The Nature Conservancy
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July 13, 2009

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

Re: Scoping Comments, SunZia Southwest Transmission Project EIS

Dear Mr. Garcia:

We appreciate the opportunity to provide comments on the scoping phase of the SunZia Transmission Line Project 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. In this letter we offer scoping comments compiled by our Arizona and New Mexico program offices which focus on two areas of concern, the Lower San Pedro/Aravaipa watersheds in Arizona, and the Bosque del Apache conservation area in New Mexico, as well as general comments to consider regarding mitigation.

The mission of The Nature Conservancy is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. The Nature Conservancy has invested significant time and resources in developing and applying science to our mission. Over the last ten years we've completed an extensive, collaborative conservation planning effort throughout the state (and globally) – our ecoregional conservation analyses – designed to identify areas where appropriate land use planning and management is critical to the conservation of natural resources. We believe this dataset, along with others such as the effort to map critical wildlife linkages by the Arizona Department of Transportation and Arizona Game and Fish Department, will be important foundational datasets for evaluating infrastructure and development planning. The ecoregional data is available free to the public at the Ecoregional Assessments page at www.azconservation.org and at www.nmconservation.org. The Nature Conservancy would be glad to sit down with BLM and SunZia personnel to help interpret and apply the findings of the ecoregional analyses.

ARIZONA SPECIFIC COMMENTS

Avoid impacts through identification of alternate corridors

Among the results of our ecoregional assessments was the identification of the Lower San Pedro River Valley, including the watershed of Aravaipa Canyon, as a high priority for biological conservation in the Southwest. We have worked in Arizona since 1966 with private, state, federal, and tribal interests to protect biologically sensitive lands. Among the results of those efforts are several large nature preserves and cooperatively managed areas that we own or manage in the Lower San Pedro River and Aravaipa Canyon watersheds which could be affected by some of the routes that have been identified.

All the identified routes across the Galiuro Mountains and Aravaipa watershed or down the San Pedro River Valley will likely cause significant environmental impact, either directly or indirectly, and we recommend avoidance of these areas. Materials on the SunZia web site show that the study corridor previously included the Tucson basin, but we could find no indication of why it was dropped. We strongly suggest consideration of additional routes to connect the Winchester and Tortolita substations while avoiding the Galiuro Mountains and north-south alignments in the Lower San Pedro River Valley. A preferable alternative would be to use the existing 345 kV alignment from Vail to the Winchester Substation.

Expand definition of avoidance areas to include other lands managed for conservation

We appreciate that the transmission routes currently identified would avoid existing areas with special federal designations, such as national parks, monuments, conservation areas, wildlife refuges and other lands where maintenance of the land's natural capital is a part of the management regime for the area. The map accompanying this letter shows additional lands in the Lower San Pedro watershed that have been acquired, designated or leased for conservation purposes that should be avoided.

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 additional lands in the valley through its proposed land exchange for a mine site in Superior. Together, these partners have protected close to 40,000 acres and invested over $25 million in acquisition of conservation lands and appurtenant water rights. Close to one third of the lower river corridor is now in protected status, and stream flow and habitat conditions are improving. In many cases, these purchases satisfied mitigation requirements for habitat losses in other parts of the state that were the unavoidable by-product of projects important to the economy. Jeopardizing the integrity of these conservation projects by opening the valley to development that depletes water and fragments habitat could trigger the need for additional mitigation. There are few places

remaining in the southwestern U.S. that are as intact and have the quality and extent of aquatic and riparian habitat as that found on the San Pedro River. Mitigating for losses to this system would be very limited and possibly less successful.

The Lower San Pedro River Valley is bookended by two large conservation holdings that serve as refugia for a number of rare and endangered species, among other things. At the north end is Aravaipa Canyon. The perennial Aravaipa Creek is widely recognized as one of the most important refugia for native fish in the Southwest. A 77,400-acre area including the canyon and its surrounding uplands are jointly managed by the Bureau of Land Management (BLM), Arizona Game and Fish Department (AGFD), and The Nature Conservancy. The area includes the Aravaipa Canyon Wilderness, three Areas of Critical Environmental Concern (ACEC), and the Conservancy's Aravaipa Canyon Preserve. The Aravaipa ecosystem has a documented presence of 529 plant and 353 animal species, including 233 birds, 50 reptiles, 48 mammals, 12 fish, and 10 amphibians. The area includes five species currently listed under the Endangered Species Act, 13 BLM sensitive species, and 14 species on AGFD's list of Wildlife of Special Concern in Arizona.

On the south end is the Muleshoe Cooperative Management Area, with 57,500 acres jointly managed by the Bureau of Land Management, Forest Service, Arizona Game and Fish Department, and The Nature Conservancy. It includes part of the Galiuro Wilderness, Redfield Canyon Wilderness, and Hot Springs ACEC. The area includes at least 29 special status fish and wildlife species. Its canyons support important populations of native fish, and its uplands have been important study areas for the interaction between fire, upland vegetation, and aquatic community health.

While Arizona is fortunate to have large tracts of open space in public ownership, the design and protection of a permanent reserve system is still a pressing need in the face of climate change and the state's growth. Pima County's award-winning Sonoran Desert Conservation Plan identifies most of the land in the county in what is called the Middle San Pedro Subarea as important for protecting biological corridors, critical habitat, cultural resources, ranches and riparian resources. Pinal County has recently followed suit by adopting a County Open Space and Trails Master Plan. The plan identifies much of the Lower San Pedro Valley as open space.

Minimizing and mitigating impacts

We have four major concerns that apply to construction along any route, and that might affect which route is chosen. These comprise both site-specific impacts and the cumulative effect of these impacts for a given alignment.

First, we are concerned about the construction and maintenance of access roads along the transmission line corridor. Access roads fragment the habitat for wildlife and frequently become open routes for recreational off-road vehicle drivers, from which they can venture away into unroaded landscapes. That prospect is particularly troubling for any route that crosses the Galiuro Mountains, a region where wildlife and the human experience of wilderness have benefitted from the almost total lack of through roads. Our

experience with land management has shown that putting fences and gates across utility access roads is ineffective – replacing locks and rebuilding gates have become frequent events for our preserve managers. The proposed route, crossing the Galiuros near their north end, would thus have an unintended effect of significantly increasing off-road travel near and through our Aravaipa Canyon Preserve. We recognize that some transmission towers can be installed with helicopters, and we encourage that practice. Enough aerial placements would need to be done to avoid creating new travel routes in conservation lands.

Second, the placement and size of individual transmission towers will significantly affect the overall environmental impact of a route. The footprints of towers should avoid riparian zones, especially those with perennial water, and stream crossings should incorporate towers of sufficient height to avoid any tree removal required to meet safety regulations. Of particular concern are the riparian forests along the San Pedro River, which support a rich biological community, including the endangered Southwest Willow Flycatcher. Many properties along the lower San Pedro River have been set aside as mitigation for environmental damage elsewhere, and are managed specifically to benefit the Willow Flycatcher and generally for the native riparian community. The cottonwood and mesquite trees along perennial reaches of the river grow to sufficient height that regulations for 500 kV transmission lines would likely require tree removal for clearance beneath the lines. Thus, towers on either side of a river crossing in those reaches would need to be extremely tall to avoid clearing a swath of trees beneath the lines.

Third, linear disturbance features such as utility corridors become avenues for the spread of invasive plant species. This can be minimized by prompt revegetation, but subsequent new disturbance, such as maintenance of an access route, reopens that avenue.

Fourth, the ADOT/AGFD Wildlife Linkages Assessment identifies the portion of the valley between the Catalina/Rincon Mountains and the Galiuro Mountains as a potential linkage zone and the river corridor as a riparian habitat/linkage zone. It also identified areas south of the Galiuro Mountains, and south of the Pinaleno Mountains. A more detailed analysis modeled wildlife movement corridors between the Galiuro and Pinaleno Mountains. All of these are crossed by one or more of the routes under consideration. In these cases, protecting wildlife linkages does not require total avoidance. Rather, they are areas where protecting the ability of wildlife to move should be considered in the design of fencing and other infrastructure.

Site-specific concerns

In addition to those general concerns, we have identified several issues that are specific to the proposed route. As shown, it crosses the Galiuro Mountains in an undeveloped area near our Aravaipa Canyon Preserve and the Aravaipa Canyon Wilderness. Just south of that route is National Forest land and the Galiuro Wilderness. We have worked with the BLM and Forest Service to establish both the physical and institutional conditions that would allow natural fires to run their course in that region. That is critical to its ecological health, both for the upland vegetation communities and the riparian and aquatic systems that are affected by watershed condition. We are concerned that a

transmission corridor would require fire suppression to prevent damage to towers and lines.

We also note that one of the biggest threats to the health of Aravaipa Creek and its native fish community is excessive sediment deposition. While the proposed route is some distance from the creek, erosion from power line construction in the watershed upstream of Aravaipa Canyon would likely cause additional sedimentation that degrades one of the most important native fish habitats in the Southwest.

We are pleased to see that one potential route not currently identified is the All-American Pipeline alignment where it crosses the Muleshoe. While we generally support co-locating utility corridors, that route across the southern Galiuro Mountains has long been problematic as a source of erosion, unauthorized off-road vehicle traffic, and invasive plant dispersal. Because of the rugged terrain and close proximity to riparian and aquatic habitats, using this part of the corridor should be avoided.

Corridors from the proposed Willow Substation to the New Mexico border
Of the three routes coming into Arizona from New Mexico, we support the proposed route between the state border and the proposed Willow Substation as having the least impact and as avoiding sensitive areas to the highest degree. We find the two alternative routes to that point also acceptable.

NEW MEXICO SPECIFIC COMMENTS

The proposed and alternative transmission routes through central New Mexico will avoid crossing directly through the Bosque del Apache National Wildlife Refuge, however in skirting around the actual refuge lands, the proposed and alternative routes will bisect the ecoregional conservation area known as the "Bosque Wilderness Area" (please note: this is not a federal designation) as identified on the attached map. The Bosque del Apache National Wildlife Refuge includes 10 miles of Rio Grande River frontage and is a critical migratory stopover along the Rocky Mountain Flyway. The Refuge is a destination for migrating waterbirds, neotropical migrants, shorebirds and raptors, including threatened, endangered and imperiled species. The EIS should evaluate the impacts of the proposed and alternative transmission line routes on the migration corridors of these species -- including cranes, waterfowl and raptors -- as they fly in and out of the habitat contained in the National Wildlife Refuge. Design elements for the proposed and alternative routes can be used to minimize the mitigation needed to address impacts to these species. The EIS should also evaluate design alternatives that include burying the transmission line as it crosses the migratory corridor and off-site mitigation to compensate for lost habitat.

The proposed SunZia Transmission Line between Truth or Consequences and the AZ-NM state line is reasonably located to avoid significant conflicts with biologically sensitive lands identified in The Nature Conservancy's Ecoregional Assessments (see www.nmconservation.org). For example, the route crosses through the Ladder Ranch, Knight Canyon/Thompson Canyon and the Langford Mountains, but not through the most biodiverse and sensitive habitats in these conservation areas. The route also crosses

through the Nutt Grassland, which contains important habitat, although the most sensitive lands are west of the proposed route. Fragmentation of this grassland would be minimized if the route were moved to follow the existing corridor for New Mexico State Highway 27.

The attached map of New Mexico shows the proximity of the proposed SunZia Transmission Line to biologically sensitive lands in southern and central New Mexico. As alternatives are developed for the EIS, these lands should be considered and avoided wherever possible. Where these conservation priorities are currently unprotected, they can be considered for off-site mitigation.

GENERAL COMMENTS ON THE PROJECT

Compensating for Unavoidable Impacts

Regardless of the final route chosen, we anticipate impacts on biodiversity values and possibly on sensitive, candidate, or listed species. We believe it is imperative to offset all impacts to these species and other biodiversity. It is likely that the impact of the access roads, towers and transmission lines on some species cannot be mitigated through on-site action, and will require off-site mitigation efforts.

Developing mitigation alternatives is an integral part of the preparation of an environmental impact statement. 40 C.F.R. § 1502.14. The definition of mitigation for EIS purposes includes consideration of "compensating for the impact by replacing or providing substitute resources or environments." 40 C.F.R. § 1508.20(e). For this EIS, we request development of a mitigation component that provides for no net loss in habitat for wildlife species. We also request that this component be included in the preferred alternative.

In accordance with BLM policy, the following factors indicate that off-site mitigation is appropriate for this project:

• The SunZia SW Transmission Project is a major electrical right-of-way project, one of the types of large development projects for which offsite mitigation may be appropriate.
• The SunZia SW Transmission Project line is likely to affect resources and values of high public importance.
• The SunZia SW Transmission Project line may have permanent impacts that cannot be mitigated onsite.

We request that following analyses be included in the EIS:

TNC would appreciate an opportunity to work with project and agency staff to review approaches for quantifying project impacts. We request that habitat determined to be lost or significantly degraded be offset through offsite mitigation. Biodiversity offsets are an important tool for maintaining or enhancing environmental values in situations where development results in detrimental environmental impacts that cannot be mitigated locally. Such offsets are an option for addressing environmental impacts of development

to mitigate for impacts after efforts have been undertaken to minimize impacts on-site through application of the other steps (avoid, minimize, rehabilitate) are shown to be inappropriate or untenable. However, identifying areas appropriate as offsets can be a significant challenge. In order to be successful, we believe that the following steps, at a minimum, are taken to ensure that the marginal impacts on biodiversity, and natural resource values, or minimized or eliminated.

1. Thoroughly inventory all segments of the selected route to identify current known occurrences of all species of concern, and other important ecological resources.
2. Utilizing GAP, LANDFIRE (www.landfire.gov), and other habitat models, identify key habitats for those species impacted by the SunZia SW Transmission Project.
3. Using the same models, identify areas within the region that harbor examples of these same habitats. It is important to ensure that these habitat patches are of sufficient size to sustain a viable population of the key species.
4. Set mitigation goals for each species consistent with the quality of habitat lost.
5. Identify mitigation sites that, in total, will offset the losses resulting from SunZia SW Transmission Project construction and maintenance.
6. Provide offsite mitigation for losses to these species by replacing lost or degraded habitat functions and values if possible or providing for permanent conservation of these habitats at a different location but preferably within the same ecosystem.

We look forward to further involvement with this process, and would be happy to share the information we have developed on the natural infrastructure of southeastern Arizona.

Sincerely,

Terry Sullivan
New Mexico State Director

Tom Collazo
Acting Arizona State Director

Enc.: Lower San Pedro Conservation Investment map
Conservation Interests in New Mexico map