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June 16, 2010

DOCKET

09-AFC-6

DATE JUN 16 2010

RECD. JUN 16 2010

California Energy Commission
Attn: Docket No. 09AFC6
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

Re: 09-AFC-6 Blythe Solar Power Plant Project

Dear Docket Clerk:

Enclosed are an original and one copy of **REBUTTAL TESTIMONY OF VERNON C. BLEICH ON BEHALF OF CALIFORNIA UNIONS FOR RELIABLE ENERGY FOR THE BLYTHE SOLAR POWER PROJECT**. Please process the document and provide us with a conformed copy in the envelope provided.

Thank you.

Sincerely,

/s/

Elizabeth Klebaner

EK:bh
Enclosures

STATE OF CALIFORNIA
California Energy Commission

In the Matter of:

The Application for Certification for the
Blythe Solar Power Project

Docket No. 09-AFC-6

**REBUTTAL TESTIMONY OF VERNON C. BLEICH
ON BEHALF OF CALIFORNIA UNIONS FOR RELIABLE ENERGY
FOR THE BLYTHE SOLAR POWER PROJECT**

June 15, 2010

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Attorneys for CALIFORNIA UNIONS FOR
RELIABLE ENERGY

I. Introduction

I have reviewed those documents that address evidence of mule deer and bighorn sheep on or near the property proposed for the development of the project known as the Blythe Solar Power Project (“Project”) in eastern Riverside County. It is my opinion that the aforementioned documents have inadequately portrayed the potential importance of the location to two species of large mammals, bighorn sheep and mule deer, that occur in the area. Further, they have not addressed the impacts of the Project in the context of a potential effort to reestablish pronghorn in a geographic area that evidence indicates formerly was occupied by that species. My *curriculum vitae* is included with my opening testimony.

My rebuttal testimony the aforementioned documents, including the Applicant’s opening testimony pertaining to mule deer and bighorn sheep, dated June 11, 2010.

II. The Lack of Detection of Nelson’s Bighorn Sheep in the McCoy Mountains During Aerial Surveys for the Golden Eagle is Not Evidence of their Absence from the Project Impact Area

In opening testimony, the Applicant notes that the Revised Staff Assessment concluded that bighorn sheep are unlikely to use the Project Site or the McCoy Mountains, citing “... consultation with local experts and agency resource staff.”¹ This conclusion is overstated, at best. Among factors contributing to visibility bias are group size (of the animals being surveyed),² type of terrain,³ activity of the animals,⁴ percent vegetative cover,⁵ and survey intensity.⁶ As explained in my opening testimony, bighorn sheep and other large mammals are difficult to see from the air, even by skilled and experienced observers conducting surveys focused exclusively on large ungulates.⁷ Furthermore, a large proportion of animals available to be seen during any given survey is generally missed.⁸ The fact that bighorn sheep were not detected in the McCoy Mountains during aerial surveys for the Golden Eagle is not evidence of absence,⁹ particularly because the aforementioned aerial surveys were conducted to locate Golden Eagle aeries, and not specifically to search for bighorn sheep. Indeed, the Applicant states that, “PVSI conducted the eagle surveys as required by the agencies during the breeding season of 2010 to verify presence/absence within a 10-mile radius of the project and evaluate

¹ Palo Verde Solar I Opening Testimony, p. 34

² Bleich, V. C., C. S. Y. Chun, R. W. Anthes, T. E. Evans, and J. K. Fischer. 2001. Visibility bias and development of a sightability model for tule elk. *Alces* 37:315-327.

³ Bodie, W. L., E. O. Garton, E. R. Taylor, and M. McCoy. 1995. A sightability model for bighorn sheep in canyon habitat. *Journal of Wildlife Management* 59:832-840.

⁴ Bleich, V. C., C. S. Y. Chun, R. W. Anthes, T. E. Evans, and J. K. Fischer. 2001. Visibility bias and development of a sightability model for tule elk. *Alces* 37:315-327.

⁵ Gasaway, W. C., S. D. DuBois, D. J. Reed, and S. J. Harbo. 1986. Estimating moose population parameters from aerial survey. *Biological Papers of the University of Alaska* 22:1-108.

⁶ Wehausen, J. D., and V. C. Bleich. 2007. The effect of survey intensity on bighorn sheep helicopter counts. *Desert Bighorn Council Transactions* 49:23-29.

⁷ Testimony of Vernon C. Bleich on Behalf Of California Unions for Reliable Energy for the Blythe Solar Power Project, June 11, 2010, p. 5.

⁸ *Id.*

⁹ See Palo Verde Solar I Opening Testimony, p. 34

potential eagle nesting foraging [*sic*] habitat.”¹⁰ Those flights were not focused bighorn sheep surveys; rather, observations of bighorn sheep were recorded opportunistically as they were encountered.¹¹

Further, bighorn sheep aerial surveys normally are conducted during periods of sexual aggregation (i.e., summer and fall – not spring) when group sizes are larger than at other times of the year.¹² Group size and distribution are influenced by season^{13, 14} because of the influence of rainfall on forage conditions in arid and highly variable environments¹⁵ such as those near the Project site. Although the Applicant reportedly observed bighorn sheep “... in other desert mountain ranges further west...”¹⁶ that result does not ensure that bighorn sheep were not present in the McCoy Mountains during the aforementioned survey. In my opinion, the fact that no bighorn sheep were observed in the McCoy Mountains during an aerial search for Golden Eagle aeries is not surprising, and cannot be considered evidence that bighorn sheep are absent from that range.

Mitigation for impacts is warranted and appropriate, for the reasons stated in my opening testimony, and given the likelihood that bighorn sheep inhabiting the mountains around Blythe range across a broad geographic area.¹⁷ Bighorn sheep occupying extremely arid regions may be able to do so because they are able to move freely to travel widely in order to take advantage of seasonally available resources necessary to meet their life-history requirements.^{18, 19} Indeed, bighorn sheep inhabiting other harsh and arid ecosystems, characteristics that aptly describe conditions in the vicinity of the proposed Project, have home ranges that averaged 22 square miles in size.²⁰ As I point out in my opening testimony, resources – including forage and water which are necessary for bighorn sheep to meet their life-history requirements – likely are more widely dispersed in eastern Riverside County where the proposed Project is located than on the western edge of Death Valley.²¹ There, home ranges averaged 22 square miles in size.²²

¹⁰ Palo Verde Solar I Opening Testimony, p. 36

¹¹ G. P. Mulcahy, California Department of Fish and Game, personal communication on 2 June 2010.

¹² Bleich, V. C., R. T. Bowyer, and J. D. Wehausen. 1997. Sexual segregation in mountain sheep: resources or predation. *Wildlife Monographs* 134:1-50.

¹³ Bleich, V. C., R. T. Bowyer, and J. D. Wehausen. 1997. Sexual segregation in mountain sheep: resources or predation. *Wildlife Monographs* 134:1-50.

¹⁴ Wehausen, J. D., and V. C. Bleich. 2007. The effect of survey intensity on bighorn sheep helicopter counts. *Desert Bighorn Council Transactions* 49:23-29.

¹⁵ Wehausen, J. D. 2005. Nutrient predictability, birthing seasons, and lamb recruitment for desert bighorn sheep. Pp. 37-50 in J. Goerrissen and J. M. Andre, editors. *Sweeney Granite Mountains Desert Research Center 1978-2003. A Quarter Century of Research and Teaching.* University of California Natural Reserve System, Riverside, California, USA.

¹⁶ Palo Verde Solar I Opening Testimony, p. 34

¹⁷ See Testimony of Vernon C. Bleich on Behalf Of California Unions for Reliable Energy for the Blythe Solar Power Project, June 11, 2010, p. 12; *see also*

¹⁸ G. W. Sudmeier, Society for the Conservation of Bighorn Sheep, personal communication on 1 June 2010.

¹⁹ G. P. Mulcahy, California Department of Fish and Game, personal communication on 2 June 2010.

²⁰ Oehler, M. W., Sr., R. T. Bowyer, and V. C. Bleich. 2003. Home ranges of female mountain sheep, *Ovis canadensis nelsoni*: effects of precipitation in a desert ecosystem. *Mammalia* 67:385-401.

²¹ Testimony of Vernon C. Bleich on Behalf Of California Unions for Reliable Energy for the Blythe Solar Power Project, June 11, 2010, p. 12.

²² Oehler, M. W., Sr., R. T. Bowyer, and V. C. Bleich. 2003. Home ranges of female mountain sheep, *Ovis canadensis nelsoni*: effects of precipitation in a desert ecosystem. *Mammalia* 67:385-401.

III. The Applicant Cites to No Support for the Contention that the Creation of a Water Source for the Nelson's Bighorn Sheep Would Adversely Impact the Species

Applicant states that, “in addition, addition of an artificial water source could likely have more significant adverse impacts. It would create dependency of a population of sheep on an artificial water source”²³ The Applicant attempts to lead the reader to believe that dependency of a population of sheep on an artificial water source is a bad thing, and would exacerbate any challenges with which bighorn sheep in the Project area are faced. Bighorn sheep are dependent upon water during the hottest times of the year²⁴ and water sources are commonly developed in efforts to conserve bighorn sheep.²⁵ The notion that bighorn sheep dependent on an artificial water source is somehow an onerous situation does not withstand scrutiny. Indeed, the Applicant cites to no facts to support its argument. Similarly, the argument that an artificial water source “...could affect population dynamics in an unnatural way”²⁶ is spurious and without support. What is not spurious, however, is the fact that bighorn sheep inhabiting “... the mountains around Blythe”²⁷ will be impacted by development of the proposed Project.

IV. Prior Studies Show that Raven Populations Occur Only Infrequently at Wildlife Water Developments

The Applicant also asserts that mitigation in the form of water development will create “... a potential new subsidy for ravens that could negatively affect desert tortoise by increasing this predatory species.”²⁸ Raven populations are strongly influenced by, and associated with, development of roads and linear rights of way, urbanization, and agriculture.^{29, 30, 31} There is a positive linear relationship between density of rights of way and raven populations, and road density and the type of road likely influence raven density.³² Major highways have a strong influence on distribution of ravens because there is more traffic and more carrion along major highways than on secondary roads.³³ The positive relationship between raven density and major highways, transmission lines, and linear facilities likely exists because roads, transmission lines, power lines, and railroads provide sources of food, grit, and locations for nesting and perching.³⁴

²³ Palo Verde Solar I Opening Testimony, p. 34

²⁴ Turner, J. C. 1973. Water, energy and electrolyte balance in the desert bighorn sheep, *Ovis canadensis*. Ph.D. Thesis, Univ. California, Riverside.

²⁵ Dolan, B. F. 2006. Water developments and desert bighorn sheep: implications for conservation. *Wildlife Society Bulletin* 34:642-646.

²⁶ Palo Verde Solar I Opening Testimony, p. 34

²⁷ Response to CEC Staff Data Request, Biological Resources AFC Section 5.3, p. BIO-50.

²⁸ Palo Verde Solar I Opening Testimony, p. 34

²⁹ Knight, R. L., R. J. Camp, W. I. Boarman, and H. A. L. Knight. 1999. Predatory bird populations in the east Mojave Desert, California. *Great Basin Naturalist* 59:331-338.

³⁰ Knight, R. L., H. A. L. Knight, and R. J. Camp. 1993. Raven populations and land use patterns in the Mojave Desert, California. *Wildlife Society Bulletin* 21:469-471.

³¹ Kristan, W. B., and W. I. Boarman. 2002. Spatial pattern of risk of common raven predation on desert tortoises. *Ecology* 84:2432-2443.

³² Knight, R. L., R. J. Camp, W. I. Boarman, and H. A. L. Knight. 1999. Raven populations and land use patterns in the Mojave Desert. *Great Basin Naturalist* 59:331-338.

³³ Austin, G. T. 1971. Roadside distribution of the common raven in the Mojave Desert. *California Birds* 2:98.

³⁴ Boarman, W. I., M. A. Patten, R. J. Camp, and S. J. Collis. 2006. Ecology of a population of subsidized predators: common ravens in the central Mojave Desert. *Journal of Arid Environments* 67:248-261.

^{35, 36} The development of a water source does not require the construction of a transmission line, or even a road. Such sites would be visited by trained personnel approximately twice annually for maintenance purposes.³⁷ Consistent with this, ravens have been documented to occur only infrequently at wildlife water developments in the Sonoran Desert (a total of 270 visits by ravens in nearly 38,000 hours of observation).³⁸ Therefore, the Applicant's supposition that the development of a wildlife water source in the McCoy Mountains would increase predation upon desert tortoises by raven populations is unfounded and should be rejected.

³⁵ Knight, R. L., H. A. L. Knight, and R. J. Camp. 1993. Raven populations and land use patterns in the Mojave Desert, California. *Wildlife Society Bulletin* 21:469-471.

³⁶ Knight, R. L., R. J. Camp, W. I. Boarman, and H. A. L. Knight. 1999. Predatory bird populations in the east Mohave Desert, California. *Great Basin Naturalist* 59:331-338.

³⁷ Bleich, V. C., and A. M. Pauli. 1990. Mechanical evaluation of artificial water devices built for mountain sheep in California. Pp. 65-72 in G. K. Tsukamoto and S. J. Stiver, editors. *Wildlife water development*. The Wildlife Society, U.S. Bureau of Land Management, and Nevada Department of Wildlife, Reno, Nevada.

³⁸ O'Brien, C. S., R. B. Waddell, S. S. Rosenstock, and M. J. Rabe. 2006. Wildlife use of water catchments in southwestern Arizona. *Wildlife Society Bulletin* 34:582-591.

DECLARATION OF VERNON C. BLEICH
BLYTHE SOLAR POWER PROJECT
09-AFC-6

I, Vernon C. Bleich, declare as follows:

1. I recently retired from the California Department of Fish and Game, where I worked extensively and primarily with large mammals in the arid ecosystems that characterize eastern and southeastern California. As a private citizen, I currently offer expertise with respect to natural resource conservation issues.
2. I hold an M.A. degree in biology and a Ph.D. in wildlife biology. My relevant professional qualifications and experience are set forth in the attached curriculum vitae and the attached testimony, and are incorporated herein by reference.
3. I prepared the testimony attached hereto and incorporated herein by reference as it relates to the Staff Assessment/Draft Environmental Impact Statement prepared for the project known as the Blythe Solar Power Project in Riverside County.
4. It is my professional opinion that the attached testimony is true and accurate.
5. I am personally familiar with the facts and conclusions described within the attached testimony and if called as a witness, I could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Executed on June 15, 2010, at DICKINSON, ND.



Vernon C. Bleich

DECLARATION OF SERVICE
Blythe Solar Power Plant Project

Docket No. 09-AFC-6

I, Bonnie Heeley, declare that on June 16, 2010, I served and filed copies of the attached **REBUTTAL TESTIMONY OF VERNON C. BLEICH ON BEHALF OF CALIFORNIA UNIONS FOR RELIABLE ENERGY FOR THE BLYTHE SOLAR POWER PROJECT** dated June 15, 2010. The original document, filed with the Docket Office, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:

http://www.energy.ca.gov/sitingcases/solar_millennium_blythe/index.html.

The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Office via email and U.S. mail as addressed below:

CALIFORNIA ENERGY COMMISSION

Attn: Docket No. 09-AFC-6
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.
Executed at South San Francisco, California on June 16, 2010.

/S/

Bonnie Heeley

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