

Thank you for your comment, Robert Bendick.

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Solar Energy Development PEIS  
Comment ID: SolarM60240

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Attachment: TNC Colorado Chapter Comments.doc

Comment Submitted:

Date: September 14, 2009  
To: Solar Energy PEIS Team: Bureau of Land Management and Argonne National Labs  
Cc: BLM Colorado State Office: Maryanne Kurtinaitis, Lands and Realty Program Lead and Justice Rhodes,  
From: Tim Sullivan, Acting State Director, Colorado Field Office  
Subject: **Scoping Comments on Solar Energy Study Areas in Colorado**

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Dear PEIS Team:

Thank you for the opportunity to comment on the Solar Energy Study Areas (SESAs). Our comments build on those we submitted to BLM in the form of a “preliminary analysis” on April 14, 2009. At that time, we identified high potential conflicts between solar energy development and natural resource values across the San Luis Valley (SLV) as a whole. This latest set of comments “zooms in” on the four areas that BLM is proposing in the SLV and builds on the preliminary analysis to take into account additional species and vegetation values.

**1) We were pleased to see that the areas have only very limited intersections with the high potential conflict areas, from a natural resources perspective, that we identified in the preliminary analysis.**

Attachment 1 shows the SESAs overlaid with the high potential conflict areas that we identified in the preliminary analysis. As you may recall, for the preliminary analysis we collected available GIS layers for natural resource values the SLV, identified those that our scientists felt would be \*most sensitive\* to disturbance by solar energy development, and then overlaid these values. The resulting map included the most significant values from our scientists’ perspectives, and for which we had available data. Specifically these values included:

- Bald eagle roost sites and winter concentration areas
- Bighorn sheep production areas and severe winter range
- Gunnison sage-grouse production Areas, severe winter Range, winter Range, and overall range
- Globally imperiled plants and natural communities as ranked by CNHP
- Riparian areas
- Potential Conservation Areas as identified by the CNHP
- Sandhill crane habitat

**Of those values, the only clear intersections with the SESAs include riparian areas for the Los Mogotes East and Antonito South Areas.**

According to the preliminary analysis, there is also an intersection between sandhill crane habitat and the Fourmile East SESA. However, we do not believe that the habitat actually extends into Fourmile East given what we know of the terrain, and based on a map of sandhill crane distribution we acquired from USFWS after submitting the preliminary analysis to BLM. For the preliminary analysis, we had mapped a simple approximation of sandhill crane habitat by buffering all conservation easements and wildlife refuges by 1,000 feet. The USFWS map is more accurate and does not appear to intersect the Fourmile East SESA.

**2) There are additional intersections between the SESAs and key natural resource values beyond those that we reviewed for the preliminary analysis. We urge BLM to proactively address impacts to these and other natural resource values.**

Following the preliminary analysis, we reviewed additional GIS layers with species and vegetation values and noted intersections with the SESAs. We did not review *all* available GIS layers in our possession for possible intersections, but we did expand the list beyond the values that we identified for the preliminary analysis. The values for which we identified intersections with one or more SESAs include:

- Bald eagle winter forage
- Elk highway crossing
- Elk severe winter range
- Gunnison's prairie dog colonies – active
- Gunnison's prairie dog colonies – unknown
- Landscape intactness
- Pronghorn winter concentration
- Riparian areas (also noted in the preliminary analysis)
- TNC portfolio sites

Attachment 2a provides more detail about these intersections and includes considerations for how BLM could address impacts to these resources. Attachment 2b provides maps of these intersections. Attachment 3 shows the full list of GIS layers collected and/or reviewed for intersection with the SESAs.

**3) Consider adding or removing SESAs based on the best available information on transmission corridors, combined with knowledge of natural resource values on BLM-managed lands throughout the Valley.**

The map of the Solar Energy Study Areas for the San Luis Valley shows “existing designated corridors.” In talking with BLM, we understand these corridors include those that Xcel and the SLV Rural Electric Cooperative identified prior to 1991, which BLM included in its 1991 Resource Management Plan. BLM may have used these corridors when selecting the Solar Energy Study Areas.

There is at least one other more recent map of potential transmission development, however, which Tri-State and Xcel produced as recently as January 2009:

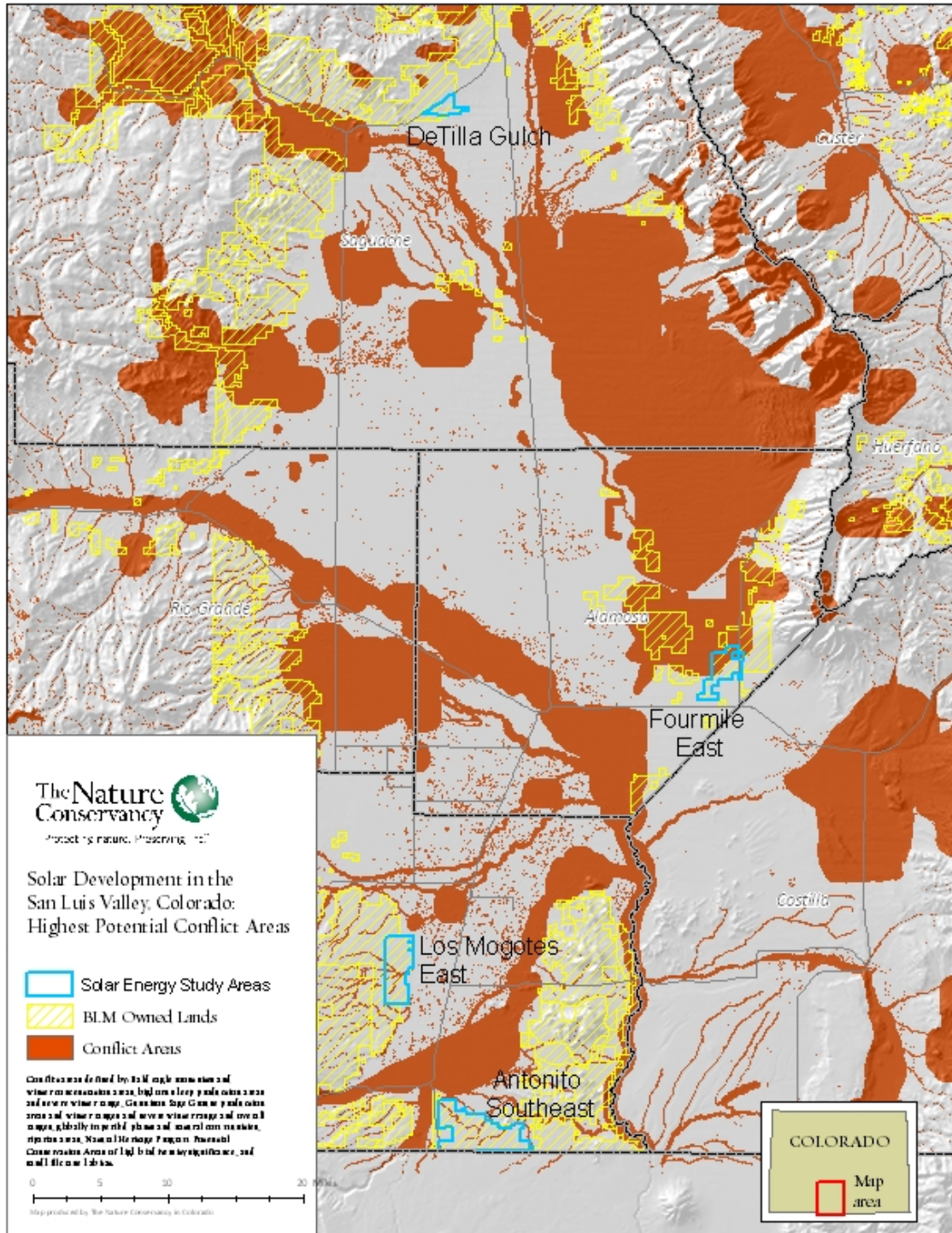
[http://www.tristategt.org/Transmission/sanluisvalley/documents/Project\\_Siting\\_Updates.pdf](http://www.tristategt.org/Transmission/sanluisvalley/documents/Project_Siting_Updates.pdf).

We wonder if BLM would alter its choices of SESAs based on this updated map, if BLM did not already use this map in identifying the SESAs. Consider revisiting the selection of the SESAs based on the most up-to-date transmission alternatives, to ensure that BLM has selected the most appropriate sites for potential solar energy development based on transmission and potential conflicts with key natural resource values.

**4) We hope you will engage us in future conversations about solar energy siting.** We appreciated the opportunity to share the preliminary analysis with the BLM State Office and the San Luis Valley Public Lands Center earlier this summer. We hope to continue these conversations, and wish to add real value to BLM's efforts to manage for species and vegetation while allowing for solar energy development. In particular, we have been gaining increasing experience working with BLM and other partners in identifying mitigation opportunities through our "Energy by Design" (EBD) process. As you may be aware, EBD is a science-based process through which we bring together agencies and willing industry partners to identify opportunities to avoid, minimize, reclaim, and offset impacts of development, based on goals for and anticipated impacts to species and vegetation. To date we have applied this process to oil and gas on public and private lands and the methodology is readily applicable to solar and other types of energy development. If BLM would like to discuss the possible application of EBD to the Valley, please contact David Gann at [dgann@tnc.org](mailto:dgann@tnc.org) or Megan Kram at [mkram@tnc.org](mailto:mkram@tnc.org).

Thank you for your consideration. Best of luck as you move forward with the PEIS.

**Attachment 1. TNC preliminary analysis of high potential conflict areas overlaid with Solar Energy Study Areas.** Of the natural resource values included in this map, conflicts exist only for riparian areas within Los Mogotos East and Antonito Southeast. The apparent conflict within Fourmile East is with potential sandhill crane habitat, for which the map was a rough approximation of habitat. A more accurate map that we acquired from USFWS suggests that there is no known conflict with sandhill crane habitat in the Fourmile East SESA.



**Attachment 2a.** Natural resource values observed to intersect with BLM Solar Energy Study Areas in the San Luis Valley, Colorado.  
*Yellow highlights = observed intersections using GIS.*

See Attachment 2b (separate attachment) for maps of these intersections.

GIS layers collected	Status of species	Included in TNC prelim. analysis	Intersection with the BLM Solar Energy Study Areas				Layer source	Considerations for how BLM should address impacts
			DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE		
Bald eagle winter forage		No	No (east of site)	No	No	Yes	CDOW	Discuss with CDOW. Consider setting quantitative objectives for maintenance and enhancement.
Elk highway crossing		No	No	Yes	No	No	CDOW	Discuss with CDOW. Consider setting quantitative objectives for maintenance and enhancement.
Elk severe winter range		No	Yes	No	Yes	Yes	CDOW	Discuss with CDOW. Consider setting quantitative objectives for maintenance and enhancement.
Gunnison's prairie dog colonies – active		No	Yes	No	No	No	CDOW	Discuss with CDOW and FWS. TNC is concerned about any net loss of available habitat (includes active and unknown) for this candidate species. Cumulative impacts to this species such as habitat poisoning, changes in land use, and plague have greatly reduced its population numbers and available habitat. Of the states with known prairie dog habitat, Colorado currently maintains by far the largest number of individuals range-wide. Historically, the population strongholds in Colorado included the San Luis Valley and South Park. However, the habitat in South Park has diminished from 670,000 acres prior to 1940 to 40-50 acres currently. <b>[what is in the SLV now vs. what was there historically?] [citation]</b>
Gunnison's prairie dog colonies – unknown		No	Yes	Yes	Yes	No, but adjacent to western boundary of the site	CDOW	

			Intersection with the BLM Solar Energy Study Areas					
GIS layers collected	Status of species	Included in TNC prelim. analysis	DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE	Layer source	Considerations for how BLM should address impacts
Landscape intactness	n/a	No	Somewhat intact. Least intact of the four study areas	Relatively intact, bisected by local roads	Highly intact, though its eastern border is adjacent to much less intact land.	Highly intact. Most intact of the four study areas.	TNC	This "cost surface" layer shows the relative degree of intactness (and its inverse - fragmentation) across the state of Colorado based on agriculture, urban development, oil and gas development, and roads (primary, secondary, local and primitive). To maintain habitat functionality, consider setting quantitative objectives for acreage to retain as intact for each of the SESAs, based on objectives for species and vegetation more broadly. Ideally, BLM would retain as much area as possible as intact by guiding or encouraging (via incentives?) development toward less-intact SESAs and areas within SESAs.
Pronghorn winter concentration		No	Yes	No	Yes (western half of the site)	No	CDOW	Discuss with CDOW. Consider setting quantitative objectives for maintenance and enhancement.
Streams	n/a	Yes	No	No	Yes	Yes	TNC adapted from National Hydrography Dataset Plus	Maintain an appropriate distance from streams and riparian areas, ideally as identified by mapping riparian vegetation or floodplains.
TNC portfolio sites	n/a	No	Yes – SLV Grease-wood and Upper SLV	Yes – Great Sand Dunes/ San Luis Lakes.	No	Yes - Punche Valley	TNC	[what to say? Suggesting impact minimization would not be helpful to BLM...]

**Attachment 3.** Full list of natural resource collected and/or reviewed for intersection with BLM Solar Energy Study Areas in the San Luis Valley. *Yellow highlights = observed intersections using GIS.*

GIS layers collected	Status of species	Included in TNC prelim. analysis	Intersection with the SESAs (N/R = GIS layer collected but not reviewed for intersection)				Layer source	Notes
			DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE		
<b>PLACES IMPORTANT TO MANY OF THE VALUES BELOW</b>								
TNC portfolio sites		No	Yes	Yes	No	Yes	The Nature Conservancy (TNC)	DeTilla Gulch intersects with SLV Greasewood and Upper San Luis Valley. Fourmile east with Great Sand Dunes/San Luis Lakes. Antonito South = Punche Valley.
<b>LARGE AND INTACT PATCHES OF ECOLOGICAL SYSTEMS</b>								
Viably-sized patches of matrix vegetation types		No	No	No	No	No	Colorado Nat. Heritage Program (CNHP)	Best and biggest occurrences of patches, necessary to meet goal for the TNC Southern Rocky Mountains Ecoregional Assessment
Landscape intactness		No	Somewhat intact. Least intact of the four study areas	Relatively intact, bisected by local roads	Highly intact, though its eastern border is adjacent to much less intact land.	Highly intact. Most intact of the four study areas.	TNC	This "cost surface" layer shows the relative degree of intactness (and its inverse - fragmentation) across the state of Colorado based on agriculture, urban development, oil and gas development, and roads (primary, secondary, local and primitive).
<b>RIPARIAN AND AQUATIC</b>								



GIS layers collected	Status of species	Included in TNC prelim. analysis	Intersection with the SESAs (N/R = GIS layer collected but not reviewed for intersection)				Layer source	Notes
			DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE		
Streams		Yes	No	No	Yes	Yes	TNC adapted from National Hydrography Dataset Plus	Includes all perennial, intermittent, etc. No go 1000 ft from wetlands, lakes,
<b>RARE PLANTS AND NATURAL COMMUNITIES</b>								
Potential Conservation Areas – B1 and B2		Yes	No	No	No	No	CNHP	
G1 and G2 rare plants and natural comms		Yes	No	No	No	No	CNHP	
Potential Conservation Areas – B3		No	No	No	No	No	CNHP	
G3 rare plants and natural comms		No	No	No	No	No	CNHP	
<b>OTHER IMPORTANT WILDLIFE VALUES</b>								
Bald eagle roost sites		Yes	No	No	No	No	Colorado Div. of Wildlife (CDOW)	
Bald eagle winter concentration areas		Yes	No	No	No	No (north and west of site)	CDOW	
Bald eagle summer forage		No	No	No	No	No	CDOW	
Bald eagle winter forage		No	No (east of site)	No	No	Yes	CDOW	
Bald eagle winter range		No	N/R	N/R	N/R	N/R	CDOW	
Bighorn migration corridors		No	No	No	No	No	CDOW	
Bighorn production areas		Yes	No	No	No	No	CDOW	
Bighorn severe winter		Yes	No	No	No	No	CDOW	

GIS layers collected	Status of species	Included in TNC prelim. analysis	Intersection with the SESAs (N/R = GIS layer collected but not reviewed for intersection)				Layer source	Notes
			DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE		
range								
Bighorn summer concentration areas		No	No	No	No	No	CDOW	
Bighorn water source		No	No	No	No	No	CDOW	
Bighorn winter concentration areas		No	No	No	No	No	CDOW	
Bighorn winter range		No	No	No	No	No	CDOW	
Bighorn summer range		No	N/R	N/R	N/R	N/R	CDOW	
Bighorn migration patterns		No	N/R	N/R	N/R	N/R	CDOW	
Bighorn mineral lick		No	N/R	N/R	N/R	N/R	CDOW	
Bighorn overall range		No	N/R	N/R	N/R	N/R	CDOW	
Bighorn winter range		No	N/R	N/R	N/R	N/R	CDOW	
Elk highway crossing		No	No	Yes (see notes)	No	No	CDOW	An elk crossing is mapped along County (?) Road 150 and appears to intersect Fourmile East at its northernmost point along this road.
Elk migration corridors		No	No	No	No	No	CDOW	
Elk production areas		No	No	No	No	No	CDOW	
Elk severe winter range		No	Yes	No	Yes	Yes	CDOW	
Elk summer concentration areas		No	No	No	No	No	CDOW	
Elk winter concentration areas		No	No	No	No	No	CDOW	
Elk limited use areas		No	N/R	N/R	N/R	N/R	CDOW	
Elk migration patterns		No	N/R	N/R	N/R	N/R	CDOW	
Elk overall range		No	N/R	N/R	N/R	N/R	CDOW	
Elk resident population		No	N/R	N/R	N/R	N/R	CDOW	
Elk summer range		No	N/R	N/R	N/R	N/R	CDOW	

GIS layers collected	Status of species	Included in TNC prelim. analysis	Intersection with the SESAs (N/R = GIS layer collected but not reviewed for intersection)				Layer source	Notes
			DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE		
Elk winter range		No	N/R	N/R	N/R	N/R	CDOW	
Gunnison sage-grouse production area		Yes	No	No	No	No	CDOW	
Gunnison sage-grouse severe winter range		Yes	No	No	No	No	CDOW	
Gunnison sage-grouse winter range		Yes	No	No	No	No	CDOW	
Gunnison sage-grouse overall range		Yes	No	No	No	No	CDOW	
Mule deer concentration area		No	No	No	No	No	CDOW	
Mule deer critical winter range		No	No	No	No	No	CDOW	
Mule deer highway crossing		No	No	No	No	No	CDOW	
Mule deer migration corridor		No	No	No	No	No	CDOW	
Mule deer severe winter range		No	No	No	No	No	CDOW	
Mule deer winter concentration area		No	No	No	No	No	CDOW	
Mule deer limited use area		No	N/R	N/R	N/R	N/R	CDOW	
Mule deer migration pattern		No	N/R	N/R	N/R	N/R	CDOW	
Mule deer overall range		No	N/R	N/R	N/R	N/R	CDOW	
Mule deer resident population		No	N/R	N/R	N/R	N/R	CDOW	
Mule deer summer range		No	N/R	N/R	N/R	N/R	CDOW	
Mule deer winter range		No	N/R	N/R	N/R	N/R	CDOW	

GIS layers collected	Status of species	Included in TNC prelim. analysis	Intersection with the SESAs (N/R = GIS layer collected but not reviewed for intersection)				Layer source	Notes
			DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE		
Pronghorn concentration area		No	N/R	N/R	N/R	N/R	CDOW	
Pronghorn limited use area		No	N/R	N/R	N/R	N/R	CDOW	
Pronghorn migration corridor		No	No	No	No	No	CDOW	
Pronghorn overall range		No	N/R	N/R	N/R	N/R	CDOW	
Pronghorn perennial water		No	N/R	N/R	N/R	N/R	CDOW	
Pronghorn resident population		No	N/R	N/R	N/R	N/R	CDOW	
Pronghorn severe winter range		No	No	No	Yes	No	CDOW	
Pronghorn winter concentration		No	Yes	No	Yes (western half of the site)	No	CDOW	
Pronghorn winter range		No	N/R	N/R	N/R	N/R	CDOW	
Sandhill crane habitat		Yes	No	Yes	No	No	TNC	Represented by a 1-mile buffer of wildlife refuges and conservation easements
Gunnison's prairie dog colonies – active		No	Yes	No	No	No	CDOW	We don't have this data yet, but hope to collect it. Candidate for listing in this part of the range
Gunnison's prairie dog colonies – inactive		No	No	No	No	No	CDOW	

GIS layers collected	Status of species	Included in TNC prelim. analysis	Intersection with the SESAs (N/R = GIS layer collected but not reviewed for intersection)				Layer source	Notes
			DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE		
Gunnison's prairie dog colonies – unknown		No	Yes	Yes	Yes	No, but adjacent to western boundary of the site	CDOW	