusively or primarily from renewable energy sources. Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity.

Several alternative routes connecting New Mexico and central Arizona were evaluated in the siting studies for the proposed SunZia 500 kV transmission lines conducted during the scoping process. Some of the alternatives (including the Preferred Alternative) were co-located along the existing TEP 345 kV transmission line corridor, which is considered a siting opportunity for new transmission lines. The Bowie Power Station site is located approximately 15 miles from the TEP 345 kV transmission line corridor, where it was permitted to interconnect with the existing TEP transmission system at the Willow-345 kV substation.

The Afton Solar Energy Zone (SEZ) (designated in the Final PEIS for Solar Energy, July 2012) is located within the NMSO Qualified Resource Area (QRA) as shown on Figure 4-3 of the DEIS. As part of the purpose and need of the SunZia Project, the Midpoint Substation would be a potential interconnection point for future solar energy development projects that may be located within this QRA, including the Afton SEZ. It is noted there is an existing 345kV transmission line between the Afton SEZ and the Midpoint Substation, as shown on Figure 4-1 of the DEIS.
Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, “it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation” as stated in the DEIS (p.1-8).
Recent projections from the Western Electricity Coordinating Council (WECC) in a table titled, “2022 Common Case Loads and RPS Requirements in WECC Region, Modified as needed for DG Assumptions” (http://www.wecc.biz/committees/BOD/TEPPC/20120106/Lists/Minutes/1/2022%20Renewables_FINAL_20120206.xlsx last visited October 2, 2012) show that approximately 55,765 GWh of new renewable generation will need to be added to the WECC Region (i.e., California, Nevada, Arizona, and New Mexico) between 2011 and 2022 in order to meet RPS. By comparison, DEIS Table 1-1 indicates a projected need for 58,654 GWh of renewables by 2020 and 70,794 GWh by 2025.

The deliverability, destination, and cost-competitiveness of the electricity carried on the proposed SunZia transmission system are subject to future negotiations. Subscription of SunZia’s available transmission capacity is dependent on the customers of the transmission line (i.e., generators planning to sell energy) and their associated buyers (i.e., utilities, cooperatives, other energy consumers); therefore, it is unknown and speculative to predict which energy markets SunZia’s future (but currently unidentified) customers may serve. Further, electricity on the transmission system is in a constant state of fluctuation and is dependent on a number of factors (e.g., changes in energy demand, addition of transmission, addition of generation resources, fossil generation, project closures due to economics, age and regulations etc.). Future electrical paths for electricity transported by SunZia will be determined based on available transmission capacity and contractual arrangements in place at the time SunZia becomes operational.

Please see responses to comment Nos. 7, 8, and 9.
The range of alternatives considered included potential transmission line routes that could provide electrical interconnections with renewable energy resources located primarily within the Qualified Resource Areas (QRAs) for wind energy, in south-central New Mexico, and the QRAs for solar energy located in southwestern New Mexico (e.g., BLM designated Afton Solar Energy Zone) and southeastern Arizona. Alternatives due west from the northern portion of the study corridors in New Mexico would not be practical or feasible to achieve this objective. Please also see response to Comment No. 7.

Section 7 consultation is ongoing between the USFWS and BLM. Note that no alternative would cross or affect designated critical habitat for the Mexican Spotted Owl.

The USFWS and AZGFD are cooperating agencies for the SunZia Southwest Transmission Project, and will continue to collaborate in developing measures to minimize impacts to wildlife.
16 Measures to minimize unauthorized, recreational traffic on new access roads are described in the standard and selective mitigation measures for the Project. Implementation of these measures would be determined in the final POD, and would be at the discretion of the landowner or applicable agency.

17 Comment noted

18 The DEIS (Section 4.6.4.5) notes that roads or any other form of ground disturbance may negatively affect the Tucson Shovel-nosed Snake, directly or indirectly. No solar energy developments identified as reasonably foreseeable future actions in the cumulative effects analysis area would be sited within suitable habitat for the species (Section 4.17). The Project would not facilitate the development of renewable energy generation within the range of the species, as the western terminus (planned Pinal Central Substation) is located at the eastern edge of the species’ range. Energy transmitted by the Project would move east-to-west, and new facilities in Pima, Pinal, and Maricopa counties in Arizona would not interconnect to the Project.
Saguaros would be salvaged and transplanted, in accordance with state law and as noted in the standard mitigation measures developed for the Project. Mesquite bosque may be affected by the Project at the crossing of the San Pedro River, although the BLM preferred alternative crossing location was selected to minimize effects to any riparian habitat, including mesquite bosque. At this time, no reasonably foreseeable future renewable energy developments have been identified within suitable habitat for the species. See the response to comment 18 regarding future energy development in central Arizona.

Salvage of saguaros and agaves would be implemented as a standard mitigation measure. Additional measures to reduce the impacts to nectar-feeding bats, including the ratio of supplemental planting, would be developed in coordination with the USFWS during Section 7 consultation. Solar facilities are typically located in level valley bottoms that do not often support agaves or saguaros. Development of wind energy generating facilities in eastern Arizona and western New Mexico could result in cumulative impacts to agaves used by nectar-feeding bats. However, no such actions are identified as reasonably foreseeable within habitat that would support agaves. See comment 18 regarding energy development in central Arizona.
24. Section 7 consultation is ongoing with USFWS for the BLM preferred alternative, which does not contain habitat for the Gila Chub. If the BLM preferred alternative is modified or changed in a way that may affect the Gila Chub, consultation with the USFWS would be reinitiated.

25. Comment noted

26. Section 7 consultation is ongoing with USFWS for the BLM preferred alternative, and addresses impacts to the Southwestern Willow Flycatcher, its recovery, and critical habitat. As noted in the DEIS, no suitable nesting habitat for the Southwestern Willow Flycatcher is present on the BLM preferred alternative, although designated critical habitat is present on the Rio Grande and proposed critical habitat is present on the San Pedro River.

27. The DEIS (Section 4.6.4.5) notes that the Mexican Spotted Owl may be present within the study corridor. However, no designated critical habitat is crossed by any alternative, and no ponderosa pine woodlands or narrow canyons with high cliffs are present on or would be affected by any alternatives.

28. Comment noted

29. See response to comment 27.
The historical range of the species, as presented in the USFWS 2010 finding that listing of the White-sided Jackrabbit was not warranted, does not include any portion of the Project area. The historical range included the southern Playas and Animas valleys in New Mexico, approximately 50 miles to the south of the Project area. The White-sided Jackrabbit is listed as sensitive by the BLM NM State Office, and all applicable special-status species policies would be followed regarding the species.

An Avian Protection Plan will be developed for the Project, and will include detailed information on the selection and placement of bird diverters and other measures to increase visibility of overhead groundwires, guywires, and other features of the Project. The APLIC guidelines for reducing collision risk have been updated and are in press, to be released in 2012. These guidelines will present the best available information to be used in developing the Avian Protection Plan.
The FEIS (Section 3.6.6.1) has been updated to reflect the introduction of Mexican Gray Wolves into northern Mexico. Policies for managing the introduced population in Arizona and New Mexico do not provide for dispersal and residency outside the Blue Range Wolf Recovery Area. Under current policies, any Mexican Gray Wolf found in the Project area would likely be captured and returned to the Blue Range Wolf Recovery Area or to captivity. If those policies are modified, conference with the USFWS would be reinitiated as warranted.
Comment noted

38 No new road access would be created in occupied habitat for the Mexican Gray Wolf, or in any areas considered potential habitat under current policies. See response to comment 36.

39 The DEIS (Section 3.6.6.1) notes that Ocelots appear to have moved through the Project area recently, and are occasionally sighted in southern Arizona. Ocelots are known to prefer dense shrub cover, which is primarily found in riparian corridors in the Project area. No areas outside riparian corridors appear to have habitat structure similar to known Ocelot habitat, and impacts to the species are not expected to occur outside riparian areas.

40 Comment noted

41 Impacts to the Ocelot are being addressed during Section 7 consultation with the USFWS.

Additional information:

39 Ocelots appear to have moved through the Project area recently, and are occasionally sighted in southern Arizona. Ocelots are known to prefer dense shrub cover, which is primarily found in riparian corridors in the Project area. No areas outside riparian corridors appear to have habitat structure similar to known Ocelot habitat, and impacts to the species are not expected to occur outside riparian areas.

39 The DEIS (Section 3.6.6.1) notes that Ocelots appear to have moved through the Project area recently, and are occasionally sighted in southern Arizona. Ocelots are known to prefer dense shrub cover, which is primarily found in riparian corridors in the Project area. No areas outside riparian corridors appear to have habitat structure similar to known Ocelot habitat, and impacts to the species are not expected to occur outside riparian areas.

Note: This information is intended to supplement the text in the image and provide additional context or clarification.
2100 Comment Response

42 The DEIS (Section 4.17) notes identified renewable energy facilities that may affect the Aplomado Falcon in the discussion on cumulative effects.

43 The DEIS (Section 4.6.4.5) specifies “effects related to habitat loss” in the referenced sentence, and does not discount other potential effects. However, no information is available that would indicate the presence of a transmission line would affect future management decisions for the species or preclude areas from being selected as reintroduction sites.

44 Comment noted

45 See comment 42. Section 7 consultation is ongoing with the USFWS, and will address potential impacts to the Aplomado Falcon.

46 Although the DEIS (Section 3.6.6.1) described the range of habitat Jaguars may use in the United States, the FEIS has been modified to note that much of southern and central Arizona is within the historic range of the Jaguar. The DEIS also discussed modeling that indicated suitable habitat remains in Arizona and New Mexico. However, areas north of Interstate 10 were not proposed as critical habitat by the USFWS, as those areas were determined to be unoccupied at the time of listing or insufficiently connected to Mexico to be essential to the conservation and recovery of the species. The DEIS does not discount the possibility that individual Jaguars may disperse across Interstate 10 in the future, but the long-term absence of the species and the substantial barrier formed by Interstate 10 must also be considered as the current conditions and best available information.

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*Jaguar (Panthera onca)*: Jaguars in the United States are likely dispersing males from breeding populations in southern Mexico. Movement corridors are important to maintain; however, human developments may block access to corridors or fragment contiguous habitats needed to sustain a home range. Pumas and jaguars may be particularly damaging for movement corridors. The United States portion of the jaguar’s range coincides with the proposed transmission route in Cochise, Pinal, Santa Cruz, and Hidalgo counties, creating a significant barrier to future dispersal and preventing movement corridors for this species. Areas with moderate to high intensity development will likely be impassable for jaguars. This area includes areas where development activities may obstruct or otherwise disrupt connectivity for jaguars. See comment 42.
The DEIS (Section 4.6.4.5) does not propose species-specific mitigation for the Jaguar, as no information indicates that the species would be present to be affected. However, mitigation measures that would be implemented to minimize impacts to other species would accomplish objectives described in the comment. Disturbance to mesquite bosque at the San Pedro River crossing would be minimized by placing the structures on elevated terrain, to achieve conductor clearance while minimizing vegetation management needs. Upland vegetation within the other areas noted in the comment (Peloncillo, Rincon, and Winchester mountains) is typically desertscrub with some areas of low-density juniper-oak woodland, where vegetation management need be at a relatively low intensity and frequency. The Project would be adjacent to two existing transmission lines in this area. No fences are anticipated to be added in these areas. Mechanisms presented in the POD would be in place, through agency coordination and contractor resource sensitivity training, to ensure that construction and maintenance activities would be modified or temporarily halted if a Jaguar is detected in the Project area at any time.

48 Comment noted

The BLM has initiated consultation with USFWS under Section 7 of the ESA. At present, the 2012 critical habitat proposal (USFWS 2012) and the Recovery Outline for the Jaguar (Jaguar Recovery Team and USFWS 2012) are the most recent documents regarding recovery planning. However, the pending draft Recovery Plan would be considered during Section 7 consultation if released during that timeframe. If Jaguars are found to occur north of Interstate 10 in the future, consultation with the USFWS would be reinitiated.

The Recovery Outline for the Jaguar identifies much of southern Arizona south of Interstate 10 as a “secondary area” for recovery planning, and the remainder of Arizona (including the Project area) as a “peripheral area”. Peripheral areas are defined as follows:

- Areas that contain few verified historical or recent records of Jaguar and records are sporadic.
- Quality and quantity of habitat are marginal for supporting adequate Jaguar populations. Habitats may occur in small patches and is not well-connected to larger patches of high-quality habitat.
- May sustain short-term survival of dispersing Jaguars and temporary residents.

As discussed in the DEIS (Section 3.6.6.1) and responses to comment Nos. 46 and 47, loss of connectivity due to Interstate 10 is likely to be limiting to a much greater degree than habitat suitability within the Project area.

50 Raven predation has not been demonstrated to present a threat to Sonoran Desert Tortoises, due to the high rock and shrub cover present in suitable habitat. This is noted in the USFWS 12-month finding that listing of the Sonoran Desert Tortoise was warranted but precluded, as supported by published literature. Natural perches and nest sites are readily available in Sonoran Desert Tortoise habitat, limiting the potential for a transmission line to artificially support increased raven densities. Best management practices and standard mitigation measures would dictate that contractors maintain a clean work area during construction and maintenance, preventing food waste and trash from attracting high densities of ravens and other predators to the Project area.
The DEIS does not propose species-specific mitigation for the Jaguar, as no information indicates that the species would be present to be affected. However, mitigation measures that would be implemented to minimize impacts to other species would accomplish objectives described in the comment. Disturbance to mesquite bosque at the San Pedro River crossing would be minimized by placing the structures on elevated terrain, to achieve conductor clearance while minimizing vegetation management needs. Upland vegetation within the other areas noted in the comment (Peloncillo, Rincon, and Winchester mountains) is typically desertscrub with some areas of low-density juniper-oak woodland, where vegetation management be needed at a relatively low intensity and frequency. The Project would be adjacent to two existing transmission lines in this area. No fences are anticipated to be added in these areas. Mechanisms presented in the POD would be in place, through agency coordination and contractor resource sensitivity training, to ensure that construction and maintenance activities would be modified or temporarily halted if a Jaguar is detected in the Project area at any time.

53 Comment noted

54 APLIC standards for electrocution risk will be followed during construction. As noted in the comment, the risk of electrocution is low on high-voltage transmission systems. APLIC’s 2012 guidelines on reducing collision risk are in press, but are anticipated to be published prior to development of the Avian Protection Plan. The USFWS and other applicable agencies will be consulted regarding general measures and site-specific information to avoid impacts to Golden Eagles.
The DEIS (Section 4.6.4.6) acknowledges that impacts to Pronghorn related to disturbance could occur, although sensitive seasons would be avoided during construction and routine maintenance. Additional mitigation, including vegetation management to enhance habitat suitability within the right-of-way and potential compensatory or offsite mitigation, will continue to be considered.

No known populations of Chihuahua scurfpeas occur within the Project area, although suitable habitat may be widespread based on the limited knowledge of the species’ needs. The species is also listed as BLM sensitive. Surveys would occur as warranted, and in appropriate weather conditions following sufficient rains to increase the probability of detecting any plants present.

All cooperating and other applicable agencies would be consulted as needed regarding rare plants. Current information indicates that, except as discussed in the DEIS, most rare plant species found in the study area are not likely to be present in the Project area. However, a discussion regarding the Pecos sunflower has been added to the FEIS (Section 3.6.6.1, 4.6.4.5), as new populations have recently been established through seed translocation in the Rio Grande floodplain between the two alternative crossing locations.

The SunZia Project does not conflict with the CLS as stated in the comment because, as stated on page 36 of the Regional Plan Policies, “These policies apply to new rezoning and specific plan requests, time extension requests for rezoning, requests for modifications or waivers of rezoning or specific plan conditions, including substantial changes, requests for Comprehensive Plan amendments, Type II and Type III conditional use permit requests, and requests for waivers of the subdivision plat requirement of a zoning plan.” The SunZia Project will require none of the stated actions, and therefore is not in conflict with the stated goals or requirements of the CLS.
will enable into the future the surrounding landscapes, will not compromise the integrity of the following ecologically sensitive and important conservation investments, conservation plans and intact natural landscapes:

- Pima County’s Sonoita Desert Conservation Plan Conservation Lands System
- San Pedro River Valley and migration corridor (proposed National Wildlife Refuge and numerous private land conservation easements)
- Aravaipa Canyon / Gila Mountains Complex (USPS, State, Private)
- Saguaros (National Park East (NPS)
- Las Cienegas National Conservation Area (BLM)
- Pima County preserves (County, State)
- AZGFD-identified wildlife linkages
- Por Grande River and migration corridor
- Serrella National Wildlife Refuge (USFWS)
- Bosque del Apaches National Wildlife Refuge (USFWS)
- Ladder Ranch (owned by Ted Turner)
- Luke Valley Ranch (owned by Jam Winder)
- Nogal Land Trust complex (BLM, State, Private)
- Palominosa Mountains Wilderness and wildlife linkages (BLM, State)
- Citizen-proposed wilderness areas (BLM, USFS, State)
  - Patilla Mountains
  - Stallion Wilderness Study Area and contiguous island lands
  - Vasquez Wilderness Study Area and contiguous island lands
  - Sierra de la Cruz
  - Chisos Mountain
  - Chopawamsi Wilderness Addition
  - Pinto Canyon
  - Massacre Peak
  - Magdalena Mountains Unit
  - Goodnight Mountains
  - Huachuca Mountains
  - Sierra de las Uvas / Picket Peaks
  - Lemay Flats
  - Pinaleno Mountains

Inventory of, and protection for, lands with wilderness characteristics:

The Federal Land Policy and Management Act of 1976 (FLPMA) requires BLM to inventory and consider lands with wilderness characteristics. See Organizational Memorandum (OM) 303-1554 and Materials 6310 and 6370 contain a mandatory guidance on implementing that requirement. This OM directs BLM to “maintain and maintain inventories regarding the presence or
As part of the data inventory and impact assessment, the BLM actively updated the lands with wilderness characteristics affected by the project in each field office, throughout the study area. No additional update is necessary. See response to comment #4.

Wilderness Study Areas (WSAs) are considered as exclusion areas by the BLM, and therefore no alternative routes have been sited that would impact WSAs. The BLM conducted an inventory of lands with wilderness characteristics and CWI units were also identified. Text has been modified in Section 3.12.4 of the FEIS as follows:

“Citizen’s Wilderness Inventory Units have been reviewed as part of the inventory of Lands with Wilderness Characteristics on BLM lands.”

The following CWI units would not be crossed by the preferred route: Padillo Gonzales, Chupadera Wilderness Addition, Penasco Canyon, Sierra de las Uvas, Nutt Mountain, and Goodsville Mountains.

The Preferred Route would traverse the Cibola Canyon, Stallion, Sierra de la Cruz, and Lordsburg Playas North CWI units; however, there are existing unpaved roads within these units.

The Preferred Route would also cross the Veranito but it would be located along the edge of this CWI unit where there are existing unpaved roads.

The Magdalena Mountains (2 and 3), Nutt Mountain, and Massacre Peak CWI units would be crossed by the Preferred Route; however, it would parallel an existing 345kV transmission line and associated access roads within these units.

Please also see response to Comment No. 5.

As part of the data inventory and impact assessment, the BLM actively updated the lands with wilderness characteristics affected by the project in each field office, throughout the study area. No additional update is necessary. See response to comment #4.

Comment noted

Comment noted

Comment noted
Per guidance in Conducting Wilderness Characteristics Inventory of BLM Lands Manual (MS-6310), all BLM lands with proposed applications need to go through an inventory for lands with wilderness characteristics. For the assessment of LWC’s for SunZia the only LWC inventory units in New Mexico that were identified based on the manual (MS-6310) was Nutt Mountain that would be crossed by one of SunZia’s alternatives (not the Preferred Route). The Preferred Route would also cross a pending LWC unit adjacent to Stallion WSA. For the assessment of LWC’s for SunZia the only LWC inventory units in Arizona that were identified based on the manual (MS-6310) was Muleshoe that would be crossed by one of SunZia’s alternatives (not the Preferred Route). Thus the potential to preclude wilderness designations is reduced for the Project.
Quebradas CPWs

Proposed links H101, H103, H60, and A111 would cut across or run directly adjacent to numerous CPW units in the Quebradas void land complex east of Socorro (see Table 1). The Citizens’ New Mexico BLM Wilderness Inventory states: “The Quebradas Complex is an area of unique landscapes and rich archaeological sites. This complex of wildlands is at the crossroads of the New Mexico landscape. Geographically, it is the northeastern distribution of the Chihuahuan Desert shrub and cactus communities. This is also a transitional area where continuous woodland covers a good portion of the landscape... This transition zone includes areas where pinyon pines, junipers, mountain mahogany, and other more montane species are found and also desert shrubs. The area is also home to two special-status plant species: Dubea hispida and Anabasis irrorata. The relatively high diversity in the western part of the complex also provide corridors through which wildlife can travel.”

Magdalena Mountains and Chupadera Wilderness Addition CPWs

Proposed links H111, H160 and A641 would cross or run directly adjacent to CPW units in the Magdalena and Chupadera Wildernesses, respectively. The Citizens’ New Mexico BLM Wilderness Inventory states: “The Magdalena and Chupadera Wildernesses are significant sites for wilderness designation. The Chupadera Wilderness includes the (Chupadera and Magdalena) range[s] consists of rolling volcanic hills, interior mesas, and bordering peaks with picturesque valleys.”
### SunZia Southwest Transmission Project J-378

#### Final Environmental Impact Statement and Proposed RMP Amendments

#### Other Agency and Non-Government Organization Comments

#### 2100 Comment Response

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<td>73</td>
<td>Comment noted</td>
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**Wilderness Study Areas:** Wilderness Study Areas (WSAs) are legally protected from development, including transmission line development. See 40 U.S.C. § 1705(a). The SunZia study corridor is in close proximity to the following WSAs: Veracruz (directly adjacent to southern boundary), Bellon (1.72 miles from southern boundary), Peñilla (2.46 miles from northern boundary), Sierra de las Canas (approximately 3 miles from northern and southern boundaries), and Devil’s Backbone (1.77 miles from eastern boundary). The DEIS quantifies the percentage of these WSAs where SunZia would be visible – ranging from 19% of the Peñilla WSA to as much as 79% of the Veracruz WSA. Although the DEIS characterizes SunZia’s potential impacts to these areas as “indirect,” SunZia’s impacts to the wilderness character of these WSAs would be direct, negative, and lasting.
Recommenendations: We encourage the BLM to select the "no action alternative". However, if BLM selects an action alternative, we encourage the BLM and SunZia to consider the following recommendations: BLM must more accurately and completely characterize the direct nature of impacts to wilderness characteristics and values re designated Wilderness Study Areas and CFW areas. As noted above, because wilderness designation protects wildlife and habitat, Wilderness Study Areas and CFW areas should be avoided. Line(s) that cross CFW limits or are very near CFAs should be dropped from further consideration so as to avoid impact to wildlife. The fragmentation of roadless lands via road construction should be avoided, so as to maintain wildlife habitat integrity and security.

b. Arizona

Sulphur Springs Valley: Sulphur Springs Valley is an internationally recognized destination for birding scototser, particularly centered around raptors. The valley hosts the largest concentration of wintering hawks in the United States, providing winter habitat for 74 species of raptors, including bald and golden eagles, Harris's, ferruginous, and rough-legged hawks.

Recommenendations: We encourage the BLM to select the "no action alternative". However, if BLM selects an action alternative, we encourage the BLM and SunZia to consider the following recommendations: The Sulphur Springs Valley is a sensitive area for raptors that should be avoided. However, if selected, this link would require careful planning to avoid key bird habitats. This link should be implemented on less sensitive vegetative that allows forage or saltpans, so as to make the areas more viable and thus to avoid direct mortality due to collisions.

Designated Wilderness

Pecosillo Mountains Wilderness Area: According to BLM, this wilderness area "has section through rugged Pecosillo Range, which stretches from Mexico to the Gila River. Desert bighorn sheep have been recently re-introduced to the region and share their home with peregrine falcons and for other sensitive animal species. Vegetation ranges from desert shrubland in the most mountainous areas to oak-juniper woodland in the higher ranges." The Pecosillo mountain chain forms a vital north/south wildlife linkage. While this linkage is impaired by I-10 and railroads that are routed through Grants Pass at the Arizona/New Mexico border, an additional east/west disturbance corridor would only further compromise the integrity of this important wildlife linkage. Instead of following the existing disturbance corridor of I-10 and the railroad at Stew's Pass, proposed link B150 would be located approximately 5 miles north of the existing transportation corridor, improving current undisturbed habitat, and passing within 0.5 miles of the southern boundary of the Pecosillo Mountains Wilderness Area. This route would significantly impact the naturalness and restricted of the BLM designated wilderness, particularly from the southern portion of the unit. This is an inappropriate location for a major new energy corridor. Links B150A and B150B would run even further north through undeveloped terrain, although they would be located much further away from the designated wilderness area. This route would also potentially allow the assurance of the Landsberg Peaks.
Recommenda tions: We encourage the BLM to select the “no action alternative”. However, if the BLM selects an action alternative, we encourage the BLM and SunZia to consider the following recommendations. The proposed B150a link should be located much closer to, and parallel with Interstate 10 and the railroad to avoid impacts to the designated wilderness area and wild lands that form an important wildlife linkage. If for some reason link B150a cannot be located coincident to these transportation corridors, Linke B150a/B1006 would be preferable so as to avoid bifurcating Lordsburg Flats and close proximity to the Patagonia Mountains wilderness area.

Citizens’ Proposed Wilderness

Pinañero Mountains Proposed Wilderness: The Pinañero Mountains are a classic sky island mountain range that traverses five ecological communities, and according to the Nature Conservancy, contains the highest diversity of habitats of any mountain range in North America. Link B150a would traverse the edge of this proposed wilderness on its eastern flanks, and would significantly detract from the naturalness of the area.

Aravaipa Canyon Wilderness and Coffee Proposed Wilderness Addition: As noted earlier in our comments, Aravaipa Canyon and the Galiuro Mountains are at the heart of one of the widest and most intact wilderness complexes in the Southwestern United States. Adjacent to the two

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<tr>
<td>79</td>
<td>Link B150a, located along Subroute 3A1 (BLM Preferred Alternative identified in the DEIS) was sited to follow within an existing pipeline corridor where access is available. A route located adjacent to I-10 would result in conflicts with land uses and visual impacts. Note that the BLM Preferred Alternative (Subroute 3A2) as indicated in the FEIS would not include Link B150a.</td>
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designated wilderness areas are contiguous roadless public lands that have been identified by the Arizona Wilderness Coalition’s Citizens’ Wilderness Inventory as suitable for wilderness designation. Proposed link C170 would be routed within less than one mile of both of the proposed wilderness additions.

According to The Nature Conservancy, “The Gallina-Aravaipa-Santa Teresa area encompassed over 100,000 acres of intact, high-value wildlife habitat. The area maintains the full complement of wildlife from large mammals (mountain lion, black bear, bighorn sheep, mule deer, white-tailed deer), to highly limited species such as Gould’s turkey and the threatened Mexican spotted owl. The Aravaipa area, alone, includes over 300 species of plants and birds, 45 mammals, and 69 amphibians and reptiles. The streams on the Marshash Ranch and Aravaipa Canyon are the last refuges remaining for the state’s imperiled native fish species. The abundance of the area’s bighorn sheep population has enabled the Game and Fish Department to transplant.” A new road development corridor would be detrimental to the security and integrity of outstanding wildlife habitat in the wild land complex.

**Recommendations:** We encourage the BLM to select the “no action alternative.” However, if BLM selects an action alternative, we encourage the BLM and SunZia to consider the following recommendations: Proposed links Link B153a and C170 should be dropped from further consideration due to high levels of impact to public lands with wilderness characteristics and ecological values.

**Sonoran Desert Conservation Plan**

This section was contributed by the Coalition for Sonoran Desert Protection. Definition: A long-standing member of the Coalition, which works to ensure a community-scale ecosystem that promotes a healthy, vibrant, and sustainable Sonoran Desert.

Pima County’s Sonoran Desert Conservation Plan (SDCP) is a ground-breaking effort to connect the most ecologically valuable lands and resources across the region, while guiding growth into more appropriate areas. The SDCP addresses several elements of resource conservation, including cultural preservation, open space conservation, protections of parks and natural reserves, and natural conservation, and ecological conservation.

The biological goal of the SDCP is “to ensure the long-term survival of the full spectrum of plants and animals that are indigenous to Pima County through maintaining or improving the ecosystem structure and function necessary for their survival.” While the SDCP does acknowledge the SDPC, the only major component of the SDCP analyzed in the DEIS is impacts to “priority vulnerable species.”

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[Comment Response Table]

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<td>81</td>
<td>Comment noted. Neither Link B153a (Subroute 4A) or Link C170 (Subroute 4A and 4B) is not part of the BLM Preferred Alternative (Subroute 4C2c).</td>
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SunZia Southwest Transmission Project  
Other Agency and Non-Government Organization Comments  

See comment response #63 above
### Table 2. Acres of Pima County's Conservation Lands System that would be impacted by typical 400-foot right-of-way associated with SunZia routes.

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<tr>
<th>CLS Categories</th>
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<tr>
<td></td>
<td>Preferred</td>
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<tr>
<td>Important Riparian Area</td>
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<td>Multiple Use Management</td>
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**Important Riparian Areas** constitute the most biologically sensitive of CLS lands. They are "critical elements of the Sonoran Desert where biological diversity is at its highest..." They are valued for their high water availability, vegetation density, and biological productivity. They are also the backbone to preserving landscape connectivity. Pima County guidelines recommend a landscape conservation objective of 38% undisturbed natural open space for Important Riparian Areas.

**Biological Core Management Areas** are "those areas that have high biological values. They support large populations of sensitive species, contain large blocks of contiguous habitat and biological reserves, and support high-gravity potential for five or more sensitive species." Pima County guidelines recommend a landscape conservation objective of 30% undisturbed natural open space for Biological Core Management Areas.

**Multiple Use Management Areas** are "those areas whose biological value is significant, and support populations of vulnerable species, contain large blocks of contiguous habitat and biological reserves, and support high-value potential habitats for three or more sensitive species." Pima County guidelines recommend a landscape conservation objective of 35% undisturbed natural open space for Multiple Use Management Areas.

**Special Species Management Areas** are "areas defined as critical for the conservation of specific native plant and animal species of special concern to Pima County. Currently, these species are designated as Special Species: native endangered species, Mexican spotted owl, southwestern willow flycatcher." Lands designated as Special Species Management Areas occur throughout the other CLS and designated Clark County lands."
Table 3. Acres of Pima County's Special Species Management Areas that would be impacted by typical 400-foot right-of-way associated with SunZia routes.

<table>
<thead>
<tr>
<th>Overlap with other CLS Categories</th>
<th>SunZia Route #42</th>
<th>SunZia Route #42X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Important Riparian</td>
<td>284 acres</td>
<td></td>
</tr>
<tr>
<td>Biological Core Management</td>
<td>98 acres</td>
<td></td>
</tr>
<tr>
<td>Multiple Use Management</td>
<td>473 acres</td>
<td></td>
</tr>
<tr>
<td>Areas outside CLS</td>
<td>7 acres</td>
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Finally, Critical Landscape Connections are another important component of the CLS. They are defined as areas that provide connectivity for movement of native biological resources but which also contain potential or existing vernal pools that tend to initiate major conservation areas. Two of the Critical Landscape Connections are “across the I-10/Santa Cruz River corridor in the south” and “across the J-10 corridor along Concho Creek in the east,” both areas crossed by the #42 route.

The proposed SunZia Project poses significant threats to the CLS, but the DEIS does not quantify or even qualify impacts to the CLS, a crucial component of the SDCP. Without further evaluation of the CLS and other components of the SDCP, such as Pima County’s proposed Multi-Species Conservation Plan, the DEIS does not satisfy the federal mandate that a DEIS shall include discussions of possible conflicts between the proposed action and the objectives of Federal, regional, state, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned. 40 C.F.R. § 1508.3(b). Furthermore, the DEIS does not address 40 C.F.R. § 1508.4(d) which states that, “To better integrate environmental impact statements into State or local planning processes, statements shall discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not formally mentioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law.”

More detailed conservation guidelines and the CLS map can be found in Pima County’s Comprehensive Land Use Plan and proposed Multi-Species Habitat Conservation Plan permit documents.
The BLM preferred alternative through the Sulphur Springs Valley is entirely parallel to existing transmission lines, operated without bird flight diverters. However, bird diverters would be considered as a potential mitigation measure in this location. Final selection of mitigation measures would be detailed in the Avian Protection Plan. Note that self-supporting structure types would be selected in this location, to minimize impacts on land use and reduce the collision risk to birds foraging in the surrounding agriculture.

A discussion of conservation easements in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.

As stated above, the SunZia Project is not required to be in conformance with the CLS. A discussion of conservation easements in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.

Comment noted
The DEIS discussed how the Project may contribute to fragmentation (Section 4.6.3.1). Based on existing conditions and the lack of information indicating that transmission lines form a barrier to movement for any species present in the Project area, the direct impact of the Project is not anticipated to be significant. The DEIS acknowledges that increased traffic may affect wildlife, although this cannot feasibly be quantified at this time. A range of maintenance traffic could be estimated, but recreational traffic would be expected to be highly variable, dependent on proximity to population centers, access, season, OHV use restrictions, law enforcement, and other factors.

Comment noted

Compensatory mitigation for residual impacts will be determined through coordination between the proponent and any applicable agency.
The cumulative impact analysis in Section 4.17 of the DEIS evaluates potential cumulative impacts to special status species and noxious weeds (Section 4.17.4.6), lands with wilderness characteristics (Section 4.17.4.12), and fire frequency, regimes and management (Section 4.17.4.7) associated with development that was identified in the Past, Present and Reasonably Foreseeable Future. It is acknowledged that development of energy resources that could interconnect with the Project may occur within proximity to the proposed substations, as described in the energy development scenarios.

Reasonably foreseeable future energy developments have been identified in Table 4-30 of the FEIS, which include the Bowie Power Station, the Afton Solar Energy Zone, the NREL identified QRA’s, and the Southline Transmission Project. The FEIS has been updated to include recent changes in the Solar PEIS and RDEP.
Recommendations: We encourage the BLM to select the “no action alternative”. However, if BLM selects an action alternative, we encourage the BLM and SunZia to consider the following recommendations. For all of the above projects and activities, the Final EIS should analyze potential impacts and timing to provide a full picture of potential cumulative impacts. BLM and SunZia should conduct a more thorough cumulative impacts analysis, to include impacts to special status species from energy development enabled by SunZia, the proposed Southwest Transmission line, the proposed Border Power Station, direct and indirect impacts to lands with wilderness characteristics and values, introduction and spread of non-native noxious plants and changes to fire frequency, regimes and management. A comprehensive cumulative impacts analysis will contribute to informed decision-making as required by NEPA, and help inform appropriate mitigation measures, opportunity sets and larger picture decisions about the level of development that can be sustained by the environment and host communities.

Summary:

Defenders is committed to guiding our nation's transition to clean energy in a way that protects wildlife and habitats by ensuring renewable energy and transmission projects are built “smart from the start” to be avoid, minimize and effectively mitigate for negative impacts to our environment, wildlife habitats and other sensitive resources.

We recognize that new transmission lines will be needed in some cases to carry renewable energy to population centers, and create improved transmission capacity and reliability. However, renewable energy and associated transmission development are not appropriate everywhere on the landscape.

Upon return of the DEIS for SunZia, we urge BLM to select the “no action alternative” for the following reasons:

1. All proposed routes would adversely impact ecologically sensitive areas and wildlife resources including valuable habitats with regional and global significance.
2. The stated purpose and need for the SunZia Project is misleading and incomplete.
3. The BLM’s alternatives analysis is not consistent with the SunZia Project’s stated purpose and need and does not evaluate the full range of reasonable alternatives. Other alternatives not yet analyzed, or other projects, could adequately serve the stated purpose and need.
4. The impact analysis for vital lands and conservation plans is misleading.
5. The public process has lacked transparency and effective public engagement.

SunZia is a highly controversial project. We are concerned with the quality and nature of the public process that has been conducted by the BLM for the SunZia project to date. As such, BLM should
2100 Comment Response

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provide additional opportunities for meaningful public engagement leading up to the Final EIS, as to comply with the intent and purpose of NEPA. Issues and input gathered from such public engagement should be used by BLM to inform and guide its decision-making process. BLM should consider engaging the UIECCR or other professional mediators to ensure productive communication and increase the likelihood of resolving outstanding conflicts.

We appreciate the opportunity to submit these comments.

Sincerely,

Matt Clark
Southwest Representative
Defenders of Wildlife
Coalition for Sonoran Desert Protection

Melanie Manisson  
Executive Director
Sky Island Alliance

Caryn Campbell  
Executive Director
UIECCR

Paul Green  
Executive Director
UIECCR

SunZia Southwest Transmission Project  
Other Agency and Non-Government Organization Comments  
J-389  
Final Environmental Impact Statement and Proposed RMP Amendments
3415 E. Lee Street  
Tucson, AZ 85716  
Submitted by electronic mail and certified U.S. Mail August 17, 2012

Mr. Adrian Garcia, Project Manager  
SunZia Southwest Transmission Project  
Bureau of Land Management  
New Mexico State Office  
P.O. Box 27115  
Santa Fe, AZ 87501  
NMSunZiaProtect@blm.gov

Dear Adrian,

Attached is an outline of some of the deficiencies and issues that I have identified for the SunZia Draft Environmental Impact Statement and the project itself. Many of these issues are related to the purpose and need for the project, which is a matter of considerable concern. I hope that this outline will help focus the debate about the purpose and need for this project and the feasibility of building a project like this. The outline is self-explanatory.

Thank you for considering these comments.

Sincerely,

Norm “Mick” Meader  
(520) 323-0002  
mmeader@cox.net

Please refer to responses to comment letters-1604, 2161, 2162, 2164, and 2412
2 The BLM Preferred Alternative for the proposed action is to grant right-of-way for two 500 kV transmission lines. The BLM has considered other options including alternate transmission routes and technologies such as system upgrades, but alternative technologies eliminated because they would not be practicable and feasible as described in Section 2.3.3 of the DEIS. As stated in Section 2.3.3.3 of the DEIS “since energy efficiency programs do not address these needs (for the Project), they were eliminated from further consideration.”

4 The amount of staging area ground disturbance has been calculated and included in the results of the impact analysis. Specific locations of staging areas can be identified only after engineering is completed, although they are typically located in the flatter, less rugged areas with good access.
2161

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2161 Comment Res

10 These features are rated on a comparative basis with similar features within the physiographic province. It is important to note that “viewers” do not just rate landscape units as A, B, or C based on their overall opinion of a particular landscape. Based on the criteria described above, at the project level, it was determined that land crossed by link C170 is a Class B landscape.

11 Hunting and other dispersed recreation activities are considered to occur wherever not restricted. The discussion of land use resources is specific to identified recreation areas, such as trails and designated OHV areas. Viewsheds are described in visual resource analysis (Section 4.9.3) of the DEIS and socioeconomic impacts are described 4.13.4.

12 Hunting, and other dispersed recreation activities are considered to occur wherever not restricted. The discussion of land use resources is specific to identified recreation areas, such as trails and designated OHV areas. Also please see response to Comment No.11.

13 Land uses were categorized for the study corridor inventory according to the categories defined in Section 3.1.10.2, Methods. The definition of this category is as follows: “Grazing/Multi-Use/Vacant – all land uses that did not fit under a specific category, or were not specifically designated for a specific use by the responsible jurisdiction or land management agency.” (DEIS, p. 3-216) This category includes privately owned lands, as well as state or federal (public) lands leased for grazing; the underlying description is “vacant” because they do not contain any other specified land use and are generally undeveloped, although they do contain utilities and range improvements such as tanks and fences.

14 Dispersed recreation activities are considered to occur wherever not restricted. The discussion of land use resources is specific to identified recreation areas, such as trails and designated OHV areas. Recreation on other federal and state land is generally dispersed and takes place in undesigned areas.

15 Traditional land uses are discussed in Section 3.8 of the DEIS, Cultural Resources.
16 The presence of roads and other modifications reduces the quality of these areas for consideration as lands with wilderness characteristics. An inventory of lands with wilderness characteristics was based on a 1000 foot buffer (500 feet on each side of the reference centerline) per direction from the AZ and NM State Wilderness Leads. This was done to identify potential lands with wilderness characteristics allowing flexibility in the project description (i.e., location of the project).

17 Section 3.13.9 includes a summary of characteristics for each of the subroute groups, and identifies the “key similarities and differences between various subroutes” (pp. 3-296). The importance of economic livelihood for ranchers and hunting guides is discussed, including economic contributions of agriculture and tourism/recreation in the DEIS, Section 3.13.6.1.

18 The electric field data are provided in the DEIS, Section 4.15.3.2 for comparison with the potential Project effects (pp. 4-230-4-231).

19 The detailed description of monitoring, including enforcement of speed limits, will be provided in the Final Plan of Development, based on specific road locations.

20 The effectiveness of SE 6 (selective mitigation relating to road closures) would depend on the final access plan, which will include identification of roads to remain open, be gated, or be permanently closed and rehabilitated. Road closures would depend on future maintenance needs, as well as the preference of the landowner or land management agency. This will be presented in the final POD.

21 Additional details regarding mechanisms that aid the spread of noxious weeds are presented in the Noxious Weed Management Plan, Appendix B2 of the POD. However, this discussion has been expanded in the FEIS.
22 See response to Comment No. 19.

23 The referenced sentence acknowledges that selective mitigation measure 6, regarding the gating or closure of access roads, may not be implemented in all locations and would primarily be at the discretion of the landowner or agency.

24 The potential exists for the introduction of noxious or invasive weeds by recreational traffic throughout the Project area. Measures to prevent or treat the spread of invasive plants within the right-of-way would be implemented according to the Noxious Weed Management Plan, Appendix B2 of the POD.

25 See response to Comment No. 19.

26 The DEIS notes that erosion may occur to some degree from any source of ground disturbance. The extent to which this would occur along Link C170 would depend on the final access road plan, including areas selected for closure or reclamation. However, the siting of Link C170 attempted to avoid direct paths for sediment to travel into portions of streams supporting listed fish. The upper portion of Turkey Creek, approximately 0.5 miles from the head of the drainage, would be spanned by a portion of Link C170, and is crossed by an existing access road that may require improvement. All additional ground disturbances would occur on ridgelines or in other upland areas in the Turkey Creek watershed. Additional ground disturbance in the Aravaipa Creek watershed would occur in tributaries such as Fourmile Creek and Road Canyon, providing buffering from sites supporting native fish. Existing access is present within the floodplain of Aravaipa Creek itself. The DEIS (Section 4.6.4.5, 4.6.5) acknowledges that sediment may be transported substantial distances, but this potential would be minimized through standard mitigation measures and the siting described above.

27 The DEIS (Section 4.6.4.5) acknowledges that opportunities for OHV traffic in some areas within the range of the Sonoran Desert Tortoise may be increased. However, much of the BLM preferred alternative would benefit from existing access once it reaches high-quality Sonoran Desert Tortoise habitat. For any alternative, the creation of new public access is acknowledged to potentially affect the species.

28 The potential for the Project to affect fire use as a land management tool is acknowledged in the DEIS (Section 4.7.3.3). However, the degree of effect would depend on site-specific conditions at the time a fire may be planned. The presence of a transmission line typically constrains but does not necessarily preclude fire use in grasslands.

29 See response to Comment No. 23.
2161 Comment Response

30 See response to Comment No. 23.

31 Fire use is also discussed in Section 4.7. Transmission lines may limit, but not necessarily preclude, the use of fire as a management tool. The determination whether or not a prescribed fire could occur would depend on site-specific conditions at the time the fire may be planned, and cannot feasibly be predicted.

32 Comment noted. Please see response to comment #7.

33 The discussion of impacts to land use resources includes designated recreation areas. Dispersed recreation is considered to occur wherever not restricted by other uses or restrictions.
34 Comment noted

35 The visual resource assessment methodology was reviewed and approved by the BLM. The visual resource impacts disclosed in the DEIS follow this BLM approved methodology. Impacts were assessed from wilderness areas looking towards the proposed project (see Map Volume) and were disclosed in the DEIS (see Section 4.12.3.3).

36 The DEIS discusses that the Project would result in disturbance to wildlife throughout Section 4.6, but this would be mitigated to the extent practicable through seasonal avoidance, a selective mitigation measure. Road closures may be implemented, as discussed in the response to Comment 23.

37 Impacts were assessed from wilderness areas looking towards the proposed project (see Map Volume) and were disclosed in the DEIS (see Section 4.12.3.3). The intent of wilderness designations is to protect the characteristics that have been inventoried within the wilderness boundary based on specific criteria identified within the Wilderness Act (1969).

38 Although new access roads would not be provided for public use, it has been suggested that recreational use (including hunting, hiking, off-road vehicle activities, etc.) within the area would increase if new or improved access to the transmission line corridors were to be provided. However, there is no evidence that recreational use or visits to the area would decline, or increase, as a result of construction and operations of the proposed project, as stated in Section 4.13.4.5.
As indicated in Section 3.14 in the DEIS, EO 12898 (U.S. Department of Housing and Urban Development [HUD] 1994) requires federal agencies to address high and disproportionate environmental impacts on minority and low-income populations. Should potentially significant and adverse impacts attributable to the proposed Project fall disproportionately on these populations, environmental justice impacts would result. As noted in Section 4.14, Table 4-20 of the DEIS, High impacts occur in areas where the Project could create direct, long-term, and significant impacts to existing environmental justice populations.

The methodology of assessing impacts to environmental justice populations was applied consistently within rural and urban areas. As stated in Section 4.14.2, although the type of impacts to rural and urban areas would be similar in most cases (e.g., the condemnation of a residence), the level of impact was also determined according to the proximity and density of the environmental justice population to the potential impact. For example, rural residential properties could experience moderate impacts from a distance of two miles of the transmission lines, while a residence just outside a mile from the lines could experience low impacts because of the existing lines or the presence of other structures commonly associated with a built urban environment. For these reasons populations within a 3-mile buffer are more likely to be affected by the Project (higher impacts occur up to a distance of three miles; noise and visual impacts dissipate at greater distances). Census tracts provide the most meaningful geographic unit to measure population components within the area of potential effects in rural areas, but the impacts are assessed according to inhabited structures within proximity to the Project corridor’s centerline. The results indicate higher and disproportionate impacts to urban areas, due to higher population densities in proximity to the Project.

Noise resulting from construction of the transmission lines would be temporary and may be audible; however, it is unlikely that operational noise would be discernible to recreation users within wilderness areas near C170.

As stated in the DEIS, Section 1.4, “the Applicant’s (Project) objectives are to increase transmission capacity, thereby relieving existing transmission congestion and allowing additional electricity to be generated and transported to western power markets and load centers in the Desert Southwest (p. 1-5). While additional electricity will be needed to serve future population growth, and the SunZia project could serve to provide a portion of that electricity to meet future demand, the Project would not cause or encourage population growth within the study area.

The cumulative effects analysis includes projects that are reasonably foreseeable, or as defined in the BLM NEPA Handbook (Section 6.8.3.4) “for which there are existing decisions, funding, formal proposals, or which are highly probable, based on known opportunities or trends” and “must be concrete enough that consideration of its effects would be useful to the decision-maker” (DEIS, Section 4.17.3, p. 4-246). Other future infrastructure projects within the Subroute 4A or 4B corridors, such as a pipeline or additional 500 kV transmission line, have not been identified.
that route will not be suitable for future pipelines. Subroute 4A or 4B would provide a likely alternate for such projects.

Given complications with Case 22, Tucson Electric Power’s conceptual Tortolita to Winchester 500kV transmission line could become a Tortolita to Willow 500 kV line following Subroute 4B.

The cumulative effects of such projects include but are not limited to: habitat fragmentation, erosion and other effects on threatened and endangered species, including fish species in Aravaipa Creek, increased OHV use of service roads, and increased disturbance to desert bighorn sheep populations.

All of these cumulative impacts should be analyzed for both of the above mentioned future projects.

--Section 4.17.4.2
Global Climate Change: See Section 2.3.3.3 comments and Section 14.7 comments above.

--Section 4.17.4.3
Soil Resources, Operation: As regards Link C170, see Table 2-11 comments, Section 4.6.4.4 comments and Section 4.6.4.7 comments above.

--Section 4.17.4.6
Biological Resources, Conclusion: “...cumulative impacts would be reduced in most cases when linear utilities, including the proposed Project, are collocated.” This is further argues against Subroutes 4A and 4B, which would involve the longest sections of new utility corridor among the Route Group 4 alternatives.

Also, as regards Subroutes 4A and 4B, see Section 4.17.3.2 comments above. Future infrastructure projects are likely to use Subroutes 4A or 4B subsequent to construction of the Project along either of these routes. Cumulative impacts to visual resources are therefore likely to be high.

--Section 4.17.4.7
Wildland Fire: As regards Subroutes 4A and 4B, see section 4.6.4.7 comments above.

--Section 4.17.4.9
Visual Resources: As regards Subroutes 4A and 4B, see Section 4.17.3.2 comments above. Future infrastructure projects are likely to use Subroutes 4A or 4B subsequent to construction of the Project along either of these routes. Cumulative impacts to visual resources is consequently likely to be high. This section should be expanded to reflect this.

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<tr>
<td>43</td>
<td>Comment noted</td>
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<tr>
<td>44</td>
<td>Please refer to response to comment No’s. 22 and 29.</td>
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<tr>
<td>45</td>
<td>Please refer to response to comment No. 42.</td>
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<td>46</td>
<td>Please refer to response to comment No. 28.</td>
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<td>47</td>
<td>Please refer to response to comment No. 42.</td>
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<td>48</td>
<td>Please refer to response to comment No. 42.</td>
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<tr>
<td>49</td>
<td>There are existing roads within this area that have altered natural conditions and thus wilderness characteristics. There is no documentation identified that provides guidance for managing the three wilderness areas as a single complex.</td>
</tr>
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<td>50</td>
<td>Please see response to Comment No. 39.</td>
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Section 4.17.4.10

Land Use and Recreation Resources: Despite the title of this section, almost no reference is made to cumulative effects as regards recreation resources. It is highly probable that future infrastructure projects would use Subroute 4A or 4B subsequent to Project completion. This would increase the cumulative effects of the Project on Recreational use, particularly along Link C170. This section should be expanded to reflect this.

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Section 4.17.4.12

Wilderness... Construction and Operation: “Operation of the Project would reduce the size of the inventory unit, as areas where the Project would cross would no longer be eligible for wilderness designation.” Subroute 4B is 133 miles long, 111 miles of which constitute a new utility corridor. Much of the 111 miles of new corridor will bisect the second largest expanse of undeveloped landscape in Arizona and New Mexico.

Within that area are several designated Wilderness Areas (Santa Theresa, Aravaipa and Gaiuro). Adjacent to these Wilderness Areas are lands having wilderness characteristics. Among the most outstanding is the Manchester/Galiuro/Aravaipa complex, which constitutes one of the longest undeveloped upland reaches in Arizona, stretching more than 100 miles in a south-southeast to north-northwest orientation. Link C170 would bisect that unbroken complex, fragmenting yet another of Arizona’s diminishing wild lands.

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Section 4.17.4.14

Environmental Justice Conditions: Negative impacts of future infrastructure projects expected to use Subroute 4A or 4B subsequent to Project completion will be borne primarily by area residents. These impacts may include, but are not limited to, degradation of visual, recreational and economic opportunities. See Section 4.14 comments above.

Operation: Further evidence of an urban bias is evidenced by the statement, “For properties that experience degradation of scenic views, devaluation could take place.” No mention is made of mitigation for property devaluation caused by the proposed Project and other infrastructure projects that can be expected to follow subsequent to the establishment of a new utility corridor along Subroutes 4A or 4B.
Dear Adrian,

Attached are a review and two reports that I have done for the Casabel Working Group that address the SunZia Economic Impact Assessment and EIA Supplement: Impacts of Potential Renewable Generation Facilities, now included in the SunZia Draft Environmental Impact Statement as Appendix G1. I am also including a review of Appendix G2 and references to these appendices within the main DEIS text.

I am sending this message to both the BLM’s standard SunZia email address and your personal email address because the Environmental Planning Group cannot adequately respond to my comments themselves. I assume that all submittals that go to NMSunZiaProject@BLM.gov go to EPG, and you may not see them. I therefore need to alert you to this.

In January I submitted two reports critical of the reports now included in Appendix G1 and asked that they be incorporated into the DEIS if possible. Because they were not included, I am submitting them here again for BLM review in the revised final draft environmental impact statement.

These economic studies contain many misleading statements and calculations and require revision to be included in the final environmental impact statement. EPG, however, has the expertise to refine them, other than to make editorial changes, and the author of these reports need to address public comments and make revisions as required for the BLM. It is imperative, I believe, that the BLM also contract with a professional outside economist to professionally review these reports and make recommendations. These reports have not been professionally reviewed and as such do not yet meet publication standards, making this type of review essential. No professional journal would publish this work without such a review.

I am copying this message and my review and reports to Alberta Charney of the University of Arizona and Anthony Popp of New Mexico State University, the two lead authors of Appendices G1 and G2, so that they have my comments and understand this situation. The SunZia DRIS is a legal document and as such may be legally challenged. It is thus important that Dr. Charney and Dr. Popp strive to meet the editorial standards of their discipline. With the other demands upon their time, I understand how difficult it may be for them to do this. The shortcomings of their reports need to be addressed somehow, however, and at the very least, my comments should be bound with their reports to help explain them. I understand that my own comments may contain errors or misunderstandings.

Sincerely,
Norm “Mick” Meader
Co-Chair, Casabel Working Group
(505) 323-0092
nmeader@cox.net

Attachments: 2
- Dr. Alberta Charney, University of Arizona
- Dr. Anthony Popp, New Mexico State University

SunZia Southwest Transmission Project
Other Agency and Non-Government Organization Comments

Cascabel Working Group
6590 N. Cascabel Road
Benson, AZ 85602

Submitted by electronic mail and certified U.S. Mail August 17, 2012

Mr. Adrian García, Project Manager
SunZia Southwest Transmission Project
Bureau of Land Management
New Mexico State Office
P.O. Box 77115
Santa Fe, AZ 87501
NMSunZiaProject@BLM.gov

Dear Adrian:

Attached are two separate analyses that I have done on the SunZia economic assessments included in Appendix G1 of the SunZia Draft Environmental Impact Statement, “SunZia Economic Impact Assessment and EIA Supplement: Impacts of Potential Renewable Generation Facilities.” This appendix contains two separate reports, one on the economic impacts of building the transmission project itself and the second on hypothetical renewable generation facilities that might be built in the area of SunZia.

I submitted both of my reports to you in January 2012 for inclusion in the SunZia DEIS if that were possible. Since they were not included, I am submitting them again for formal review and inclusion in the EIS by the Bureau of Land Management. These reports document serious deficiencies in both reports. I herein also offer additional comments on references to these reports in the SunZia DRIS as well as on Appendix G2, a new study that attempts to assess the economic impacts of constructing SunZia along individual route segments considered in the DEIS.

The reports included in Appendix G1 need significant revision and recalculation in places, to be worthy of inclusion in a federal environmental impact statement. If the authors of these reports cannot correct and revise them to meet publication standards and if they are not removed from the DEIS, it is imperative that my reports be bound with them to explain their weaknesses and errors. Not doing this will result in a gross misrepresentation of the economic potential of the SunZia project for Arizona and New Mexico.

Thank you for including this.

Sincerely,
Norm “Mick” Meader
Co-Chair, Casabel Working Group
(520) 323-0092
nmeader@cox.net

Final Environmental Impact Statement and Proposed RMP Amendments
Senior technical review was conducted for all resource studies included in the DEIS by the BLM interdisciplinary team. The social and economic analysis was reviewed by Joshua Sidon, BLM economist.

As stated in Section 4.17.3.3 of the DEIS, “These development scenarios are offered as analytical tools, and not meant to imply that there are currently specific or known cumulative effects from generators.” While other forecasts could be provided, for example a 50 percent renewable energy development component, or a scenario that reduces coal-fired energy production. However, because of the uncertainties involved in predicting energy development in the future, the RFF actions were used as a basis for the cumulative resource analysis. It would not increase the accuracy of the predictions.

The Energy Development Scenarios were identified based on the criteria described in Section 4.17.3.2 of the DEIS, and included “Reasonably foreseeable future refers to future actions or projects “for which there are existing decisions, funding, formal proposals, or which are highly probable, based on known opportunities or trends” (BLM NEPA Handbook at § 6.8.3.4.). To constitute a reasonably foreseeable future action, a project must be concrete enough that consideration of its effects would be useful to the decision-maker.” As stated in Section 4.17.4.13 of the DEIS, the economic forecasts addressed RFFs (in a ten year planning period) as well as a potential generation projects over the life of the SunZia Project (50 years).
A cumulative effects analysis that assesses several mixes of renewable and non-renewable generation is needed to determine potential impacts. Using a mix of 50% renewable and 50% non-renewable generation is one reasonable mix to consider and include. This is a far better scenario to use for modeling the end use of SunZia. The fundamental importance of an environmental impact statement is to assess actual impacts as closely as possible, not to accommodate and evaluate a highly idealized and unrealistic scenario chosen by the project proponent to sell the project.

Problems with Appendix G2

Editorial Considerations

Appendix G2 is a new study that was done subsequently to the Economic Impact Assessment and Supplement. It contains numerous flaws and omissions that should be addressed. Most importantly, the appendix contains no descriptive title or introduction that explains what it contains and is meant to address. By looking at the tables, one can deduce that it assesses the economic impacts of the project by route segment and by county for the final alternatives considered for the project, but the appendix does not state this up front. The appendix also contains no map of the segments being considered to help explain the text and tables. While one can page through the main DEIS to find maps to match the calculations, this is an unnecessary burden to place upon the reader when replicating these and including them here would allow the reader to easily determine the locations of route segments.

The economic figures in this appendix were presumably calculated using the same assumptions used in the primary Economic Impact Assessment study included in Appendix G1 and therefore should be consistent with it. The appendix does not explain what “Option A” and “Option B” are. Option G1 instead uses Scenario 1, Scenario 2, and Scenario 3. Only by paging through the 900+ pages of the main DEIS can one determine that Option A refers to two 500-kV AC lines with 3000 MW of capacity and Option B refers to one 500-kV AC line with 1300 MW of capacity and one 5000-kV DC line with 3000 MW of capacity. This needs to be stated in an introduction.

This appendix purports to give income tax revenues by county and labels the tables as such, but then these tables break down these taxes into two categories, (1) Direct Sales Tax (sometimes labeled just “Direct Tax”) and (2) Induced Tax. Neither of these tax categories constitutes income tax. Both sales tax and income tax are types of induced taxes because they change when an economy’s real gross domestic product changes. These tables should be labeled “Average Induced Income Tax Revenues.” Without the label “Average,” the tables present tax revenues that are only intended for Arizona and New Mexico. These tables do not appear to contain federal income tax revenues. All nine tables that give “income tax revenues” are mislabeled.

What is most disturbing about this appendix is that the appendix uses the word “jobs” throughout to describe employment when in reality all numbers are job-years or man-years of work. None of the numbers contained in this appendix actually refer to jobs even though they are prominently labeled as such. This needs to be clearly explained in an introduction or footnote.

Comment Response

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<td>3</td>
<td>Editorial changes have been in Appendix G1 and G2 of the FEIS in response to commenter’s requests for clarifications.</td>
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<td>4</td>
<td>As stated in Section 4.13.2 Impact Assessment Methodology of the DEIS “Employment is measured in terms of number of job years. For example, three jobs could refer to three people working 1 year or one person working for 3 years.” Additional notation has been provided in Section 4.13.4.6 of the FEIS to clarify the definition of employment.</td>
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and the term “job-years” should be used throughout rather than “jobs.” Values should be labeled as to what they are.

Also, this appendix does not give the number of years over which this work takes place. It is important to give this so that the reader can determine the average number of jobs associated with the project. Appendix G1 uses 4 years as the basis for calculating job-years of work, and presumably Appendix G2 does also, but this is not stated. This creates an inconsistency in the Executive Summary because in referencing Appendix G2 to summarize employment, the summary states that these will occur over a 2-3 year period. While a 2- to 3-year construction period is part of the project’s timeline, this was not the basis for the original economic calculations. The Executive Summary should reference the actual length of time used to derive the numbers.

Apparent Calculation Errors

In comparing the economic numbers obtained in Appendix G2 with Appendix G1, it appears that gross errors have been made in Appendix G2 in calculating employment numbers and the revenues derived from them. The total job-years of work for the preferred alternative should roughly equal the total job-years of work obtained in the initial economic impact study because the total length of the project remains essentially the same. While the number of job-years of construction labor for Option A (originally Scenario 2) is essentially equivalent (roughly 190), the number of Other Direct job-years is 200-250 less, and the combined total of Indirect and Induced job-years is about 1,700 less, for an overall reduction in job-years of about 2,000. The total now is around 4,150 vs. 6,200 before. If the underlying assumptions for Appendix G2 are the same as for Appendix G1, these numbers should be nearly the same.

I alerted the study’s principal author Albert Place to this by email on May 31, 2012, and she said that she would look into it. She did not, however, and I called her again on July 7, 2012. She did not respond to my second inquiry. She apparently lacks the time and personal to isolate the errors and make the necessary corrections. This appendix should be removed from the FEIS unless these discrepancies can be resolved or explained and the recommendations noted above are incorporated.

County Economic Impact Projections

A particularly egregious problem occurs with the number of jobs attributed to each county for construction of the project. For example, the tables in Appendix G2 give the total number of jobs for Cochise County as 775 (substation and transmission line construction for route segments 3B and 4C). These are prominently labeled “jobs” without clarification and are attributed entirely to the project. However, they are the global job-years of work required to complete the project across the county and are unrelated to jobs created in the county. A similar problem is associated with labor income. This labor income is attributed to the county when it actually occurs world-wide. The actual labor income for Cochise County resident is a tiny fraction of the total given. District sales taxes and induced taxes (state income taxes, in reality) are, again, not those derived solely within the county. Only property tax revenues are actually attributable to the county as given.

Clarification of number of years over which work takes place has been clarified in Appendix G1 and G2 of the FEIS in response to commenter’s requests for clarifications.

The differences occur because the sums of county impacts are used as state “totals” in the EIS but the sums of county impacts are necessarily smaller than statewide impacts, which are reported in the EIA. The “totals” given in Tables G2-6 are smaller than the statewide impacts given in the EIA in Tables 4.2.2 and 4.2.3.

The numbers in Appendix G2, Tables G2-1 through G2-6, are county-by-county impacts and, as stated in the EIA (pages 35 and 39), the sum of the impacts across counties is less than the state impact for two reasons: 1) there are expenditures by workers and materials purchases made in the state but outside of the county through which the line passes and those have impacts outside of the county, and 2) statewide multipliers are larger than county multipliers because there are smaller leakages from a state than a county. The assumption regarding the portion of construction worker spending in the state (outside the counties where construction occurs) is given on p.33 of the EIA and p.4-213 of the EIS. Assumptions were made regarding the distribution of expenditures on materials as stated on page 32 of the EIA, based on an estimated construction process. Table headings in Appendix G1 and G2 have been clarified in response to commenter’s requests for clarifications.

Clarifications have been made in the FEIS in response to commenter’s requests for clarifications.
When one converts job-years to jobs, calculates the actual number of people hired in the county for construction (3 average, 8 peak), removes the jobs associated with materials manufactured outside the county (almost all of them), and removes other jobs created outside the county, the total jobs available in Cochise County will be 20-30. County officials, however, have been led to believe that 775 jobs will be created in the county and are using this number for economic projections. These tables are nearly useless for county purposes if the authors do not determine the actual economic benefit for the counties themselves.

Comment on References to Appendices G1 and G2 in the DEIS

Misrepresentation of Job-Years as Jobs:

What is most disturbing about these studies is that numbers do they give the actual number of jobs that will be available in Arizona and New Mexico. They do not provide even the most fundamental employment number associated with a project: how many people SunZia will hire for construction. The only actual employment numbers given in the entire DEIS for SunZia occur on page 4-211 under section 4.13.4.1 Populations Impacts, which is associated with housing. Here it says the following:

The construction of the transmission lines and substations is expected to take place over a span of 2 to 3 years at various locations throughout the study area, and will employ a maximum of 205 workers per transmission line and 55 workers per substation site.

The only actual job numbers given in the entire 327 pages of economic study itself occur in Tables 6.1 and 6.2, and then only a sum of jobs for all four job categories is given for each year. No where does the SunZia Economic Impact Assessment state how many people SunZia will employ.

To make clear how deceiving this economic assessments is, I use the following example from page 4-219 of the DEIS:

The total number of jobs that would be created in New Mexico and Arizona during construction of the proposed Project would range between 4,555 and 5,310 (including transmission lines and substations between Option A and Option B).

The numbers stated here are actually global job-years of work created throughout the world associated with building the project. They are not jobs, and they do not occur exclusively in New Mexico and Arizona. These include the job-years of work involved in fabricating the steel for the transmission towers and the transmission cable. All of the steel for the transmission

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Comment Response

8

The actual numbers of estimated jobs are indicated in Section 2.4, 10.11 and Tables 2-8 and 2-9 of the DEIS. Clarification of the number of jobs was added in Section 4.13.4.3 and Section 4.13.4.6 of the FEIS to indicate that the term for employment is “job years.”
Dear [Name],

Attached are comments by Daniel Baker of the Cabezoil Working Group on the SunZia DEIS related to the San Pedro Valley, many specifically keyed to the preferred alternative route 4G. Accompanying Daniel's comments is a copy of our contribution to the DEIS entitled, "Draft Environmental Impact Statement Contributions for Proposed SunZia Transmission Line Routes Traversing the San Pedro River Valley." Daniel references this several times in his comments, and we are providing it here for convenient review. Daniel is also including a U.S. Geological Survey two-page publication entitled, "Biodiversity Metrics with the subtitle 'Biodiversity and Ecosystem Services'" that specifically compares the biodiversity metrics of the San Pedro Valley to the Rio Grande Valley and the southwest in general. Daniel references this in his comments as well.

I am also attaching comments by Ralph Waldt of the Cabezoil Working Group on specific items in Chapter 3 of the DEIS under "Affected Environments." He is a career naturalist and has some of the greatest biological knowledge of the San Pedro Valley. He noticed several discrepancies related to specific species.

We appreciate expressing these materials to you also.

Thank you for considering these comments.

Sincerely,
Norm "Mick" Meader
Co-Chair, Cabezoil Working Group
(320) 322-0962
mmeader@cox.net
1 The environmental sensitivity criteria listed in Table 2-1 were applied in the evaluation of opportunities and constraints as a preliminary step to identify alternative corridors during the scoping process, but not for the impact analysis. The overall sensitivity was based on the composite of opportunities and constraints. (Also see DEIS, Appendix A.) After alternative corridors were identified, the impact analysis was conducted according to criteria and methods described in Chapter 4 of the DEIS.

2 Cumulative impacts were not limited to the resource sensitivity categories listed in Table 2-1. Cumulative impacts were analyzed and described in Section 4.17 of the DEIS according to the methods described therein.

3 See response to comment no. 1.

4 As stated above, the resource categories included in Table 2-1 were used to identify opportunities and constraints within a large regional study area. Designated Wild and Scenic Rivers within the study area would be considered a high level of sensitivity, although only Fossil Creek and the Verde River are designated Wild and Scenic Rivers in Arizona. Wildlife corridors, unfragmented landscapes, and areas of high biological diversity have been included in the impact analysis. Areas protected by conservation investments and initiatives have been considered and addressed in the Biological Resources Sections 3.67 and 3.68; and impacts have been documented in Sections 4.6.4.6 and 4.6.4.7 of the DEIS.
- **Wild and Scenic Rivers** - The San Pedro River is the last major undammed river in the desert southwest and of international renown. In the United States, only 2 percent of the nation’s 5.1 million kilometers of rivers and streams remain free flowing and undeveloped (CWG, pp. 6-8, 34-5).

- **Wildlife Corridors** - The SPRV is recognized as the main Neotropical avian migratory corridor in the Western U.S., and as such is of hemispheric importance. It also functions as an east-west corridor connecting the Rincon-Catalinas mountain complex with the Winchester-Galluro mountain complex within the biologically rich Madrean Archipelago (CWG, pp. 6-8, 34-44).

- **Unfragmented and Intact Landscapes** - The Middle SPRV is part of the largest unfragmented and intact landscapes in the desert southwest, well over a million acres inclusive of no paved roads (CWG, pp. 9-12).

- **Biological Diversity** - The Madrean Archipelago is a hotspot of faunal biological diversity, especially mammalian, avian and reptilian. All of Brown and Lowe's Southwestern Biotic Formations are represented in the Middle SPRV environs, and six ecoregions converge there (CWG, pp. 17-29).

- **Ecological Services** - The SPRV provides greater ecosystem services than the Middle Rio Grande and the Southwest overall on virtually every metric (Biodiversity Metrics EPA/600/F-11/006 May 2011 www.epa.gov). The services of migrating song birds may be as much as $5000 per year for each square mile of forest land (Robinson, CWG, Pp. 72-3).

- **Conservation Investments** - The Lower SPRV has an unusually large assembly of protected status lands and partners. Roughly 192,000 acres have been protected at a cost of $42,500,000 since the ‘80s, unconnected for inflation; including 144,000 acres for mitigation (CWG, pp. 14-17; See TNC DEIS comments).

- **Conservation Initiatives** - Due to these unique attributes of the SPRV, a number of conservation initiatives are proposed or in process for the Lower SPRV, almost none of which are even mentioned in the DEIS. Since NEPA requires that a large overview be maintained toward the magnitude of environmental effects, both for the immediately contemplated action and of future actions, proposals that are in process need to be included in the data layers in order to evaluate impacts.

Preeminent among these is the U.S. Fish & Wildlife Service’s Lower San Pedro River Collaborative Conservation Initiative and National Wildlife Refuge proposal. The Service initiates a Land Protection Planning process to study land conservation opportunities, including adding lands to the National Wildlife Refuge System, when wildlife habitat areas of interest are identified in long term resource plans or are brought to their attention. The Service identified the Lower SPRV as having high quality wildlife habitat values and good habitat restoration...
As noted, national or state wildlife refuges were considered as a high sensitivity, and therefore the alternative corridors were sited to avoid crossing refuges. While there are several initiatives to establish new refuges or conservation areas, none have been established. However, regional and comprehensive land use plans (Pinal County, Pima County/Sonoran Desert, etc.) that have been adopted and are being implemented by local jurisdictions have been included in the baseline studies, and the Project’s effects on such plans have been evaluated in the DEIS.

The magnitude of environmental impacts to biological resources have been evaluated in Section 4.6 of the DEIS, including impacts to sensitive vegetation and wildlife as well as federally-listed species and habitats.

The estimated amount of potential ground disturbance resulting from new access has been calculated using a consistent method for all alternative transmission line corridors included in the DEIS analysis. As stated in Section 2.4.10.1 (Table 2-7, p. 2-73), the assessment of access levels was primarily based on the evaluation of existing conditions (i.e., distance from existing roads, road conditions) and terrain (slope) for each one-tenth-mile long corridor segment to avoid skewing the ground disturbance estimates. The total amount of potential acreage of disturbance was calculated for each subroute segment and based on typical road construction specifications, which provides an average value for comparative purposes.
8 Although more detailed measurements of access roads and facility construction will become available based on the site-specific engineering data in the POD, estimates of ground disturbance that have been developed for purposes of analysis in the DEIS that are reliable according to the project description and the best available data from maps, aerial imagery, and field review.

9 Construction in rugged terrain has been accounted for in the access levels with steeper slopes. Drive and crush construction is generally useful to reduce the amount of erosion potential. (Also please refer to comment no. 7.)
The access model calculation includes the 24-foot-wide roadway in addition to the larger areas of cut and fill, which increase with the degree of slope. Two separate primary access roads would not be needed, although separate spur roads could be required to reach separate tower sites. The model accounts for a maximum amount of ground disturbance with each typical condition. Various access levels, from 1 through 3, occur along Subroute 4C2c and are measured using the GIS application for each mile of roadway.
Mitigation Measure SE 6 would be effective to mitigate potential unauthorized access in selected locations where fences and gates can be controlled. The use of this mitigation measure would be specified in the POD where it would be supported by land owners or land management agencies' representatives.
Mitigation measures to minimize the risk of bird collisions will be employed in the San Pedro River Valley, at the river crossing and potentially at other locations if found to be warranted. However, in contrast to the Rio Grande, the San Pedro River does not support large numbers of birds at the highest risk of collision (cranes, waterfowl, etc.). Large wading birds are present, but would primarily be associated with the riparian corridor. The valley-wide bird movements discussed in the comment are largely passerines and other smaller birds, not typically at risk of collision. North of the river crossing location, bird movement through the valley is largely parallel to the proposed route which would also assist in minimizing collision risk.
Localized impacts to biological resources resulting from potential ground disturbance in the SPRV are indicated for each one-tenth mile segment on the biological resource maps: Figures 6-1W, 6-2W, and 6-3W (DEIS Map Volume). The figures for estimated ground disturbance are included in the impact level tables in the DEIS, Appendix H - Impact Levels; the ground disturbance estimates and impact levels for biological resources are listed in Table H-6 and Table H-7 (pp. H-31 through H-38). (Also see response to comment no.7.)

The BLM weighed the impacts associated with each alternative route and identified one route that avoids or minimizes impacts by locating the preferred alignment along existing disturbance and avoiding critical resources to the greatest extent. It also follows an existing natural gas pipeline for 50% of the length. Although the portion of the route which parallels the San Pedro River is all on State land, it does not cross nor come near lands with special designations. The preferred was chosen not only for having the least impact to resources, but also having the least impact to resources that could be directly mitigated, such as preventing or controlling soil erosion, wildlife habitat and species mitigation. The SunZia transmission lines would follow the existing 345 kV transmission line corridor, which has the benefit of using the same primary access roads, particularly at the San Pedro River crossing where there is existing access and minimal suitable Southwestern Willow Flycatcher habitat.
It is acknowledged that the San Pedro River is considered to be highly sensitive. However, construction of transmission lines crossing the river can be achieved with minimal disturbance to the river channel and associated riparian vegetation by placing towers where conductors would span over the river and much of the riparian vegetation. Selective Mitigation Measure 8 would be implemented at the river crossing.

Engineering designs and mitigation measures (i.e. use of existing roads) are in place to minimize the impact to the SPRV as much as possible. 4C2C like all other alternative routes were analyzed cumulative for the impact to water resources as a whole that includes streams, rivers, water bodies, groundwater, and aquifers. In addition, other resources are also weighed in the selection of a preferred route. 4C3 actually crosses 15 miles of perennial streams and 49 miles of intermittent streams which is more that 4C2 or 4C2c. Plus, 4C3 crosses twice as many miles of the sole source aquifer and is within close proximity to a greater number of groundwater wells than 4C2 and 4C2c.
The decision maker must consider impacts to the human environment, which includes impacts to residential and commercial land uses, socioeconomics, and other resource values. The relative importance of all resource values is weighed in the decision based on the lead agency's criteria within reasonable limitations, but cannot be measured using a mathematical formula.

None of the subroutes in Group 4, including 4C2c, would impact the restricted airspace north of the WSMR.

Please see response to Comment no. 21.
Potential impacts within the greater region beyond the study corridors have been identified and analyzed as indirect and cumulative impacts (Section 4.17 of the DEIS). The study area has been defined for each affected resource, according the potentially affected area for each resource.

The application of standard mitigation measures along the length of Subroute 4C2c in the San Pedro River Valley and selective mitigation measures where sensitive soils have been mapped along this alternative would mitigate impacts to soils that are susceptible to water erosion thereby limiting surface destabilization and sedimentation into the watershed. Standard mitigation measures (Table 2-10) include a number of for proper road construction methods to ensure stable surfaces both for the sake of reducing Project-related impacts to the environment and continued maintenance access to the Project area. Standard mitigation measure #4 requires siting access roads along the natural landform contour wherever possible thereby reducing both ground disturbance and vegetation removal reducing the potential for erosion of surface soils.

Standard mitigation measure #5 requires that vegetation be left in place where possible which would reduce ground disturbance and maintain subsurface root structure reducing the potential for erosion beyond natural levels to occur. Standard mitigation measure #8 requires surface restoration of various Project-related work areas including restoration to original landform contours, reseeding, and installation of cross drains to control water flow within the Project area which would restore disturbed site stability and reduce the potential for erosion beyond natural levels. Standard mitigation measure #19 requires that tower sites be located at least 200 feet from any stream where practicable which would limit the potential for sedimentation.

The application of selective mitigation measures (Table 2-11) where soils susceptible to water erosion have been mapped within the San Pedro River Valley would further reduce the potential for erosion beyond naturally occurring levels. These selective measures include not widening or otherwise upgrading existing access roads in areas with erosion susceptible soils, utilizing existing crossings of perennial streams, placing crossings of canyons at the maximum practicable distance, utilizing overland access (i.e., drive-and-crush or cut-and-clear) to the greatest extent possible. All of these measures would further reduce Project impacts to soils susceptible to water erosion.

Furthermore, the Project Plan of Development would include erosion-control and site reclamation procedures in the Erosion Dust Control, and Air Quality Plan; Stormwater Pollution Prevention Plan Methodology; and Right-of-Way Preparation, Reclamation, and Monitoring Framework Plan.

The portion of Aravaipa Creek listed by ADEQ as being “outstanding” is greater than 4 miles from the centerline for the closest Link C170. Buehman Canyon is within the study area, but the portion designated as “outstanding” by ADEQ is 0.5 miles from centerline of Link C441. It is not anticipated there will be any discharge to these outstanding waters. Engineering designs and selective mitigation measures are in place to prevent additional run off and sedimentation.
The importance of the San Pedro River Valley to migratory birds is acknowledged in multiple locations throughout Section 3.6. Species distribution noted, and is addressed further in Appendix B1. The referenced citation does not indicate that extirpation of those species would be likely as a result of access roads. The primary discussion is related to expanded mining in the San Pedro River Valley and its effects on water quality, with access roads as a potential secondary issue. All streams supporting aquatic species would be spanned without new access road crossings.
Desert Conservation Plan for the A-7 Ranch (crossed by the 4C2 route), that increased vehicular use by recreational users in this area would increase sedimentation from disturbed soils in roads and that extinguishment of aquatic dependent species such as Longfin Dace and Lowland Leopard Frog would be likely (CWG, p. 82).

This is cited as just one example (time does not permit for greater examination) of either a too narrow study area, or an insufficient resource review, or both. It also indicates an insufficient attention to the impacts of erosion in this sensitive watershed, both by project roads that BNPs and mitigation measures cannot adequately address, nor by trespass vehicles that will be permitted by this new access.

3.6.7 Biological Resource Conservation Areas: This list is inadequate to reflect the extent of biological resource conservation areas and partners in the SPRV. A separate listing should be created for proposed new routes through the highly sensitive SPRV that reflects the many partners and ~$2.5 million in conservation investment as recently tallied by TNC. See CWG, pages 14-17 for a better but still incomplete listing.

3.6.8.1 Wildlife Linkages: The DEIS details the importance of wildlife linkages, noting that “habitat fragmentation and loss are currently recognized as the principal threats to biodiversity.” Puzzlingly, for an area of such renowned biodiversity as the SPRV, and of such largely unfragmented and intact extent, it finds not a single wildlife linkage. However, there are abundant examples of existing and proposed linkage projects in the valley:

- AGFD Arizona’s Wildlife Linkages Assessment reference, number 82 was identified between the “Habitat Blocks” of the Rincon-Catalina Mountain and Winchester-Gallino Mountain complexes from Soza Wash to San Manuel. Its purpose was “to document the connectivity value of these lands before adverse activities are proposed.”
- AOLT Impaired Movement Corridors: Mapped by The Arizona Open Land Trust with TNC, it identified Hot Springs/Pea Canyon and Redfield/Kuehleman Canyons as main SPRV cross-valley corridors.
- Sonoran Desert Conservation Plan: One of the conservation strategies articulated in Pinal County’s purchase of the A-7 was to “maintain relatively unfragmented landscape connections between the Rincon, Santa Catalina, Gallina and Winchester mountain ranges and through the San Pedro River valley...”
- Hot Springs Canyon Neighborhood Wildlife Corridor Conservation Easement Project: Local landowners donated $2.4M worth of fee simple and conservation easement lands to TNC in order to connect protected upstream core habitats in the Gallina/Winchester Mountains with those on the San Pedro River and in the Rincon/Catalina complex.
- Pinal County Open Space and Trails Master Plan: Pinal County has recognized the unfragmented nature of the lower SPRV by adopting a plan that identifies much of the area as open space.
- USFS Forest Legacy Program: The SPRV was selected as the number-one Forest Legacy Project in the nation, receiving commendations from Governor Brewer and the

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<td>Additional conservation areas will be addressed, pending additional inventory and information from USFWS and others.</td>
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<td>31</td>
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Land uses were categorized for the study corridor inventory according to the categories defined in Section 3.1.10.2, Methods. The definition of this category is as follows: “Grazing/Multi-Use/Vacant – all land uses that did not fit under a specific category, or were not specifically designated for a specific use by the responsible jurisdiction or land management agency.” (DEIS, p. 3-216) This category includes privately owned lands, as well as state or federal (public) lands leased for grazing; the underlying description is “vacant” because they do not contain any other specified land use and are generally undeveloped, although they do contain utilities and range improvements such as tanks and fences.

The proposed Lower San Pedro NWR corridor contains the critical habitat and associated riparian resources that have been recognized for their high sensitivity in the proposal to establish a NWR. Although the NWR has not been formally established, the same resources attributed to the value of the proposed refuge have been recognized and addressed in the DEIS and FEIS analysis (Section 3.6.7.9, 4.6.4.6).
35 The economic impacts on ranching activities have been addressed in Section 4.13.4.5 of the DEIS. Although approximately 20 percent of the right-of-way would be disturbed, the remainder can be used for grazing. Impacts would be minimized during construction with mitigation measures to allow ranching operations to continue.

36 Comment noted. Also, cumulative impacts to resources in the San Pedro River Valley are discussed in Section 4.17 of the DEIS.

37 Comment noted. See response to Comment 26.
Further, whatever the advantages of mitigations, there remain inescapable adverse impacts to the SPRV watershed of such high significance, sensitivity, quality, and value. What reparations for these inescapable impacts will be made to the public in compensation for losses to these ecosystem services?

4.5 WATER RESOURCES: “Removal of unique riparian habitat, increased sedimentation, and reduced water quality” are unacceptable impacts to a resource of such significance, sensitivity, high quality and value as the SPRV.

4.5.3.4 Route Group 4: 4C2c crosses 6 miles of perennial rivers, 40 miles of intermittent streams, and has 36 percent of the route sensitive to water resources, which is the highest sensitivity. Without a breakdown of locates per a POD, how do we know that this is a result of “more mileage” of the route rather than that these impacts are focused in the SPRV?

“The construction of access roads, staging areas, work areas, and stream crossings could affect perennial and intermittent streams, water bodies, wetlands, wells, and springs.” But there is little mention of mitigation measures. Whatever the advantage of mitigations there may be, again there remain inescapable impacts to the SPRV watershed of such high significance, sensitivity, quality and value. What reparations for these inescapable impacts will be made to the public in compensation for losses to these ecosystem services?

4.6 BIOLOGICAL RESOURCES: This is an interesting section, and ordinarily I would be of priority interest. It reviews an abundance of potential negative impacts across the spectrum of biological classifications in a generally sound manner, and makes points throughout that most with concern for the SPRV would assent to. Despite that, very few of these considerations make it into data charts and evaluations. That appears to be because of the presuppositions established in Chapter 2, which was extensively discussed above. When the parameters and categories are set so narrowly, rather than addressing both discrete and general attributes, discussions such as these can sound good, but their concerns do not get reflected in the data and evaluations. With the limited time appropriated to review the material, there are only a few limited remarks worthy of attention.

4.6.3.2 Wildlife: Illustrating the above point, this section begins with a good general discussion of potential fragmenting impacts of the proposed infrastructure corridor. 4.6.1.1 Significant impacts also lists “Fragmentation resulting from the addition of new infrastructure to large, currently intact blocks of habitat” as a significant impact. Following is a long list of biological classifications and special status species that are addressed, which is appropriate in itself. But, after returning to the fragmentation issue [4.6.4.1 Agency-identified and Other Biological Resource Areas (Wildlife Listings)] and another good discussion of habitat fragmentation, this overarching issue is addressed by the implementation of discrete mitigation measures 5E 1, 2, 3, 4, 5, 6, 8, and 14 which “would minimize these effects.” And those “are applicable to each of the wildlife linkages discussed below.”

Whatever the minimizing effects, major fragmentations still occur, and as a resource of the SPRV’s significance, sensitivity, quality and value, this should be avoided and be reflected in data. Statements such as “Overall, however, impacts of linear features on wildlife are mostly negative and may be difficult to mitigate,” and “fragmentation is currently
41 Transmission lines in the Southwest have not been shown to cause high impacts relating to fragmentation. As the DEIS discusses, such effects are expected to some degree. However, current research does not indicate that the resulting fragmentation would be “major”. See response to Comment no. 31 regarding linkages.

42 Offsite, compensatory mitigation will continue to be developed with the proponent and all applicable agencies.

43 As indicated in Section 3.14 in the DEIS, EO 12898 (U.S. Department of Housing and Urban Development [HUD] 1994) requires federal agencies to address high and disproportionate environmental impacts on minority and low-income populations. Should potentially significant and adverse impacts attributable to the proposed Project fall disproportionately on these populations, environmental justice impacts would result. As noted in Section 4.14, Table 4-20 of the DEIS, High impacts occur in areas where the Project could create direct, long-term, and significant impacts to existing environmental justice populations.

The methodology of assessing impacts to environmental justice populations was applied consistently within rural and urban areas. As stated in Section 4.14.2, although the type of impacts to rural and urban areas would be similar in most cases (e.g., the condemnation of a residence), the level of impact was also determined according to the proximity and density of the environmental justice population to the potential impact. For example, rural residential properties could experience moderate impacts from a distance of two miles of the transmission lines, while a residence just outside a mile from the lines could experience low impacts because of the existing lines or the presence of other structures commonly associated with a built urban environment. For these reasons populations within a 3-mile buffer are more likely to be affected by the Project (higher impacts occur up to a distance of three miles; noise and visual impacts dissipate at greater distances). Census tracts provide the most meaningful geographic unit to measure population components within the area of potential effects in rural areas, but the impacts are assessed according to inhabited structures within proximity to the Project corridor’s centerline. The results indicate higher and disproportionate impacts to urban areas, due to higher population densities in proximity to the Project.
44 Although the I-10 Bypass proposal may become active, the Arizona State Transportation Board voted to remove the proposed alternative routes through the San Pedro River Valley from future consideration.

45 Mitigation is recommended to reduce the potential for erosion. An erosion control plan within the POD will be required.

46 The statement regarding potential cumulative impacts is a reasonable estimate of the effectiveness of mitigation.

47 This comment appears to discuss direct and indirect effects of the Project, rather than the NEPA definition of cumulative impacts as stated. However, all mitigation measures to minimize the collision risk to birds will be considered as an Avian Protection Plan is developed, and any may be implemented as appropriate.
The decision to grant right-of-way for proposed Project would not provide a means to permit other utility projects, and would not preclude other utility projects from being constructed under the No Action scenario.

Comment noted, also see preceding responses.
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- The wider “context” and overview of the SPRV route, as required by NEPA, indicates that the SPRV is a resource of “high sensitivity” on numerous bases which argues compellingly for avoidance.
- Fragmenting impacts of new roads, erosion, OHV trespass and attendant development would threaten the survival of the San Pedro River as the last major undammed river in the desert southwest.
- Fragmenting impacts to the San Pedro River and 40 miles of transmission lines through the SPRV would threaten its status as the most Neotropical even-parrotery corridor in the Western U.S., which is of hemispheric importance.
- Fragmenting impacts of new roads, erosion, OHV trespass and attendant development would threaten wildlife linkages between the Rincon-Catalina mountain complex and the Winchester-Galiuro mountain complex, part of over a million acres of largely unfragmented and intact landscape in the Madrean Archipelago.
- Fragmenting impacts of new roads, erosion, OHV trespass and attendant development would threaten the “hotspot” of floral and faunal biological diversity within the Madrean Archipelago.
- Fragmenting impacts of new roads, erosion, OHV trespass and attendant development would threaten $42.5 million of conservation investment in the Lower SPRV as well as substantial ongoing conservation initiatives by many agencies and NGO partners.
- Fragmenting impacts of new roads, erosion, OHV trespass and attendant development would compromise the social and economic benefits of a working landscape and the highest level of ecosystem services in the desert southwest.

**The selection of the 42c route falls on each of the five DEIS criteria: Maximize use of existing utility corridors and infrastructure; Minimize impacts to sensitive resources; Minimize impacts to river crossings; and Minimize impacts to military operations within the restricted airspace north of the WSIR.**

The selection and approval of the Lower SPRV as a potential NWR by the USFWS, which is in process and runs parallel to the DEIS proposal for over 30 miles, is contradictory to another DOI agency (BLM) authorizing a major infrastructure corridor.

There is also a troubling component in the DEIS that at times make it appear as an advocacy piece for the applicant, rather than an impartial and objective evaluation of impacts as required by the NEPA process. It is not the point here to make accusations; that will depend on EPS responses to these and many other responders. That said, here are some of these concerns:

- Failure to review larger contextual and overview features of the SPRV resource as required by NEPA.
- Including the SPRV’s 40 miles of new access within 90 miles of low-impact and colocated infrastructure traverse skewing impact averages.
Other Agency and Non-Government Organization Comments

- Failure to include the Plan of Development making it impossible to quantify and evaluate the direct impacts of the project to the SPRV resource.
- Area of ground disturbance appears to be underestimated and underreported for high-slope and rugged terrain such as the SPRV traverse would encounter.
- Failure to include any consideration of the USFWS Lower SPRV initiative in current or cumulative impact reviews.
- Failure to include consideration in current or cumulative impact reviews: The Arizona State Land Reform Initiative for the Catalina-Galluro Corridor; the Pinal County Comprehensive Plan; America's Great Outdoors Lower San Pedro River conservation initiative; the ongoing US Forest Service Forest Legacy Program; the ongoing Sonoran Desert Conservation Plan.
- Mention of the SPRV's significant function as the main avian Neotropical migratory corridor in the West is lacking.
- Throughout the DEIS consideration of the avian migration corridor appears to be limited to the main-stem river riparian area, despite extensive discussion of this point in CWG's DEIS comments submission, the majority of which appears to have been ignored.
- Despite the selection priority to maximize use of existing utility corridors and infrastructure, 4C2c is selected which parallels only 57% of existing utility or pipeline corridor, while 4C3 (the Tucson route) follows 84% of existing utility or pipeline corridor.
- Despite the selection priority to minimize impacts to sensitive resources, the highly sensitive 4C2c SPRV route is selected over 4C3 which "would have relatively fewer biological impacts..."
- Despite the selection priority to minimize riparian and river crossing impacts, 4C2c - having 40 miles of SPRV watershed traverse, crossing 6 miles of perennial rivers, 40 miles of intermittent streams, and 30 percent of the route sensitive to water resources which is the highest sensitivity of all routes - is selected over 4C3 with only one crossing of the SPRV.
- The single selection priority to minimize impacts to residential and commercial uses is deemed sufficient to preclude the 4C3 Tucson route from selection over all other priorities.
- A study area of 3 or 4 miles on each side of the project centerline in a largely unfragmented watershed like the SPRV does not satisfy the basic requirements of NEPA or the most basic tenets of ecology.
- Guehman Canyon, which 4C2c crosses, was excluded from consideration as a "Unique Water" or OAW as designated by the Arizona Department of Environmental Quality, whereas an OAW was discerned at Cienega Creek along the Tucson route.
- While finding linkages across the 4C3 Tucson route, the DEIS failed to find a single wildlife linkage in the SPRV such as AGFD Arizona's Wildlife Linkages, ADLT Impaired
Movement Corridors, Sonoran Desert Conservation Plan, Hot Springs Canyon Neighborhood Wildlife Corridor Conservation Easement Project, Pinal County Open Space and Trails Master Plan, USFS Forest Legacy Program, USFWS Lower San Pedro Collaborative Conservation Initiative, Arizona State Trust Lands Rincon-Galluro Corridor. This also ignored the CWG DELS contributions which delineated many of these linkages.

- The terms “vacant” and “undeveloped land” for lands traversed in the SPRV implies a strong urban bias inappropiate for assessing impacts to such biological diverse areas that provide such economically valuable ecosystem services.

- The Summary of Inventory Results focuses on population centers while ignoring the vast landscapes crossed by 4C2c which provide economic livelihood for ranchers and ecosystem services of significant economic value in the southwest and western hemisphere.

- Despite noting that “Overall, however, impacts of linear features on wildlife are mostly negative and may be difficult to mitigate,” there is no discussion of reparations to the public in compensation for losses to these ecosystem services from these incomming impacts as required by NEPA.

- The parameter for consideration of environmental justice is “by census tracts located within approximately 3 miles of each proposed subroute.” While 3 miles from the project is too narrow for documenting impacts in natural areas, it may well be too wide in urban areas. To apply similar standards to such divergent environments would appear to represent an inequitable and biased treatment of the impacted resources.

- The restriction of cumulative impacts to governmental ten-year plans reflects a bias toward urban contexts, since natural systems do not work on a ten-year horizon.

- The I-10 bypass project, which had a proposed route through the SPRV, is not mentioned. Though deferred, the project may well become active again as the economy improves and if a new infrastructure corridor is opened in the SPRV.
The section regarding Arizona state law has been clarified in the FEIS (Section 3.6). Each species noted in the comment was discussed in the Biological Technical Report, Appendix B-1 of the DEIS. The ESA candidate Sonoran Desert Tortoise is discussed in the DEIS (Section 3.6.6.1, 4.6.4.5).

Russian thistle and Johnson grass are not listed as noxious weeds by the state, and thus were not included in Table 3-29. However, mitigation measures described in the DEIS, Noxious Weed Plan (Appendix B2 of the POD), and reclamation goals will be used to minimize or prevent the spread of any invasive plants in the Project area, and to achieve a healthy native community as temporary disturbance is restored.

The FEIS states that this species occurs in the study corridor regularly (Section 3.6.6.1).

The FEIS (Section 3.6.6.1, 4.6.4.5) discusses the current state of knowledge regarding the Jaguar, including sightings summarized in the USFWS proposal to designate critical habitat.

“May occur” is a reasonable statement, given the wide range of conditions present within the study corridor near each proposed river crossing. Note that the DEIS specifies that it refers to the 8-mile study corridor and not the larger study area. The DEIS (Section 3.6.9.3, 4.6.5.4, 4.5) further discusses conditions at each proposed crossing location, most of which currently lack suitable nesting habitat for the Yellow-billed Cuckoo. Nesting habitat may recover at some locations in the future.
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56 The entire San Pedro River Valley was acknowledged to be potential Sonoran Desert Tortoise habitat in the DEIS (Section 3.6.6.1, 3.6.9.3) and impact analysis.

57 The BLM and USFWS are unaware of Spikedace in the San Pedro River at this location.

58 The DEIS (Section 3.6.8) discussed linkage zones for which detailed modeling had been completed by the Arizona Wildlife Linkages Working Group. Although the referenced area was not among them, the DEIS notes the lack of existing access in a portion of this area, as well as the conservation efforts underway in the A7 Ranch and other areas. This discussion has been expanded in the FEIS (Section 3.6.7).
August 22, 2013

Bureau of Land Management
Adrian Garcia, Project Manager
SunZia Southwest Transmission Project
P.O. Box 27115
Santa Fe, New Mexico 87502-0115

RE: Comments on the Draft EIS for the SunZia Southwest Transmission Project (SunZia Project)

Dear Mr. Garcia,

The Southern Arizona Home Builders Association (SAHBA) represents building industry professionals ranging from builders and developers to land planners, engineers, and trade contractors, etc. We currently have approximately 343 member companies located, or who have offices, in Pima, Cochise and Santa Cruz Counties.

There is concern that SAHBA member properties and current or future development projects would be negatively impacted by the SunZia Southwest Transmission Project’s alternative Subroute 4C3 (Tucson) depicted in the Draft EIS/RMPA released May 25, 2012.

We are therefore submitting this letter to express our concerns with Subroute 4C3 (Tucson) for the Applicant’s proposed transmission project. SAHBA does support the Applicant’s project and prefers the Applicant’s project be located within the BLM Preferred Alternative route.

In light of the potential impacts on SAHBA member companies, we respectfully request to be notified of any new information or additional venues to provide formal comment.

Thank you for your consideration on this matter.

Sincerely,

David Godlewski
President
SAHBA

Comment noted. Also note that Subroute 4C3 (Tucson) is not the BLM Preferred Alternative.

Comment noted
The DEIS was made available for public review and comment on May 25, 2012. The BLM held ten public meetings and scheduled a 90-day public comment period that ended on August 22, 2012. In total, the public scoping for the SunZia project has included a total of 22 public meetings and 255 days of public comment.

A 45-day public comment period is generally the time provided for a DEIS. The BLM’s planning regulations and guidance require a minimum 90-day public comment period for land use plan amendments. The SunZia project may involve several BLM land use plan amendments thus the 90-day comment period was provided. The SunZia DEIS comment period meets BLM requirements and affords interested parties opportunity and time to review the document and submit substantive comments. In addition, the BLM regulations implementing the National Environmental Policy Act regulations require that all substantive comments received before reaching a decision must be considered to the extent feasible. This means that substantive comments received after the 90-day comment period have also been considered before the Final EIS was issued.

Comment noted
All scoping comments and summary have been provided in the scoping report, which has been publicly available on the BLM website for the SunZia Project. All comments submitted in response to the DEIS have been cataloged and individual responses were prepared and included with the FEIS. The most current and best information was used to describe the Project and analyze impacts to resources in the DEIS. Information was reviewed and updated as appropriate for the FEIS. The FEIS indicates where text changes have been made. Please also see response to Comment No. 1 regarding public involvement.

Please see response to Comment No. 1.
The Bowie Power Station site is located approximately 15 miles from the TEP 345 kV transmission line corridor, and a Certificate of Environmental Compatibility has been issued for a separate (double circuit) 345 kV transmission line to allow interconnection between the Bowie Power Station and the existing TEP transmission system at the Willow 345 kV substation. The Bowie Power Station and transmission project is not part of the proposed Project. As a third party contractor for the SunZia Project, EPG has disclosed that the contractor has no financial or other interest in the outcome of the project, as required under 40 CFR 506.5(c)(3).
By controlling the message about the purpose of the SunZia project, by ignoring much of what was submitted in written form, and by forbidding publicly-raised questions during or after these official presentations, the BLM was denying the public and stakeholders any opportunity to effectively challenge the narrative about renewable energy that was being presented by their environmental contractor in the DEIS and in the public meetings.

With evidence that the applicant’s claims for benefits to the environment are significantly exaggerated (see comments below) we need not wait until the project is constructed to learn that this particular project will significantly increase greenhouse gas emissions, contrary to the claim made in the DEIS. If we wait that long, the impacts to the San Pedro Valley will have already occurred. The San Pedro watershed contains the last remaining major riparian ecosystem in Southern Arizona. As such, it has become the repository for conservation investments that were needed to satisfy mitigation requirements for development that has taken place elsewhere in the state. These conservation investments were made in good faith, and should not be devalued by building a major new infrastructure corridor in the last remaining major riparian watershed. This corridor will nullify the very growth areas that caused the need for these conservation investments.

There is no evidence that this project will benefit the environment as a whole, and there is plenty of evidence that this project will cause significant harm to the San Pedro riparian ecology. A recent DEIS comment letter from the applicant’s own project manager documents the environmental impacts along the BLM’s preferred route through the San Pedro Valley, and he admits how difficult it would be to mitigate those impacts. Another alternative route, the so-called Aravaipa option, bisects both the lower San Pedro River Valley and the second largest unfragmented wilderness zone in New Mexico and Arizona (the Chiricahua mountains), which would violate principles of conservation biology in an equally significant manner as with the preferred route, as well as violating the BLM’s own directive about incurring rights-of-way in common. The other route alternatives through the San Pedro Valley or through the Tuscon rim are also unacceptable or unfeasible. The BLM must seriously consider alternatives to this proposed project.

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<td>6</td>
<td>Comment noted. A discussion of conservation easements along the San Pedro river and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.</td>
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8 As stated in Section 1.3 of the DEIS, the BLM’s action is considering the Applicant’s ROW application. As part of BLM’s consideration of the application, it also considers the Applicant’s objectives as they relate to the purpose and need for the project, as well as establishing a reasonable range of alternatives.

Recent projections from the Western Electricity Coordinating Council (WECC) in a table titled, “2022 Common Case Loads and RPS Requirements in WECC Region, Modified as needed for DG Assumptions” (http://www.wecc.biz/committees/BOD/TEPPC/20120106/Lists/Minutes/1/2022%20Renewables_FINAL_20120206.xlsx last visited October 2, 2012) show that approximately 55,765 GWh of new renewable generation will need to be added to the WECC Region (i.e., California, Nevada, Arizona, and New Mexico) between 2011 and 2022 in order to meet RPS. By comparison, DEIS Table 1-1 indicates a projected need for 58,654 GWh of renewables by 2020 and 70,794 GWh by 2025. The WECC analysis provides a more recent RPS analysis than Table 1-1, however, the WECC data presents similar results when compared with the DEIS data and largely substantiates the data that was presented in the DEIS.

9 As stated in the introduction to the table on DEIS p. 1-6, “Table 1-1 provides the forecast of additional energy that would be required to meet the RPS in these states (identified as Net Short), and the transmission capacity that would be needed if these energy standards were to be met entirely by solar or wind projects for the forecast years 2015, 2020, and 2025, respectively.” Table 1-1 is provided as an example of the amount of renewable generation that would be required to meet RPS and the associated transmission capacity; this transmission capacity could be provided through the existing transmission system, if available, or through new transmission system additions.

The FEIS was modified to include a footnote to Table 1-1 as follows: “Necessary transmission capacity could be provided through the existing transmission system, if available, or through new transmission system additions.”

10 Section 1.4 and References of the FEIS has been modified to include the following citation: (SWAT 2006). SWAT 2006, Project Zia Transmission Planning Workshop, PowerPoint presentation given on August 17, 2006, by Bob Smith, Arizona Public Service Company; available online at http://westconnect.com/filestorage/swat_project_zia_081706.pdf (last visited October 10, 2012).
the DEIS in order to meet BLM information quality guidelines. To do otherwise perpetuates the same systematic bias identified by the NRCDs in their IQA petition.

On the same page there are general statements about the need for increased transmission capacity for renewable energy in the Desert Southwest, but no statements from SWAT’s Renewable Energy Task Force related to this particular project. This incoherence was documented by Charles Huckleberry in scoping comments.

Table 1.2 in Section 1.4 is another misleading table, apparently intended to emphasize the interest in developing “primarily renewable energy” projects within SunZia’s project area. Since the table does not include all existing transmission owners within the SunZia project area, it cannot be used to once again invoke the phrase “primarily renewable energy” as a characterization of energy development potential. Interest expressed by several of the many local utilities in the SunZia project area does not translate into the basis for a realistic prediction of energy development. As the NRCs frequently noted, potential interest in renewable energy is a very different concept from what is required for the practical and economical operation of an EHV line, and it bears no relationship to the increasing presence of natural gas generation in the national energy portfolio and specifically along the southern portion of the proposed transmission line. The claims of this project actually supporting “primarily renewable energy” are extremely slim, but the BLM has again allowed the applicant to mislead the public on this point in this section and in the DEIS sections related to Cumulative Effects, Global Climate Change, Alternatives to SunZia, and Economic Impacts (see specific discussions below). This directly contradicts the documented evidence that has been presented to the BLM during the scoping period and prior to the release of the DEIS, and it contradicts the disclaimers issued by the BLM in April of 2012.

All of the above comments on Section 1.4 are more examples of presentation bias that the NRCDs identified in their IQA petition of July, 2011. The fact that the BLM continues to present biased or unsubstantiated statements in their DEIS suggests that the agency is more interested in marketing the proposed project than presenting an objective project description. However, more importantly, it provides evidence that the BLM is ignoring documentation provided by the public and stakeholders and heading toward a foregone conclusion to designate a route for this project.

Section 1.5 correctly states, “The intent of scoping is to identify important issues related to a proposed action and its alternatives.” However, Table 1.3 (Summary of Issues from Scoping) includes no mention of the most controversial issue raised during the scoping period, which was the credibility of the renewable energy development claims that the BLM allowed the applicant to include in its scoping documents. These claims were challenged in separate written scoping comments by an electrical engineering research, two university trained scientists, a sustainable systems specialist, and a county administrator. My own scoping comments included a request for correction to these claims, and I was told by the BLM’s project manager that this request would be considered by the BLM. When no response was given several months later, I took this request to my local Conservation District, who filed another request for correction with specific reference to the Information Quality Act. There were two subsequent appeals, a case investigation by our Congressional representative regarding response delays, and two formal meetings with Arizona BLM officials.

The fact that the most controversial issue raised during the scoping period is not acknowledged in Table 1.3 contradicts the BLM’s assertion that restricting public feedback to written comments alone is

Table 1-2 of the DEIS provides an illustration of generation interconnection requests, including size and fuel, that were identified through transmission interconnection queues of load serving utilities within the SunZia’s Project study area, and represent projects located in counties which could reasonably interconnect with the existing system or SunZia. The purpose of this illustration was to provide an example of the need for transmission service within the study area.

The BLM has reviewed all public comments received during scoping and the public review period of the DEIS, including late submissions. The scoping report for SunZia contains all scoping comments and was used to identify issues and alternatives for consideration during development of the DEIS. Table 1-3 provides a summary of the information contained within the scoping report. The scoping report is publicly available on the BLM’s project website at http://www.blm.gov/nm/st/en/prog/more/lands_realty/sunzia_southwest_transmission.html. Public comments requesting clarification and corrections on the DEIS were used to facilitate preparation of the FEIS and to make adjustments as determined necessary by the BLM. As part of BLM’s consideration of the application, it also considers the Applicant’s objectives as they relate to the purpose and need for the project. Section 2.3.3.3 of the DEIS describes alternatives to new transmission including demand side generation, new generation, distributed generation, existing transmission upgrades, and Tucson area upgrades. These alternatives would not adequately address the stated purpose and need for the Project.

SunZia Southwest Transmission Project Other Agency and Non-Government Organization Comments J-437 Final Environmental Impact Statement and Proposed RMP Amendments
The range of reasonable alternatives was evaluated based on the purpose and need for the proposed action. Further, demand side management and energy efficiency programs may reduce the need for additional energy sources, thereby altering the portion of renewable energy required to meet RPS; however, these programs are not physically capable of creating 3,000 MW of available transfer capacity in the project area, nor would these programs provide access to potential energy sources along the path of the proposed project, including those located near the eastern terminus of the proposed project, and were therefore eliminated from detailed analysis in the DEIS as discussed in Section 2.3.3.3.
Lastly, this section ignores the obvious principle that significantly increasing power production reduces the incentive for energy efficiency. Providing a grid of new energy resources that are primarily non-renewable will discourage energy efficiency, significantly increase greenhouse gas emissions, and destroy incentives for demand-side management.

Section 2.3.3.3. Page 2-39. New Generation: New large scale renewable energy generation could be accommodated in southern Arizona and southern New Mexico by upgrating existing lines and using renewable energy to partially displace existing non-renewable generation in the region. In this situation, existing non-renewable resources would be used on a dispatchable basis for reliability purposes. Also, with an alternative proposal such as the Southline Transmission Project, a reasonable increase in total generation could be accommodated at the same time, without developing an entirely new major infrastructure corridor through many parts of New Mexico and Arizona, as proposed by the SunZia project.

The New Mexico wind energy resources mentioned in this section would be better served by an east-west line that also provided access for wind resources along the same latitude in Arizona. There are several alternative project proposals directed at this objective, but none of these project alternatives are mentioned in this section. In a rigorous and objective analysis, all energy options and transmission alternatives would be listed in a table and discussed. This standpoint analysis is disfavored of all alternatives except for the proposed project. This is another example of bias in presentation and the tendency to support an arbitrary and capricious conclusion.

Section 2.3.3.3. Page 2-40. Distributed Generation: While the DEIS summarily dismisses the effectiveness of distributed generation, the fact is that distributed generation has been a key factor in providing service to rural customers with no access to the grid. It appears that New Mexico and California will also be able to meet their RPS with the deployment of renewable energy, in large part due to the successes of distributed or locally produced generation. This DEIS section once again invokes the general policy of increasing transmission capacity, to the exclusion of any other policies related to energy efficiency and optimum use of existing infrastructure corridors.

This section also makes the statement that distributed generation does not increase reliability, when in fact, distributed generation can provide local areas with a valuable backup to energy transported by long-distance transmission lines that are vulnerable to interruptions. The only reliable backup I have at my own residence is the solar array on my roof. Without it, I would have no power for lighting, the telephone system, and ventilation during the main grid's power outages that occur frequently, and sometimes for long duration, during storms. There are more residential and commercial areas in Tucson that have thousands of kilowatts of local solar production based on rooftop. These local systems, coupled with local dispatchable generators, are a significant source of reliability. Over-dependence upon a nationwide grid greatly increases vulnerability to outages and reduces reliability of service.
The Proposed Action is for two 500 kV transmission lines with a transfer capacity of 3,000 MW to 4,500 MW, and would have an eastern terminus at the SunZia East Substation near Corona, New Mexico and a western terminus at the Pinal Central Substation near Eloy, Arizona. Please see response comment Nos. 5, 12, 15, and 17.
The cumulative impact analysis in Section 4.17 of the DEIS fully evaluates potential cumulative impacts associated with development that was identified in the Past, Present and Reasonably Foreseeable Future. Reasonably foreseeable future energy developments have been identified in Table 4-30 of the FEIS, which includes the Bowie Power Station, the Afton Solar Energy Zone, and the NREL identified QRA’s. The FEIS has been updated to include recent changes in the Solar PEIS and RDEP.

The BLM developed the “Energy Development Forecast Analysis” (DEIS Section 4.17.3.3), consistent with BLM’s approach in identifying “reasonably foreseeable development scenarios” (RFDs) for oil and gas actions, as an “an attempt to provide an analytical tool...to provide a means to assess the cumulative effects of the types of renewable energy projects that may ultimately interconnect (but at this time are unknown) with the Project” (DEIS p. 4-269).

As stated in the DEIS (p. 1-7), “Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services...” and reiterated on p 4-274 of the DEIS, “As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service.” Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, “it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation” (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity.

As stated in the DEIS (p. 1-9), “Pursuant to FERC Order 888, it is noted that the locations of individual proposed projects or transmission line interconnections cannot be identified to third parties by transmission owners.” Although the specific location of the proposed projects cannot be identified, DEIS Table 1-2 provided an illustration of generation interconnection requests, including size and fuel, that were identified through transmission interconnection queues of load serving utilities within SunZia’s path and represent projects located in counties which could reasonably interconnect with the existing system or SunZia. The purpose of this illustration was to provide an example of need for transmission service within the study area.
The energy development scenarios as stated in Section 4.17.3.3 of the DEIS are based on reasonable assumptions of the forecasted mix of generation resources. As stated “In developing these scenarios, it is assumed that some portion of the Project’s transmission capacity would be utilized by nonrenewable generation resources. As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service.

Further, renewable generation (depending on type, location, local and regional meteorology, and other factors) exhibits certain patterns of availability and intermittency. Should buyers of renewable generation so desire, they may arrange for regulation generation services from other sources on the grid, or from within their own inventory of generation assets. Some of the generation noted above in the two options that is indicated to come from “other types of generation facilities,” might be comprised from such regulation generation services and may, in fact, flow over and across all or part of the Project’s transmission facilities.
Part Three, Conclusion

By consistently ignoring the need to address specific requests for correction and disclosure over a 23-month period and by not acknowledging the DEIS that exaggerated renewable energy claims were an area of concern, the BLM has significantly misled the public, stakeholders, and the media about the need for and purpose of this proposed project, as well as the closely related energy development forecast. As such, the BLM has significantly undermined the established public standard of fostering informed participation by the public and stakeholders in the NEPA process.

To treat these long-standing comments about exaggerated renewable energy claims as simply DEIS feedback would not be sufficient to repair the harm done by an extended propaganda campaign. This would simply repeat the same ignore-or-delay pattern established by the BLM during the first three years of the process and further extend the period of misleading the public. Vague assurances that “concerns” will be addressed at a perpetually postponed “later date” is a paternalistic approach to dealing with the public and stakeholders, one that obviously has not led to the resolution of specific issues.

Given that the BLM has refused to allow public questioning and commenting at the DEIS public meetings, has refused to extend the comment period to effectively address and revise this misleading DEIS, and has refused to even acknowledge the most controversial issue associated with the project, the only option that deserves consideration at this late stage in the process is the No Action decision.

It is with sincere regret that I have been forced to provide this negative critique of the BLM’s role in the SunZia project. I have had a good relationship with the BLM in the past, and I look forward to the same in the future, particularly because of the important role that the BLM plays in the San Pedro River Valley. I postulate that the BLM was under considerable pressure from the Department of the Interior to fast-track this project. However, fast-tracking does not justify sacrificing information quality and meaningful public participation.

Respectfully submitted,

[signature via emails]

Peter Else
Friends of the Awanpa Region
P.O. Box 576
Mammoth, AZ 85618

Attachment: Ten Specific Requests in the Information Quality Act Petition of July, 2011
<table>
<thead>
<tr>
<th>REQUEST</th>
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<tr>
<td>1) Drop repeated phrase “including primarily renewable resources” from statements of purpose</td>
<td>Word “primarily” dropped on BLM website, after two appeals, in April of 2012</td>
</tr>
<tr>
<td>2) Include all energy resources likely to gain access in statements of probable energy development</td>
<td>Bias toward exclusive focus on renewable resources persists in the DEIS</td>
</tr>
<tr>
<td>3) Transmission access statements included no mention of “stranded” non-renewable resources</td>
<td>DEIS continues to only discuss “stranded” renewable resources</td>
</tr>
<tr>
<td>4) Drop inference that project is needed to meet Renewable Portfolio Standards in SW states</td>
<td>DEIS (page 1-7) continues to infer that this project is necessary to meet SW states’ RPS</td>
</tr>
<tr>
<td>5) Refute the claim that the project would provide “economical access” to renewable energy in southern Arizona</td>
<td>No correction or clarification made at any point in the NEPA process thus far. No discussion of cost impacts to Arizona ratepayers</td>
</tr>
<tr>
<td>6) Disclose Federal policies regarding access to the proposed lines, with resulting uncertainties</td>
<td>Brief disclaimers issued by BLM, after two appeals, in April of 2012</td>
</tr>
<tr>
<td>7) Disclose potential conflict of interest between Bowie plant and stated focus of the proposed project, and disclose potential expansion of other non-renewable resources</td>
<td>Not disclosed, and non-renewable resources were significantly understated in the Energy Development Forecast, contrary to the closely related High Plains Express Feasibility Study</td>
</tr>
<tr>
<td>8) Disclose that applicant is not obliged to build all route segments approved, thus potentially affecting future access for NM wind resources</td>
<td>Not disclosed. No reference to the economic factors that will determine ultimate build-out and probable generation sources</td>
</tr>
<tr>
<td>9) Disclose the existence of fossil-fueled plants along the proposed route</td>
<td>Done in one DEIS table, but significantly underestimated the future role of these plants in the Energy Development Forecast</td>
</tr>
<tr>
<td>10) Eliminate systematic bias in project description. Cease using the NEPA process as a marketing tool for the applicant</td>
<td>The BLM presented applicant’s unsubstantiated Energy Development Forecast, indicating 81 to 94% renewable energy development. Over 170 pages of faulty analysis in the DEIS was based upon this biased Forecast</td>
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</table>

**NOTE:** There was no acknowledgement in the DEIS that exaggerated renewable energy claims were an area of concern in scoping comments (Table 1-3). Also, the petitioners’ requests were either ignored in the DEIS (items 3, 4, 5, 7, and 8 above), or given brief responses that were subsequently dwarfed by consistently biased presentation and over 170 pages of faulty analysis.
From: Peter Warshall and Associates
To: Bureau of Land Management, New Mexico Office

No: Draft EIS for the SunZia Southwest Transportation Project
Date: August 26, 2012

Dear BLM:

Attached are our comments of the Draft SunZia environmental impact statement. Please confirm receipt of this email.

We have been asked by various organizations and individuals to prepare comments. Because of time and resources, we decided to do this work pro bono out of limited scope. Our general conclusions are as follows:

1. The DEIS does not meet NEPA standards and has grave inadequacies and incomplete and unavailable information which make a clear preferred action alternative impossible to evaluate. Some of the evidence is presented in a clearly biased form.

2. The best action at this time would be a Deferred No Action Alternative, an alternative not considered by the agency. The Deferred No Action Alternative would give the applicant and consultant (ENG) enough time to decide if they want to proceed and return with a new (greatly revised) DEIS in the future or choose the No Action alternative.

3. The only other alternative that appears reasonable is a Phased Alternative, which was not considered by the BLM/ENG. This also requires a new (revised) DEIS to be issued to the public and might address the inadequacies of the present DEIS.

4. The major problems with this DEIS are: poorly defined project and project purpose, project phasing and timing, inadequate presentation of needs and the scale and timing of project development and its environmental impacts, an economic feasibility statement that is incomplete, unreliable and remote in time and speculative in presentation, an unreasonable elimination of alternatives and mitigation measures, extensive unavailable or unattainable information that is needed to evaluate adverse environmental and socio-economic impacts, a poor understanding of crucial NEPA terms such as “significance” as well poor (or non-existent) definition of areas necessary for understanding a transmission line project (e.g., transfer capacity, congestion); and apparent biases in the presentation of evidence and evaluations.

In short, we recommend a No Action Deferred Alternative as the least expensive or the Phased Alternative with a completely revised DEIS re-issued to the public or a No Action alternative.

2206 Comment Response

1. The DEIS was prepared in accordance with the NEPA, Council on Environmental Quality regulations implementing NEPA, and the BLM NEPA Handbook.

2. The comment is suggesting an alternative whereby the BLM would not act on the application for the SunZia Project until some undetermined time in the future. Such an action is inconsistent with the requirements of FLPMA, pursuant to which the BLM must respond to and provide a decision on applications for rights-of-way traversing public lands. Additionally, such an alternative would not respond to the purpose and need of the proposed action. The BLM is required to only consider one “No Action” alternative, and has already done so in the DEIS. Finally, the impacts associated with a “No Action Deferred Alternative” would be identical to those of the currently analyzed “No Action Alternative” in the DEIS until the time that the action were to be implemented, at which point it would resemble the action alternatives analyzed in the DEIS. Therefore, “No Action Deferred Alternative” was not included in the FEIS.

3. The “phased alternative” put forward by commenter was not previously suggested, and thus not analyzed in the DEIS. Such a “phased alternative” is not reasonable as it fails to address the purpose and need to allow for at least 3,000 MW of new transfer capability in the region. The BLM, in conjunction with SunZia Transmission, would consider phased development and construction activities. However, phased development and construction activities are not “design features,” rather, they are related to mitigation and construction, operation, and maintenance activities developed following issuance of a Record of Decision, if the Record of Decision approves issuance of a right-of-way.

4. The commenter has indicated several concerns with the DEIS. Additional clarification has been provided in the FEIS to address many of these concerns. The definition of significant impacts was provided in Chapter 4 of the DEIS with respect to the analysis of each of the environmental resources, including Section 4.2.2.1, Section 4.3.2.4, Section 4.4.2.2, and others.

5. Please see response to comment nos. 2 and 3.
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<th>Comment ID</th>
<th>Comment Response</th>
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<td>2206</td>
<td>The commenter has been added to the notification list.</td>
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</table>

Please place me on all notification lists. Thank you.

Peter Warshall, PhD
350 South Grande Ave, Tucson, AZ 85745
1.0 PROJECT (Section 1502.13)

The project description is inadequate and incomplete as to who, what, when and why. These are standard requirements of the EIS process.

1.1 Who wants this project?

This project appears to be a project of the private business firm Southwestern Power Group (SPG), which is a subsidiary of MHR, but the DEIS states that the following partners: Salt River Project, Tucson Electric Power, Energy Capital Partners, Shell Wind Energy Inc. Are those financial partners still in the project (see socio-economic impacts)? What is their relation to SPG? Are they responsible for construction, operations and/or mitigation?

1.2 What exactly is the project? Why does this DEIS not say which of the two options is the preferred alternative of the BLM?

The preferred project is not resolved in the DEIS. The Sun Zia project has two preferred projects with different impacts — both of which can be built:

1. Two single-circuit 500 kV AC lines that have an approved rating of 3,000 MW from the Western Electricity Coordinating Council.

2. The BLM Preferred Alternative could include either Option A or Option B – the two options are not alternatives. The DEIS includes an analysis of impacts resulting from either of the options, and includes an analysis of each of the alternative routes with consideration for the differences between the two options. The Applicant would reserve the right to construct a second 500 kV transmission line as either an AC or a DC line, after construction of the first 500 kV AC line.
2. One single-circuit 300 kV AC line and one single-circuit 500 kV DC line with an estimated power transfer capacity of up to 4,500 megawatts. This option does not have approval from the Western Coordinating Council or approval is not disclosed.

The DEIS tries to resolve the preferred pathway of the high voltage transmission lines (HVTLs) and the location of four or more substations but does not indicate which of the HVTL options will be chosen. The two options have different scales (ranging from 2,000 to 4,500 MW) and will have very different indirect and cumulative impacts, impacts on HVTL energy conservation, number of substations, long-term impact of growth, etc., that are not addressed and analyzed in this DEIS (see Environmental Impacts) for the preferred alternative.

1.3 Will there be a supplemental BLM EIS?

It is not stated if a Supplemental EIS will be issued once the final project and right-of-way is chosen. Other EISs and permits are required; it is not stated how tiering (linked EISs) will occur. The proposed project appears to be a planning document (more than a "rip" project) since many permits, licenses and EISs are not in place and there is no Table of expected completion of these additional requirements and the financial feasibility of the project has not been demonstrated (see other sections). The route could easily change if private lands are or other landholders: refusals, relocations, and to sell, or BLM could not meet their asking price.

1.4 What is the timing and phasing of this project?

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<td>11</td>
<td>Comment noted</td>
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<td>12</td>
<td>Complete information for the Project description is located in Chapter 2 of the EIS. Please also see response to Comment No. 2.</td>
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<td>13</td>
<td>The assumptions used for the assessment are based on a 2 to 3 year construction period as indicated in the analysis of impacts (e.g., Climate and Air Quality and Socioeconomics), although the start of construction has not been determined. The BLM, in conjunction with SunZia Transmission, would consider phased development and construction activities. However, phased development and construction activities are not “design features,” rather, they are related to mitigation and construction, operation, and maintenance activities developed following issuance of a Record of Decision, if the Record of Decision approves issuance of a right-of-way.</td>
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<td>14</td>
<td>Please see responses to comment nos. 10 and 13.</td>
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<tr>
<td>15</td>
<td>Although not all proposed substations may be needed, the DEIS includes the analysis of impacts that would result from construction and operation of all proposed substations.</td>
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The project description is inadequate and incomplete because the timing and phasing is not clearly revealed and will have different environmental and socio-economic impacts. The timing and phasing are scattered in the DEIS and at times appear contradictory. Timing and phasing do not appear in the index.

There appear to be three timing periods. Construction of the complete project is supposed to take place in three years (7) from the issuing of decision document (all described components, connections and configurations). But, at times, this is contradicted and the construction period is implied to be longer since the BLM does not know if SPG wants to build option A or option E. For instance, it states: “Configuration number 2 will depend on how much power transfer capacity is in demand by the energy market in the Desert Southwest.” When will this be decided and when will the stringing of lines or the second series of towers be built? In the next three, ten, twenty or fifty years? Or, it says: “The project’s construction will likely occur in phases (e.g.: line number 1 being built prior to line number 2, etc.) and segment (e.g.: portions between substations may be built and energized before subsequent similar segments, etc.).” This highly incomplete and unclear statement implies that construction is much more than three years and does not indicate whether supplemental EIS’s or EIRs will be required.

The second timing period is a planning period for connections to power generators, and “portions between substations may be built and energized before subsequent similar segments, etc.” It is supposed to be known for each ten-year planning horizon. Ten years appears to have been chosen by BLM based on “usual” or “normal” planning periods for infrastructure development, though alternative time periods are not discussed. The first ten-year planning period for connections and power generation is NOT described in the DEIS and the public does not know if any connections would be made or no agreements for use of the line have been signed or reported. Readers do not know which substations will be built.
As stated in Section 2.4.11.3 of the DEIS, Decommissioning, structures and would be removed and disturbance ground areas would be restored at the end of the period subject to the Grant, in accordance with the Termination and Restoration Plan approved by the BLM.

Please see responses to comment no. 2.

The project description information provided in the DEIS is adequate at this time, however, it is generally recognized that additional data would be required if such studies are needed after ten years.
and before any groundbreaking, a supplemental EIS will be issued. The DEIS only addresses alternative HVTL routing and potential locales for potentially constructed substations.

Please use this project description in any revised drafts.

2.6 NEEDS

The DEIS does not make a clear distinction between the needs for this project and the purpose of the project. In this section, we comment on the needs. The needs allegedly include:

2.1 the need to relieve line congestion
2.2 the need to increase access to HVTLs for nearby new or expanded power generators
2.3 the need to provide additional electricity to meet demands, reliability and security within or near core load centers, especially to Las Cruces, Albuquerque, Tucson, and Phoenix.
2.4 the need to provide for increased electricity demand, reliability and security within other parts of the states of AZ and NM
2.5 the need to interconnect renewable resources in the vicinity of Path 47 and SunZia in the west-to-east direction and 0 MW of available transmission capacity in the east-to-west direction (SunZia’s predominant planned power flow direction) was identified on transmission lines within Path 47; and (3) SWAT analyses illustrate an abundance of interest to interconnect renewable resources in the vicinity of Path 47 and SunZia.”

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<td>2206 19</td>
<td>As stated in the DEIS, several needs have been identified and they have been listed by the commenter. The purpose of the Project is to meet these needs.</td>
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<td>2206 20</td>
<td>The DEIS, p. 1-6, specifically states that the DOE 2009 report, “identified the key transmission path in southern New Mexico” as one of the most heavily used and congested transmission paths in the West (emphasis added). The path referred to by this quote is Path 47, which includes the proposed SunZia transmission line route. Further, (1) as stated in the DEIS, the DOE identified Path 47 as a highly congested path; (2) a nominal 170 MW of available transmission capacity in the west-to-east direction and 0 MW of available transmission capacity in the east-to-west direction (SunZia’s predominant planned power flow direction) was identified on transmission lines within Path 47; and (3) SWAT analyses illustrate an abundance of interest to interconnect renewable resources in the vicinity of Path 47 and SunZia.”</td>
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requests to comment nos. 20, 22, 23, and 24.

22 The terms are used and meant to be understood in normal manner and usage to indicate a transmission system that operates in a reliable manner. The following definitions (obtained from NERC webpage located at http://www.nerc.com/page.php?cid=115122 and last accessed January 28, 2013) have been added to the glossary of the Final EIS. Reliability – In the context of the bulk power system, NERC defines reliability as the ability to meet the electricity needs of end-use customers, even when unexpected equipment failures or other factors reduce the amount of available electricity. NERC breaks down reliability into adequacy and security, defined as follows. Adequacy – Having sufficient resources to provide customers with a continuous supply of electricity at the proper voltage and frequency, virtually all of the time. “Resources” refers to a combination of electricity generating and transmission facilities, which produce and deliver electricity, and “demand-response” programs, which reduce customer demand for electricity. Security – The ability of the bulk power system to withstand sudden, unexpected disturbances such as short circuits, or unanticipated loss of system elements due to natural or man-made causes.

We could not find any letters or documents from El Paso Electric, TEP, FNM, Xcel’s Southwest Public Services or any of the 20 coops that defined their line congestion concerns. The only other pathway deemed a pathway of concern is Pathway 47 in southern NM, which is not addressed by this DEIS.

22, 23 and 24. What is the need for increased reliability in the SunZia geographic area?

Electric system reliability has two components: adequacy and security. Adequacy is the ability of the electric system to supply customers’ aggregate demand and energy requirements at all times, taking account of scheduled and unscheduled outages of system facilities. Security is the ability of the electric system to withstand sudden disturbances, such as electric short circuits or unanticipated loss of system facilities. The degree of reliability can be measured by the frequency, duration and magnitude of adverse effects on electricity delivered to customers.
The DEIS reflects that SunZia does not have specific customers at this time. See e.g. DEIS, p. 4-269 (“At this time, the Applicant is not accepting, reviewing, or processing any interconnection requests.”). The Applicant is seeking to fill a need for added transfer capability in the vicinity of the project, among other needs. See e.g. DEIS, p. 1-5. The need for added transfer capability is evidenced by the interest of generation developers to interconnect to the regional transmission system and the lack of sufficient available transmission capacity in the project area. (Also please see e.g. DEIS p. 1-8; DEIS Table 1-2; and response to comment no. 20.)

The comment incorrectly identifies the requirements of a Purpose and Need statement. As noted in 40 C.F.R. 1502.13, the Purpose and Need statement “shall briefly specify the underlying purpose and need to which the agency (BLM) is responding in proposing the alternatives including the proposed action.” The section of the DEIS outlining the Purpose and Need for the project, correctly considers the mandates of FLPMA, the EPAct, and the application for issuance of a right-of-way. A “Purpose and Need” statement need not be “objectively verifiable or supported by scientifically verifiable evidence or that the EIS must prove that a project serves a particular purpose or there exists a particular need for the project.” Insofar as the comment suggests that there is not a demonstrated need for the project, the comment presents a difference of opinion as to the form and type of information that could have been included in BLM’s purpose and need statement. Insofar as the comment requests analysis of the alternative methods to meet a portion of the purpose and need, such analysis was performed by the BLM and is documented in DEIS Section 2.3.3. Ultimately, the comment represents a difference of opinion in how to meet a discrete portion of the identified purpose and need, but does not discuss or dispute the validity of the remaining aspects of purpose and need. Reasons that alternatives were eliminated from further analysis is fully documented in Section 2.3.3 of the DEIS. Alternatives to new transmission, such as those identified by the commenter, may be able to address a discrete portion of the need for SunZia; however, the recommended alternatives fail to address all facets of the purpose and need as identified in DEIS Section 1.3 and Section 1.4. Consequently, the DEIS Section 2.3.3, Alternatives Considered but Eliminated, discusses alternative voltage levels, existing transmission system upgrades, and demand side management (including energy efficiency) and explains why each of these alternatives were considered, but ultimately screened from further consideration because they could not meet the purpose and need of the SunZia Project. Further, no combination of the aforementioned could provide between 3,000 and 4,500 MW of new transfer capability to areas with insufficient, or no existing, high voltage transmission access (i.e., the vicinity of the SunZia East Substation).

The transfer capability and general location of the SunZia Project is the result of an extensive regional project planning effort that involved the participation of more than 20 organizations (representing utilities, generation developers, transmission developers, and investors) over the course of 14 project development meetings all of which occurred before the initiation of the NEPA process. Further, EIS development included two years of scoping. To the extent comments raised during scoping suggested different configurations, such alternatives were considered and ultimately rejected as unreasonable or infeasible, as documented in the DEIS Section 2.3.3, Appendix A, and the Scoping Report. Consequently, the comment is noted, but no changes are warranted, as issues identified therein have been addressed in the DEIS.
25 In short, increased production of electricity does not automatically transimt via SunZia and other options/alternatives and their capacities are not revealed. The establishment of the size of the need and its urgency is crucial to this DEIS. Deferral may delay construction long enough that new technologies with lower impacts and less need for SunZia to become part of any future grid design. Urgency for this scale of project and commitment of public lands is not demonstrated.

27 DEIS sections 1.3 and 1.4 adequately describe the purpose and need for the proposed project. DEIS Section 4.17.3.3, Energy Development Forecast Analysis, provides an analytical tool related to the renewable energy development setting, qualified resource areas, and future renewable energy projects that would have the option to interconnect with SunZia or an existing transmission service provider.

28 Please see the response to Comment no. 25.

29 Please see the response to comment no.'s 25, 45, and 46.

30 Please see the response to Comment no. 25. In addition, DEIS Table 1-1 effectively provides an analysis of anticipated export/import needs for states in the Desert Southwest.
NM, for instance, imports electricity from Palo Verde Nuclear Power, WAPA, El Paso Electric, and Tri-State Coop. We could find no documentation that any of these utilities needs the SunZia line or plans to utilize it in the coming decades for transmission. Building SunZia would create irreversible and irretrievable adverse impacts when they may not be necessary.

Changes in near future generation patterns and effective load could reduce the need for and economics of long-distance transmission imports and exports, as SCE recently discovered with the Derens-Palo Verde 3 project. The DEIS has no scenarios, models, or descriptions of area-wide transmission that might alter the BLM's choice of alternatives or favor a phased alternative.

An example of recent changes in generation patterns is the recent drop in natural gas prices, which have also changed the need for HVTLS. Transmission of gas by existing pipelines may be a viable alternative to transmission of electrons by new HVTLS. The pipeline alternative to HVTLS is not mentioned as an energy development that reduces the need for SunZia.

The DEIS has no information about need for SunZia. For instance, it does not quote the DOE report that reduces the urgency for such a large-scale transmission project to be approved at this time: "The cumulative effect of these and similar energy efficiency, demand response, and distributed generation measures indicate that the utilities, policy-makers and communities of the Phoenix-Tucson area are now working to manage and limit loads through customer-oriented, non-wires (static added) solutions. Smaller base loads may reduce the need for SunZia."

Do the contract paths limit the need or use of SunZia? The DEIS does not describe (or we could not find them) the "contract paths" (as opposed to the "infrastructure paths") that limit wheeling electrons through the Western grid. This

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<td>2206</td>
<td>31 Please see the response to Comment no. 25</td>
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<tr>
<td></td>
<td>32 Please see the responses to comment no.’s 24 and 25. The “Purpose and Need” statements satisfy the requirements of NEPA, and thus no changes to the EIS are warranted in light of this comment.</td>
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<td>33 Please see the response to Comment no. 25</td>
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Please see the responses to Comment no.'s 25, 33, and 35. Additional transmission capacity is identified as a need within the DEIS, Sections 1.3 and 1.4. The transfer capacity (stated as transmission capacity or transmission capability) of SunZia is stated in the DEIS Section 1.2, Project Description and Location; Section 2.4, Description of Proposed Action and Plan of Development; and p. 4-274.i. The term “transfer capability” has been defined in the Glossary in the FEIS – “The measure of the ability of interconnected electric systems to move or transfer power in a reliable manner from one area to another over all transmission lines (or paths) between those areas under specified system conditions. The units of transfer capability are in terms of electric power, generally expressed in megawatts (MW).” The transfer capability from “Area A” to “Area B” is not generally equal to the transfer capability from “Area B” to “Area A.” For clarification in the FEIS, the terms “transfer capacity,” “transmission capacity,” and “transmission capability” have been replaced with the term “transfer capability.”

Source: NERC 2011 Summer Reliability Assessment; report last accessed January 16, 2013 and available online at http://www.nerc.com/files/2011%20Summer%20Reliability%20Assessment_FINAL.pdf. “The Western Electricity Coordinating Council (WECC) is the Regional Entity responsible for coordinating and promoting Bulk Electric System reliability in the Western Interconnection. WECC provides an environment for coordinating the operating and planning activities of its members” (WECC webpage last accessed January 16, 2013 and available at http://www.wecc.biz/About/Pages/default.aspx). The SunZia Project is located entirely within the WECC boundary, which is within the Western Interconnection. Accordingly, prior to initiation of the NEPA process, the SunZia Project underwent regional project planning and coordination activities in accordance with WECC policies and procedures. Additionally, WECC has granted Phase 3 status (i.e., Accepted Rating) for 3,000MW of transfer capability to the SunZia Project. Should the Applicant pursue the 4,500MW scenario, the Applicant would re-initiate the WECC Three-Phase Planning process to receive the necessary approvals to operate SunZia with a transfer capability of 4,500MW. The DEIS analyzed the project components that would result in the greatest amount of impact in order to account for either project configuration. For example, DEIS Table 2-6 identifies the footprint of disturbance for both configuration options; the DEIS impact analysis assumed the largest footprint for each substation regardless of configuration (i.e., Option A or Option B), thereby, analyzing the full range of environmental impacts that could result from either project configuration.

Comparatively, the Southwest Power Pool Regional Entity (SPP) is comparable to WECC but for projects located within its physical boundaries. Further SPP is located within the Eastern Interconnection, a system that is electrically-separate from the Western Interconnection. WAPA, or Western Area Power Administration, is a power marketing agency of the U.S. Department of Energy that markets Federal power resources predominately to publicly-owned utilities, municipalities, and Native American tribes. WAPA is a member of WECC and...
SunZia is in the permitting stage. For the purposes of NEPA, an alternative can be screened from detailed consideration if it is too speculative. Moreover, under NEPA, the BLM is not required to consider impacts of a proposed action cumulatively with other projects that are purely speculative. Accordingly, the proposed action is not “speculative.”, and the “Purpose and Need” statement complies with the requirements of NEPA. No changes are warranted in the Final EIS for the reasons outlined herein.

Please see the responses to Comment no.’s 24 and 25.

The DEIS is meant to analyze the impacts of issuance of a right-of-way to the SunZia Project. As the DEIS discloses, there are no known interconnections at this time. The Energy Development Forecast Scenarios provide an analytical framework with respect to some example configurations of interconnections, but clarifies that it is speculative at this time to identify the location, size, or sources of generation that may utilize the SunZia Project. With respect to the comment’s request that the Final EIS “add all potential non-renewable power plants that might use SunZia...[and] note power plants that might wheel electricity through SunZia...,” such a request is not possible at this time. As the DEIS explains, SunZia currently lacks information regarding the identity, size, or types of power plants, other transmission users or customers which may utilize the SunZia Project; thus, this type of information is purely speculative at this juncture.

The SunZia Project is not anticipated to contribute to greenhouse gases, beyond those impacts identified in the DEIS that could occur during construction or operation. While it is possible that the proposed project could result in “a net decrease in CHG emissions...” as stated in Section 4.17.4 of the DEIS, this statement has been deleted in the FEIS because of the uncertainty; the remaining discussion is unchanged as follows: “With respect to climate change, renewable energy such as wind and solar have limited GHG emissions, as compared with a conventional fossil fuel-fired generating facility. The renewable energy facilities that the Project is designed to serve could potentially replace a portion of the market demand currently served by older, fossil fuel-fired power plants, or displace a portion of future demand that might otherwise be served by facilities with higher GHG emissions.”
There are pending applications for coal-fired power plants, including the San Juan plants, and for natural gas power plants, which are not aggregated in this DEIS. The DEIS is biased in that it does not reveal all (renewable and non-renewable) applications or projected power plants for transmission but only those for renewable power plants. It does not emphasize that the SunZia line could facilitate an increase in greenhouse gas emissions, consumption and transmission of non-renewable energy and depletion of related water resources (see Environmental Impacts). Please delete all sections on renewable energy production that imply it will reduce greenhouse gas emissions AND add all potential non-renewable power plants in the foreseeable future that might use SunZia. In addition, note power plants that might displace electricity through SunZia from infrastructure and contract paths.

2.7 Is Peak load or base load the need for the SunZia?

The DEIS does not distinguish between base load and peak load needs or demands by ten-year periods. The Southwest sometimes imports electricity to meet peak loads during hot spells when air conditioning is maximal. If the need is peak load then many alternatives not mentioned in the DEIS exist and the HVDC may not be a good alternative. As mentioned, if it is base load then the DEIS needs to show phasing by decades on anticipated increases in base loads, load centers and how SunZia is required to transmit the base load. The unanswered question in this DEIS is: What are the economics of load balancing and what need is there for SunZia (what role would SunZia play) in wide area load balancing, if any?

3.0 PURPOSE

Please see the response to Comment no. 25. Typically, the terms “peak load” and “base load” refer to types of power generators, such terms do not refer to types of transmission. A project that is 500 miles long and 500kV transmission is intended for movement of bulk energy.
3.1 Does the proposed project give SFG a natural monopoly over in-corridor, state and inter-state transmission?

Will SFG become the largest transmission line broker (the largest supplier or wheeler of MW) with a price advantage over competitors and the ability to exclude other transmission lines from southern AZ and NM? Will the barriers to enter the electricity transmission market become so great that more energy efficient, reliable transmission lines with lower environmental and socio-economic impacts will be dismissed and duplicative by BLM? Is “lock-in” environmentally harmful? The DEIS is silent on these direct, indirect and perhaps irreversible impacts.

The BLM NEPA handbook warns against projects that are speculative. Given the lack of customers and huge gaps in knowledge concerning options, demands, timing and phasing, and hering, the SunZia line appears speculative. The DEIS does not address adverse impacts of the proposed project on future growth because it does not reveal that SFG’s purpose is to build HVTLs of such a scale as to eliminate future competitors and future construction of other transmission lines. A smaller scale project or a deferred project may fulfill the needs for the next ten-twenty years without creating a natural monopoly (lock-in) that would limit BLM choices in the future and reduce impacts. An irreversible (20 year?) impact of this project is to preempt and limit, if not eliminate, actions that could be less environmentally (e.g., underground lines, co-located lines) harmful.
3.2 Isn’t the connection to the Tres Amigas project a purpose of this project? Where is the inter-connection and Options addressed?

Another purpose of SPG (and probably the reason for Option B) is the possibility of connecting to the Tres Amigos project. This project is not mentioned (or we could not find it, not in index) in the DEIS yet Tres Amigos is the inter-connector that allows transfer capability to the Eastern and Texas grid systems and greatly influences the choice for or against the IVCC line. In short, the present DEIS is not acting as a full disclosure document, does not meet tiering and “outside-of-jurisdiction” requirements, and has inadequate long-term impact analysis without consideration of the Tres Amigos project.

4.0 ALTERNATIVES (Section 1502.14)

4.0 Who analyzed technical aspects of alternatives for the consultants and BLM? (Section 1502.17)

Many of the alternatives and mitigation technologies considered and eliminated were based on DEIS comments without references. In addition, there are NO civil engineers with an expertise on IVCCs and grid networks listed for either the BLM or the consultants (Chapter V). This obviously raises the question of technical expertise and the choice of the preferred alternative or components.

Section 1502.17 usually contains the name, contribution AND degrees and number of years of experience of each consultant and contributor. This DEIS lacks degree and experience and puts into question the credibility of the technical analysis.

Did SPG, for instance, supply the information that led to the eliminated alternatives or mitigation technologies? Who else (e.g., no civil engineer – except ADOT on transportation) supplied analysis in the DEIS? If the source of information was SPG this is a violation of NEPA requirements for full disclosure and

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<td>2206</td>
<td>The Tres Amigas Project is proposed to be located approximately 150 miles to the east of the eastern terminus of the SunZia Project, SunZia East Substation. The SunZia project description does not include an alignment that would interconnect an additional 150 miles to the east, nor has such ever been proposed by SunZia. SunZia and Tres Amigas are two separate and distinct projects, with no known interconnection opportunities.</td>
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<td>44</td>
<td>The Applicant, SunZia Transmission, LLC (of which SWPG II is one of six members) has provided information to the BLM throughout the NEPA process that includes information related to the following: the Applicant’s objectives and the technical considerations of the project description including construction, operation, maintenance, engineering, and conceptual design. However, SunZia Transmission, LLC has not made any decisions with respect to which alternatives were carried forward or the types of mitigation measures which were deemed infeasible. Rather, SunZia Transmission, LLC provided responses to questions posed by the BLM. Thereafter, the information was reviewed, independently verified, and incorporated into the DEIS. The responses related to engineering or project design characteristics from BLM were provided by the Applicant through one of the two engineering firms retained in support of the permitting process, POWER Engineers, Inc. (&quot;POWER Engineers&quot;) and Kiewit Corporation (&quot;Kiewit&quot;). The following individuals have been added to the list of contributors in Table 5-11 of the FEIS: POWER Engineers: Mark Etherton, Managing Engineer; Jim Hsu, Principal Engineer; Arthur Kroese, Principal Engineer; Gary Kunick, Principal Engineer; and Jim Multerer, Principal Engineer. Kiewit Corporation: Neal Parece, Managing Engineer; Pierre Adam, Principal Engineer; Brent Bedillion, Principal Engineer; Kevin Needham, Principal Engineer; and Morris Stover, Principal Engineer.</td>
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4.1 No Action Alternative Where is the deferred no action alternative considered?

The no action alternative has three common meanings in the NEPA process: (1) continue the present activities but do not do the proposed project; (2) continue the present activities but defer the proposed action; and (3) do not do anything.

The DEIS is inadequate because it does not consider the second meaning – the deferral of the project. The No Action Deferral Alternative seems most appropriate because (1) needs are not clear at this time; (2) significant aspects of the project are not clearly defined (e.g., the options, number of substations); (3) significant environmental impacts cannot be analyzed (e.g., the indirect and cumulative impacts of the production of greenhouse gases and water needs for power plant cooling); (4) the financial feasibility of the project has not been demonstrated (e.g., no contracts for use of the line; federal funding; ten-year financial planning); and (5) technical aspects of components that could increase energy efficiency (e.g., decrease line losses) have not been subjected to a cost/benefit analysis. We suggest that the No Action Deferral Alternative is the best alternative from the point of view of NEPA compliance.

4.2 Phased Alternative

The DEIS does not consider a Phased Alternative. Phase 1 would construct a single line with about half the land disturbance; a different route that reduced impacts; allow for a “window” of time for fast changing transmission technologies to mature (described in Environmental Impacts and below); allow a window to see if upgrades can meet needs for various time periods; allow a window to see if base loads for...
transmission actually increased to the extent that two HVTIs were necessary, allow time to see if Tres Amigos happens and its implications for SunZia, and allow time to see if SunZia needs free substation and other issues mentioned in these comments.

Phase 2 would be a tiered EIS after the first ten years of operation that evaluates the need for a second line and the advancements in technology that might mitigate or eliminate its need. If demand or need for a HVTI of HVDC or HVAC does emerge, then perhaps in ten years there will be more experience with a superconducting cable system or co-locating AC/DC lines or some other technology that will eliminate the need for a second set of towers. No other alternative is flexible enough to accommodate technological advances.

4.3 Capacity of SunZia Line Alternative

Given the unavailable and incomplete information about needs and whether the purpose is to meet local demand (within or near corridor demand vs. wide-area transfer), a smaller SunZia requires consideration. The DEIS says “Operation of higher voltage transmission lines will result in the overbuild of facilities for the existing transmission system. Higher voltage levels would result in excess capacity and increased costs, whereas lower voltage levels would require construction and operation of additional lines. Therefore, alternative voltage levels would not be technically feasible and have been eliminated from further evaluation.”

This short dismissal of the smaller (or any alternative) related to size is arbitrary and capricious. The DEIS provides no evidence of what “overbuild” means and only suggests that a range of 3,000 to 4,500 MW is acceptable. Is this a business decision or an infrastructure decision? It does not say that 9,000 MW or 2,000 MW is unacceptable. It does not address an alternative of a single 745 kV HVTI in any detail.

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2206 Comment Response

47 The application for the right-of-way was submitted for two transmission lines with a combined transfer capability between 3,000 and 4,500 MW (see response to Comment no. 25). As stated in the DEIS, Table 2-3 provides typical voltage levels and associated typical transfer capabilities. Alternatives considered and ultimately rejected as unreasonable or infeasible are documented in DEIS Section 2.3.3, Draft EIS Appendix A, and the EIS scoping report.
What is the threshold for "excess" capacity over what time period and how was that decided? What is the threshold for "under built" capacity over what time period and how was that decided? Where is a cost-benefit analysis? How do EPG/HLM contributors know that lower voltage levels (375 kV) will require additional construction of lines? We could not find any information of capacity of existing lines. If a 375 kV project does require additional lines, then when, where (which segment) and how many? Instead of new lines, there may be locations (segments) for upgrades, which require no new land disturbances? There may be segments that include enough alternate routes to eliminate construction shutdowns of electricity.

The bias for SGP’s proposal with little critical appraisal in this DEIS can be seen in sentences like: “Since DSM and energy-efficiency programs do not address these needs (of transfer capacity), they were eliminated from further consideration.” But, DSM and energy-efficiency directly influence the appropriate sizing of the HTTL needed in any planning decade. If DSM, energy efficiency programs and other actions reduce the need for base load, they reduce demand and they reduce the need for a 500 kV HTTL.

4.4 What are the differences between Option A and B and why isn’t one option selected as the preferred project in the DEIS?

As already stated, this DEIS does not suggest a preferred alternative for the components, connections and configurations of Option A vs. Option B. It presents no preferred alternative for the project, only for its routing. It does not fully compare environmental and socio-economic impacts and does not state if any additional NEPA work will be required once SGP decides. Not choosing between Options A and B, not providing the criteria for how the choice will be made, not presenting when it will be made and what further NEPA documents will be required opens the DEIS to severe legal difficulties.

### Comment Response

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<td>48</td>
<td>Please see the response to Comment no.'s 25, 47, and 52. Standard transmission voltages in the United States include 69, 115, 138, 161, 230, 345, 500, and 765 (Note: 765kV is highly uncommon and 161kV is primarily used by WAPA and is systematically being phased-out in favor of more common voltage levels). Accordingly, a “375kV” alternative has not been considered for the project as the voltage is not a standard voltage in the United States. The DEIS contains an extensive environmental cost-benefit analysis associated with the project.</td>
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<td>49</td>
<td>Please see the responses to Comment no.’s 24 and 25.</td>
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<td>50</td>
<td>The proposed project design features that would differ between Option A and Option B are described in the DEIS, Section 2.4. The impacts that could occur from two transmission lines with a combined transfer capability between 3,000MW and 4,500MW are described in the DEIS Section 2.4, Chapter 4 of the DEIS includes the analysis of the project components that would result in the greatest amount of impact in order to account for either project configuration. For example, DEIS Table 2-6 identifies the footprint of disturbance for both configuration options; the impact analysis assumed the largest footprint for each substation regardless of configuration (i.e., Option A or Option B), thereby, analyzing the full range of environmental impacts that could result from either project configuration. The analysis methodology was described in the introduction to Chapter 4.</td>
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2206 Please see the response to Comment no. 50. In addition, the proposed interconnections and differences between Option A and Option B are described in the DEIS, Section 2.4.8. The environmental impacts analysis associated with substations assumes the maximum possible environmental impacts and is included in the DEIS (see Table 2-6).

52 The quoted text within Comment 52 is located in DEIS Section 2.3.3.3, Alternatives to New Transmission, Tucson Area Upgrades (p. 2-42). Comment 52 does not dispute the validity of DEIS Section 2.3.3.3, and instead requests clarification as to the source of the statements contained therein. Please also see responses to Comment no.’s 20 and 32. (The DOE 2009 report found congestion across Path 47.)

53 The substations and their impacts were analyzed in detail in the DEIS (see response to Comment no. 51).
5.0 ENVIRONMENTAL IMPACTS (1502.16)

Below are excerpts about the presentation of some of the environmental impacts. We note that the DEIS is not clear on the content and intensity of impacts it considers “significant (1502.27).” Nor does it include some significant impacts that were outside the scope process but the responsibility of the preparers.

5.1 Direct impacts inducing power plant growth

5.2 Indirect and cumulative impacts: greenhouse gas emissions

5.3 Indirect and cumulative impacts: water resources for cooling

5.4 Indirect and cumulative impacts: energy efficiency: temperature

5.5 System efficiency: communication systems

5.6 Wind

5.1 Direct impacts inducing power plant growth

A direct impact of SunZia will be inducing power plant growth within the corridor, within the States and outside the States. A maximum and minimum scenario for the first ten years is not provided. No estimates for the following decades are provided. This renders any analysis of resulting impacts impossible. The power plant growth must be for renewable, nuclear and non-renewable sources. The DEIS uses the word “probable” with no evidence of how probable or timing.

5.2 Indirect and cumulative impacts greenhouse gas emissions

The major indirect impact of the SunZia is the increase in production of greenhouse gases by power plants that connect to the HVTL. About 30-40% of the electricity generated in NM is exported. About two-thirds of the greenhouse gases generated within NM are associated with export. 48% of the mined NM coal goes to AZ where it is used in power plants. Less than 10% of NM’s natural gas is used within the State. In addition, an unknown but significant volume of greenhouse gases escape

55. As defined in the CEQ regulation, 40 CFR 1508.8(a), a “direct impact” is one of “which (is) caused by the action and occur(s) at the same time and place.” As noted in the DEIS, future power plant growth may occur but would do so independently of SunZia; moreover, any such growth would not be contemporaneous with the SunZia Project. Therefore, power plant growth is not a “direct impact,” as such growth would not be caused by the SunZia Project, and if it occurred, it would do so at a later point in time. See DEIS Section 4.17, and 4.17.3.3, Energy Development Forecast Analysis.

56. The identification of impacts from future power plants which may connect with the SunZia Project, would be speculative and thus not within the purview of this NEPA analysis. The regulation, 40 C.F.R. 1502.22 is only applicable if there are “reasonably foreseeable significant adverse impacts” but would be inapplicable when impacts are unknown, speculative, or not “reasonably foreseeable.” As stated in the DEIS, the SunZia Project is not currently accepting interconnection requests.

Indirect effects “are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. 1508.8(b) (emphasis added). Here, no power plant expansion or construction is being caused by the SunZia Project. Such speculation is beyond the requirements of NEPA and the responsibilities of the BLM in discharging its duties under FLPMA and NEPA. A cumulative impact “is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.” 40 C.F.R. 1508.7 (emphasis added). Here, the DEIS does analyze the cumulative impacts of the SunZia Project with respect to past, present, and reasonably foreseeable future actions. See DEIS Section 4.17.4.
From pipeline leaks, gas injection plants, fluid-cracking plants and refinery processors. This leads to complications within the DEIS in describing the affected environment. How does one calculate greenhouse gases responsibilities for NM? By production, transmission or consumption? Is NM "responsible" or accountable for greenhouse gas emissions produced or consumed or that are exported by gas pipelines, coal trains or transmission lines?

While we sympathize with EUM difficulties in calculating greenhouse gas emission impacts, it is required by Section 150.222 to state what information is unavailable or incomplete and why, if the information is relevant and significant to future adverse impacts, and how it clouds any reasonable choice of the preferred alternative. This has not been done. The DEIS has not asked for letters from Tri-State Co-op, TEP, Xcel or El Paso Electric about their future generation plans and desire to connect through SunZia. They have not used models or more theoretical analyses to compensate for the extreme lack of information. The DEIS fails its responsibility for public disclosure and analysis of greenhouse gas indirect and cumulative impacts as well as unavoidable and long-term impacts.

We also note the bias in reporting greenhouse houses. In discussing the Bowie natural gas plant, the DEIS compares its emissions to national volumes. This is not the reasonable comparison by NHA rules about significance, context and intensity (1508.27). The DEIS uses a national context when it should be either percentage SunZia line capacity the Bowie plant would use to transmit non-renewable energy and its potential negative impact on the use of renewables via the SunZia line, especially with a priority contract. There are also other more local (county) contexts that can provide a clearer metric for the Bowie impact.

8.3 Indirect and cumulative impacts water resources for cooling

The growth inducing impact of SunZia and the construction of any nuclear, solar thermal, natural gas and coal-fired power plants will require additional volumes of
The purpose of the EIS and NEPA is to analyze impacts on the environment. The DEIS, Section 2.4, provides the detailed description of the proposed action, common to all action alternatives, and identifies the components of project design features upon which the environmental impact analysis is based. Comparatively, the comment primarily identifies design features that do not have the potential to have impacts on the environment, were already included in the analysis, or are not associated with overhead extra-high voltage transmission systems. Regardless, the project design features will be included in the Construction, Operation, and Maintenance (COM) Plan, a document that will be developed in cooperation with the BLM following issuance of the Record of Decision (ROD).
5.5 System efficiency: communication systems

A sophisticated control system is required to ensure electric generation very closely matches the demand. If the demand for power exceeds the supply, generation plants and transmission equipment can shut down which, in the worst cases, can lead to a major regional blackout, such as occurred in the US Northeast blackouts of 1965, 1977, 1996, 2003 and 2011. In addition, equipment failures can bring down significant segments of area wide transmission grids such as occurred in San Diego. In fact, over 98% of the nation’s (regions) problems with electric service come from brownouts and blackouts, forced interruptions, distant line congestions, weather and equipment failures. This significant fact (which demonstrates the reliability benefits of distribution systems with grid lock-up) is not addressed in the DEIS (see also Socio-Economic impacts). The DEIS also does not address service problems that may increase from SunZia and how SunZia will ensure spare capacity is available should there be a failure in another part of the network.

Communication systems can utilize microwave, optical fibers and power line communication. We could find no section on the choices between these components and the benefits for transmission in the Southwest. The impacts include health, safety, reliability, energy efficiency and socio-economics.

5.6 Wind

Although the DEIS spends considerable interest on wind erosion, we could not find (index test, surely) any information on wind impacts on SunZia cables. There is no map or reference to wind speed and cable tolerances that we could find. Wind speeds over 43 km/hr are considered potentially harmful on most transmission...
The purpose of the DEIS is to document the potential environmental effects of the Project, rather than to demonstrate or ensure economic feasibility or justify loan guarantees. The deliverability, destination, and cost-competitiveness of the electricity carried on SunZia are subject to future negotiations. Subscription of SunZia’s available transmission capacity (ATC) is dependent on the customers of the transmission line (i.e., generators planning to sell energy) and their associated buyers (i.e., utilities, cooperatives, other energy consumers); therefore, it is unknown and speculative to predict which energy markets SunZia’s future and currently unidentified customers may serve. (Please also see response to Comment no. 33.)

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<td>62</td>
<td>Please see responses to Comment no.’s 19-30.</td>
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<td>63</td>
<td>Please see response to Comment no. 45.</td>
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<td>64</td>
<td>Please see response to Comment no. 41.</td>
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65 Please see response to Comment no. 41.

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<th>61</th>
<th>6.0 SOCIO-ECON IMPACTS</th>
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<td>62</td>
<td>We have indicated (see next section) that there is no reason to believe this project is economically feasible. Its implementation and completion, in the language of the BLM NEPA Handbook, are “remote or speculative.” The prospect of bankruptcy is a red flag and could leave BLM (taxpayers) with clean up costs should the project break ground and then fail.</td>
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<td>63</td>
<td>We have tried to show (following BLM NEPA Handbook) that the SunZia HVTL would be ineffective because the needs and purposes are not clearly defined and demand for its product (electricity) may be remote in time or not materialize in the next 25-50 years. We have modified the Handbook in stating that the project may have substantially similar effects to another alternative that could become commercially and technically feasible in the next 20 years yet would produce less severe environmental impacts; and advocated for a deferred or phased project in order, in part, to protect the BLM from legal challenges and future law suits should the project fail.</td>
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<td>64</td>
<td>We emphasize that BLM is the lead agency that may be granting a natural monopoly in the Southwest and should probably have this project reviewed by federal agencies (Securities and Exchange Commission?) concerned with monopoly issues and the relationship between NEPA and locked-in private and public economic partnerships.</td>
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<td>65</td>
<td>6.2 Is the proposed project financially feasible?</td>
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Estimates of Project costs prepared by SunZia’s engineers were based on typical construction practices and industry standards. Some alternative technologies or construction methods were eliminated from consideration in the DEIS by the BLM because of the potential for operational risks and maintenance concerns; untested methods and facility types could result in unreasonably high, or prohibitive construction, operation, and maintenance costs.
67 Grid shutdowns from catastrophic power outages would not likely be an adverse impact of the Project. On the other hand, as stated in Section 1.4 of the DEIS, the Project would be designed to increase the available transfer capability within the grid, thereby reducing congestion that may contribute to the potential for future outages.

68 The BLM has evaluated the level of information that has been acquired, and determined that the information is adequate to identify the occurrence of significant adverse impacts that may result from the Project.
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<td>Please see Comment no. 68. The financial resources of the Applicant were submitted with the SF 299 application and considered proprietary; the SF 299 is incorporated by reference in Chapter 1 of the EIS.</td>
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<td>70</td>
<td>The BLM believes that the list of reasonably foreseeable impacts has been adequately addressed in the FEIS. (Please see responses to previous comments.)</td>
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The alternative route that would be in the Duncan area was eliminated because it would add an additional 14 miles of transmission line (including new access roads), offer no environmental advantage over other more direct routes, and would be substantially similar in purpose and function to Subroute 3A. As stated in the DEIS Section 1.4, the purpose of the Project is to provide new 500 kV transmission lines to deliver electricity to western power markets and load centers in the desert Southwest. A power path is provided by the existing Tucson Electric Power 345 kV transmission lines between the proposed SunZia Willow-500kV Substation and the Duncan area, which would allow for electricity carried on the SunZia transmission lines to be delivered to the Duncan/Morenci area.

Comment noted. In response to public input received on the DEIS, the route indicated by the County, Subroute 3A, has been selected by the BLM as the Preferred Alternative. Subroute 3A was selected with a modification to the alignment (now Subroute 3A2) for mitigation near the Hot Well Dunes OHV recreation area.
While not affecting Greenele County, the selected route to the west must avoid and minimize impacts.

Also, we feel that suggestions which are foundational to the do-nothing alternative, such as implementing conservation measures and streamlining technological management, while commendable, are short sighted and counterproductive. Our economy is dependent on a continuous and dependable power supply. Power delivery needs to grow and to be redundant as new technology is implemented that allows better management of our resources. These issues are beyond the Environmental Impact Statement but are equally important considerations.

We thank you for this opportunity to comment and should you have additional questions please contact us at (928) 655-2072.

Sincerely,

Richard Lanz
Greenele County Board of Supervisors
As stated in the DEIS (p. 1-7), “Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services...” and reiterated on p 4-274 of the DEIS, “As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service.” Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, “it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation” (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity.
The DEIS was made available for public review and comment on May 25, 2012. The BLM held ten public meetings and scheduled a 90-day public comment period that ended on August 22, 2012. In total, the public scoping for the SunZia project included a total of 22 public meetings and 255 days of public comment.

A 45-day public comment period is generally the time provided for a DEIS. The BLM’s planning regulations and guidance require a minimum 90-day public comment period for land use plan amendments. The SunZia project may involve several BLM land use plan amendments thus the 90-day comment period was provided. The SunZia DEIS comment period meets BLM requirements and afforded interested parties opportunity and time to review the document and submit substantive comments. In addition, the BLM regulations implementing the National Environmental Policy Act regulations require that all substantive comments received before reaching a decision must be considered to the extent feasible. This means that any substantive comments received after the 90 day comment period was considered as much as possible.

Randy Stearaigic
Southwest Conservation Advocate
Center for Biological Diversity
These comments are due in before the deadline of August 22, 2012. Thank you for including them in the overall comments on the Draft Environmental Impact Statement on the SunZia project. These comments have been published on Blog For Arizona (at http://www.blogforallzona.com/blog/2012/08/sunzia-the-making-of-a-slave-state-first-power-then-transmission.php) and on www.SaltLakeEnergyAnalyst.org (at www.SaltLakeEnergyAnalyst.org).

Russell Livesey
Energy Chairman, Steam Club Reefson Group

SunZia: The Making of a Slave State, First Power then Transmission

Why does Arizona tolerate it? Why do its citizens tolerate it? Who benefits by creating a slave-state status for Arizona?


Some states in the future expect exports in such a way that its benefit all or many within the state. Let's take the example of states like Oregon, Washington, and British Columbia. They are all major power producers for the West. They sell power to states like California and Nevada. In the example of some businesses benefit from buying the energy from all of the state population to export revenue. That revenue can come in the form of tax revenue or in the form of revenue from sales tax, and perhaps high numbers of jobs provided or even more intangible benefits, such as population growth.

But in states like Arizona, with more than a third of our electricity being exported, there is very little benefit to any significant percentage of the state. Sure there are some construction jobs that actually don't go to out of state construction workers, and they do go to in-state residents. Some of them are some maintenance jobs for running these plants that also go to in-state residents of Arizona.

However, there are a lot more number of jobs that are in the coal, gas or nuclear power production for every million invested in coal production, one in jobs are produced. Coal, heat and nuclear plants are capital intensive industries, where the money goes largely for capital-intensive power plant and construction components, much of which are produced overseas.

In contrast to 0.8 jobs for coal and 0.2 jobs per million dollars spent on nuclear energy, some energy installation produces about 1.2 jobs per million dollars spent. Sometimes you put money toward less job-creating options, and different funds for higher job-producing options. So put money into coal and nuclear reactors overall employment, because that money would have gone to other projects, or perhaps even put into less-employment spending, which has a much higher jobs output, such as 0.2 or 0.5 jobs per million dollars spent.
2 The Bowie Power Station site is located approximately 15 miles from the TEP 345 kV transmission line corridor, where it was permitted to interconnect with the existing TEP transmission system at the Willow-345 kV substation. Air emissions from the Bowie Power Station would be regulated under State and EPA authority to meet air quality standards.

3 Comment noted
As stated in the DEIS (p. 1-7), “Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services...” and reiterated on p 4-274 of the DEIS, “As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service.” Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, “it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation” (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity.

As stated in the DEIS (p. 1-9), “Pursuant to FERC Order 888, it is noted that the locations of individual proposed projects or transmission line interconnections cannot be identified to third parties by transmission owners.” Although the specific location of the proposed projects cannot be identified, DEIS Table 1-2 provided an illustration of generation interconnection requests, including size and fuel, that were identified through transmission interconnection queues of load serving utilities within SunZia’s path and represent projects located in counties which could reasonably interconnect with the existing system or SunZia. The purpose of this illustration was to provide an example of need for transmission service within the study area.

The proposed action does not require a cost outlay from the citizens of Arizona or the region. As provided in the Memorandum of Understanding between the SunZia Southwest Transmission Project’s Applicant (SunZia Transmission, LLC) and the BLM, it is the Applicant’s responsibility to reimburse the federal government for expenses to process the right-of-way application under a cost recovery agreement. Financing by the federal government is not a condition of the Proposed Action.

Please see response to Comment No. 5.
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As you know, the Bureau of Land Management (BLM) recently developed a Draft Environmental Impact Statement (DEIS) for the SunZia Southwest Transmission Project, with the aim of evaluating and analyzing impacts associated with this proposed initiative—in particular, the environmental consequences of constructing transmission lines across a sensitive habitat that is home to a diverse array of threatened and endangered species. While I commended the BLM for its strong efforts on the environmental side of this issue, I do not believe there has been a similar level of analysis in regard to how the proposed project could impact military operations in Arizona.

Indeed, every route variant for the Arizona portion of the proposed project (Route Group 4) would cross land currently used by the military. All routes would cross some portion of the Newmam Peak military training route (MTR). Northern routes 4A and 4D would cross over 35 miles of the Javelin Low Military Operation Area, while all other alternative routes would cross Fort Huachuca’s Buffalo Soldier Electronic Test Range (BSETR) and the Silverbell Army Helicopter Training Area (SBAT). These areas are home to important military training and testing missions, chief among them being Fort Huachuca’s BSETR—the Army’s developmental test location for C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance). On the BSETR, technical tests for C4ISR systems, signal intelligence systems, and Electronic Combat (EC)/Electronic Warfare (EW) equipment for the U.S. Army, other DOD and federal agencies, and private industry are planned, conducted, and analyzed. In addition to conducting developmental tests, the BSETR also supports the U.S. Army operational test community in a variety of other capacities.

The mountainous terrain that surrounds the fort’s electronic test range forms a high-altitude, electromagnetic interference-free bowl that serves as an ideal location for the type of...

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See following page(s)
Studies recently conducted for the U.S. Army – Ft. Huachuca indicate that there would be a 1-kilometer radius of potential effect from electromagnetic interference from the 500 kV transmission lines. As stated, although the degree of effect cannot be quantified, it was recommended in the study’s conclusion that “military operations and testers (should) avoid the placement of receivers or transceivers within 1 km of 500 kVa power transmission lines with frequency assignments up to 600 MHz” (USAEPG, July 2012). The BLM-preferred alignment of the proposed SunZia transmission lines would be located within approximately 1,500 feet of, and parallel to, the two existing TEP 345 kV transmission lines that cross the portion of the BSETR north of I-10. Although the proposed Project may affect potential interference patterns within the 1-km corridor that contains the existing transmission lines, it doesn’t appear that there would be any effect to the electromagnetically pristine environment.

BLM has coordinated with the DOD to identify the military operations areas through which the alternative routes would cross. Through coordination with the various branches, it was acknowledged that the military training operations could be modified in order to avoid potential conflicts with transmission lines. Continuing coordination with military personnel will take place to identify additional mitigation measures prior to construction.
Reasonably foreseeable future actions that may be implemented were identified in the cumulative effects analysis in the DEIS (Section 4.17). Many of these are renewable energy development projects that would be located within the analysis area, primarily within the Qualified Resource Areas, as shown in the DEIS on Figures 4-2 and 4-3. With the exception of the expansion of the Macho Springs windfarm in Sierra County, New Mexico, no renewable energy developments have been proposed that would be adjacent to the preferred route or alternatives.

Close coordination has taken place between the BLM and representatives of the military installations in Arizona, including their review of the Administrative DEIS. Several meetings were held between the scoping period in 2009, and a meeting with Ft. Huachuca, BSETR, Air Force, and OSD representatives September 7, 2012. Please also see response to comment no. 1 regarding the studies conducted for the BSETR.
I am concerned that the bureau has selected a preferred route without sufficient analysis of the impact such a route could have on both natural resources and military missions in Arizona. I understand that since the DEIS release in May, the BLM staff – its Arizona state staff, in particular – have worked with the Department of Defense to remedy this. Their attention to this issue and cooperation with the Department of Defense is very welcome and essential for the comprehensive review necessary for this project. However, in the end, the public record must reflect a thorough consideration of both the immediate and cumulative impacts in those areas before BLM moves to approve a final route for the transmission line. Otherwise, it will call into question any selection as being based on less than all the facts – and it would jeopardize our nation’s critical military missions and Arizona’s unique natural resources.

Sincerely,

[Signature]

John Kyl
United States Senator
August 22, 2017

Dear Mr. Garcia,

Please accept and fully consider these comments on the proposed SunZia Southwest transmission project (“SunZia”) submitted jointly by the following Audubon entities - Audubon New Mexico, the state office of the National Audubon Society, and the New Mexico Audubon Council, representatives from Audubon chapters across New Mexico (“Audubon New Mexico”). Audubon New Mexico has been very engaged in the SunZia discussions, working towards positive solutions to meet our nation’s growing energy demands.

Our comments highlight major areas of concern, including problematic stretches of the various routes in New Mexico and avian species that are likely to be most seriously impacted in New Mexico. Should the proposer be interested in pursuing the SunZia transmission line, we strongly encourage identification of alternative routes as all current routes have unacceptably high levels of environmental risk. We hope that the U.S. Bureau of Land Management (BLM) and project proponent choose generation sources and transmission sites that are the least environmentally damaging, and that SunZia becomes an example to the American people of a new way of business – where development of our nation’s transmission infrastructure occurs in a manner that does not compromise the nation’s wildlife resources and natural landscapes.

Our comments contain the following sections:
I. Improvements Needed on the BLM’s DEIS
II. Generation, Transmission, and Climate Issues
III. Proposed Routes Conflict with Important Rivers and Riparian Areas
IV. Other Areas of Concern in New Mexico
V. Species of Concern in New Mexico within the SunZia Project
VI. Collisions with the Proposed Transmission Line Highly Likely
VII. Crossing the Rio Grande
VIII. General Considerations for Renewable Energy and Transmission Line Development
IX. Mitigation Possibilities in New Mexico

Comment noted
The DEIS was made available for public review and comment on May 25, 2012. The BLM held ten public meetings and scheduled a 90-day public comment period that ended on August 22, 2012. In total, the public scoping for the SunZia project has included a total of 22 public meetings and 255 days of public comment.

A 45-day public comment period is generally the time provided for a DEIS. The BLM’s planning regulations and guidance require a minimum 90-day public comment period for land use plan amendments. The SunZia project may involve several BLM land use plan amendments thus the 90-day comment period was provided. The SunZia DEIS comment period meets BLM requirements and affords interested parties opportunity and time to review the document and submit substantive comments. In addition, the BLM regulations implementing the National Environmental Policy Act regulations require that all substantive comments received before reaching a decision must be considered to the extent feasible. This means that substantive comments received after the 90-day comment period have also been considered before the Final EIS was issued.

Additional alternative routes, including the routes that cross the Rio Grande north of Socorro, NM (BLM Preferred Alternative), were identified during the 3rd scoping period between March 31 and June 10, 2010. Routes were later added or eliminated as a result of issues identified during scoping. The BLM Preferred Alternative would not require structure placement within the river channel, and Section 2.4.12 of the DEIS identifies mitigation measures that would minimize disturbance to riparian vegetation and woodlands.

The Gateway West transmission project conducted surveys for species known to be particularly sensitive to predation by raptors that may use transmission lines (e.g. Sage-grouse). No species at risk of raptor predation were known to be present in the SunZia Southwest Project area. Appendix B2 of the DEIS presents the results of surveys conducted by the University of New Mexico, used to estimate potential collision mortality at multiple proposed crossing locations of the Rio Grande.

The MBTA does not provide a mechanism for any incidental take of migratory birds. However, all available and appropriate mitigation measures (structure design, bird diverters, and other measures that may be identified) would be implemented to minimize the collision risk. These measures will be detailed in an Avian Protection Plan, prepared in part to fulfill BLM’s obligations under the April 2010 MOU. Appendix B2 presents estimates that no significant effects to any migratory bird species are anticipated at the population level.

The discussion in Section 4.17.4.6 regarding cumulative effects presents available information on potential effects of transmission lines and other infrastructure with respect to migratory birds and other biological resources. The discussion notes that the proposed Project would contribute incrementally to the collision risk posed by all transmission lines. The increased collision risk would be minimized through mitigation measures, and through colocation with existing transmission lines where possible. The extent of effects to habitats and conservation areas resulting from uncertain future actions cannot be accurately predicted.

The DEIS presents estimated acreages of designated and proposed critical habitat for the Southwestern Willow Flycatcher that may be disturbed. Critical habitat for the Gila Chub would also be crossed by a single local alternative in Cienega Creek, Arizona, or spanned in a nearby location on Subroute 4C3. Detailed engineering has not been developed for the local...
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4 alternative that would be sited within designated critical habitat, and acres of disturbance could not be accurately estimated. No other designated or proposed critical habitat would be crossed by any alternative.

5 The Standard Mitigation measures listed in Table 2-10 of the DEIS include proponent proposed and agency mitigation measures, which are required to be implemented project-wide, and include measures to comply with the Endangered Species Act.

6 A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.

7 The cumulative impacts analysis in the DEIS (Section 4.17) accurately reflects the current status of the future transmission project proposals, as there is insufficient information available about the listed project proposals to understand their purpose and need statements, benefits, potential to meet energy demands or potential environmental impacts. Although the intent of each of these proposals is to transfer electricity generated by renewable and other sources between New Mexico, Arizona and other western markets, the specific generation sources have not been identified.

Text has been modified in Section 4.17.4.13 of the FEIS) “The High Plains Express Transmission Project and the Centennial West Clean Line Project are multistate transmission projects that could provide added potential electrical transmission paths originating in central and eastern New Mexico, respectively. The proposed Southline Transmission Project (345 kV), located between southwestern New Mexico and southeastern Arizona, could transport additional electricity generated from sources in those areas; however, the purpose and need for the Southline project is different than for the SunZia Project. The Southline project’s capacity would be limited to that which could be accommodated by a 345 kV transmission line and constructed within portions of Western Area Power Administration’s existing rights-of-way.”

8 Comment noted. Also see response to comment No. 2.

9 A preliminary Plan of Development (POD) when the DEIS was published by the BLM. The draft can be found under Documents on the BLM SunZia Project Website: http://www.blm.gov/nm/st/en/prog/more/lands_realty/sunzia_southwest_transmission.html

The final Plan of Development (POD) will be completed prior to construction and will include detailed/final engineering for the Project. This document will specify all recommended mitigation measures along the ROW and will include identification of sensitive resource areas such as biological and cultural sites. In some cases, sensitive areas can be avoided by the Project by spanning or re-routing access roads to avoid direct disturbance.

10 Existing and transmission corridors are identified in the DEIS Map Volume, illustrated on M10-4. Reasonably foreseeable future transmission lines/corridors are identified in Section 4.17.3.2, Table 4-30 of the DEIS.

11 Comment noted

12 Please see response to Comment No. 6.

13 Please see responses to Comment No. 32 below
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14 Areas of impact to critical habitat have been quantified, and added to the FEIS, where new information is available or where additional Project description has been developed. Also see response to Comment No. 4 regarding critical habitat.

15 The DEIS, (Section 4.17) discusses the types of impacts that may occur cumulatively to species and habitats in the analysis area, but does not speculate on the intensity or amounts of those impacts that cannot be determined. Additional detail has been added to the FEIS where new information became available after release of the DEIS, e.g. regarding the Sunline Transmission project which initiated the scoping process and has developed additional alternatives. Additional information relative to a discussion of cumulative effects on biological resources is not available at this time.

16 Please see response to Comment No. 5.

17 A supplemental EIS is not needed. The responses to these comments are included above.

II. Generation, Transmission, and Climate Issues

In the face of growing concern about rapid global changes in climatic conditions, much of it due at least in part to human activities (Intergovernmental Panel on Climate Change 2007), there has been speculation about what impacts these changes may have on various ecological communities (McCarty 2001, Huntley et al. 2006, Jeté et al. 2007). Intergovernmental Panel on Climate Change 2007,Bindoff2008) Nearly 60 percent of the 585 species found in North America in winter are on the move, shifting their ranges northward by an average of 35 miles. National Audubon Society scientists analyzed 40 years of citizen-science Christmas Bird Count data, providing new and powerful evidence that global warming is having a serious impact on natural systems.

Slower movement was detected among species of every type, including more than 70 percent of highly adaptable forest and feeder birds. These data illustrate, in part, the impacts of climate change on birds.

Energy and climate issues are linked with the health of our communities and environment. As our nation's continued demand for fossil fuels, coupled with the unprecedented threats brought about by climate change, threaten to alter ecosystems and available water supplies, we move forward improving our aged transmission infrastructure, our nation must consider the sources of the energy being delivered to consumers, the string of the transmission line, and the overall impacts to the wildlife resources in these areas.

The United States should make major new investments in clean energy technologies and infrastructure that will allow us to reduce global warming pollution while also creating the clean energy economy of the future. We strongly believe our society should maximize:

3 See Gateway West DRII for list of suggested mitigation measures. Three mitigation measures include: proposed pre-construction mitigation (2.7.3 and Table 3.7.1) that were developed with the BLM and cooperating agencies. The more thorough analysis for Gateway West assumed that these BMPs would be followed on all routes, as specific circumstances dictate. Notably, the BLM or cooperating agencies identified stand-alone mitigation measures were they determined that an EIS was insufficient to protect the affected resources or wasn't consistent with agency requirements (e.g., mitigation measures, see section 3.1.1.3).

To find out more about Audubon's Christmas Bird Count, please go to http://birds.wrihof.com/christmas-bird-cont.
As stated in the DEIS (p. 1-7), “Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services...” and reiterated on page 4-274 of the DEIS, “As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service.” Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, “it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation” (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity.
Potential impacts to multiple transmission lines are described in Section 4.17 Cumulative Effects of the DEIS. Mitigation would be attributed to individual projects that may be constructed in the future, but it is not certain which projects would be constructed within a given area. Also see response to Comment No. 18.
Comment noted. As discussed in the DEIS (Section 4.16), an underground alternative would result in high impacts to the Rio Grande floodplain, through the siting of associated facilities and required vegetation management within the right-of-way.
environmental analysis shows that running the line underground in this area would sufficiently limit impacts.

The network of floodplain wetlands along the Rio Grande corridor from an inherent route for more than 200,000 Mullenids, Northern Pintail, American Wigeon and 16 other Intermtowit West Joint Venture ("IWJV") priority species migrating to and from breeding and wintering areas in the interior highlands and Gulf of Mexico (Appendix A). The Middle Rio Grande valley is considered one of the most important wintering areas for the Central Flyway population of Northern Pintail. Up to 60,000 Snow and Ross' geese, and the majority of the Rocky Mountain population of greater Sandhill Cranes winter and migrate through Middle Rio Grande habitats. Currently, 80% of Rocky Mountain Cranes winter in two New Mexico counties encompassing just 34 river miles, 5,000 acres of managed wetlands, and a limited number of acres of suitable agriculture (Association of Fish and Wildlife Agencies 2009). In moist-soil units, the production of protein and carbohydrate-rich vegetation is maximized to meet the high energetic demands of wintering waterfowl and waterfowl. In areas of high sub-surface water, salt marshes support high biomasses of protein-rich invertebrates. Along with managed historic floodplain wetlands and privately-owned agricultural fields these areas support hundreds of thousands of waterfowl, cranes, raptors, and waterbirds (White-faced Ibis, Green Heron, Black-crowned Night Heron and Snowy Egret). Fresh and saline waterfowl and wading birds support dozens of shorebird species (Black-necked Stilt, American Avocet, Long-billed Curlew, Baird's Sandpiper, and Wilson's Phalarope). One of the largest remaining gallery forest/wooded forests is in the Middle Rio Grande valley and supports a great diversity of breeding landbird species, including species of concern such as the Lewis's Woodpecker and Lazuli Bunting. Mixed-grass prairies and scrubby vegetation in the area support the federally-endangered Southwestern Willow Flycatcher and other species of national and regional concern including Bell's Vireo, Yellow-billed Cuckoo, Common Black-Hawk, and Lucy's Warbler.

*Booseque del Apachia IBA*, one of the most spectacular national wildlife refuges in North America, was recently recognized as a global IBA in 2012. The 57,191 acre refuge straddles the Rio Grande valley in Socorro County, New Mexico. Within the refuge borders the three wilderness areas totaling almost 31,900 acres, most of which is desert scrubby grassland habitat. Over 340 species of birds have been documented. Over the winter, hundreds of thousands of Snow Geese and Sandhill Cranes inhabit the IBA, as well as bait boxes (35,000+), Black-throated and Sage Sparrows, and other species including Bald Eagles and Ferruginous Hawk. During summer, hermit owls, American Avocets, and Long-billed Curlews are among the many species that fly over the area. Migration brings shorebirds and other species. During the period 1995-2002 in winter, there was an average of about 45,000 waterfowl. Through the annual Festival of the Cranes that takes place here, The Central New Mexico Audubon Society, the New Mexico Audubon Council, and Audubon New Mexico join the Friends of Bosque del Apachia to continue to share the wonders of this refuge with the public and support the refuge's efforts to continue providing sanctuary to these magnificent birds and other wildlife.

Routes north of the Bosque del Apachia NWR will compromise the purpose of the refuge and the Ladd S. Gordon Waterfowl Complex managed by the New Mexico Department of Game & Fish ("NMGSF"). The proposed transmission line could also significantly harm the financial investments in habitat restoration and forage for birds made by the government agencies, both at the federal and state level, as well as by several non-governmental organizations. Bosque del Apachia NWR was established using the authority of the Migratory Bird Conservation Act (16 U.S.C. 7124) of 1936, to provide refuge and breeding grounds for migratory birds and other wildlife as well as incidental fish and wildlife-oriented recreational development, the protection of natural resources, and the conservation of endangered species or threatened species. Additional lands were added by Executive Order 12069 in November 1979.

The Ladd S. Gordon Waterfowl Complex, another Global Refuge, is composed of the Bolen, Cane Colterado, Bernardo, and La Joya Waterfowl areas. This IBA was originally designated in 2000 and has been extended to a Global IBA in 2012 because it contains critical and other areas of wetlands and other suitable habitats for tens of thousands of ducks, geese, and cranes during migration and winter. This complex is a cooperative project between the NMGSF and the U.S. Fish and Wildlife Service ("USFWS") to provide and maintain wetlands and forage for birds along the Rio Grande corridor. Approximately one-third of the wintering waterfowl in the Middle Rio Grande valley are fed by this IBA. The Bolen Waterfowl Area is four miles south of Bolen on New Mexico 109. This 5,000-acre farm grows corn and alfalfa for migrating waterfowl. The Casa Colorado Waterfowl Area comprises of 230 acres of cultivated crops is six miles south of Bolen on New Mexico 394. The Bernado Waterfowl Area is 7 miles south of Bolen near Bernado and south of US Highway 61. This property consists of more than 1,700 acres with 450 acres in cultivation and is open to the public on most days, with recent improvements for bird viewing and photography platforms. An auto tour loop and two short hiking trails also give visitors views of birds in fields and ponds. The La Joya Waterfowl Area is 22 miles south of Bolen, just east of I-25 and consists of 3,500 acres containing 400 acres of non-made ponds to provide winter feeding and nesting areas.

Located on the southern end of and at this flyway and the most migration corridor of the Rocky Mountain population of Sandhill Cranes, the Middle Rio Grande valley, more specifically the Socorro reach of the valley, has been integral to the rebuilding and protection of this waterbird population. During the early 1970's the Rocky Mountain population of Sandhill Cranes was at its lowest point due to habitat alteration, land fragmentation, and human population growth. The 1970s' population was estimated to be fewer than 1,500 birds. Efforts to protect habitat, restore wetlands, and enhance existing natural and cultural habitats in combination with community management practices helped the species recover to between 15,000 and 20,000 birds annually (Taylor 1999). Today, along with the Rocky Mountain population cranes, the Middle Rio Grande valley plays host to hundreds of thousands of migrating and wintering waterbirds and countless breeding and migratory shorebirds and rails including the federally-listed endangered Southwestern Willow Flycatcher and the candidate species Yellow-billed Cuckoo.

In 2010, a subgroup of The Migratory Shore and Upland Game Bird Support Task Force focused on establishing the top priority information needs for migratory populations of

Sandhill Cranes (Assoc. of Fish and Wildlife Agencies 2009). One of the outcomes of this effort was the finding that the most limiting landscapes in the annual cycle of Sandhill Cranes, specifically the Rocky Mountain population, is the Middle Rio Grande valley and further alterations to the valley could be population compromising. Many geographic considerations occur in the Middle Rio Grande valley which limit the migratory potential of the valley, concentrates the Sandhill Cranes population for an extended period, and places them in proximity to large concentrations of other migratory waterbirds. Due the valley's size there are already limited habitat resources for foraging and roosting which are becoming increasingly limited due to habitat conversion and degradation resulting from water loss and urbanization.

*Conservation Investments in Middle Rio Grande Valley*

Audubon New Mexico is concerned about the impacts of SunZia to the significant financial investments made to date to conserve the biological, cultural, and historic resources of the Middle Rio Grande valley by landowners, non-governmental organizations, and state and federal agencies and governments. Because of its importance as a continental flyway, the USFWS and partners have worked to conserve and restore habitat for decades along the Middle Rio Grande Valley. The SunZia project will adversely impact the federal and partner investments in this Middle Rio Grande region including the 2001 and 2003 North American Wetlands Conservation Act (NAWCA) projects valued at over $6.5 million ($2 million from the federal NAWCA and $4.5 million in matching funds from partners). Successful implementation of the previous NAWCA grants in partnership with Ducks Unlimited and the USFWS funded wetland and riparian restoration work at Bosque del Apache NWR, Sennita NWR, the Ladd S. Gordon Waterfowl Management Area, and several other sites along the Middle Rio Grande valley including several conservation easements.

Audubon New Mexico supports these projects and the recent NAWCA grant which may award $1 million in federal funds for five conservation easements, one for acquisition, and riparian restoration in the Middle Rio Grande and the inter-agency Private Lands Program Conservation Initiative. The 2012 NAWCA project for the Middle Rio Grande valley*, contributes 1,857 acres of protected, restored, and enhanced palisade and forested wetlands, mitigated agricultural, and wetland-associated uplands to the diminished base of waterbird habitat – all of which could be impacted by the SunZia project. To be successful, this Middle Rio Grande landscape-level initiative requires many partners willing to work together towards a shared vision of a living river. This project, currently underway, brings together 14 partners – 7 of which are 10% matching partners – comprised of a diverse collaboration including: 8 private landowners, 4 non-profit organizations, 2 charitable foundations, Santo Domingo Pueblo, USFWS, NM DGF, New Mexico Environment Department, and the Sevcrese So. Water Conservation District.

Conservation easements currently held by and in negotiations with the Rio Grande Agricultural Land Trust (RGALT) will be impacted by the SunZia line with the crossing between Bosque del Apache and Sennita National Wildlife Refuges. RGALT is securing 3 perpetual conservation easements on 602 acres of private lands along more than a mile of the Rio Grande just north of Bosque del Apache NWR. These tracts are in the active floodplain and still have some overbank flooding, providing an important wetland habitat and support ecological functioning.

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| 23 | Please see response to Comment No. 6. |
See response to comment 22. Mitigation measures to minimize collision risk at the Rio Grande crossing will be based on the best available information, and are anticipated to include modifications in structure type and design, conductor and groundwire configuration, and measures to increase visibility such as bird diverters. The DEIS (Appendix B2, Section 4.6) acknowledges that bird collisions would occur, but through the siting of the BLM preferred alternative near the north end of a narrow block of farmland, and with the application of mitigation measures, the purpose of Bosque del Apache NWR and the Ladd S. Gordon Waterfowl Complex is not anticipated to be compromised.

Please see response to Comment No. 6.

Section 2.3.3.1 of the DEIS describes alternative transmission line routes that were considered and eliminated. The alternative routes located south of the Bosque or north of the Sevilleta National Wildlife Refuge were eliminated because they were not feasible. The southern routes would cross either wilderness study areas or military lands that were excluded for new rights-of-way. The northern routes were excluded because they would cross wilderness study areas or BLM exclusion areas.

Please see response to Comment No. 6.
The BLM’s proposed plan amendment would be to adopt the 400-foot-wide corridor alternative. Text was revised in Section 2.6 of the FEIS as follows: “The BLM’s preferred plan amendment alternative is the 400-foot-wide corridor that may be included as an amendment to RMPs in New Mexico and Arizona for conformance with VRM and right-of-way management objectives…”

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The referenced study, including all mortality estimates based on the results, was designed and conducted independently by researchers at the University of New Mexico. EPG prepared the report for inclusion in the DEIS as Appendix B2. Although the BLM preferred alternative crossing had not been identified at the time of the study, the results now represent the best available information for the study area, or for similar transmission lines in similar settings.

An Avian Protection Plan will be developed, to include selection and placement of all mitigation measures to minimize the risk of bird collision and to identify monitoring requirements and adaptive management. This plan will be supported by APLIC’s 2012 guidelines on reducing collision risk.
The Avian Protection Plan will address impacts to all migratory birds, including measures to minimize disturbance to nesting birds.

The Avian Protection Plan will address nesting, resident, or migratory raptors, including stipulations for avoidance, management of nests on Project structures, avoidance of nearby nests, and ensure compliance with the Bald and Golden Eagle Protection Act.
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35 See response to comment 34. The Avian Protection Plan will also serve as an Eagle Protection Plan. Development of this plan will be a cooperative effort between the BLM, USFWS, and applicable state agencies.
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36 See response to comments 33 and 34.

37 The DEIS (Section 3.6.6.1) discusses potential impacts to the Aplomado Falcon, including the cumulative effects of wind and solar development (Section 4.17.1.6). The DEIS specifically notes the Macho Springs Wind Project. However, wind energy development in the vicinity of the proposed SunZia East Substation would generally be outside the likely range of the species. With regards to loss of habitat, no evidence indicates that the Aplomado Falcon is negatively affected by transmission lines. Smaller distribution lines have been used as nest substrates in Texas, and disturbance of existing raptor and raven nests in Aplomado Falcon habitat would be avoided to the extent practicable. Habitat unsuitability, resulting from widespread changes from historical conditions in vegetation communities, is expected to be the primary limiting factor to Aplomado Falcons within the Project area. Potential impacts to the Aplomado Falcon are addressed in detail through Section 7 consultation with the USFWS, currently underway.
Potential impacts to the Southwestern Willow Flycatcher on the BLM preferred alternative are addressed in detail through Section 7 consultation, currently underway with the USFWS. Recovery plans have been reviewed for all applicable species, and relevant information has been used to develop the FEIS and Biological Assessment.

Development of mitigation measures related to design, micrositing, locations where seasonal avoidance would be implemented, and other site-specific or time-specific constraints, will be conducted concurrent with the final POD. However, the standard and selective mitigation measures presented in the DEIS provide the framework to be used for site-specific application. Detailed application of these measures would also be conducted concurrent with the consideration of other resources.

The best available information, including consultation with agency biologists, will be used to determine appropriate buffers and seasonal constraints for all parts of the Project area.

As noted in previous comments, an Avian Protection Plan will be developed, and will incorporate information to be provided in the 2012 update of APLIC’s guidance to minimize collision risk.
VI. Collisions with the Proposed Transmission Line Height Likely

Extensive attention to the Rio Grande and associated floodplain has reduced the available riparian habitat and created it into a narrow corridor, particularly in the Middle Rio Grande valley. This contraction increases the density of birds moving along the corridor increasing the likelihood of collisions. Additionally, the Lordsburg Flats area provides habitat to vast numbers of waterfowl, including cranes, after rain events and the overhead line would present avian challenges in that area.

Sandhill Cranes are threatened from collisions with power lines. Up to 10% of all mortality is due to collisions with powerlines (NMDGF 2003). Consequently, an additional 30% of all deaths are from indiscernible causes, but a portion could conceivably include collisions. During winter, cranes need both roosting sites, flat, shallow open wetlands as well as nearby feeding areas which may include wet meadows or other wetlands and cropland. Cranes in New Mexico have been documented traveling over 20 miles from roost site to feeding areas (NMDGF 2003).

Numerous studies have found that collisions with transmission lines are a significant cause of mortality for Sandhill Cranes and collisions with power lines have been well-documented (Ward et al., 1987, Windigstedt 1988, Brown and Drewien 1995, Wright et al., 2009). In a 2005 USDA Forest Service Technical Report, Manville said that collisions with power transmission and distribution lines are estimated to kill as many as 175 million birds annually, and an additional tens to hundreds of thousands more birds are electrocuted. The difficulty with quantifying the impact of these activities is that due to great expense of area they cover they are poorly monitored for both strikes and electrocutions (Manville 2005). Other sources of mortality include hunting (52%) and other shooting incidents (5%) (NMDGF 2003). Cranes generally fly higher than turbines or powerlines. Incidents may occur during landing or takeoff and duringlement weather conditions such as snowstorms or heavy fog.

Daily movements north out of Bosque del Apache NWR and up to Ladder S. Gordon Waterfowl Management Area or the surrounding agricultural lands expose birds to obstacles in their flight path. Managed agricultural crops are provided at Bosque del Apache NWR and Ladder S. Gordon Waterfowl Area approximately 40 miles north of the Refuge. Food and hunting management at each of these areas is designed to encourage daily movement between the areas to disperse the population of wintering cranes and snow

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<td>43</td>
<td>Coordination with BLM and cooperating agency biologists was carried out through the impact analysis process.</td>
</tr>
</tbody>
</table>
The DEIS (Section 4.16) discusses the potential for greater environmental impacts of the underground alternative of the Project at the Rio Grande relative to overhead conductors and groundwires.
All available mitigation measures are under consideration to minimize bird collision risk at the Rio Grande crossing. Final selection and placement of mitigation measures will be identified in an Avian Protection Plan. Generally speaking, mitigation measures identified at this time will include the following, although other measures remain under consideration:

- Structures within the Rio Grande floodplain will be self-supporting lattice or steel tubular, and will not use guywires.
- Bird diverters or similar post-construction measures to increase visibility will be applied within the Rio Grande floodplain.
- Overhead groundwires will use a one-inch conductor (OPGW) within the Rio Grande floodplain rather than the typical one-half-inch conductor (OHGW) used elsewhere.

1. The BLM preferred alternative is located at a relatively narrow portion of the Rio Grande floodplain, near the northern end of a block of contiguous farmland. Although Sandhill Cranes may use farmland in this area, likely dependent on crops planted in a given year, a relatively smaller foraging area is available when compared to much of the floodplain.

2. See response above.

3. See response above.

4. Existing access would be available within the Rio Grande floodplain in most locations, although spur roads may be required to reach some structure sites. No new fencing is anticipated, although this would be at the discretion of individual landowners.

Please see response to Comment No. 27.
Within the Project area, areas of high avian use are understood relatively well. The Rio Grande was identified as such an area, and focused surveys were conducted at multiple locations along the Rio Grande Valley, including estimates of typical flight heights during diurnal movements. Cooperating agencies have provided information on known roosting areas. Bats are not known to be at risk of collision with transmission lines. Also see response to comment 4.

A HEA is one potential pathway to assess the effect of the Project and to determine the extent of mitigation required. See response to comment 50.
Multiple opportunities for compensatory mitigation are available for the Project, and would be developed in detail following Section 7 consultation and during right-of-way acquisition. The BLM and Arizona Game and Fish Department have policies regarding compensation for losses of Desert Tortoise habitat and loss of habitat values for all wildlife. Critical habitat for two listed species (Rio Grande Silvery Minnow and Southwestern Willow Flycatcher) may be affected at the Rio Grande crossing, and offset mitigation may be appropriate. Modification of land use within the right-of-way in the Rio Grande floodplain (e.g. crop modifications or planting screening trees) would be subject to the approval of private landowners, but remains under consideration. Other mechanisms to support mitigation planning, including HEAs, may be used if found to be necessary by the applicable agency.
confidence in reduction of impacts to species. We recommend review of the mitigation
measures proposed in the Gateway West DEIS as a minimum, along with close
consultation with the USFWS and cooperating state agencies.

Additionally, the BLM has demonstrated the authority to negotiate for mitigation funds for
substantial offsets, in addition to avoidance, minimization, and restoration measures. For
instance, on the Ruby Pipeline through Nevada, Utah, and Wyoming, BLM was able to
secure $31.6 million in funding to offset the impacts of that gas line for conservation
measures to benefit wildlife. Mitigation funding should be under consideration for any
unavoidable impacts of the SunZia project.

X. Conclusion

In closing, the American West's natural resources are too precious and unique to sacrifice
—in the long term to climate change or in the short term to energy development. As our
nation struggles with ways to meet growing energy demands and the challenges of climate
change, the ability to balance these will require thoughtful, comprehensive, and pro-active
planning. We continue to champion the efforts to identify the most environmentally
appropriate sites for clean energy projects and transmission lines.

Thank you for the opportunity to comment on this Draft Environmental Impact Statement
of the proposed SunZia Southwest Transmission Project. We will continue to remain
engaged in this important project and welcome future dialog.

Sincerely,

Karyn Stockdale
Vice President and Executive Director
Audubon New Mexico, the state office of the National Audubon Society
P.O. Box 9214
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kstockdale@audubon.org

Judy Liddell
President
New Mexico Audubon Council
jliddell@mm.com

23

2307 Comment Response
See following page(s)
Audubon Arizona is the state office of the National Audubon Society and as such we respectfully submit the following comments concerning the SunZia Southwest Transmission Project. We appreciate the extended analysis of BLM goals to evaluating the alternative routes for this very large and intrusive project. We remain very concerned that the majority of the routes, including the preferred alternative, are proposed for the lower San Pedro River valley and adjacent dry island mountain ranges. The mountains and associated Bosumt desert, galletaands and riparian corridors of southwestern Arizona have been recognized for decades as one of the most biologically diverse regions in the contiguous United States.

Audubon has specific expertise and knowledge about birds, bird habitats and bird related recreation and economic values; therefore we are listing our comments primarily to those topics. Our overall concern is that the DEIS is lacking in specifics of construction, design, and land disturbing impacts related to surface access for construction and maintenance.

Lower San Pedro River (Kussene north to Yinkitakman)

The San Pedro River is a unique and extremely important biological asset in the arid southwest. As one of the few unclaycinated and fishless rivers in the San Pedro Valley, it supports a high concentration of riparian and riparian resources. The river supports a diversity of plants and animals and exhibits a remarkably intact riparian system including extensive stands of Fremont cottonwood (Populus fremontii), Goodding's willow (Salix gooddingii) gallery forest and large mesquite (Prosopis velutina) bosques. Doane and Slagle (2004) describe the San Pedro River as one of the most significant potential unclaycinated desert rivers in the United States. Species that are listed or proposed for listing under the Endangered Species Act are represented in sustainable numbers within this corridor.

The National Audubon Society has responded to the San Pedro River corridor from north of Sonora to the confluence with the Gila River at Willcox as a globally Important Bird Area (IBA). The values that earn this recognition include scores of the highest nesting densities of riparian obligate birds in the western United States and a critically important fall and spring migration corridor for thousands of neotropical migrants. Identified as an IBA in January of 2005, the lower San Pedro River was scientifically peer reviewed and subsequently designated as a Global Important Bird Area in January of 2008. http://audubon.org/sites/iba/1913

Audubon Arizona SunZia DFS Comments August 22, 2012

SunZia Southwest Transmission Project
Other Agency and Non-Government Organization Comments

J-507

Final Environmental Impact Statement and Proposed RMP Amendments

The lower San Pedro River supports a substantial population of the federally-endangered southwestern willow flycatcher (Empidonax difficilis) and the western population of Yellow-billed Cuckoo (Coccyzus americanus). Both of these species are currently being evaluated for listing. The Arizona Game and Fish Department documented 194 southwestern willow flycatcher territories consisting of 307 adult birds in 2005, the last year of extensive surveying (English et al., 2008). Over 100 species of breeding birds and another approximately 250 species of migrant and wintering birds occur in the area, representing roughly half the number of known breeding species in North America. The San Pedro River serves as a migratory corridor for an estimated 1 million migrating birds each year. Notably, 36 species of raptors, including the gray hawk (Accipiter gentilis), Burrowing owl (Athene cunicularia), and kestrel (Falco sparverius), are present. These migrating bird values are contributing elements to a collaborative conservation initiative and new natural wildlife refuge along the lower San Pedro River in Cochise, Pima and Pinal Counties, Arizona that is being supported by the southwestern region of the United States Fish and Wildlife Service.

The Lower San Pedro River IBA's southern boundary begins at 2 links Prescott in Coconino County north of the Maricopa and follows the San Pedro River downstream, north then Pima and Pinal counties to Willcox. The majority of the land is privately owned and only select properties in public ownership or under conservation easement and management are specifically included in the计划 square miles.32,762 acres IBA (Attached map). Major tributaries that have been identified as having high riparian habitat values in the San Pedro River watershed include Fightingtown Creek, Red Rock Creek, Cyber Creek, and Aravaipa Creek. The riparian habitats in these and similar drainages are of crucial importance to the ecological health of this region.

Numerous species of endangered and threatened native fish species persist in the lower San Pedro River. Barred Sucker, a possible SunZia Alternative Route is a major tributary to the lower San Pedro River and contains an intact native fish assemblage, including the endangered Sucker (Mobula tricolena) and the non-native Red Rock Creek, being designated as episodic critical habitat. Similarly, critical habitat for these species exists within the Core Areas (5.8 miles plus 3.4 additional miles within Basin).
1 The Project is not anticipated to cause fragmentation at a level that would substantially affect function of habitat blocks in and adjacent to the Lower San Pedro River Valley. The comment notes that Cascabel Road "is unpaved and has low traffic volume, minimizing the linear impacts to wildlife movement". Access roads for the Project would have much lower traffic volumes, even if recreational use occurs. Access roads may also be closed and rehabilitated in selected, high-sensitivity locations. The DEIS acknowledges that effects may occur in the discussion of alternatives (Section 4.6.5), but also considers these effects in the context of existing conditions.

2 Comment noted. A discussion of conservation easements along the San Pedro River and elsewhere in the Project study corridors have been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.
become a focal point for conservation and mitigation investments because of the opportunity to protect and restore a relatively undisturbed river system, cross-valley wildlife movement, and ecological processes such as those that sustain ecosystem health.

Partners in this effort include the Bureau of Land Management, Bureau of Reclamation, Rialto-Flow Project, Arizona Inland Counties, Fish and Wildlife Service, Foothills Coalition, and the Friends of the Superstition Mountains. The Riparian Corridor Collaborative has identified additional lands in the valley through its proposed land exchange for a single site in Superior. Together, these properties have protected close to 40,000 acres and invested over $25 million in acquisition of conservation lands and alternative water supplies. Close to one-third of the river is now in protected status, and stream flow and habitat conditions are improving.

Willcox Playa/Cochise Lakes IBA

The IBA was identified as a Global Important Bird Area in October 2001 and encompasses the 74 square mile, 47,043 acre Willcox Playa, a broad alkaline basin fed by ephemeral desert spring (primarily geothermal and seasonal) and intermittent streams. (attached map)

The playa is seasonally flooded by a shallow depth. Outlying the playa are the satellite lakes/waterfowl ponds of Cochise Lakes, or also Lake Cochise, disked flats, and Willcox Playa Wildlife Area comprising Cranke Lake. The Playa itself is administered by the Department of Defense and the U.S. Army Corps of Engineers. It is not managed in anyway, and is pooled no trespassing. On the upper east side of the playa is the Arizona Game and Fish Department managed Willcox Playa Wildlife Area, consisting of 586 acres. There are two "hot spot" points, and the 30-acre impoundment at the Wildlife Area. The significant avian resources are over-wintering Sandhill Cranes and migratory and wintering shorebirds, waterfowl, and waterbirds. The Wildlife Area (Cranke Lake) and Cochise Lakes, for nesting, rearing, and feeding. Sandhill Cranes depend heavily on the surrounding agricultural lands of the broader Saguaro Springs and Bonita Valleys for forage, particularly in times of wetland conditions.

The site is important to special status waterfowl species such as Swainson's hawks, scaled quail, chestnut-backed chachalaca, and Geese's sparrow. It supports significant concentrations of shorebirds (>100) and cranes (>500). Willcox Playa and wetlands support the second largest over-wintering concentration of Sandhill Cranes (Grus canadensis) in Arizona, typically 4,000 to 9,000 pairs (White Water Draw Wildlife Area in the south and winters 10,000 to 22,000 cranes). There are occasional years when crane numbers spike when a large number of birds (>12,000) from White Water Draw switch to roosting in this area (using either the Playa or Cranke Lake).

Most significantly, both in spring and fall, summer shorebirds can see over in very substantial numbers (400-900 individuals of Cohete Lakes), and in-migration shorebird species using the include Wilson's Phalarope (April, May, July, Aug., Sept.), Willet (April), Least Sandpiper (April, Aug., Sept.), Western Sandpiper (April, Aug., Sept.), Long-billed Dowitcher (May, Sept.), Black-necked Stilt (July, Aug., Sept.), and American Avocet (July, Aug., Sept.). larger numbers of other shorebird species (Killdeer, Western Gyrfalcon, Red-tailed Hawk, Cattle Egret, and Red-winged Blackbird, Sandpiper, and Red-necked Phalarope). Small numbers of some shorebirds occasionally breec.\n
< by John Bürger<br>
< SunZia Southwest Transmission Project J-509 Comment Response

See following page(s)
2314 Comment Response

The BLM preferred alternative crossing the Sulphur Springs Valley would be parallel to two existing transmission lines that do not have bird diverters or any other mitigation measures implemented. The BLM has requested reports from informal monitoring conducted by AZGFD in this area, but not specific to the existing transmission lines. To date, there is no available information that the existing lines create a substantial hazard for birds foraging in the adjacent farmland.

Colocating transmission lines can increase the overall visibility of the entire corridor relative to a single transmission line. However, bird diverters may also be installed in this location if information indicates that there would be a benefit. The existing transmission lines would likely remain without bird diverters, unless installed as a discretionary action by TEP. Burying new lines adjacent to existing lines would not be a viable alternative to minimize impacts.

Comment noted. The BLM Preferred Alternative is Subroute 4C2c, which avoids this area.
The economic role of public lands is acknowledged in the DEIS, as stated in Section 4.13.4.5 “impacts (direct and indirect) to recreation and tourism have been identified by the public during the scoping process. The description of land use impacts to recreation areas or trails resulting from Project construction or operation have been described in Section 4.10.5 and visual impacts to recreation users have been described in Section 4.9.3. The Project would not substantially change the use of recreation areas or trails, and the number or type of recreation users would not be likely to change, therefore economic effects to recreation are not anticipated. Changes in the tourist economy would therefore not be expected.”

It is acknowledged that there are many ecotourism attractions throughout the study area, although it is noted that the BLM Preferred Alternative would not cross Aravaipa Creek, and would not affect the Wilcox Playa area or any of the crane watching sites identified on the Wings Over Wilcox festival map.

Cumulative impacts to economic resources including recreational activities associated with ecotourism have been identified in Section 4.17.4.13 of the DEIS. As stated cumulative impacts on recreational resources could occur as a result of utility scale solar and wind developments, which could in turn affect ecotourism. It is likely that ecotourism will continue to be a positive trend although the level of impact cannot be quantified without speculative assumptions regarding future levels of recreation and tourism within the analysis area.

As indicated in Section 4.13.4.5 of the DEIS studies have been reviewed regarding the effects of high voltage transmission lines (HVTLs) on property values. These studies found that often no effect to property values occur based on the presence of HVTLs; in studies where effects were found, the effects generally resulted in a 10 percent or smaller reduction in property value.
An over-arching concern we have about the decision process for selecting the SunZia route is the complete lack of design specifics. Many of our concerns and the concerns voiced in earlier public comment periods are about the details of construction and maintenance, details that are not addressed in this DEIS. Of particular concern is the accidental introduction of invasive plant species including but not limited to African bushwillow (Pterocarpus ciliaris), blue panic (Panicum antidotatum), or Desert Grazing Weed, burmuda grass (Cynodon dactylon), Saharan mustard (Drosaica arenaria), and another African grass, Lehmann’s lovegrass (Eragrostis lehmanniana). The highest risk of invasive species spread is by being carried on vehicles and equipment during construction and also during post-construction maintenance. Spread of these species increases the risk of catastrophic fire and degradation of the upland Sonoran desert biotic communities.

SunZia Proposed Route identified by Audubon Arizona as having highest potential impacts to avian species:

The route alternative segments that cause the greatest concern are highlighted in red on the attached map. We recommend that specific power line designs and construction techniques be included in the analysis of alternative routes. We recommend including in the final documents specific design requirements that will prevent or reduce risks to riparian corridors and avoidance of bird sites. Additionally, the final PPM should include an analysis of specific construction methods that will reduce risks to riparian areas.

Sincerely,

Vashni "Tico" Supplesa
Director of Bird Conservation, Audubon Arizona

Table 3-29 (page 3-79) identifies noxious weed species for which suitable habitat may be present within the study corridor. In addition to the effects identified in the DEIS, the final POD will specify a detailed Noxious Weed Management Plan. The purpose of this plan is to provide guidance on control of potential noxious weed infestations along the ROW during construction of the Project. In particular, this weed plan will require a biologist to conduct pre-construction noxious weed surveys which will identify infestations along the ROW. These identified noxious weed locations will be illustrated in the map volume with the final POD so construction personnel are aware of the locations. The Plan also outlines noxious weed management for construction equipment along the ROW (training, working in weed-free areas first, cleaning stations, etc.). Preventative measures, control measures, and agency-specific requirements are outlined in the plan as well as a list of BLM-approved Herbicides and SOPs. This Noxious Weed Management Plan was based on the principals and procedures outlined in the BLM Integrated Weed Management Manual 9015.

As indicated Table 2-11 of the DEIS the selective mitigation measures are prescribed that require special design and construction to minimize impacts to riparian areas (e.g., SE-8). Design engineering would be completed with the final POD that will include a detailed mitigation plan for design and construction.

Sincerely,

Vashni "Tico" Supplesa
Director of Bird Conservation, Audubon Arizona
August 21, 2012
Adrian Garcia
Project Manager
Bureau of Land Management
New Mexico State Office
501 Dinosaur Trail
Santa Fe, NM 87503-1560

Re: SunZia Southwest Transmission Project Draft Environmental Impact Statement

Dear Mr. Garcia,

I am writing on behalf of the Continental Divide Trail Coalition (CDTC) to provide comments on the SunZia Southwest Transmission Project Draft Environmental Impact Statement. Our comments are specific to the planning and management of the Continental Divide National Scenic Trail.

Background
The Continental Divide National Scenic Trail (CDNST) was designated by Congress in 1976 as a unit of the National Trails System. The 3,800 mile CDNST traverses the magnificent Continental Divide between Mexico and Canada. It travels through 25 National Forests, 21 Wilderness areas, 3 National Parks, 1 National Monument, 8 BLM resource areas and through the states of Montana, Idaho, Wyoming, Colorado, and New Mexico. The vision for the Continental Divide National Scenic Trail is to create a primitive and challenging backpacking trail on or near the Continental Divide to provide people with the opportunity to experience the unique and incredibly scenic qualities of the area. For many of the same reasons National Parks are established, National Scenic Trails are created to conserve the nationally significant scenic, historic, natural and cultural qualities of the area. In addition, National Scenic Trails are designed for recreation and the enjoyment of these very special places.

The Continental Divide Trail Coalition (CDTC) was recently established (June 2012) to provide a national voice and advocate for the CDNST and ensure all areas of Trail protection, promotion, and volunteer stewardship continue to be fully realized. Prompted by the continued threat of a lack of
progress in the Trail’s completion due to shrinking agency budgets and to ensure opportunities for public involvement continued in the absence of a national nonprofit partner, trail enthusiasts formed the Continental Divide Trail Coalition to work with the Federal Agencies tasked with administrative responsibility for the CDNST. The CDTC is comprised of natural resource professionals, CDNST volunteers and supporters, and most importantly Trail users. CDTC is committed to work on behalf of the Trail and the Trail’s community. The goal of the CDTC is to become the umbrella group for all CDNST Trail Groups and as a national non-profit partner with the Federal Agencies in the management of the CDNST, to advise on policy, ensure policy impacts, advocate for congressional appropriations, and establish community based on-going volunteer stewardship of the Trail.

CDTC recognizes the need for additional transmission corridors and lines to accommodate the growing industry of alternative energy sources available in New Mexico. However, CDTC would like to address our concerns for the affect this proposed project will have on the planning and management of the Continental Divide National Scenic Trail.

**Trail Location in the Project Area:**
The CDNST is located in and around the proposed Londiho Substation. For specific location, we recommend contacting USFS CDNST Program Administrator who may provide you with a location map. The trail in the area will be impacted by both the construction of the substation facilities as well as the transmission lines coming into and out of the facility.

**Nature and Purpose of the CDNST:**

As stated in the CDNST Comprehensive Plan, “the nature and purposes of the Continental Divide National Scenic Trail are to provide for high quality, scenic, primitive hiking and horseback riding, non-motorized recreational experiences and to conserve natural historic and cultural resources along the Continental Divide.” As stated in the CDNST Study Report (page 1), “One of the primary purposes for establishing the Continental Divide National Scenic Trail would be to provide hiking and horseback access to those lands where man’s impact on the environment has not been adverse to a substantial degree and where the environment remains relatively unaltered. Therefore, the protection of land resources must remain a paramount consideration in establishing and managing the trail and its corridor. There must be sufficient environmental controls to assure that the values for which the trail is established are not jeopardized.”

Some general findings from the CDNST Study Report that assist in describing these terms include:

1. **Designation and Establishment:**
   - “Designation and establishment of a 100 mile Continental Divide Trail would provide the American people with recreational opportunities of national significance and that trail users would wander their way through some of the most spectacular scenery in the United States and have an opportunity to enjoy a greater diversity of physical and natural qualities than found on any other extended trail.” (Study Report, page 4)

2. **Guidelines and Standards:**
   - The Study Report also “advocates that the most minimal development standards consistent with these circumstances be employed; the trail should be regarded as a simple facility for the hiker-horseman.” (Study Report, page 8)

CDTC Comments, Sun Zia DEIS 8/21/2012
c) The Study Report describes the trail experience as an "intimate one, where one can walk or ride horseback across vast fields of wildflowers and contemplate a story dating from the dawn of earth’s history...along the way the inopacuity of the alpine meadows, resident forests and...—desert landscape overwhelms anyone who passes that way. The Trail would provide the traveler's best encounter with the Continental Divide—its serenity and peace...and would supply for every trail traveler some of the world's most sublime scenes." (Study Report, page 189)

The Study Report further identifies the significant qualities, characteristics and trail opportunities of the proposed CDNST in five representative segments on pages 20-52. Escorts include:

1. Scenic Qualities: Spectacular scenery of the quality and magnitude along the proposed CDNST route is not available anywhere in the Continental United States. The trail traverses a variety of terrain, including high desert, forests, geologic formations, and mountain meadows. Flora abounds in the near views, while distant views of major valleys and mountain peaks are exceptional. (Study Report page 99)

2. Cultural Qualities: There are significant segments of the trail and adjacent trails that were used by early-day Indians, ancient cliff-dwelling tribes, Spanish explorers and mountain men in their travels within and through the Continental Divide area. Little visible evidence is left of these activities; however, through interpretative signing, trail users will be alerted to the cultural significance of the area. (Study Report page 101)

3. Historic Qualities: Many signs of historical activity are within the vicinity of the trail and throughout its entire length. Thus, any person visiting the area may have some advance knowledge of the historical significance of the area to make the visit more meaningful. (Study Report page 103)

4. Natural Qualities: The “visitors” of the proposed route of the CDNST would encounter a great variety of terrain, geology, climate, and plant and animal life. This would include the unique and unusual character of Glacier, Yellowstone and the Rocky Mountain National Parks and the back-country solitude of 16 (now 25) National Forest Wilderness and primitive areas, as well as the living quality of the Red Desert of Wyoming. Certain plants, trees, and animals that are observed along the trail are unique to the area traversed. (Study Report page 104, as modified)

Incorporating the CDNST Comprehensive Plan into the Mimbres Resource Management Plan:

CDTC is working to develop and encourage consistent management direction for the CDNST across different administrative unit boundaries. We support the direction as expressed by the CDNST Comprehensive Plan because we feel it offers all administrative units responsible for managing the Trail and its corridor the necessary information and direction to fulfill the intent of the National Trail System Act and ensures consistent administrative treatment of the Trail’s recreational, natural, and cultural resources.

In review of the DEIS, we discovered the new direction for the CDNST as described in the 2009 CDNST Comprehensive Plan has not been used to develop or evaluate the alternatives included in this proposal. Specifically, the Mimbres Resource Management Plan (RMP) does not reflect the new direction, the evaluation of impacts or treatment of the CDNST in the current DEIS is not consistent or conforming. Therefore without the resolution of this issue, it is inappropriate to determine what, if
any, impacts the SunZia transmission line may have on the nature and purposes of the CDNST. In order to accomplish this, CDTC recommends the Minibires Resource Management Plan be amended to incorporate this significant new information that will affect land use allocations. Furthermore, we feel that any determination of action may not be made until the primary issues addressing the implementation of the 2009 CDNST Comprehensive Plan in Minibres RMP occur and bring the plan into compliance.

CDNST Comprehensive Plan Direction

Adopting CDNST direction in the RMP is within the scope of the SunZia EIS due to potential direct and cumulative impacts of the proposed action and expected connected. Once the Minibres RMP is revised or amended, the SunZia (and Southline) transmission line proposal can be further assessed following NEPA processes. The FIS needs to objectively assess and disclose whether the proposal and connected wind and solar energy developments would substantially interfere with the nature and purposes of the CDNST. Projects that would result in a substantially interference should not be permitted.

Special Resource Management Area:

CDTC recommends that upon amendment, the Minibres RMP should address CDNST integration needs by establishing a revised Special Recreation Management Area (SRMA) pursuant to the guidance in IM No. 2011-004 or any more recent National Trail planning direction.

Specific recommendations regarding management for the Desired Experiential for the CDNST

CDTC promotes the following desired condition for the CDNST Corridor:

The CDNST is a continuous trail in nature from the Meoco-New Mexico Border to Montana-Canada Border for travel primarily by hikers and equestrians through the wild, scenic, forested, desert and culturally significant lands of the Rocky Mountains. It is usually a simple path, purposeful in direction and concept, favoring the Continental Divide and located for minimum construction to protect the resource. The body of the Trail is the lands it traverses and its soul is in the living stewardship of the volunteers and workers of the Trail community.

Views from the CDNST are predominantly wide-ranging and grand in nature. The trail offers a diversity of topography and a variety of vegetation and animal life exposing the user to the entire range of land forms, water features, history, and uses of the land that are found along the Rocky Mountain region. The corridor appears natural to the visitor and is characterized by a range of ecological life zones.

CDTC Comments: SunZia DEIS 3/21/2012

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<th>Comment</th>
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<td>2352</td>
<td>Comment noted</td>
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<tr>
<td>3</td>
<td>The CDNST is recognized as a National Scenic Trail in the visual resources section of the DEIS. As such it was considered a high sensitivity viewing location and was selected as a KOP and simulation viewpoint to ascertain impacts.</td>
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This special area retains a natural healthy forested and alpine landscape character shaped by both natural processes and humans. Visitors will experience diversity of native plant and animal species. This corridor traverses a range of Recreation Opportunity Spectrum (ROS) classes. The CDNST setting will either be consistent with or complement the primitive and semi-primitive non-motorized ROS Class. Careful trail design will allow for an appearance of a more primitive setting than the recreation opportunity spectrum would predict. The linear nature of the corridor is recognized in determining the ROS class. Roads, utility corridors, or signs of mineral development may be seen, yet they remain visually subordinate.

An atmosphere of self-reliance and respect for CDNST values is fostered and all activities in the Special Area are designed to maintain or enhance the CDNST experience.

CDNST desired conditions should include a "recreation experience not materially different in quality than that extended by a bona fide hiking and equestrian trail and one that is":
1. quiet
2. in a wild and primitive setting
3. with a natural surface single track (18-36 inches wide)
4. harmonizes and compliments the surrounding landscapes
5. travel is at a slow pace

Therefore, CDTC recommends the inclusion of CDNST management direction to achieve the following:

1. serve to protect the significant experiences and features that exist along the CDNST
2. establish the best location for a non-motorized CDNST through the most primitive, scenic, diverse and undeveloped landscapes on or near the CDNST that will provide a wide range of experiences and challenges
3. allow for existing trails to be considered for the final CDNST route so long as they are non-motorized and meet the nature and purpose for a National Scenic Trail
4. foster communication, participation and partnership along the CDNST
5. require monitoring and evaluation of the conditions on and around the CDNST
6. assure proper and sensitive standards pertaining to establishment, operation and maintenance of the trail. Further, it would provide common objectives and means to coordinate the efforts of many agencies and interests having responsibility for implementation. (Study Report, page 5)

Protection of Visual Resources

CDNST Comprehensive Plan direction that states the USES Scenic Management System (SMS) is the framework for integrating all scenic management data into all levels of forest planning. The SMS identifies the existing landscape character, visual sensitivity, and scenic integrity, and how actions may affect and alter those resources. We encourage values of Very High or High whenever possible to meet the nature and purpose of the CDNST. In some cases, where the CDNST crosses major highways, or is in proximity to more urban settings, it may result in a value of moderate or an interim, but the goal should always be to attain a level higher that would be suggested by its classification.

CDTC Comments, SunZia DEIS 8/21/2012
Both the SMS and VRM systems are recognized in the 2009 Continental Divide National Scenic Trail Comprehensive Plan (page 12). It’s also noted that “On public lands administered by the Bureau of Land Management, the visual resource inventory will follow the procedures outlined in the BLM Manual Section 8400.” (Page 13). The visual resource inventory and impact assessment was based on the BLM VRM System (Manual 8400). The visual assessment included a complete analysis of all lands, regardless of jurisdiction, for scenic quality and viewing locations including associated KOPs (travel routes, recreation, residences) as well as conformance with VRM Classifications. The route to the north occurs on private land when crossed by the project; therefore, visual management designations are not applicable. The route to the south would cross the CDT while on BLM land which is currently designated as VRM Class II.

Regarding the integrity and quality of the scenic resources, it should be noted that the southern crossing occurs in an area south of Lordsburg and is highly modified (mining operations, water tower, roads, and radio towers) with facilities that exhibit similar form, line, color, and texture as compared to the proposed project. The northern crossing is also modified and the project would occur near an existing substation with a 345kV transmission line and multiple 115kV transmission lines converging at the substation.

See response to comment No. 4, paragraph 2 regarding integrity and quality of the existing scenic resources.

7 Comment noted.

As indicated in Table 2-11 in the DEIS, selective mitigation measures are prescribed that would minimize visual and recreation impacts to trails (e.g., SE-2 and SE-10).

Comment noted. Also please see response to comment No. 8.
Recreation impacts to viewers are discussed in the visual resources section of the DEIS. When crossing the CDT, the project would be viewed setting that is primarily associated with modern modifications and disturbances. Section 4.9.3.2.

As stated in Section 4.9.3.2 of the DEIS, “impacts for high concern recreation viewers associated with the Continental Divide National Scenic Trail are anticipated where the Project would cross this national scenic trail (at the BLM Preferred Alternative). Viewers here would view the Project in context with an existing substation, an existing 345 kV line, and multiple 115 kV lines converging at the substation (Link B121); therefore, contrast would be reduced.” The cumulative effects analysis included energy development scenarios, which require a larger area of effect as compared to transmission line projects. This larger analysis area in southern New Mexico covers portions of the CDT defined by similar vegetation communities, terrain, and cultural/historic resources specific to this region (Basin and Range Physiographic Region) of the trail and is a reasonable area of effect for the cumulative analysis.

The final Plan of Development (POD) will be completed prior to construction and will include detailed engineering for the Project. This document will specify all recommended mitigation measures along the ROW and will include identification of sensitive resource areas such as National Scenic and Historic trails, biological resource areas and cultural sites. Also please see response to Comment No.8 regarding selective mitigation measures prescribed in the DEIS.
2352 Comment Response

See following page(s)

Thank you for the opportunity to express our concerns regarding the proposed SunZia Southwest Transmission Project. We request to remain on the mailing list and to be engaged in future public involvement processes regarding this project. I can be reached at (501) 419-8506 and

Teresa Ana Martinez,
CO-founder and Director
Continental Divide Trail Coalition

Both the SMS and VRM systems are recognized in the 2009 Continental Divide National Scenic Trail Comprehensive Plan (page 12). It’s also noted that “On public lands administered by the Bureau of Land Management, the visual resource inventory will follow the procedures outlined in the BLM Manual Section 8400.” (Page 13). The visual resource inventory and impact assessment was based on the BLM VRM System (Manual 8400). The visual assessment included a complete analysis of all lands, regardless of jurisdiction, for scenic quality and viewing locations including associated KOPs (travel routes, recreation, residences) as well as conformance with VRM Classifications. The route to the north occurs on private land when crossed by the project; therefore, visual management designations are not applicable. The route to the south would cross the CDT while on BLM land which is currently designated as VRM Class II.
contract that is either none or weak if a substantial interference of the nature and purposes of National Trails are to be avoided.

Thank you for considering these comments. Please contact me if you have any questions.

Greg Warren

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The land manager for the portions of the trail crossed by the Project is ASLD and do not have federal visual management objectives (i.e., VRM, VQO, or SIO). However, visual impacts were assessed for the trail and based on these impacts mitigation measures have been recommended to reduce, to the extent practicable, impacts to trail users/viewers (i.e., perpendicular crossings, maximize spans, etc.).
Direct land use impacts to the trail would be limited to the studied corridor. Visual impacts to recreation users would not extend beyond the studied corridor.

The suggested mitigation measures will be considered and included in the final POD as appropriate. The AZT will be informed of the anticipated construction timeframe so they can notify users via the AZT website. Additional public notification could include signage (as specified in the POD) along the affected segment of the trail (along with signage at logical connecting trailheads) and would be placed prior to construction.
Since the trail would be spanned, the use of a helicopter for construction may not be needed. Selective mitigation measure 2 would be recommended at the AZT crossing so that temporary access would be screened from the trail.
The BLM recognizes that there are varying means to forecast conditions in the transmission grid; however, the data provided in this comment do not dispute the validity of the BLM’s purpose and need for the SunZia Southwest Transmission Project. The Draft EIS included a description of congestion associated with transmission Path 47. The following summarizes the statements applicable in response to the CWG’s comment.

1) DOE identified Path 47 as a highly congested path;
2) a nominal 170 MW of available firm transmission capacity in the west-to-east direction and 0 MW of available firm transmission capacity in the east-to-west direction (SunZia’s predominant planned power flow direction) was identified on transmission lines within Path 47 and beyond; and
3) SWAT analyses illustrate an abundance of interest to interconnect renewable resources in the vicinity of Path 47 and SunZia.
Dear Adrian,

I would like to submit the following supplementary comments to the SunZia Draft Environmental Impact Statement. Although the deadline for comments has passed, I believe these comments are substantive and potentially important to assessing the need for this project. These comments address the statement in the SunZia DEIS that Path 47 in southern New Mexico is congested and that SunZia will address this issue. I have now had time to review the source of this statement, the Department of Energy’s 2009 National Electric Transmission Congestion Study, as well as documents referenced in this study and elsewhere. This conclusion is very misleading, and the attached report clarifies this.

Review of DOE’s report and supporting documents shows that, in reality, Path 47 is one of the least congested and most reliable paths in the western United States, and no additional transmission capacity is needed to meet current power needs in the region. What is occurring is that utilities and power generators that use Path 47 have scheduled much of the path’s transmission capacity for themselves but are not using it. Such a situation needs to be resolved by the Federal Energy Regulatory Commission. A physical power delivery problem does not currently exist.

In addition, calculations by Public Service Company of New Mexico show that path 47 has sufficient transmission capacity to export approximately 1,000 MW of power. Currently, development of solar resources in southeastern New Mexico is not limited by insufficient transmission capacity. Rather, these resources are not being developed because potential power generators cannot obtain power purchase agreements from utilities. That is, utility companies are unwilling to buy the power. This hinders the financial risks for a project like SunZia if it intends to support itself by selling transmission capacity to deliver this power.


To fully update the SunZia DEIS regarding Path 47, the BLM needs to access the Western Electricity Coordinating Council’s 2012 Path Rating Catalog. I strongly urge the BLM to obtain the assistance of the Department of Energy and the Western Electricity Coordinating Council with this to ensure that the information in the DEIS regarding Path 47 is the most up to date possible. This catalog is available for $90 at the following URL: http://www.wcc.gov/library/Places/PathRating%20Catalog.aspx. I cannot access this catalog without purchasing it and this cannot provide the most up-to-date information for the BLM to use.

The problem with congestion on Path 47 is not one that I immediately recognized when I read the DEIS, and I was unable to research it before the SunZia DEIS comment deadline. I believe that the information provided is substantive and important to incorporate into the SunZia environmental impact statement if the EIS is to be reliable and accurate.

Because this information applies equally to the Southline Project, I am providing this to Tom Hurshman, BLM manager for that project. I am also copying this to Lauren Azar, Senior Adviser to Department of Energy Secretary Steven Chu, who may be able to direct you to the appropriate person to fully update the congestion ratings for Path 47.

Sincerely,

Norm "Mick" Meader
Co-Chair, SunZia Working Group
mmeader@ecow.net

Attachments (3)

cc: Mr. Jesse Juan, Director, BLM New Mexico State Office, (505) 292-2283, jjuan@blm.gov
Mr. Tom Hurshman, BLM Southline Transmission Project Manager, thurshman@blm.gov
Ms. Lauren Azar, Senior Adviser to Department of Energy Secretary Steven Chu, lazara1@doe.gov
The DEIS discusses the potential impacts to migratory birds in Section 4.6, 4.17, and Appendix B2.
2. The preferred crossing location directly circumvents public-private investments to protect the migratory waterfowl habitat in the middle Rio Grande Valley. RGALT has been working since 2004 with the USFWS Intermountain West Joint Venture group using North American Wetlands Conservation Act (NAWCA) grant funds to preserve habitat, including working farms in the middle Rio Grande Valley down to Bosque del Apache NWR. The proposed crossing just north of Socorro lies in close proximity if not passing directly through 4 of NAWCA Conservation Easement projects. Well over a million of state and federal dollars have been invested in these properties to protect and restore the native riparian area of threatened bird species.

3. The preferred alternative cuts through the area designated for protection as part of the Secretary of Interior’s Middle Rio Grande Conservation Initiative. On January 5, 2012, Secretary of the Interior Ken Salazar visited Albuquerque and met with local community leaders to discuss strengthening existing partnership efforts in the Middle Rio Grande region (the 180-mile stretch of river between Cochiti and Elephant Butte reservoirs). Secretary Salazar challenged attendees to develop a partner-driven plan for the Middle Rio Grande that would support the Department of Interior’s America’s Great Outdoors (AGO) initiative and build off the existing successes in New Mexico’s middle Rio Grande communities, to support existing efforts to address water management and endangered species concerns and to add an additional focus of conservation, education, and recreation opportunities as well.

1 http://www.fws.gov/pgmdisk1/MGS/112/112/index.htm
2 http://www.nps.gov/nrm/rgalt/index.htm

Comment Response

2399

A discussion of conservation investments along the Rio Grande and elsewhere in the project study corridor, which includes USFWS identified NAWCA grants have been added to Section 3.10.1 and 3.10.3 of the FEIS.
Section 4.9.3.1 of the DEIS describes high to moderate visual impacts for residential viewers near the Rio Grande crossing along Link E180 (Subroute 1A1), also illustrated on Map 9-3E of the Map Volume. Text has been added to the FEIS describing residential viewer impacts along Link E180 (Section 4.9.3.1).

“Impacts to residences near Socorro are anticipated to be high along Link E180 where direct views of the project within ½ mile would occur.”

As indicated in Section 4.13.4.5 of the DEIS studies have been reviewed regarding the effects of HVTLs on property values. These studies found that often no effect to property values occur based on the presence of HVTLs; in studies where effects were found, the effects generally resulted in a 10 percent or smaller reduction in property value.

The preferred alternative does not cross the Veranito WSA, or any other WSA because rights-of-way are excluded from WSAs. It does, however, cross the northern edge of the Johnson Hill recreation area in two places, adjacent to an existing road.

Section 2.3.3.1 of the DEIS describes alternative transmission line routes that were considered and eliminated. The alternative routes located south of the Bosque or north of the Sevilleta National Wildlife Refuge were eliminated because they were not feasible. The southern routes would cross either wilderness study areas or military lands that were excluded for new rights-of-way. The northern routes were excluded because they would cross wilderness study areas or BLM exclusion areas.
include more private lands and rural population centers, and more of the Rio
Grande waterfowl migratory flyway.
3. It avoids the low-altitude migratory avian “Rio Grande Flyway” described
above. Constructing a power line across this corridor would create yet
another threat to the Rio Grande Flyway migrants.
4. It avoids private Conservation Easements in the middle Rio Grande
Valley north of Bosque del Apache. In addition to working on habitat
preservation in the middle Rio Grande Valley as described above, RGALT
has been working with private landowners, the USDA Farmland Protection
Program\(^1\), and the State of New Mexico\(^2\) to preserve critical farmlands in
this area. All of the alternative routes that cross the Rio Grande north of
Bosque del Apache will negatively impact these government – private
collaborations to preserve irrigated farmland and wildlife habitat.
5. This eastern-end route is shortest, causing the least land disturbance.

It is our understanding that the military was ready to accept the proximity of
the power line following outside the WSMR west boundary. Thus, let us
utilize this opportunity and option to put the power line in an area that
causes the least disturbance to private land and critical wildlife habitat and
flyways, and select the Route numbers A181 and A300 (or alternately,
A250) as the Proposed Route for the SunZia powerline.

Sincerely,

Cecilia Rosacker McCord
Executive Director, RGALT

Board members
Mark Cortner, President
Matthew Mitchell, Vice President
Bill Hume, Secretary
Kathy Albrecht, Treasurer
Jim McCord

1 Comment noted

2 Known biological resource conservation areas and agency-identified biological resource areas have been identified in sections 3.6.7 and 3.6.8 of the DEIS. The FEIS has been modified to further identify conservation investments located along the Rio Grande and San Pedro River valley (Section 3.10.1, 3.10.3).

3 The study area for the proposed National Wildlife Refuge (or Collaborative Conservation Initiative) is 4 miles wide, centered on the San Pedro River. The proposed refuge would not necessarily include all lands within that study area, and the USFWS continues to identify potential participants. Thus, the potential for the project to affect the planning process exists, although no direct conflicts have been identified to date. The Project (BLM preferred alternative) would cross the southernmost one-half mile of the refuge area in a single location near Redington. Other alternatives to the north would potentially have a greater impact on the proposed refuge.

4 It is the proponent's intent to increase transmission capacity and co-locate transmission facilities in areas of potential renewable energy development; the BLM is required to respond to the proponent's application for use of BLM administered lands for a new utility right-of-way. The BLM discloses environmental impacts to resources throughout the study corridors that could result from the construction and operation of the Project. The BLM's decision will be to grant, grant with conditions or deny the application for new right-of-way. The Record of Decision will decide which alternative to select, any mitigation requirements, and the terms, conditions, and stipulations of the grant.
We again want to reiterate our strong and unanimous opposition to the Aravaipa transmission line route proposed by BLM and SunZia (Alternate Transmission Line Route sections C108, C179, C178, C173, C502, and C505 on Figure M 1-1W). We state this opposition again here because we understand that SunZia is advocating this route. The Aravaipa route cut through more than 20 miles of the Aravaipa Canyon watershed, crosses Aravaipa Creek on the east side of the Canyon, and bisects the Aravaipa Canyon Wilderness administered by the Bureau of Land Management to the north and Gila River Wilderness in the Coronado National Forest to the south.

Aravaipa Creek is a perennial creek in the Sonoran Desert that flows through the wilderness and the area in which the APQA numbers live. Aravaipa Creek is home to two federally-protected fish species, the opligodes and the lace mohawk, and is the only watercourse in Arizona still to have all three native fish species. Other species of special concern in the creek and nearby are lot of other fish (longnose dace, roundnose dace, decent dace, and Sonoran dace). These fish species, yellow-ball tadpole, gray brook, and black brook, the desert sucker, and the desert high school. In other words, Aravaipa Creek and its watershed constitute a unique environment and an ecologically sensitive area. In fact, the Aravaipa Canyon Wilderness has been called the “crown jewel” of the wilderness areas administered by BLM.

Protection of the special aspects of this environment is very high priority for APQA and the Aravaipa transmission line route would threaten the Aravaipa Canyon Wilderness in a number of ways.

1. The Aravaipa route would block the roadless wildlife migration corridor between the Aravaipa Canyon Wilderness and the Gila River Wilderness in the Coronado National Forest, one of the last of this magnitude in the southwest. The importance of this 100-mile long corridor has not been taken into account because for some unknown reason the study area stops just north of the Gila River and does not include the roadless areas to the north. This is an essential corridor for many animals, such as desert bighorn sheep, black bears, mountain lions, and rondeale, and it connects these two ecologically pristine areas. Overall, approximately 50 miles of the proposed route would pass through or within one mile of areas determined to be environmentally sensitive, the largest number of miles in all three transmission line routes, proposed or alternative. More importantly, once the transmission lines are in place, with their attendant maintenance access, they will act like a “pavement” to further access, first by off-road vehicles, then to more development and degradation.

2. At the result of the unique aspects and large area that the Aravaipa route for the transmission line would bisect the second largest area in Arizona-New Mexico, it seems unlikely that appropriate mitigation for the negative environmental effects that would be caused by the transmission lines is possible.

3. The Aravaipa route would cross or closely parallel Aravaipa Creek on the east side of the wilderness and cross the Aravaipa Creek watershed for much of its length, potentially destroying and altering habitat important to native species.

4. The Aravaipa route includes more than 15 miles of mountains terrain, making construction difficult, unsafe, expensive, environmentally degrading, and very undesirable for maintenance.

5. The Aravaipa route crosses the area for which a number of agencies have developed a management plan that the continued use of prescribed and naturally occurring fire. Not only would transmission lines fragment the area, it would greatly limit the use of fire as a management tool, thereby increasing the chances of catastrophic wildfires.

Sincerely,

Rusty Wagner
President, Aravaipa Property Owners Association (APQA)
2407 Comment Response

1 The BLM has complied and continues to comply with Section 106 of the National Historic Preservation Act. Initiation of the Section 106 process is at the identification of the undertaking. IM’s cited by Archaeology Southwest would not have been in effect from 2009 through portions of 2012. Nevertheless, the National PA (IM 2012-061) does specify that the ACHP may voluntarily enter into the Section 106 process any time that it wishes.
We were very pleased that BLM recently issued an Instructional Memorandum (IM) that expressly describes the process to be followed when undertaking a project that requires compliance with both NEPA and NHPA (IM No. 2012-100). The IM includes a helpful chart (attached to this letter) that describes what steps should be taken at various points in the NEPA and NHPA processes to ensure coordination and complementary reviews. What we find intriguing is that in the case of the Sun Zia project, this useful guidance has been completely disregarded. For example, the chart accompanying the IM shows that the appropriate time to initiate NHPA is prior to beginning NEPA scoping, certainly not after a draft NEPA document has already been released. In other words, according to BLM’s own guidance, BLM should have initiated Section 106 consultation for this project three years ago, in 2008. Furthermore, according to the chart, at the point in the NEPA process where a draft EIS has already been issued (the current status of Sun Zia), a draft Section 106 agreement should already be completed and be circulated for comments. Instead, BLM continues to refuse to initiate Section 106 consultation, in direct violation of BLM’s own explicit guidance on the matter.

The 1997 Arizona BLM Protocol agreement states that, “[t]he BLM will request the SHPO’s review of the following kinds of undertakings: [a] non-historic interstate and/or intrastate projects or programs, as determined by either the BLM or the SHPO, Examples are interstate pipelines or transmission lines which involve multiple jurisdictions and require the preparation of Environmental Impact Statements” Protocol at 4. Since this seems to describe the Sun Zia project, it is clear that BLM should have already contacted the SHPOs about this project to seek their review. Furthermore, BLM recently adopted a new Nationwide Programmatic Agreement (NPA) which reinforces the importance of NHPA compliance early in the process of project planning. NPA at 4.1(b).

We are also concerned that waiting until a final alternative is selected before beginning compliance with Section 106 will send the opportunity of the Advisory Council on Historic Preservation to provide meaningful input on the undertaking. 36 C.F.R. § 800.5(i), 800.16(f). Under Section 106 of the NHPA, federal agencies have an obligation to develop and evaluate measures to “avoid, minimize, or mitigate” the adverse effects of their actions before finalizing their decisions. 16 U.S.C. § 470l(c), 36 C.F.R. § 800.3. In light of this obligation, BLM has stated that it will select a Sun Zia alternative before commencing NEPA compliance, effectively removing from consideration other alternatives that could “avoid, minimize or mitigate” adverse effects on historic properties. Complying with Section 106 now will ensure that BLM does not select a project alternative before Section 106 consultation, which would impermissibly foreclose alternatives, such as selecting a different route or route segment, to “avoid, minimize or mitigate” the adverse effects of the project. Finally, we find it difficult to understand the “Big-Hopping” that BLM has done on the question of when it intends to actually start Section 106 consultation. In correspondence dated June 3, 2010, BLM stated, “[s]ince the preferred and alternative routes have been
As stated in the DEIS (p. 1-7), “Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services.” and reiterated on p 4-274 of the DEIS, “As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service.” Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, “it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation” (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity.
We appreciate the information that was provided by Archaeology Southwest as part of the Class I data collection efforts. The Sonoran Desert Conservation Plan is available online and provides overviews of priority conservation areas including cultural resource sites. As your letter notes, the “Pima County” cultural areas represent a subset of information available from AZSITE that have greater spatial accuracy than provided in the Sonoran Desert Conservation Plan. Analyses in the DEIS included cultural site records in AZSITE within Pima County. Priority conservation areas identified by Archaeology Southwest and provided to EPG are included in the cultural overview maps; we admit these are not discussed in detail in the DEIS, due to the opaque process used to identify these areas (their designation is apparently a combination of known site type/condition/age and landowner interest in conservation easements). Unfortunately, an original report for Archaeology Southwest’s San Pedro surveys has not been available for our review.
archaeologists and tribal members and employees. The Pima County planning effort identified the most sensitive areas in Pima County with respect to significant prehistoric features on the landscape. In some instances they represent prehistoric cultural landscapes with the full complement of site types associated with Native Americans, particularly within the period of AD 700 and 1400. It appears based on the fact provided on page 8-138, that Pima County was not consulted in any capacity as it pertains to cultural resources despite our specific reference to the significant information they had compiled as part of their county planning effort associated with the Sonoran Desert Conservation Plan, an award winning planning effort. Under Section 106, local governments have a right to participate as consulting parties. 36 C.F.R. 800.12(b)(3).

We appreciate that the information provided by Archaeology Southwest concerning priority areas in Pima County and the San Pedro River basin were referenced in the DEIS (Page 5-138 and Figure M 69-19). Nonetheless, there is no subsequent analysis or associated narrative on how this information was considered for purposes of the alternatives assessment and determination of impacts to historic properties. This provides further indication that the NEPA process has not served, and cannot serve, the requirements of the Section 106 consultation process. We have attached a recent final report that includes all of the Prehistoric Priority Cultural Resource Areas in Pima County. Similar to Pima County this information was derived from thousands of AGSIT records and the expert opinion of notable local archaeologists and tribal representatives and members. We strongly recommend that this information, previously submitted information for the entire San Pedro River basin and information provided by Pima County be considered as part of the Final EIS and Section 106 consultation process.

3. Inadequate delineation of the area of potential effect for Class I records review.

The Class I records review initially considered data within a mile of the edge of the 1000 foot corridor. However because of the "minimum amount of data" the review focused only on data found within a zone defined as 1/4 mile in width calculated from the 1000 foot corridor center line. The decision to limit the focus of inquiry should be determined from an assessment of the "area of potential effect" as opposed to the size of the dataset. An area of potential effect (APE) will be identified in the Section 106 process. In comments we submitted previously, we raised the issue of indirect impacts associated with motorized access routes constructed to support transmission line construction and maintenance. In short, certain sites such as large habitation areas, petroglyph or pictograph sites, rock shelters and caves as well other sites with above-ground historic structures, are vulnerable to vandalism including looting. Such activities are related, in part, to site access which is facilitated by routes open to motorized use. Facilitated access to areas that would

3The regulations are clear that the area of potential effect is the "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties." (36 C.F.R. 800.16 (d))
2407  Comment Response

4b New roads in forested areas have a different dynamic than in non-forested areas that were amenable to off-road travel prior to development. The vulnerability of a site to vandalism/disturbance depends not only on distance from a road, but also on factors such as size, isolation from public view, and visibility (ability of non-archaeological public to recognize the material as a site). The Programmatic Agreement in preparation for the project under Section 106 identifies measures for addressing potential indirect and cumulative adverse effects to such vulnerable sites.

5 Section 3.8.1.3 of the FEIS has been amended to read:

“The Areas of Potential Effects can be formally defined with the issuance of a ROD identifying a preferred route.”

Well-defined Areas of Potential Effects for direct, indirect and cumulative effects are currently being developed through consultation with the Section 106 consulting parties and specified in the Programmatic Agreement in preparation for the project.

Section 106 consultation was initiated with the establishment of the undertaking, as well as the finding of adverse effect. The adverse effect notification and invitation to participate in consultation was sent to the ACHP on July 13, 2009. On August 14, 2012, additional information was provided to the ACHP as required under 36 CFR 800.11.

“Formal” consultation was not specified in the referenced section (3-143), and was only inadvertently included on 5-10. Consultation has been ongoing since the establishment of the undertaking in 2009, when consulting parties, including Archaeology Southwest, were identified.

6 Well-defined Areas of Potential Effects for direct, indirect and cumulative effects are currently being developed through consultation with the Section 106 consulting parties and specified in the Programmatic Agreement in preparation for the project.
assessment methodology presently is restricted to a potential corridor width of 600 feet. Our first concern relates to the decision to further restrict the geographic area under consideration to 600 feet despite BLM’s earlier statement that the corridor could be up to 1000 feet in width and the Right of Way application is designed to provide for that additional width if needed. The limited focus area for the direct project impacts is not explained. We recommend that the final impact assessment for purposes of NEPA and Section 106 compliance consider direct impacts within the 1000-foot corridor width. In addition, the impact assessment methodology fails to consider the larger geographic area subject to indirect impacts that we discuss above. In essence, we are left to conclude that any sites outside a 600-foot area centered on the corridor centerline could not be impacted by the project. We recommend that the impact assessment methodology include an indirect impact zone as described more fully in Section 2 above.

6. Misleading information on the status of Section 106 consultation.

We strongly object to the statement made on pages 3-145 and 5-10 of the DGS that formal Section 106 consultation has begun. This is not the case, as verified in phone and email conversations with Arizona and New Mexico State Historic Preservation Officers and the Advisory Council for Historic Preservation. We strongly recommend that Section 106 consultation begin immediately. Because BLM did not undertake appropriate notification, clarifying the relationship between the NEPA process and Section 106 public involvement requirements, commencing the required Section 106 process is necessary and long overdue.

REFERENCES


We appreciate the opportunity to provide these comments and look forward to your response to our input.

Sincerely,

William F. Baude
CBO and President
Archaeology Southwest

Amy Cal
Senior Field Officer and Attorney
National Trust for Historic Preservation

Attachments:
- Final 305 County Priority Cultural Resource Area Report
- California Public Utility Commission RPS Table
- Reports and select pages from reports regarding vandalism of archaeological sites.

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SunZia Southwest Transmission Project
Other Agency and Non-Government Organization Comments

J-541

Final Environmental Impact Statement
and Proposed RMP Amendments
The BLM Preferred Alternative for the proposed action is to grant right-of-way for two 500 kV transmission lines. The BLM has considered other options including alternate transmission routes and transmission technologies such as system upgrades, but they were eliminated because they would not be practicable and feasible as described in Section 2.3.3.

The Bowie Power Station site is located approximately 14 miles from the TEP 345 kV transmission line corridor, and permits have been issued for a separate 345 kV transmission line to allow interconnection between the Bowie Power Station and the existing TEP transmission system at the Willow 345 kV substation.
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SunZia Southwest Transmission Project
Other Agency and Non-Government Organization Comments
J-543
Final Environmental Impact Statement and Proposed RMP Amendments
2412 Comment Response

2. As stated, portions of the Preferred Alternative Segment 4C2c are parallel to the San Pedro River and some portions are parallel to a pipeline. After crossing the river, the distance between the transmission line route and the river would vary from about 3 to 5 miles, within the San Pedro River Valley (see Figure M5-1W). The Project could impacts many of the valley’s conservation values generally listed in Tables 1-3 of this letter, although many of these would not be affected by the preferred alternative route. In particular, the Redington Ball Court, 7B Ranch, Muleshoe Ranch Preserve and Joint Management Area, Three Links Farm, lower Hot Springs Canyon, Adobe Preserve North, and others would not be affected. This impacts to values or lands listed in theses have been documented in Chapter 4 of the DEIS.

3. Although the preferred alternative route would cross and parallel the area delineated as the Collaborative Conservation Initiative for the Lower San Pedro Valley (Figure 1), the route would closely parallel the existing two, 345 kV transmission lines near the (Narrows) river crossing, which would avoid serious impacts to, or conflicts with, conservation values or lands within the area.

4. As stated, the preferred alternative route would cross the Catalina/Rincon-Galiuro corridor. Although these lands had been considered part of the State Land Reform initiative at one time, they are composed of primarily Arizona State Trust lands, leased for grazing, and have not been designated for conservation purposes by the Arizona State Land Department.
**Table 1. Summary of Lower San Pedro River Valley environmental values**
- One of the Nature Conservancy’s “Last Great Places”
- Last free-flowing river in the Desert Southwest
- Part of the largest unfragmented landscape in Arizona outside the Grand Canyon region
- One of the three principal desert riparian areas in the Southwest (alongside Colorado and Rio Grande Rivers)
- Exceeds the Rio Grande River Valley in biological richness
- Hosts the largest mammal species diversity in North America
- Recognized as a Globally Important Bird Area by the American Bird Conservancy
- Principal north-south migration corridor for Central and South American birds
- Habitat for numerous threatened and endangered species
- Home to one of the largest remaining intact monophyletic forests in the world
- Rich archaeological history dating from earliest North American human occupation (Clovis)

**Table 2. Current and recent federal conservation initiatives in the Lower San Pedro Valley**
- [U.S. Fish and Wildlife Service Lower San Pedro River Wildlife Refuge Collaborative Conservation Initiative](#)
- [NRCS/USFWS Joint Working Lands for Wildlife Habitat Initiative](#)
- [Resolution Copper Land Exchange (78 Ranches)](#)
- [USFS Forest Service Forest Legacy Program’s #1 preservation objective in 2007](#)

**Table 3. Other agencies and organizations with conservation lands and easements in the Lower San Pedro Valley**
- [Arizona Game and Fish Department](#) — newly acquired fee lands from ASARCO and John Smith near Amaya Mountain and Lower Santa Cruz River
- [Arizona Land Trusts](#) — additional conservation easements on other privately owned parcels
- [Bureau of Land Management (BLM)](#) — lower California Baja, Chile, and San Rafael Swell conservation easements near落地
- [Federal Reserve (FR)](#) — lower California Baja, Chile, and San Rafael Swell conservation easements near落地
- [Bureau of Reclamation](#) — San Pedro Preserve at Dudleyville, Cool's Lake, Great Salt Lake, and Virginia Lake
- [Arizona State Parks](#) — Las Vegas Hot Springs, Hidden Springs, and Hot Springs Springs
- [Sahara Conservation](#) — San Pedro Preserve at Dudleyville, California, and Arizona
- [Surprise Hot Springs Preserve](#) — Ajo Hot Springs, Dade Valley, and San Rafael Swell
- [San Pedro Preserve](#) — Adobe Springs, North, and South Forks

**Figure 1. Map of the SunZia preferred alternative for the acquisition envelope (dashed green line) for the Lower San Pedro River National Wildlife Refuge, proposed as part of the U.S. Fish and Wildlife Service’s current Lower San Pedro River Valley Collaborative Conservation Initiative.**
Allen Flat – The SunZia transmission lines would cross over the TEP lines near the river crossing, allowing the use of spur roads to be built to the existing access roads. The roads would not prevent antelope from crossing the corridor.

San Pedro Crossing – Vegetation maintenance would require tall trees to be cut to provide clearance between the conductors, but would not require clear-cutting of riparian vegetation.

Little Rincon – In response to comments received during the scoping process and additional analysis of the corridors provided for review at that time, the study team made several modifications to alternative route alignments within the study area, including the alternative Subroute 4C2c.

Paige Canyon – Comment noted.

Roble and Soza Canyons/A-7 Ranch – As stated, the preferred alternative is located on lands in between the A-7 Ranch parcels held by Pima County. The Project would require easements to be obtained on Arizona State Trust Lands that are currently leased for grazing and would not prohibit future conservation management efforts by Pima County.

Buehman Canyon – The preferred alternative crosses private lands in this area, but none are held by Pima County.

Six-Bar Ranch/Edgar Canyon – Comment noted.
The alternative Subroute 4B would cross Aravaipa Creek between the two Wilderness areas, as stated. For clarification, the corridor centerline of the alternative route would be approximately 3.5 miles from the Aravaipa Canyon Wilderness (the nearest) and 5.5 miles from the Galiuro Wilderness boundaries.
Table: 2412 Comment Response

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Figure 4. A more detailed view showing the SunZia preferred alternative in the San Pedro Valley superimposed on the Arizona Game and Fish Department’s fragmentation map for Arizona. The distance from Benson (south) to Maricopa (north) along the river is ~40 miles.

2. The Consequences of Choosing the No Action Alternative

2.1 Can Other Alternatives Meet the Objectives of the SunZia Project?

The DEIS states that the principal objectives of this project are to (1) provide transmission capacity for renewable energy generation development, largely to meet the renewable energy...
Recent projections from the Western Electricity Coordinating Council (WECC) in a table titled, “2022 Common Case Loads and RPS Requirements in WECC Region, Modified as needed for DG Assumptions” (http://www.wecc.biz/committees/BOD/TEPPC/20120106/Lists/Minutes/1/2022%20Renewables_FINAL_20120206.xlsx last visited October 2, 2012) show that approximately 55,765 GWh of new renewable generation will need to be added to the WECC Region (i.e., California, Nevada, Arizona, and New Mexico) between 2011 and 2022 in order to meet RPS. By comparison, DEIS Table 1-1 indicates a projected need for 58,654 GWh of renewables by 2020 and 70,794 GWh by 2025.

The deliverability, destination, and cost-competitiveness of the electricity carried on the proposed SunZia transmission system are subject to future negotiations. Subscription of SunZia’s available transmission capacity is dependent on the customers of the transmission line (i.e., generators planning to sell energy) and their associated buyers (i.e., utilities, cooperatives, other energy consumers); therefore, it is unknown and speculative to predict which energy markets SunZia’s future (but currently unidentified) customers may serve. Further, electricity on the transmission system is in a constant state of fluctuation and is dependent on a number of factors (e.g., changes in energy demand, addition of transmission, addition of generation resources, fossil generation, project closures due to economics, age and regulations etc.). Future electrical paths for electricity transported by SunZia will be determined based on available transmission capacity and contractual arrangements in place at the time SunZia becomes operational.
The cumulative impacts analysis in the DEIS (Section 4.17) accurately reflects the current status of the future transmission project proposals, as there is insufficient information available about the listed project proposals to understand their purpose and need statements, benefits, or potential environmental impacts.

The range of alternatives considered included potential transmission line routes that could provide electrical interconnections with renewable energy resources located primarily within the Qualified Resource Areas (QRAs) for wind energy, in south-central New Mexico, and the QRAs for solar energy located in southwestern New Mexico (e.g., BLM designated Afton Solar Energy Zone) and southeastern Arizona. Alternatives due west from the northern portion of the study corridors in New Mexico (High Plains Express Transmission Project and the Centennial West Clean Line Project) would not be practical or feasible to achieve this objective.

The proposed Southline Transmission Project (345 kV), located between southwestern New Mexico and southeastern Arizona, could transport additional electricity generated from sources in those areas; however, the purpose and need for the Southline project is different than for the SunZia Project. The Southline project’s capacity would be limited according to the plan to construct portions of the proposed transmission lines within existing rights-of-way.”

SunZia Southwest Transmission Project
Other Agency and Non-Government Organization Comments

J-551 Final Environmental Impact Statement and Proposed RMP Amendments
As reflected in the proposed action, the SunZia Project was designed to increase transmission capacity by at least 3,000 MW, and may ultimately be designed to increase transmission capacity by up to 4,500 MW. The Applicant identified the 3,000 MW mark as a minimum increase based upon the existing demand for increased transmission capacity to relieve congestion, improve reliability, and provide future energy sources, including renewables, with access to market, balanced by marketing factors and engineering constraints.

Please also see response to Comment No. 11.
Three issues are currently being addressed by the SunZia Project, a transmission system proposed from the Afghan generating station north of Las Cruces to the SunZia generating station south of Pecos. This project consists of (1) building a new double-circuit 345 kV line from the Afghan generating station to the Apache power plant near Willcox, Arizona, and (2) replacing the single-circuit 115 kV transmission line between the Apache power plant and the SunZia generating station with a double-circuit 230 kV line. This project is 355 miles long and essentially parallels the SunZia Southwest Transmission Project in its entire length, although it will pass through Texas rather than bypass it as SunZia does. This project will reduce congestion and increase reliability across this region in the same way that SunZia would. It will also provide transmission capacity for solar development along this corridor. This project will provide 1,300 MW or more of transmission capacity to southwestern New Mexico and 1,500 MW or more transmission capacity in southeastern Arizona.

The SunZia Project is more appropriate for this region and will accomplish essentially all that SunZia would with minimal environmental impacts. New transmission capacity requires generation capacity to support it, and this region cannot support building both of these projects simultaneously. Building SunZia alone to transport wind-generated electricity to Arizona and California is very risky in light of renewable energy development in these states. In addition, other projects have been proposed to export wind-generated electricity from New Mexico, noted in Table 3. These four projects have a total capacity of 7,600 MW. One of these, the High Plains Express Project (HPE), begins at the same exact location as SunZia and ends 30 miles north of where SunZia does. This project would accomplish precisely the same purpose as SunZia but generating New Mexico wind energy instead. It follows an existing corridor for its entire length from the Rio Grande River to Phoenix, greatly reducing environmental impacts. HPE is currently on hold for the very reasons that make SunZia as valuable financially.

We cannot recommend more strongly that the SunZia Project rather than SunZia be chosen to meet the regional need for reducing grid congestion and increasing system reliability. The SunZia Project will also provide vastly more benefit to southeastern Arizona because of the multiple grid interconnections it will have. This permits a much more adequate distribution of power to this region as well as more interconnection opportunities for renewable energy facilities. Building SunZia and the SunZia simultaneously is redundant and jeopardizes the success of both projects. Both physical and economic pragmatism dictate that only one of these should be built at this time. Even then, the financial success of whichever project is favored depends upon the rate of construction of new generation facilities across this region. The slower this rate, the more vulnerable the project is. Whether these new facilities are renewable or nonrenewable, they are essential to the long-term success of either project.
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This portion of the High Plains Express Project between central New Mexico and central Arizona was included as an integral part of the feasibility studies for HPE. While the High Plains Express Stage 2 Feasibility Report conveyed the following conclusions: All of these points are relevant for SunZia and make clear the risks of this project.

- High level of uncertainty.
- Scenarios show wide range of outcomes.
- Public policy adds additional uncertainty.
- Specific demand for HPE has not been identified.
- Although many of the resulting benefit-cost ratios indicate a net positive result, the overall economics and associated risks do not warrant development without further study.
- There is no clear method for cost allocation and cost recovery over multiple jurisdictions with varying benefits.
- Almost all uncertainties do not merit moving forward with a full commitment to develop the overall project unless a customer is identified that provides for cost recovery.
- There is significant uncertainty around the best-case assumptions.
- The project risk in terms of both development capital and construction capital is very large.
- At this time, it is not reasonable to risk significant development capital based on the benefit-cost ratio for the entire project, in light of the uncertainties.

These multiple reasons for placing the High Plains Express Project on hold should be more than enough to give one pause about building SunZia.

### 3.2 Arizona and California Love of New Mexico Power – Will It Occur and Be Profitable?

While New Mexico has substantial renewable energy resources, the renewable energy resources of Arizona and California are in themselves huge and make those states sufficient for an ideal environment for renewable energy. The recent increases in Arizona and California’s renewable energy capacity have sharply decreased the demand for out-of-state resources and make the use of these by those states highly questionable.

Utilities prefer to develop renewable generation close to load rather than import renewable energy from great distances.

The market potential for New Mexico power in western states is now clearly much less than anticipated when SunZia was proposed, meaning that the cost of power for New Mexico power will develop far more quickly than expected, if at all. Consequently, the reduced or lacking market greatly reduces the amount of transmission capacity that can be financially justified. Power must be sold at a price through some process in order to pay for the project. Development of these more local resources sharply reduces the need for the incremental amount of transmission capacity that SunZia would provide and greatly increases the project’s financial vulnerability. SunZia is thus a very high-risk project that demands close financial scrutiny, not only by the federal government but by potential investors as well.

In addition, delivering power to California would severely reduce central and western Arizona’s transmission capacity (see Attachment D, CWG letter to the Arizona Corporation Commission). These impacts must be resolved before permitting SunZia to proceed. At a minimum, SunZia...
would have to extend one 500-kV line from the Final Central substation to the Pajarito substation to protect Arizona transmission capacity for in-state use and solar development. Without this, SunZia will experience transmission capacity in Arizona for some development because most development is scheduled to occur in the central and western parts of the state.

4. Recommendation: The No Action Alternative

Given the route alternatives, the environmental impacts, the alternative projects and strategies for moving the needs that SunZia would, and the lack of financial viability for the project, the No Action alternative is the sound choice here. Energy planners could consider extending the eastern portion of the SunZia Project with the Southern Project if they wish to provide some access to wind generation in western New Mexico. Again, the use of that wind generation by Arizona and California utilities is likely to be small, which places this project as a whole at great financial risk. Combining these two projects would make both more sound and more financially manageable. Even so, building a single combined project entails substantial risk.

This review makes apparent how impoverished and unthought the strategies have been for proposing and building transmission capacity in this region. It is “every man for himself,” which leads to overlapping projects and excessive transmission capacity. That is, too much transmission capacity is being contemplated simultaneously, and energy markets cannot financially support it or pay for it. Regional transmission planning should be comprehensive and coordinated rather than piecemeal and contradictory. In addition, planners need to develop a comprehensive view of how renewable generation is likely to develop based upon (1) resource location, (2) local resource magnitudes, and (3) market constraints.

In light of their immense reserves, Southwestern states should be sufficiently in their renewable energy resources. This scenario stimulates the need for New Mexico to provide more western states with renewable energy and thus reduces the need to build large amounts of transmission capacity for this purpose. Building an efficient, cost-effective transmission system that can serve financially is difficult to do given all of the variables involved and the resulting risks.

SunZia’s proposals have clearly not adequately assessed these risks or adjusted for them. SunZia assumes that if the project merely obtains the necessary permits, the project will somehow succeed and reasonable projects will be built to feed it with power. This is a financially hazardous and dangerous proposition. The federal government must decide whether it should issue a permit for a project that will almost certainly result in excessive capacity and have a high likelihood of ending in financial failure. The federal government must also decide whether it wishes to partially finance such a project or become a partner to it because ultimately this is what will be asked and required to build it.

2412 Comment Response

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<td>Please see response to Comment Nos. 1 and 10.</td>
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<td>16</td>
<td>As provided in the Memorandum of Understanding between the SunZia Southwest Transmission Project’s Applicant (SunZia Transmission, LLC) and the BLM, it is the Applicant’s responsibility to reimburse the federal government for expenses to process the right-of-way application under a cost recovery agreement. Financing by the federal government is not a condition of the Proposed Action.</td>
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The Project would be immediately adjacent to existing transmission lines in the Nutt Grasslands, and would use existing access with the exception of spur roads. The Noxious Weed Management Plan (Appendix B2 of the POD) provides detailed information on methods to prevent the spread of invasive plants.

Comment noted. Note that a review of cultural resource types previously identified within the Preferred Alternative is discussed in Section 3.8.2.2. Section 4.8.3 provides an impact analysis for various resource types, including trails.

The Preferred Route crosses NM Highway 27, which was identified in Section 3.9.3.1 of the DEIS as a high concern level travel route due to its designation as a scenic byway (Lake Valley Backcountry Byway), while parallel to a 230kV transmission line. Visual contrast would be reduced because the existing facilities exhibit similar form, line, color, and texture as compared to the proposed project. NM Highway 26 is not designated as a scenic byway and is not identified as a trail on the National Trail Systems map (http://www.nps.gov/nts/).
declaration was done by the Department of Interior because it is an area that has special qualities. Two 500 kV transmission lines is not compatible with these pristine-scenic views that travelers enjoy from N. M. Highway 26 and 27. It seems absurd that the Department of Interior would designate the area along N. M. Highway 26 and 27 as being in a special category and now, a few years later the Bureau of Land Management would designate the same area by allowing it to be in the preferred alternative for two large power lines.

In my opinion, the line should be located (if at all), south to the Las Cruces area, then west along I-10 to an existing corridor where there are already three large capacity lines plus a gas line, communication line on the north side of I-10 and a major railroad which lead to Deming, N. M. New Mexico is well known for its wide open spaces and beautiful views and south western New Mexico is one of the few places left in America that have the same rural characteristics as they have enjoyed for the last several hundred years. Don't mess this up with an eye sore that two 500 kV transmission lines will leave on the landscape especially thru the Nett Grasslands along N. M. Highway 26 and 27 in Sierra and Luna County.

Sincerely,

Joe Bill Nunn
President-Southwest New Mexico Grazing Association
The DEIS was made available for public review and comment on May 25, 2012. The BLM held ten public meetings and scheduled a 90-day public comment period that ended on August 22, 2012. In total, the public scoping for the SunZia project has included a total of 22 public meetings and 255 days of public comment.

A 45-day public comment period is generally the time provided for a DEIS. The BLM’s planning regulations and guidance require a minimum 90-day public comment period for land use plan amendments. The SunZia project may involve several BLM land use plan amendments thus the 90-day comment period was provided. The SunZia DEIS comment period meets BLM requirements and affords interested parties opportunity and time to review the document and submit substantive comments. In addition, the BLM regulations implementing the National Environmental Policy Act regulations require that all substantive comments received before reaching a decision must be considered to the extent feasible. This means that substantive comments received after the 90-day comment period have also been considered before the Final EIS was issued.

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Other Agency and Non-Government Organization Comments and Proposed RMP Amendments
September 21, 2012

Bureau of Land Management
Adrian Garcia, Project Manager
SunZia Transmission Line Project
P.O. Box 27115
Santa Fe, NM 87502-0115

Re: Comments on SunZia Transmission Line Project Draft EIS/RMPA

Dear Mr. Garcia:

We appreciate the opportunity to provide comments on the SunZia Transmission Line Project Draft Environmental Impact Statement. We are a private property owner along the proposed line alternatives defined as Sulphur Springs Valley (SB) and North of Mt. Graham (NM). We plan to transfer these lands to the Bureau of Land Management (BLM) upon completion of a Federal Land Exchange, pending before Congress. As such, it is important for the BLM to understand the biological and cultural features of private lands that are part of that exchange.

Resolution Copper Mining (RCM) is a limited liability company owned 51 percent by Resolution Copper Company, a Rio Tinto PLC subsidiary, and 49 percent by UGM Copper, Inc., a BHP-DeBeers LC subsidiary. Resolution Copper Company is the manager of RCM. Rio Tinto is a world leader in mining and exploration that discovers, mines, processes and supplies metals and minerals.

The Resolution Copper project is located roughly three miles east of Superior, Arizona, and is one of the largest copper ore bodies ever found. This enormous resource is expected to yield more than 1 billion pounds of copper per year when in full production and meet more than a quarter of the United States anticipated copper demand—based on today’s range—for several decades.

Prior to developing the mine, Resolution Copper will spend about $1 billion to complete extensive environmental, cultural, engineering and other studies, and exploratory activities. To facilitate construction and operation of the mine, we are seeking to obtain title to about 2,400 acres of U.S. Forest Service land at Oak Flat, under which the ore body lies, in exchange for about 2,300 acres of high-quality Arizona conservation lands owned by Resolution Copper. The Arizona State Land Exchange and Conservation Act was drafted to do just that. The exchange will provide us the necessary access to develop the mine and allow the Resolution Copper project to proceed safely and responsibly.
Comment noted. The BLM Preferred Alternative is Subroute 4C2c, which would avoid subroutes 4A or 4B (Link C592).
The Gila River Indian Community Tribal Historic Preservation Office (HRP) has received the Draft EIS for the SunZia Southwest Transmission Project dated June 13, 2012. The documents describe Bureau of Land Management (BLM) plans for granting a right-of-way to SunZia Transmissions, LLC (SunZia) for construction of two 500-kilowatt electric transmission lines from the proposed SunZia East Substation, Lincoln County, New Mexico to the Pinon Central Substation, Pinon County, Arizona. The BLM New Mexico Office is the lead federal agency responsible for compliance with § 106 of the National Historic Preservation Act (NHPA). The exact length of the line is yet to be determined and can vary from 450 miles to 530 miles long depending on the chosen route. Right-of-way width is expected to be 800 feet wide, but in certain locations can be as wide as 1,000 feet. Approximately 36% of the line (191 miles) will be located on federal or tribal lands in New Mexico and Arizona. The SunZia line will cross various federal lands, state lands, tribal lands, and private lands. Based upon initial analysis of the project map, the Tohono O’odham Nation appears to have the most potential for direct impacts from this undertaking. Gila River Indian Community (Community) lands will not be directly affected, but locations of the end points of the SunZia transmission line, Pinon Substation, Pinon County, Arizona, is situated in an area of our responsibility and we are then the primary consulting tribe per the NHPA.

A Class I (records search) inventory has been conducted by the BLM for the undertaking. A substantial list of previous archaeological surveys for Arizona and New Mexico are attached with the document. We are inquiring about the differences between reports listed as unfinished or not traced. Class II (sample survey) inventories were also conducted in areas where site density is expected to be high which included historic environments such as the San Pedro River Valley. Class II inventories were also conducted in areas where historic trails/roads were known to be present including the Butterfield Trail.

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<td>No alternatives cross tribal lands.</td>
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<td>2</td>
<td>The missing project information has been further researched and the table has been revised accordingly.</td>
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SunZia Southwest Transmission Project
Other Agency and Non-Government Organization Comments

The GRIC-TIPO accepts that the Draft EIS is an comprehensive, informative document. The lack of a specific route and location for the powerline makes evaluation of the effects of this undertaking difficult to fully evaluate. It is clear that whatever route is selected, there will be adverse effects to the resources. The impacts upon cultural resources and the cultural landscape will be adverse, but until a route for the powerline and associated infrastructure is chosen, the severity of those adverse effects cannot be accurately gauged. In addition, any proposed mitigative actions cannot be discussed or evaluated until a final powerline route is chosen. The GRIC-TIPO requests to review the associated documentation of the chosen powerline route when it is made available.

The proposed project area is within the ancestral lands of the Four Southern Tribes (Gila River Indian Community; Salt River Pima-Maricopa Indian Community; Ak-Chin Indian Community and the Tohono O’odham Nation). The GRIC-TIPO defers to the Tohono O’odham Nation as lead in the consultation process.

Thank you for consulting with the GRIC-TIPO. If you have any questions please do not hesitate to contact me by Archaeological Compliance Specialist Larry Bessette, Jr. at 520-562-7162.

Respectfully,

Bernard V. Lewol
Tribal Historic Preservation Officer
Gila River Indian Community

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<td>The Final EIS will be transmitted to the GRIC and the rest of the tribes upon publication.</td>
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Comment noted. Impacts to ESA-listed and candidate species are also being addressed in detail through Section 7 consultation with the USFWS, currently underway. Although seasonal avoidance may not avoid all disturbances to Bighorn Sheep, NMGFD and BLM biologists will be consulted to determine dates with the highest biological sensitivity, and construction and non-emergency maintenance would occur outside those dates, as a stipulation in the final POD.
2 Eliminate consideration of Link A161b, which passes within 500 feet of Torreon Spring, the only known location of the Socorro springgbelt. Because this location may support the only remaining population of the state and federally listed endangered species, it is highly vulnerable to extinction. Any increase in sediment deposits by wind or water, or change in local hydrologic balance, could have an adverse effect.

3 Eliminate consideration of the Uvas Valley Alternative (Links A381, A430 and A481). This route would bring the transmission line through an additional Sandhill Crane wintering area southwest of Hatch and crosses a larger portion of the Luna County Grasslands BCA. The Uvas Valley alternative also crosses the NMP Auit to Hatch area, where potential conflict has been identified for ducks. It would also fragment high quality black prairie grasslands for which the BLM Uvas Valley Area of Critical Environmental Concern was designated, and it is longer than the preferred alternative.

4 The Department recommends selection of Subroute 3A over the BLM preferred alternative Subroute 3A1. Operationally we recommend the project cross the Afton border using Link B150a rather than Link B150b. There are a number of reasons for this recommendation, as specified 460w.

- Subroute 3A is 56 miles (87%) shorter than the project route Subroute 3A1, and parallels existing overhead transmission lines for over half its distance, as opposed to 26% of the distance for Subroute 3A1.
- Lordsburg Playa is designated a Key Ephemeral Aquatic Habitat in the CWCS. It is a unique natural ephemeral wetland habitat for large branchiopod crustaceans and migratory waterfowl. The CWCS identifies a Priority Conservation Action of no net loss of geographically isolated wetlands.
- Lordsburg Playa is the only known location in New Mexico for the Lynch Tagpola Shrimp and the Bowmann's Fairy Shrimp. Both species are vulnerable to habitat loss, changes in hydroperiod, and water contamination.
- Link 100a crosses the NMP Lordsburg Playa area, where potential conflict with overhead power lines has been identified for turbines.
- Link 150a will fragment the range of the New Mexico Petrel (Tetrao mountain desert bighorn sheep herd, however, this is less of a concern than Link B220, referenced above, since the range of the Petrel's herd is already crossed by Interstate Highway 10.

The DEIS identifies a number of mitigation measures which would be implemented on all or specific portions of the SunZia project. The Department has the following recommendations regarding implementation of mitigation measures:

2 Comment Response

2 Link A161b is not a part of the BLM preferred alternative. If construction were to occur on Link A161b, Section 7 consultation would be reinitiated with USFWS. Additionally, geotechnical exploration would be required before construction. This would provide information on whether any effects to hydrology of Torreon Spring would occur. If any effects would be anticipated, engineering or siting modifications would be considered or required, to avoid potentially jeopardizing the survival of a listed species.

3 The Uvas Valley alternative is not a part of the BLM preferred alternative, in part to avoid impacts to habitat and the additional risk to Sandhill Cranes present in the valley.

4 The BLM preferred alternative has been modified to select Subroute 3A rather than Subroute 3A1, primarily to avoid impacts to Lordsburg Playa.
5 The study conducted by the University of New Mexico presented in Appendix B2 represents the best available information regarding the collision risk to birds in the Project area. Appendix B2 presents a reasonable range of estimates of the collision risk to Sandhill Cranes based on field survey results. Regardless of the estimates, an Avian Protection Plan will be developed that will consider all applicable measures to reduce the risk of collision, and will stipulate monitoring and adaptive responses if implemented measures are not adequate.

6 The Avian Protection Plan will provide details on the selection and location of mitigation measures to reduce the bird collision risk. However, mitigation measures would be implemented only where anticipated to be effective and where birds typically at risk of collision occur in large numbers. The Chupadera Mesa and Luna County Grasslands Bird Habitat Conservation Areas are not expected to benefit substantially from the application of bird diverters, as few large, heavy-bodied birds are present.

7 Comment noted. Recommended mitigation measures would be employed to minimize impacts to Desert Bighorn Sheep.

8 Information on wildlife-safe construction practices would be provided during contractor awareness training, and biological monitors would ensure proper implementation of those practices.
5. Page 4-58 states a Biological Protection Plan will be appended to the Plan of Development. This plan should include pre-construction right-of-way surveys for special status species. The Department is available to assist with design of pre-construction wildlife surveys once the final alignment has been selected. Burrowing Owl surveys and mitigation should be conducted in accordance with the Department’s Habitat Handbook guideline. Note that routine small mammal surveys will not be sufficient to document presence or absence of the New Mexico Meadow Jumping Mouse at the Rio Grande crossing locations. Please contact Jim Stuart, Non-game Mammalogist, at 505-476-5107 or jstuart@state.nm.us for appropriate survey methodology.

Thank you for the opportunity to comment on this Draft EIS. If there are any questions, please contact Rachel Janikowski, Mining Habitat Specialist at 505-476-6159 or rjanikowski@state.nm.us.

Sincerely,

Matthew Walder, Chief
Conservation Services Division

USFWS, NMES Field Office
Pat Mahler, SW Area Habitat Specialist, NMOSF

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<td>The Biological Protection Plan (POD Appendix B1) will include stipulations for preconstruction surveys, developed in consultation with all applicable agencies. Potential impacts to the New Mexico Meadow Jumping Mouse have been addressed through Section 7 consultation with the USFWS.</td>
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