

DOCKET 07-AFC-5
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STATE OF CALIFORNIA

Energy Resources Conservation and Development Commission

In the Matter of:

APPLICATION FOR CERTIFICATION
FOR THE IVANPAH SOLAR
ELECTRIC
GENERATING SYSTEM

DOCKET NO. 07-AFC-5

COMMENTS ON THE PMPD OF INTERVENOR BASIN AND RANGE WATCH

August 20, 2010

Kevin Emmerich
Laura Cunningham
Basin and Range Watch
PO Box 70
Beatty NV 89003
(775)553-2806
atomictoadranch@netzero.net

TITLE

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**Basin and Range Watch Comments of the Presiding Members Proposed Decision on
Ivanpah Solar Electric Generating System**

Deferred Planning: We are concerned about several "deferred plans" that were not analyzed under NEPA/CEQA, but will be done by the applicant after approval. So far we have found these:

1. Risk Management Plan for Hazardous Waste
2. Drainage Erosion and Sedimentation Plan
3. Heliostat Depth Testing Plan for mounting poles in the ground
4. Special-Status Plant Protection and Monitoring Plan
5. Special-Status Plant Remedial Action Plan (in case 4 fails)
6. Seed Collection Plan
7. Final Desert Tortoise Relocation/Translocation Plan
8. Final Raven Management Plan
9. Final Weed Management Plan
10. Revised Closure, Revegetation and Rehabilitation Plan
11. Maps of Vegetation Clearing/Mowing
12. Maps of Rare Plants On-site and Off-site
13. Identification of Desert tortoise, Nested Species, Rare Plant, and Ephemeral Drainage compensatory mitigation lands
14. Succulent Inventory for Salvage and Transplant
15. Gas Pipeline Revegetation and Monitoring Plan
16. Off-site Drainage Enhancement and Management Plan
17. Pre-construction Surveys of Vegetation Types to Guide Restoration (p. 84)
18. Vegetation Restoration Monitoring Plan
19. Soil Baseline Characterization to guide soil preparation for seed planting
20. Biological Soil Crust Restoration Plan

Several of these plans could have impacts to groundwater, yet will apparently be done

later, without public review.

Soil and Water Resources: Our initial comments on the PMPD, is that it seems to have been written a long time ago, and not updated very well, as it says in a footnote that the amount of soil that will be cut and moved in Ivanpah Phase 3 is based on the Draft EIS/Final Staff Assessment, and not the updated "Mitigated Ivanpah 3" alternative which was adopted. The footprint was reduced by 430 acres, and BrightSource decided to pull out of a very large wash, "due [to] the presence of large boulders..." This buried boulder problem was never addressed in any CEC document. Thus how surface runoff, rainwater drainage, and potential groundwater impacts may not be completely addressed. We would like to make sure the entire PMPD reflects the final alternative.

We also notice a new estimate of 16,000 gallons per night of groundwater use for mirror washing, where each mirror would be washed once in a two-week rotation. This was difficult information to get, and thus indicates trucks will be spray-washing every night of the year in a giant rotation. The applicant claims wash-water will evaporate before it hits the ground, but on cold winter nights we think there could be substantial wetting of the soil. A discrepancy occurs in the PMPD, where in the Biological Resources section, it is stated that there will be a mirror-washing drip line to the ground, causing potential erosion and weed growth. This is not analyzed well.

The whole stormwater/drainage issue was never analyzed, and its affects on groundwater infiltration from changes in washes, compaction, disturbance of biological soil crusts, and increased downhill sedimentation. The Low Impact Design will still result in soil compaction, edge disturbance to ecological systems, and fragmentation. Using "low impact tires and tracks" will not stop this.

We note that the PMPD admits there will be a "failure rate" of 32,000 heliostats during a 100-year flood event. That was never discussed to our knowledge, and could be a big impact on downstream tortoise habitat. Three-dimensional scour around heliostat poles was not studied.

Biological Resources: Golden eagles were detected on the project site, yet we have not seen a report on the amount of foraging habitat or nest surveys within a 10-mile radius of the site.

Burrowing owls should be passively removed, nit actively removed from burrows during pre-construction guidelines.

Bighorn sheep studies indicate a decline in the Clark Mountains in 1991-1993 due to poor recruitment. This needs more study to determine the possible reasons, and whether the project will lead to further declines.

There is no assessment of power tower impacts to bats and birds. Is this a migration corridor?

Desert tortoise habitat on the project site is described as “high quality.” Land acquisition for mitigation should therefore be purchased at a 5:1 ratio, rather than 3:1, following California Department of Fish and Game recommendations for the Calico Solar Project (CEC Evidentiary Hearing, August 18, 2010).

There continues to be no discussion of the genetic uniqueness of the Northeastern population of Desert tortoise, and the cumulative impacts to this population in Ivanpah Valley. Conservation of the Northeastern Mojave Recovery Unit is being ignored. Biological science is advancing in its understanding of the importance of maintaining the diversity and connectivity of genetic populations, yet siting of large-scale renewable energy projects is occurring too quickly to take this into consideration.

Tortoise compensatory mitigation for habitat loss and potential take is at a 3:1 ratio, or 8,146 acres, at least two-thirds by habitat mitigation. Where will this land be found, and is it even feasible to find this acreage in the Northeastern Mojave Recovery Unit?

The DRECP Independent Science Advisors state “...the advisors do *not* recommend translocation of desert tortoise as effective mitigation or conservation action, in part because translocated tortoises suffer high mortality rates.” (Public Review Draft, Recommendations of Independent Science Advisors for The California Desert Renewable Energy Conservation Plan (DRECP), Prepared For Renewable Energy Action Team: California Department of Fish & Game, U.S. Fish & Wildlife Service, U.S. Bureau of Land Management, and California Energy Commission, Prepared By The DRECP Independent Science Advisors, August 2010, page 77).

Concerning brush mowing in a natural Mojave Desert scrub community, the PMPD states that the “evidence is uncertain about the effects of this mowing.” Studies should be carried out in a scientific manner before approval of the project, as mowing will have great impacts to this large area of habitat and future possibilities of restoration. How many times will vegetation need to be mowed? Mojave Desert vegetation is not adapted to this, and perennial plants may likely die off.

We believe that creating “protected habitat areas left free of project development” for the six special-status plant species is not acceptable mitigation. Staff admits this is an uncertain technique, but the known negative impacts of edge disturbance and fragmentation are well documented in the scientific literature.

Concerning revegetation and restoration of the site, the DRECP Independent Science Advisors say:

“Every effort should be made to avoid and minimize any new disturbance of soil surfaces in the siting, design, construction, and maintenance of any and all project features. Arid ecosystems are strongly shaped by characteristics of soils and other geological surfaces that develop over millennia and that cannot be replicated by human actions. Therefore, ecological impacts of projects that alter surficial geology should be presumed permanent, despite any good intentions or promises to decommission renewable energy projects at

the end of their useful life and restore what came before. This does not mean that well-conceived efforts to decommission, restore, and revegetate have no ecological value, however—only that such actions can never be assumed to replicate original nature, and therefore cannot be considered full mitigation for the original impact.” (page 3)

The DRECP Independent Science Advisors also recommend preserving and protecting the Creosote bush-white bur sage scrub (*Larrea tridentata-Ambrosia dumosa* Alliance) supporting big galleta (*Pleuraphis rigida*) or a diverse shrub layer (page 13 ff.), which is present over a wide area of the ISEGS project site.

Concerning biological soil crusts, which we have seen to be abundant on the Ivanpah project site, the DRECP Science advisors recommend: “Removal or disruption of biological soil crusts can increase dust production. It can also limit primary production, especially of desert annuals, an important food source for many desert animals. Siting of developments should avoid disruption of biological soil crusts, which may require millennia to recover...” Such soil crusts should be mapped. (page 35)

In addition, all vegetation types, wildlife linkages, Audubon Important Bird Areas, Nitrogen deposition maps, desert pavement, alluvial fans, and riparian channels/washes should be mapped.

The Ivanpah Valley should be analyzed as to what habitat may be predicted to be essential to accommodate distributional shifts, in response to climate change, as predicted based on existing or future models.

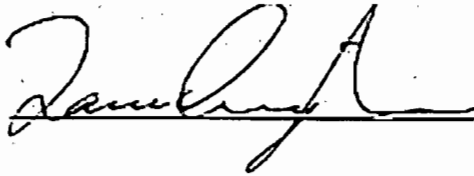
The DRECP Independent Science Advisors recommend these birds for management consideration, and we have seen all these species on the ISGES project site Mojave Desert Scrub fan or in the adjacent Clark Mountain foothills. “The following bird species were selected by CalPIF (2009) as desert focal species because they use desert vegetation as their primary breeding habitat, they are great enough in abundance to provide adequate sample sizes for statistical comparisons, and they have experienced reductions from their historical breeding range. They should therefore be considered as potential planning species for DRECP.

- **Costa’s hummingbird** (*Calypte costae*).
- **Ladder-backed woodpecker** (*Picoides scalaris*).
- **Ash-throated flycatcher** (*Myiarchus cinerascens*). Although this species is common and widespread, it is an obligate cavity nester and therefore can serve as a surrogate for assessing nest site availability for desert cavity-nesting species.
- **Verdin** (*Auriparus flaviceps*).
- **Black-tailed gnatcatcher** (*Polioptila melanura*).
- **Le Conte’s thrasher** (*Toxostoma lecontei*).
- **Crissal thrasher** (*Toxostoma crissale*). This species is of interest because it occupies two very different desert woodland types – mesquite and riparian in the lower deserts, and pinyon-juniper woodland in the higher areas of the eastern Mojave Desert.
- **Phainopepla** (*Phainopepla nitens*). Phainopeplas provide important ecological services (dispersal of mistletoe seeds).

- **Black-throated sparrow** (*Amphispiza bilineata*).
- **Scott's oriole** (*Icterus parisorum*). This is a focal species in the analysis of desert woodlands (Joshua tree and pinyon-juniper)." (page 33)

Alternatives: If the "no Project" alternative is chosen, the PMPD says that it will be likely that additional gas-fired power plants would be built. But because ISEGS will be intermittent, additional back-up power plants and baseload will need to be built anyway.

Before the Distributed Generation model is eliminated, a thorough study should be undertaken to compare Germany's fast implementation model with the slow and inefficient California model of rooftop PV installation. Why is Germany installing thousands of MW of rooftop generation per quarter and California cannot seem to?



Laura Cunningham
Kevin Emmerich
Basin and Range Watch
PO Box 70
Beatty NV 89003
(775) 553-2806
atomicoadranch@netzero.net



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV**

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GENERATING SYSTEM**

**DOCKET No. 07-AFC-5
PROOF OF SERVICE
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APPLICANT

Solar Partners, LLC
John Woolard,
Chief Executive Officer
1999 Harrison Street, Suite #500
Oakland, CA 94612

Todd A. Stewart, Project Manager
Ivanpah SEGS
sdeyoung@brightsourceenergy.com
E-mail Preferred

Steve De Young, Project Manager
Ivanpah SEGS.
1999 Harrison Street, Ste. 2150
Oakland, CA 94612
tstewart@brightsourceenergy.com

APPLICANT'S CONSULTANTS

John L. Carrier, J. D.
2485 Natomas Park Dr. #600
Sacramento, CA 95833-2937
jcarrier@ch2m.com

COUNSEL FOR APPLICANT

Jeffery D. Harris
Ellison, Schneider
& Harris L.L.P.
2600 Capitol Avenue, Ste. 400
Sacramento, CA 95816-5905
jd@eslawfirm.com

INTERESTED AGENCIES

California ISO
e-recipient@caiso.com

Tom Hurshman,
Project Manager
Bureau of Land Management
2465 South Townsend Ave.
Montrose, CO 81401
tom_hurshman@blm.gov

Raymond C. Lee, Field Manager
Bureau of Land Management
1303 South U.S. Highway 95
Needles, CA 92363
Raymond_Lee@ca.blm.gov

Becky Jones
California Department of
Fish & Game
36431 41st Street East
Palmdale, CA 93552
dfgpalm@adelphia.net

INTERVENORS

California Unions for Reliable Energy ("CURE")
c/o: Tanya A. Gulesserian
Marc D. Joseph
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Ste 1000
South San Francisco, CA 94080
tgulesserian@adamsbroadwell.com

Western Watersheds Project
Michael J. Connor, Ph.D.
P.O. Box 2364
Reseda, CA 91337-2364
mconnor@westernwatersheds.org

Gloria Smith, Joanne Spalding
Sidney Silliman, Devorah Ancel
Sierra Club
85 Second Street, 2nd Fl.
San Francisco, CA 94105
E-mail Service Preferred
gloria.smith@sierraclub.org
joanne.spalding@sierraclub.org
gssilliman@csupomona.edu
devorah.ancel@sierraclub.org

*indicates change

INTERVENORS CONT.

Joshua Basofin, CA Rep.
Defenders of Wildlife
1303 J Street, Ste. 270
Sacramento, CA 95814

E-mail Service Preferred

ibasofin@defenders.org

Basin and Range Watch
Laura Cunningham

Kevin Emmerich

P.O. Box 70

Beatty, NV 89003

atomicloadranch@netzero.net

Center for Biological Diversity

Lisa T. Belenky, Sr. Attorney

Ileene Anderson, Public Lands Desert Director

351 California Street, Ste. 600

San Francisco, CA 94104

E-mail Service Preferred

lbelenky@biologicaldiversity.org

ianderson@biologicaldiversity.org

California Native Plant Society

Greg Suba, Tara Hansen & Jim Andre

2707 K Street, Suite 1

Sacramento, California, 95816-5113

E-mail Service Preferred

gsuba@cnps.org

thansen@cnps.org

granites@telis.org

County of San Bernardino

Bart W. Brizzee, Deputy Co. Counsel

385 N. Arrowhead Avenue, 4th Fl.

San Bernardino, California, 92415

bbrizzee@cc.sbcounty.gov

ENERGY COMMISSION

JEFFREY D. BYRON

Commissioner and Presiding Member

jbyron@energy.state.ca.us

JAMES D. BOYD

Vice Chairman and

Associate Member

jboyd@energy.state.ca.us

Paul Kramer

Hearing Officer

pkramer@energy.state.ca.us

John Kessler

Project Manager

jkessler@energy.state.ca.us

Dick Ratliff

Staff Counsel

dratliff@energy.state.ca.us

Jennifer Jennings

Public Adviser

publicadviser@energy.state.ca.us

DECLARATION OF SERVICE

I, LAURA CUNNINGHAM declare that on AUG 25 2010, I served and filed copies of the attached, PAAD COMMENTS dated AUG 25 2010. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [www.energy.ca.gov/sitingcases/ivanpah].

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(Check all that Apply)

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1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

