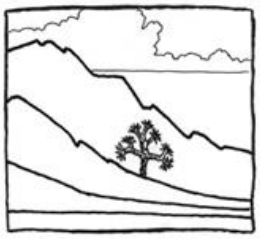


Basin and Range Watch

January 6th,

To: Nancy Christ

BLM Southern Nevada District Office
4701 North Torrey Pines Drive, Las Vegas, NV 89130

Email: nancy_christ@blm.gov

Subject: Comments on the Playa Solar Project (Dry Lake SEZ Parcels 2,3 and 4) NEPA# DOI-BLM-NV-S010-2014-0127-EA, Project # N-93306. Comments on the Dry Lake Solar Energy Center Project NEPA# DOI-BLM-NV-s010-2014-0126-EA , Project # N-93337 and the Harry Allen Solar Energy Center Project NEPA # DOI-BLM-NV-S010-2014-0125-EA Project # N – 93321.

Basin and Range Watch is a group of volunteers who live in the deserts of Nevada and California, working to stop the destruction of our desert homeland. Industrial renewable energy companies are seeking to develop millions of acres of unspoiled habitat in our region. Our goal is to identify the problems of energy sprawl and find solutions that will preserve our natural ecosystems and open spaces. We have visited the Dry Lake South Solar Energy Zone and adjacent wilderness areas. We are concerned about the direct and cumulative impacts that the project would have on the region.

Streamlining Away the Integrity of NEPA: The BLM has released 3 environmental Assessments for 3 solar projects on 6 parcels on over 3,000 acres in the Dry Lake Solar Energy Zone and appears to be gloating about the streamlined review in the press release. The process has been streamlined to the point where public participation has never been more difficult. You are reviewing a very large chunk of land for development with a very minimal time period. Even worse, you held the public meeting just 2 days after the release of the EA's. Plus, BLM opened the 30 day comment period with the Christmas and New Year's holiday strategically situated right in the middle. This appears to be a streamlining strategy. To maintain the integrity of public participation for NEPA, BLM should extend the comment deadline for at least ten days to accommodate the potential people missed over the holidays.

The expedited, streamlined review of these three projects is due to the programmatic review provided in the *Final Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States (*PEIS).

All of the three EA's state: *"This EA will assist the BLM in project planning and compliance with the National Environmental Policy Act (NEPA) and Federal Land Policy and Management Act of 1976*

(FLPMA). The EA is tiered to the July 2012 Final Solar PEIS. Tiering allows for the preparation of an EA and Finding of No Significant Impact (FONSI) for the Proposed Action (also referred to as a "Finding of No New Significant Impact," 43 Code of Federal Regulations [CFR] 46.140(c)), so long as any significant effects of the individual action were analyzed in the Solar PEIS and any additional effects of the individual action not analyzed in the Solar PEIS are not significant."

The PEIS was a very incomplete document. We analyzed the 5 Solar Energy Zones in the state of Nevada and the two in California. Many of the issues that were raised by Stakeholders in the Dry Lake Mitigation workshops were simply resolved with adaptive management solutions which are not really solutions. Adaptive management is simply a way to streamline approval and has been over used by the Interior Department for energy projects in the past 5 years. While the ES's rely on Tiering as a form of incorporation by reference that refers to previous EAs or EISs, the PEIS would be the reference you are referring to and as we will point out, missed important factors regarding the environmental analysis of the Dry Lake Solar Energy Zone. Because the PEIS relies too much on Adaptive Management, we would like to request that each of these solar projects be reviewed by with an Environmental Impact Statement.

Purpose and Need: The Purpose and Need Statement justifies approval based on the President's Climate Action Plan and recent competitive lease auctions for parcels on the solar zone. The statement refers to regional mitigation workshops. But the statement makes a poor case for on- site mitigation to compensate for loss of resources. Off site mitigation would potentially enhance resources off site, but would do little to compensate for the damage caused by large scale industrial development. Retiring grazing allotments, building desert tortoise fences, hiring more law enforcement for resource protection and enhancing interpretive exhibits are all discussed mitigation strategies, but would do little to help the specific site targeted for development.

The Purpose and Need Statement fails to fully emphasize BLM's commitment to the National Environmental Policy Act. The mitigation requirements fall short of complying with the Endangered Species Act, the National Environmental Policy Act and Migratory Bird Treaty Act.

Due to incomplete data in the PEIS, the Purpose and Need Statements should be rewritten to accommodate a full range of conservation alternatives for the site. These should include distributed generation, brownfields and conservation alternatives.

Desert Tortoise:

The Solar Energy Zone has a moderate to high density of desert tortoises and has been acknowledged by the EA's as being important for the connectivity of populations:

"The potential for both genetic and demographic connectivity occurs throughout the Dry Lake Valley, particularly within the Coyote Springs Critical Habitat Unit to the northwest of the Project area (BLM 2014b). A connectivity area is located on the northwestern boundary of the SEZ. The corridor is designated as desert tortoise Critical Habitat within the Coyote Springs Desert Wildlife Management Area (DWMA) (Clark County 2007), and is approximately 1.5 miles to 3 miles wide within the area of indirect effects, and averaging 6 miles across its full length."

The USFWS has also preliminarily estimated that the Dry Lake SEZ may support up to 213 desert tortoises (BLM and DOE 2010).

In particular, the site of the Harry Allen Solar Energy Center has a high quality habitat for the desert tortoise as pictured below:

We would like to see a cumulative analysis created focusing on the impacts that large solar projects have had on the desert tortoise. So far we have seen over 150 removed from the Ivanpah Solar Project, 157 from the Moapa Solar Project and most recently 152 from the Silver State South Project. In spite of the transmission lines on the Dry Lake Solar Zone, the site supports a population of similar size.

Already, tortoises on the first two sites have experienced translocation mortality from hyperthermia and predation.

The below numbers from the California Department of Fish and Game indicate 50 percent mortality from translocation of desert tortoise.

-Tortoises handled for blood testing will have 5% mortality rate from handling.
-Tortoises translocated will have a 50% mortality rate.
- Resident Tortoises on the recipient site will also have a 50% mortality rate due to competition from translocated tortoises.

The Fish and Wildlife Service has stated that they do not support translocation as a proven mitigation strategy for big development projects.

We are also concerned that desert tortoise translocation could lead to the proliferation of Upper respiratory Tract disease in tortoise populations in Coyote Springs Valley.

The Dry Lake mitigation workshops concluded “Niche modeling, completed by the National Park Service for the Lake Mead National Recreation Area, suggests, under future climate change, high-quality desert tortoise habitat will remain in the Gold Butte ACEC while most of the adjacent desert tortoise habitat in the national recreation area will decline and disappear.”

At the 2013 Desert Tortoise Symposium in Ontario, California, Dr. Barry Sinervo, an evolutionary biologist from UC Santa Cruz, presented research that suggested that the very development of solar projects in arid regions facing a warming future will cumulatively add to the “local” heat index. Sinervo states: *“We find that solar farms accelerate predicted extinctions by 50 years. Therefore,*

populations of Gopherus adjacent to solar farms may go extinct even before benefits of solar farms are realized (e.g., by 2080). In addition, the siting of solar projects in the Ivanpah Valley or near California City threatens the only habitat predicted to sustain population demography in 2080, effectively eliminating climate refuges for G. agassizii."

And:

"We emphasize that while prospects look bleak for Gopherus it can be rescued from climate-forced extinction with aggressive limits on CO2 input into the atmosphere. However, current and proposed solar projects will only hasten extinctions and likely eliminate the last remaining refuges for Gopherus from climate warming." http://www.deserttortoise.org/symposium/2014Abstracts.pdf

If the areas surrounding Gold Butte are indeed this vulnerable to climate change including the lands located on the solar zone, this is a bad time to be removing habitat identified valuable for desert tortoise connectivity.

At this point, desert tortoise populations have taken a large hit from utility scale solar projects in the Northeast Recovery Unit for the species. We believe streamlining environmental review for projects that will remove habitat for the species is a step backwards. An EIS should be prepared for each project to further evaluate the impacts to the species.

Avian Kills/Polarized Glare:

Large solar projects are creating a polarized glare or lake effect and are causing birds and insects to be deceived and collide with solar panels or simply dehydrate. The avian impacts are not fully understood, but everyone seems to agree that this problem was underestimated during the initial boom to fast track big solar on both public and private lands in the Southwestern US. The polarized "lake effect" is now well known from the Genesis, Desert Sunlight and Ivanpah Projects, all in California. Bird species that have collided (or dehydrated) with solar panels and heliostats include the Endangered Yuma clapper rail, peregrine falcon , American kestrel and a host of water birds. As far as we know, very few focused surveys are occurring in the state of Nevada. The Crescent Dunes power tower will have these surveys take place after the project goes on line this winter, but that is all we know about. For three California Solar Projects, we have been informed that over 160 species of birds have been recorded killed with thousands of individual mortalities.

The Environmental Assessments briefly raise the issue of polarized glare when talking about threatened and endangered birds. The only three species mentioned are the southwestern willow flycatcher, the Yuma clapper rail, and the yellow-billed cuckoo which are all special status or Endangered Species. The EA's claim that the "project area is not within a path that would connect any aquatic features", but overlook the fact that Lake mead National Recreation Area is about 30-40 miles to the south and the Pahranagat National Wildlife Refuge is about 60-70 miles to the north. While the lake effect would not mimic riparian habitat, both the Southwest willow flycatcher and yellow billed cuckoo could be present at Pahranagat National Wildlife Refuge and could pass over the solar projects. There are many water birds that could pass over the project using it as a path between Lake Mead and Pahranagat which potentially could collide with solar panels. The effect may also increase risk of collision with transmission lines and electrocution. An EIS should be written for each document and the bird lists of both Pahranagat National Wildlife Refuge and Lake Mead National Recreation Area should be included. The

below is a list of water birds from Pahranagat National Wildlife Refuge, many of which could potentially hit the solar panels on these three projects.

LOONS	Sp	S	F	W
___ Common Loon		o	-	o	o

GREBES	Sp	S	F	W
___ Pied-billed Grebe*		c	o	c	c
___ Horned Grebe		r	-	r	-
___ Eared Grebe		c	u	c	c
___ Western Grebe*		c	u	c	c

PELICANS & CORMORANTS	Sp	S	F	W
___ American White Pelican		u	r	u	o
___ Double-crested Cormorant*		c	c	c	u

BITTERNS, HERONS & EGRETS	Sp	S	F	W
___ American Bittern*		u	o	u	o
___ Great Blue Heron*		c	c	c	c
___ Great Egret		o	o	u	-
___ Snowy Egret		u	u	c	o
___ Cattle Egret		-	-	r	r
___ Green Heron		r	-	r	-
___ Black-crowned Night-Heron*		u	u	u	o

IBIS	Sp	S	F	W
___ White-faced Ibis		o	u	u	-

WATERFOWL	Sp	S	F	W
___ Tundra Swan		u	-	u	c
___ Greater White-fronted Goose		r	-	r	r
___ Snow Goose		r	-	o	u
___ Ross' Goose		r	-	-	-
___ Canada Goose*		c	c	c	c
___ Green-winged Teal*		c	o	u	c
___ Mallard*		u	u	c	c
___ Northern Pintail*		u	u	c	c
___ Blue-winged Teal		o	-	o	o
___ Cinnamon Teal*		c	o	c	u
___ Northern Shoveler*		c	o	u	u
___ Gadwall*		c	u	c	u

___ American Wigeon u o c c
___ Canvasback c r c c
___ Redhead* c u c u
___ Ring-necked Duck u r u r
___ Greater Scaup r - r -
___ Lesser Scaup o - o o
___ Common Goldeneye o - o o
___ Bufflehead u - u o
___ Hooded Merganser r - r o
___ Common Merganser u - o c
___ Red-breasted Merganser o - o o

___ Ruddy Duck*
http://www.npwrc.usgs.gov/resource/birds/chekbird/r1/pahran.htm

Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds, signed in January 2001) requires the BLM to evaluate the effects of federal actions on migratory birds. The lack of information regarding polarized glare bird collisions with solar panels in both the PEIS and the three Environmental Assessments show that BLM failed to adequately evaluate the effects of these proposed Federal actions on migratory birds. This puts the BLM in violation of the Migratory Bird Treaty Act. The cumulative impacts of polarized glare collision combined with electrocution and habitat loss increase threats to avian fauna. An EIS should be prepared for each project so these impacts can be better evaluated.

At this point, those California projects are among the few that are reporting findings of dead birds at their sites. And although we have nothing in writing to confirm this, we have now been told by a few biologists working on these projects that they are discouraged by the developers from reporting incidental finds.

In 2008, there was a very strong localized rain storm that filled up Silver Lake, located in the Silurian Valley, California for about 2 months. We do have a photo of the temporary lake below. We also saw white pelicans on the lake but do not have a photo of the birds.

^Silver Lake just north of Baker, California and adjacent to the project site after strong rains in 2008.

^Lake effect from the Copper Mountain Solar facility south of Boulder City, Nevada.

If a real, ephemeral lake can attract white pelicans to the Silurian Valley, than there should be concern that an artificial lake would attract birds to new "lakes" between Lake Mead and the Pahranagat National Wildlife Refuge.

Recently, the US Fish and Wildlife Service released a report called *"Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis" Rebecca A. Kagan, Tabitha C. Viner, Pepper W. Trail, and Edgard O. Espinoza National Fish and Wildlife Forensics Laboratory*

The report has enough information to tell us that incidental reporting of bird mortality from solar projects does not really give the complete numbers.

The report finds that *" Trauma was the leading cause of death documented for remains at the Desert Sunlight* (First Solar project) *and Genesis sites."*

The report also states *"These solar facilities appear to represent "equal-opportunity" hazards for the bird species that encounter them. The remains of 71 species were identified, representing a broad range of ecological types. In body size, these ranged from hummingbirds to pelicans; in ecological type from strictly aerial feeders (swallows) to strictly aquatic feeders (grebes) to ground feeders (roadrunners) to raptors (hawks and owls). The species identified were equally divided among resident and non-resident species, and nocturnal as well as diurnal species were represented."*

The two main identified cause of mortality from photovoltaic projects are trauma and predation.
The report details the mortality at the 4,500 acre Desert Sunlight photovoltaic site which was built by First Solar;

"Sixty-one birds from 33 separate species were represented from Desert Sunlight. Due to desiccation and scavenging, a definitive cause of death could not be established for 22 of the 61 birds.
Blunt force impact trauma was determined to have been the cause of death for 19 Desert Sunlight birds including two Western Grebes (Aechmophorus occidentalis) and one each of 16 other species. Impact (blunt force) trauma is diagnosed by the presence of fractures and internal and/or external contusions. In particular, bruising around the legs, wings and chest are consistent with crash-landings while fractures of the head and/or neck are consistent with high-velocity, frontal impact (such as may result from impacting a mirror).

Predation was the immediate cause of death for 15 birds. Lesions supporting the finding of predation included decapitation or missing parts of the body with associated hemorrhage (9/15), and lacerations of the skin and pectoral muscles. Eight of the predated birds from Desert Sunlight were grebes, which are unable to easily take off from land. This suggests a link between predation and stranding and/or impact resulting from confusion of the solar panels with water."

Challenges to data collection included rapid degradation of carcass quality hindering cause of death and species determination; large facilities which are difficult to efficiently search for carcasses; vegetation and panels obscuring ground visibility; carcass loss due to scavenging; and inconsistent documentation of carcass history. Searcher efficiency has been shown to have varying influences on carcass recovery with anywhere from 30% to 90% detection of small birds achieved in studies done at wind plants (Erickson et al., 2005). Scavengers may also remove substantial numbers of carcasses. In studies done on agricultural fields, up to 90% of small bird carcasses were lost within 24 hours (Balcomb, 1986; Wobeser and Wobeser, 1992). OLE staff observed apparently resident ravens at the Ivanpah power tower. Ravens are efficient scavengers, and could remove large numbers of small bird carcasses from the tower vicinity.

(Erickson, W. P., G. D. Johnson, and D. P. Young, Jr., 2005, A summary and comparison of bird mortality from anthropogenic causes with an emphasis on collisions: U S Forest Service General Technical Report PSW, v. 191, p. 1029-1042; Balcomb, R., 1986, Songbird carcasses disappear rapidly from agricultural fields: Auk, v. 103, p. 817-820; Wobeser, G., and A. G. Wobeser, 1992, Carcass disappearance and estimation of mortality in a simulated die-off of small birds: Journal of Wildlife Diseases, v. 28, p. 548-554.) "

The report concludes:

"Given these variables it is difficult to know the true scope of avian mortality at these facilities. The numbers of dead birds are likely underrepresented, perhaps vastly so. Observational and statistical studies to account for carcass loss may help us to gain a better sense of how many birds are being killed."

And the photovoltaic projects have insect impacts: "*Light and noise pollution associated with electrical power plants can be problematic for wildlife. Polarized light pollution from PV panels can attract aquatic insects and other species that mistake the panels for bodies of water, potentially leading to population decline or even local extinction of some organisms (Horvath et al. 2010). Nighttime lighting for security or other reasons may negatively impact a variety of Mojave Desert species, many of which have developed nocturnal behavior to escape the daytime heat of the desert. (Mojave Desert Ecoregional Assessment September 2010, The Nature Conservancy of California 201 Mission Street, 4th Floor San Francisco, CA 94105) p. 50"*

The only real organized surveys for avian mortality are taking place at the Ivanpah Solar Project with only a 20 percent coverage. They have now discovered 3 kit fox dens in the project site as well as active raven nests. It is likely that scavengers are removing birds before they can be counted. The rest of the finds are simply incidental which may indicate that mortality numbers are far greater than being reported.

The approved Blythe Solar Power Project would be a 4,000 acre PV facility near the Colorado River near Blythe, California also built by First Solar.

At a hearing for the California Energy Commission, there were interveners. LABORERS' INTERNATIONAL UNION OF NORTH AMERICA had biologist Shawn Smallwood estimate a number of birds that would be killed for one of the Interveners to the project. He estimated that over 2,100 birds would be killed per year by the 4,000 acre Blythe Solar Power Project. The estimate can be viewed here:

http://docketpublic.energy.ca.gov/PublicDocuments/09-AFC-06C/TN201152_20131108T155000_Testimony_of_K_Shawn_Smallwood_PhD.pdf

We would like to suggest that the agencies require avian monitoring on these projects and mitigation. Single axis units can be potentially designed to be turned upside down which could be helpful in the migration times.

The US Fish and Wildlife Avian Mortality Report makes the following recommendations for these big projects:

- For at least two years (and in addition to planned monitoring protocol), conduct daily surveys for birds (at all three facilities)
- Use dogs for monitoring surveys to detect dead and injured birds that have hidden themselves in the brush, both inside and outside the perimeter of the facility
- To decrease removal of carcasses, implement appropriate raven deterrent actions
- Retrofit visual cues to existing panels at all three facilities and incorporate into new panel design. These cues should include UV-reflective or solid, contrasting bands spaced no further than 28 cm from each other.

Air Quality/Dust:

Dust control in hot, arid climates is very problematic. The removal of well established vegetation, biological soil crusts and centuries old desert pavement creates opportunities for dust to be airborne every time the wind blows. Not only does fugitive dust create problems for visual and biological resources, it creates issues for public health as well.

We are seeing this problem with several of the recently approved, prioritized large energy projects. The Department of Interior has been so effective in streamlining the environmental review of these projects that they have created a perfect storm of compromised air quality.

The EA's fail to fully address the potential of fugitive dust emissions to spread Coccidioidomycosis (Valley Fever) to nearby communities. The Dry Lake Zone is located about 10miles from the city of Las Vegas, Nevada.

There have been 368 cases of Valley Fever confirmed in Clark County, Nevada from 1992 to 2003: http://www.lasvegassun.com/news/2003/aug/11/valley-fever-hidden-threat-in-wind/

Epidemiologists investigated an outbreak of valley fever that had sickened 28 workers at two large solar-

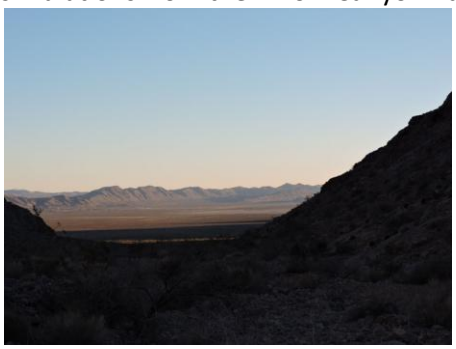
power construction sites in San Luis Obispo County: http://articles.latimes.com/2013/may/01/local/la-me-ln-valley-fever-solar-sites-20130501
One of these projects was called Topaz, built by First Solar.

We would like to request the following mitigation measures for air quality on the Silver State South Project:

1. Stop all construction when wind speeds reach ten miles per hour or more.
2. Limit construction hours by half when temperatures climb above 100 degrees.
3. Hold developer accountable for their air quality violations. Give them steep fines until they can get their act together. The Right of Way/Lease Grant issued for this project states: *"Failure of the holder to comply with any diligent development provision of this instrument may cause the Authorized Officer to suspend or terminate the authorization in accordance with 43 CFR 2807.1 7 -2807.19, and use the posted Performance and Reclamation bond to cover the costs for removal of any equipment and/or facilities. The Authorized Officer will provide the holder a written Notice of Failure to Ensure Diligent Development prior to the suspension or termination of the authorization. The holder will be provided an opportunity to correct any noncompliance in accordance with 43 CFR 2807.18 or submit a written request to the Authorized Officer for an extension ofthe time lines in the approved Plan of Development."*
4. Provide a web page where the general public can monitor disciplinary actions taken by BLM to insure that developers are in compliance with conditions of mitigation. This web site should have a place for the public to report violations.

Visual Resources:

Lands on the project site are designated VRM Class IV which is the lowest possible classification. The BLM however, has failed to evaluate all of the potential visual impacts. For example, there are no KOP simulations from the Arrow Canyon Range which is in the ACEC less than a mile north of the project.



^ Dry Lake Valley seen from the Arrow Canyon Range. Solar projects would be highly visible from here.

Large solar projects can remove up to 5 square miles of habitat. Due to the large project size, lands of all VRM classifications will be cumulatively impacted. The project will be visible from lands that are miles outside of the ROW.

The size of the project is large and will have the potential to impact different VRM zones of different classes. The project site should be evaluated for impacts on area with all visual classes.

Adaptive Management Failures:

The following is a list of just some of the problems and failures that have arisen from streamlined, fast-tracked energy projects under the management of the Interior Department on BLM land in the last 5 years. These are only just a few examples.

1. Ivanpah Solar Project, California: About 6 times as many desert tortoises were removed from the site than both the BLM and the developer predicted.
2. Genesis Solar Project, California: Due to streamlined permitting, inadequate archeological surveys were conducted for this project and an entire archeological village was destroyed by the developers along the Ford Dry Lake.
3. Ocotillo Express Wind Project. In May, 2013, one of the turbines threw a blade on a public access road. Flaws were discovered in the design of the turbines and the entire project was curtailed for months while repairs could be made.
4. Desert Sunlight Project, California: In fall of 2014, the owner of the project asked to extract an additional 50 acre feet of water from the local aquifer which has been determined to be fossil water.
5. Ivanpah Solar Project: Owner NRG is burning over twice the natural gas they originally said they would due to the fact that the project is only running on a small part of predicted capacity.
6. Desert Sunlight, Ivanpah, Genesis (and several more) are documenting over 160 species of birds that have been killed at the projects with thousands of individuals.

Conclusion:

We would like to comment on more of the missed details of these three EA's but BLM simply did not provide us with enough time to do so. Lack of known mitigation and use of the Adaptive Management concept is a frivolous way for the BLM to conduct business on public lands. Streamlining review of very large projects like this will set future precedents and will be used for many other public land uses besides renewable energy. By chipping away at NEPA, BLM is taking the public ownership out of public lands and simply serving the well funded developers. Again, we would like to request that the BLM review these three very large solar projects with full Environmental Impact Statements.

Thank you,

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