

CALIFORNIA ENERGY COMMISSION1516 NINTH STREET
SACRAMENTO, CA 95814-5512Main website: www.energy.ca.gov**DEPARTMENT OF FISH AND GAME**1416 NINTH STREET
SACRAMENTO, CA 95814Main website: www.dfg.ca.gov

April 29, 2011

Ms. Linda Resseguie, Project Manager
BLM Draft Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue – EVS/240
Argonne, Illinois 60439

Dear Ms. Resseguie:

The California Energy Commission (Energy Commission) and the California Department of Fish and Game (Fish and Game) (or collectively, “the Agencies”) appreciate this opportunity to comment on the Draft DOE-BLM Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States (Solar DPEIS or DPEIS) announced in the December 17th, 2010 *Federal Register* Notice of Availability. The Energy Commission and Fish and Game have participated in the scoping process for the Solar DPEIS, and have been cooperating agencies during the development of the DPEIS. The Energy Commission led the California Interagency Working Group for the Solar DPEIS, and Fish and Game has participated jointly with the Energy Commission in these efforts. Our comments here are limited to the California portion(s) of the Solar DPEIS.

The Renewable Energy Action Team (REAT) Agencies, which include the United States Fish and Wildlife Service, the United States Bureau of Land Management (BLM), the Energy Commission, and Fish and Game, have also initiated development of the Desert Renewable Energy Conservation Plan (DRECP or Plan) to accelerate the permitting and development of new renewable energy projects, while conserving natural communities, and associated species and their habitats. We offer these comments to promote and enhance the ongoing synergies between state and federal efforts.

BACKGROUND

The DRECP is intended to result in an efficient and effective biological mitigation and conservation program providing renewable energy project proponents with permit timing and cost certainty under the federal (ESA) and California Endangered Species Acts (CESA) while preserving, restoring and enhancing natural communities and ecosystems that support covered species within the DRECP Plan Area. The DRECP encompasses more than 22,587,000 acres in a seven-county area. All of the lands within the DPEIS are within the Plan

Area boundary. A program-level Environmental Impact Report will be prepared to comply with the California Environmental Quality Act (CEQA), which will accompany the DRECP as it undergoes final public review and moves toward formal adoption. The REAT Agencies are parties to the DRECP Planning Agreement. The creation of the DRECP was mandated in California by Executive Order S-14-08, and reinforced by the Secretary of Interior's Secretarial Order 3285 (March 2009). A Memorandum of Understanding on Renewable Energy between the State of California and the Department of Interior signed by Governor Schwarzenegger and Department of Interior Secretary Salazar merges the work efforts of both orders and provided an impetus for the DRECP Planning Agreement (May 2010).

Participation by the U.S. Fish and Wildlife Service will contribute to efficiencies under the federal ESA. The commitment to use the DRECP process as a basis for amending BLM land use plans introduces additional siting and permitting benefits. The DRECP is to be a Natural Community Conservation Plan under the California Natural Community Conservation Planning Act (NCCPA) and a Habitat Conservation Plan under the ESA. In its simplest form, the DRECP will identify areas for renewable energy generation and transmission facility development and create a network of biological conservation areas providing benefits to covered species and their habitats found in the Plan Area.

Because of the primacy of the DRECP in all of the resource planning for renewable energy in the California desert, our comments are necessarily in the context of the potential for the DPEIS and the DRECP planning effort to be mutually reinforcing.

The Energy Commission and Fish and Game review of BLM's DPEIS for solar energy development have identified the following issues. Also, the Agencies have noted that many of the specific technical comments we provided in July, 2010 have not been adequately incorporated to the current draft, and the current draft brings up new issues meriting comment. Attached for your consideration are specific technical comments prepared by the Energy Commission and Fish and Game (Attachment 6).

GENERAL COMMENTS

Proposed Solar Energy Zones

All four proposed solar energy zones (SEZs) in the preferred and SEZ only alternatives in California are within the geographic planning boundary of the DRECP. The initial proposed study areas were co-located with selected Competitive Renewable Energy Zones (CREZs) from the Renewable Energy Transmission Initiative (RETI):

- Imperial East Solar Energy Zone
- Iron Mountain Solar Energy Zone
- Pisgah Solar Energy Zone
- Riverside East Solar Energy Zone

We appreciate BLM's inclusion of these CREZs in the solar energy zones and the linkage this creates between our State and federal efforts. Differences between a CREZ area and the solar energy study area are due, in part, to land ownership/management responsibility; only BLM-managed lands were included in the proposed solar energy study areas. As a result, blocks of land within a solar energy study area have been excluded because they are privately owned or managed by the California State Lands Commission, as have adjacent private lands potentially suitable for solar and other renewable energy development. We believe this fact will limit the effectiveness of the Solar PEIS in facilitating renewable energy development in California since projects located on adjoining private land may not be able to tier-off the document to assist with CEQA compliance. In addition, the transmission line routes, which are necessary to move power from generation facilities to the load centers, have been excluded.

In general, the Energy Commission and Fish and Game support designation of three of the four Solar Energy Zones in their reduced acreage configurations, as preferred for solar development in California. Support for designation of the Imperial East Solar Energy Zone, Pisgah Solar Energy Zone, and Riverside East Solar Energy Zone is further based on the judicious application of the Policies, Design Features, and the Potentially Applicable Mitigation Measures as identified in Chapter 5 of the DPEIS.

The Energy Commission and Fish and Game have commented previously and continue to recommend that the Iron Mountain Solar Study Area, and now Solar Energy Zone, be eliminated from further consideration. This recommendation is based upon its remote location in the Eastern Mojave, which contradicts a preference for development to occur first in areas that have already been impacted and avoiding, wherever possible, undisturbed and remote areas, and to preserve the high conservation value of the public lands in this area. This includes value for wildlife habitat connectivity. The Agencies, as a matter of policy, would like to encourage the development of additional renewable energy facilities in the Western Mojave, to the extent feasible, because of its location closer to load centers, and often in closer proximity to existing and upgradable transmission line infrastructure. There appear to be some areas of the Iron Mountain Solar Energy Zone that may be suitable for development. If the BLM were to continue consideration of the Iron Mountain Solar Energy Zone, the Agencies recommend deferring a decision on configuration of such a site to the DRECP process or at a minimum to a separate federal designation process completed in conjunction with, and consistent with, the DRECP planning effort.

Designation of Other Areas for Solar Development

The currently identified preferred alternative in the PEIS includes the identified SEZ's (approximately 339,000 acres), plus an additional area that exceeds 1,766,000 suitable for solar outside of the SEZ. To date, the DRECP planning effort in California has recognized and included the PEIS identified SEZ (with the exception of Iron Mountain) in its evaluation of potential development areas, and has identified lands adjacent to these SEZ that may also be suitable for renewable development.

The Agencies have been providing comments since 2009 on earlier iterations of the DPEIS. Most recently, we provided extensive comments on Chapter 7 of the preliminary PDEIS. At that time, we had not been made aware that the SEZ alternative was not in fact the preferred alternative, and accordingly we focused all of our comments on specific issues with the four SEZs. In those earlier joint comments, the agencies provided maps and information that were available to us at the time that indicated areas that we believed should receive additional consideration for solar energy development. These areas were not added to the four SEZs that appeared in the Preliminary Solar PEIS.

The review of this Solar DPEIS is first opportunity the Agencies have had to review the "other areas", which actually comprise more than 80% of the overall Solar Development Area of the preferred alternative, that are identified in the DPEIS. In contrast to Chapter 9, which provided detailed analysis of the SEZs with site-specificity, these areas do not have the level of detail necessary to provide meaningful comment and analysis of the impacts of the potential development. On review, it appears that while some of the identified areas may be suitable for solar energy development, other of these areas could be in conflict with lands that have high wildlife value and are being considered in the DRECP for potential conservation through additional protection or management actions.

Our concerns about the potential conflicts between preliminarily identified conservation opportunities for the DRECP and the Solar Energy Program (preferred alternative) of the PEIS are depicted in the attached maps 1-3 (Attachments 1, 2 and 3), in which the BLM lands emphasized for solar energy facility development are shown within the DRECP Area. Biological information, based on GIS layers that Fish and Game is contributing to the preliminary DRECP conservation framework, is also shown. An explanation for each of the five layers accompanies the attached maps (Attachment 4). Overlap of these layers with the Solar PEIS preferred alternative's lands indicates a potential conflict between the conservation planning efforts of the DRECP and the Solar PEIS preferred alternative designation of those lands as emphasized for development. Overlap of four of these layers with the BLM Solar Energy Program areas appears significant. While the bighorn sheep range layers do not show a high level of overlap, the proximity of these active ranges (see inset in Map 2, or vicinity near the Pisgah SEZ) to the BLM Solar Energy Program lands is cause for concern, as connectivity between these ranges is important for the viability of bighorn sheep populations.

The analyses the REAT Agencies have initiated for the overall DRECP Conservation Strategy will be more detailed than those in the Solar DPEIS. The Agencies recommend deferring a decision on the initiation of BLM land use plan amendments for the lands identified that are outside of the SEZs, or not including these additional lands in the NEPA preferred alternative, pending further analysis associated with the DRECP Planning effort.

Integration of the Solar PEIS and the DRECP in California

The DRECP Planning effort is scheduled to be complete in 2012 and is moving forward on schedule with the hard work and collaboration of the Agencies, BLM and USFWS. One of the next DRECP products will be an initial focused conservation strategy in the June 2011

timeframe which will include maps of areas with lower biological value. This will provide an indication of the areas that are potentially suitable for renewable energy development, and will include both public and private lands. As noted above, the Agencies' initial comparison of vegetation, individual species occurrence data, and wildlife habitat connectivity data to be used in the preliminary conservation analysis for the DRECP with the areas proposed in the preferred alternative of the DPEIS indicates substantial conflicts.

For the future designation of additional solar or other renewable energy zones, the Agencies recommend a joint state/federal approach that would address the designation of private land areas directly adjacent to some of the identified SEZ on public lands, and considers the addition of new SEZs in the Western Mojave. This approach would provide a larger area to consider for potential renewable energy development in California, and would help to redirect the siting of projects from high value public lands to relatively more disturbed private lands. For the desert areas of California, the DRECP planning effort is the appropriate vehicle to facilitate future SEZ designations, and the DRECP, with the ongoing and focused involvement of the BLM California Office, will contribute to resolving outstanding solar energy siting issues.

As a starting point for the designation of additional solar energy zones, the specific areas identified in our joint comment letter on the proposed solar energy study areas, dated September 14, 2009, remain viable for consideration (copy attached as Attachment 5), with the caveat that the more recent GIS analysis we provide in Attachments 1-4 is considered. An exception is the case of the Pisgah SEZ, in which the results of our analysis and the permitted project development in its vicinity indicate that expansion we called for in the 2009 letter of the Pisgah SEZ boundary directly to the north and west could impact sensitive areas or the conservation targets of the DRECP. Direct conflicts between solar project development and resource values in the recommended area of expansion of the Pisgah SEZ area to the west, which is bisected by Interstate 15 and includes disturbed lands, could be minimized if the boundary is developed in collaboration with the REAT partner process. However, as indicated in the attached maps, expansion to the north could directly impair habitat connectivity and impact areas of high conservation value. The GIS analysis, and our comments in Attachment 6, underscore our concern that siting of individual projects, whether in the proposed SEZ complex or any other future administrative configuration, always consider habitat and range connectivity, and the cumulative impacts of solar installations on those resource elements.

The BLM California Office has committed to and has initiated scoping for a California Desert Conservation Area (CDCA) amendment that would allow BLM to consider plan amendments for recommending additional conservation and development that align with the DRECP and the DRECP Conservation Strategy. We anticipate that land-use plan amendment processes would occur in 2013 or early 2014 upon completion of the DRECP. It would therefore seem redundant to initiate specific land use plan amendments in California upon completion on the Solar PEIS and prior to completion of the DRECP, as the completion of the DRECP would most certainly then trigger further amendments and/or changes to proposed or recently adopted amendments in the subsequent CDCA land use amendment process.

Ms. Linda Resseguie, Project Manager

May 2, 2011

Page 6

As California-specific issues were not fully addressed or were considered outside the scope of the Solar PEIS, it is recommended that whichever Solar PEIS alternative is eventually adopted, its implementation is closely coordinated with DRECP development and implementation, through the BLM California Office's direct participation in the REAT.

In closing, the Agencies thank you for the opportunity to comment on the DPEIS. The State of California values the standing and ongoing partnership with the federal agencies and individuals who participate with the REAT, and with the Department of the Interior. The Agencies remain committed to work with BLM and the California Office of the BLM, to coordinate our joint planning processes and efforts to responsibly and efficiently site and permit renewable energy facilities in appropriate locations in California.

Sincerely,

Original signed by

ROBERT B. WEISENMILLER, Ph.D.
Chairman
California Energy Commission

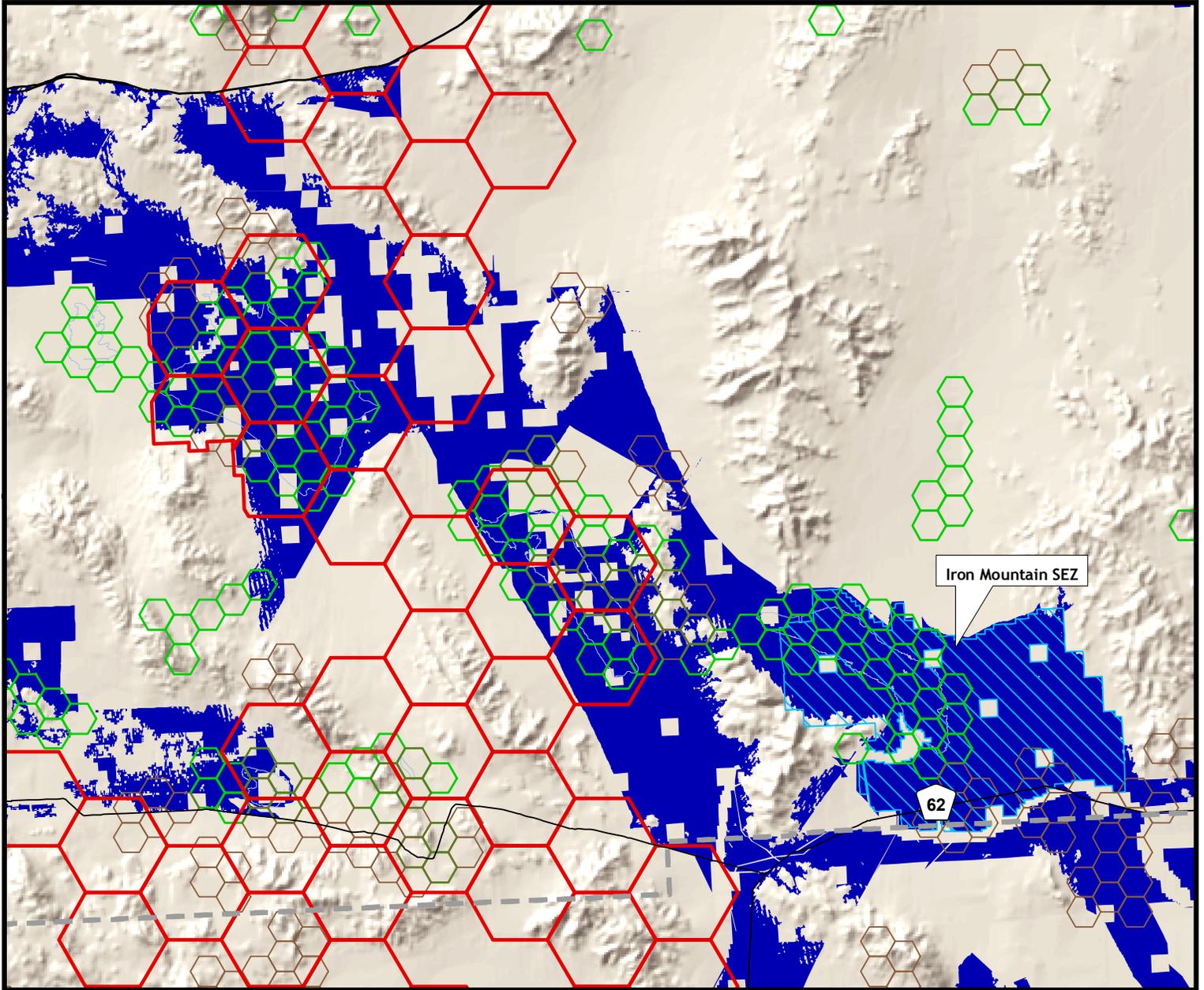
Original signed by

KEVIN W. HUNTING
Chief Deputy Director
California Department of Fish and Game

cc: Jim Abbott, CA BLM
Darrin Thome, USFWS

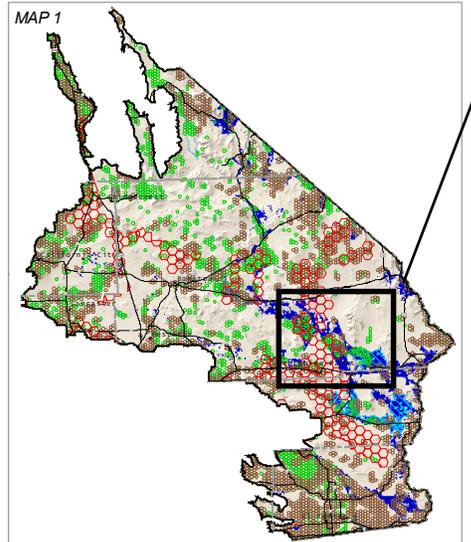
Enclosures

BLM Solar DPEIS Solar Development Areas within the Desert Renewable Conservation Plan (DRECP) Area: Potential Conflicts With Priority Mitigation Lands, Sensitive Habitats and Areas of Rare Species Richness

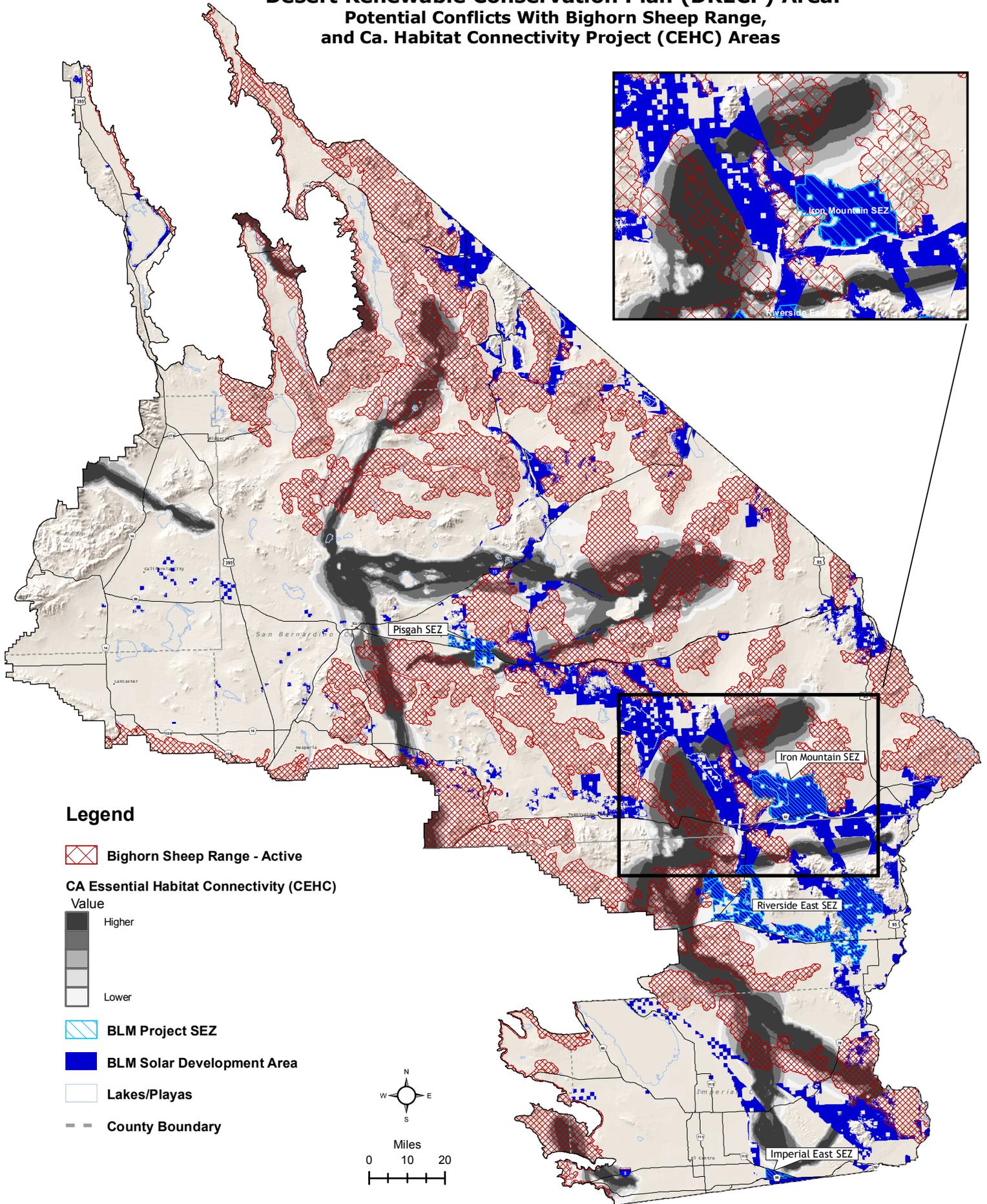


Legend

- Mitigation Areas
- Areas of Conservation Emphasis (ACE)**
- Sensitive Habitats**
- Riparian, Wetland or Rare Natural Comm.
- Rare Species Richness (as Rarity-weighted Ranks)**
- Ranks 3-5 (Mid-High)
- BLM Project SEZ
- BLM Solar Development Area
- Lakes/Playas
- County Boundary



BLM Solar DPEIS Solar Development Areas within the Desert Renewable Conservation Plan (DRECP) Area: Potential Conflicts With Bighorn Sheep Range, and Ca. Habitat Connectivity Project (CEHC) Areas



ATTACHMENT 4

Explanation of Information Depicted in Maps 1-3

Maps 1-2

1. Mitigation Areas (red hexagons)

(From *Interim Mitigation Strategy [IMS] As Required by SB X8 34* by California Department of Fish and Game, September 2010, available at <http://www.drecp.org/documents/>. Literature cited in the following discussion is presented on page 29 of the IMS).

Mitigation Target Areas (MTAs, “Mitigation Areas” on maps 1 and 2) were developed by the California Department of Fish and Game (CDFG) for the Interim Mitigation Strategy (IMS), a statutory requirement for the implementation of the Desert Renewable Energy Conservation Plan (DRECP). The MTAs are an identification of generalized target sub-areas for initial priority acquisition under the IMS. The MTAs were developed through collaboration between desert land trust experts, BLM staff, and CDFG biologists. These sub-areas were known to contain high-quality habitat with parcels that may potentially be available for acquisition under the provisions of sections 2069, 2099 and 2099.5 of the Fish and Game Code). The selected MTAs are intended only for habitat acquisition under the provisions of these Code sections and do not necessarily correspond with mitigation areas yet to be defined after more detailed analyses under the DRECP Conservation Strategy. However, it is anticipated that the DRECP Conservation Strategy conservation areas will include portions of the areas designated here as IMS MTAs.

The MTAs were developed using ArcGIS 9.3. The sub-regions were selected using 25-square-mile hexagons, which is one of the methods used to display composite spatial data by CDFG - e.g., Bird Species of Special Concern data (WFO 2008). To identify appropriate MTAs within these sub-regions, the areas were further refined using a standardized, sequential comparison with a series of GIS data layers to select the hexagons with the highest conservation value. The process included examination of the following data:

Hexagons that intersected at least one of the following GIS layers were retained:

1. Areas of Conservation Emphasis II (ACE II) - The DRECP includes portions of the ACE II ecoregions: Mojave, Sonoran, and Colorado Deserts, Sierra Nevada, and Southern California Mountains and Valleys. Areas with the highest biological value were retained.
2. California Essential Connectivity Areas (CEHC).
3. Potentially available lands for conservation - hexagons with unclassified or State-owned lands in BLM's Federal and State Surface Estate layer were retained.
4. Mohave ground squirrel core areas and corridors.
5. Active Bighorn sheep range.
6. California Condor final critical habitat and historic range.
7. Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP)
8. BLM Areas of Critical Environmental Concern (ACEC), Desert Wildlife Management Areas (DWMA).
9. BLM Wildlife Habitat Management Areas (WHMA): dunes and playas, dry wash woodlands, bighorn sheep, and multiple-species.
10. USFWS Critical Wildlife Habitat: arroyo toad (USFWS 2005), California condor (1974), Coachella Valley fringe-toed lizard (USFWS 1980), desert tortoise (USFWS 1994), and Peninsular

bighorn sheep (USFWS 2009)

11. TNC Ecologically Essential Habitat - Ecologically Essential and Ecologically Intact areas were retained.

12. Biological input from CDFG and USFWS staff.

Hexagons were dropped that overlapped entirely with the following:

13. Fully protected lands (Black and Veatch 2008).

14. Military lands; hexagons were cropped at military land boundaries

15. CDFG owned lands

Hexagons were also examined against known proposed renewable energy projects. Depending on the area, hexagons were dropped if they overlapped more than 50% with proposed solar projects, BLM Solar Energy Zones, and proposed wind energy projects. Due to the scale size of the hexagons i.e. 25 square miles, some hexagons were retained even though they had more than a 50% renewable energy project footprint if there were no other options to maintain connectivity or reduce fragmentation for target CESA Listed and Candidate Species. Acquisition immediately adjacent to renewable energy projects may be appropriate in some cases, and will be approved by CDFG on a case-by-case basis. The following layers were examined:

16. Solar Energy Study Areas for the Bureau of Land Management (BLM 2009).

17. Renewable Energy Project Applications in California (BLM 2010).

18. Competitive Renewable Energy Zones (CREZ) (CEC 2010).

19. Solar Projects (CEC 2010).

20. Wind Projects (CEC 2010).

21. Department of Fish and Game Renewable Energy Project Applications (CDFG 2010).

Within the resulting areas, individual parcels will be evaluated for potential value as mitigation for target CESA Listed and Candidate Species. Acquisition/restoration/enhancement areas will be further refined and prioritized for desert tortoise using the USFWS's desert tortoise spatial decision support system.

2. Areas of Conservation Emphasis (ACE) Sensitive Habitats (green hexagons)

CDFG mapped sensitive habitats by 2.5 square mile hexagon grid statewide, for the Areas of Conservation Emphasis – II project. Sensitive habitats included riparian, wetland, and rare natural communities. Dataset shows presence or absence of each sensitive habitat type per hexagon, but does not rank hexagons by sensitive habitat extent or quality.

Wetland types include palustrine, estuarine, lakes and ponds. Presence of vernal pools and flooded agriculture also separately denoted.

3. Areas of Conservation Emphasis (ACE) Rarity-weighted Species Richness (brown hexagons)

CDFG mapped rarity-weighted richness (RWI) by 2.5-square-mile hexagons for the Areas of Conservation Emphasis – II project. RWI is based on CNDDDB presumed extant occurrences (as of July 2009); additional museum records from the California Academy of Sciences, the Museum of Vertebrate Zoology at UC Berkeley, and the Consortium of California Herbaria (records from 1999-2009 only); and additional CDFG datasets (BIOS, other CDFG regional and Headquarters branch

data). Special status species included in RWI calculations included all State- and Federally-listed or Candidate species, CDFG species of special concern, CDFG fully-protected species, and CNPS List 1B and List 2 plants.

All documented and presumed extant occurrences with accuracy ± 1 mile or better were included to incorporate as many known occurrences as possible, and a 1-mile buffer was added to all occurrence points and polygons to standardize accuracy. Any hexagon with $>5\%$ area covered by a buffered documented occurrence was considered a presence.

Rarity-weighted species richness is a metric of "irreplaceability" based on the presence of special status species weighted by their degree of rarity. Areas with a high RWI support rare species with few documented occurrences; these areas would be expected to support unique habitats or suites of species that are limited in distribution and likely of high conservation concern. The RWI was calculated by taking the inverse of the number of hexagons occupied by each rare taxon ($RWI = \text{Sum of } [1/\# \text{ hexes per taxon}]$), so that taxa with the smallest distributions have the largest values. All RWI values were then summed per hexagon by taxonomic group. Data for each taxonomic group were normalized separately to give each taxonomic group equal weight (maximum value of 1). The normalized values were summed to determine total rarity-weighted richness. Index values are ranked into five classes using Jenks Natural Breaks Optimization method. For the examination of the overlap between areas with a high RWI, only the top three classes (3-5) are shown.

Verified species occurrences mapped by CNDDDB and museum data tend to be spatially biased toward areas with high levels of survey effort, which may result in particularly high rare species richness values in well-surveyed areas. Conversely, surveys have not been conducted in a comprehensive and consistent manner across the entire landscape, and current maps of verified rare species occurrences are expected to have high rates of omission. For this reason, counts of rare species richness would be expected to be underestimates in some hexagons, particularly those for which no survey data are available. Furthermore, RWI values may be biased by level of survey effort for certain species or in certain areas of the State. Rarity-weighted richness best represents the "irreplaceability" of areas supporting narrow-ranging species and habitats. Wide-ranging species that are rare within their range would have low RWI values although they may be of high conservation concern. A separate metric should be used to identify the areas of highest concern for wide-ranging species.

The ACE-II project report is currently in preparation for public release, but additional details are available upon request.

Map 3

4. Active Bighorn Sheep Range (red cross-hatch layer)

Active Bighorn sheep ranges, 2009, CDFG unpublished data.

5. California Essential Habitat Connectivity (light to dark polygons)

The California Department of Transportation (Caltrans) and CDFG commissioned the California Essential Habitat Connectivity Project because a functional network of connected wildlands is essential to the continued support of California's diverse natural communities in the face of human development and climate change.

The layer used in Map 3 depicts areas essential for ecological connectivity between them (Essential Connectivity Areas). This coarse-scale map was based primarily on the concept of ecological integrity, rather than the needs of particular species. Essential Connectivity Areas are placeholder polygons that can inform land-planning efforts. It is important to recognize that even areas outside of Natural Landscape Blocks and Essential Connectivity Areas support important ecological values that should not be dismissed as lacking conservation value. Furthermore, because the Essential Habitat Connectivity Map was created at the statewide scale, based on available statewide data layers, and ignored Natural Landscape Blocks smaller than 2,000 acres, it has errors of omission that should be addressed at regional and local scales

Due to the broad, statewide nature of the CEHC map, and its focus on connecting very large blocks of mostly protected natural lands, the network omits many areas that are important to biological conservation. The purpose of the map is to focus attention on large areas important to maintaining ecological integrity at the broadest scale. Natural areas excluded from this broad-brush Essential Connectivity Network should not be deemed as unimportant to connectivity conservation or to sustaining California's natural heritage.

Supplementary information: http://www.dot.ca.gov/hq/env/bio/program_efforts.htm

CALIFORNIA ENERGY COMMISSION

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September 14, 2009

Ms. Linda Resseguie, Project Manager, BLM
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Dear Ms. Resseguie:

The California Energy Commission (Energy Commission) and the California Department of Fish and Game (Fish and Game) appreciate this opportunity to comment on the solar energy study areas announced in the June 30, 2009 *Federal Register* Notice of Availability. In the solar programmatic environmental impact statement (Solar PEIS), these study areas will be analyzed in depth for significant environmental impacts and economic viability. The results of this analysis will then be used to designate solar energy zones in which large-scale solar energy generating facilities would receive priority for accelerated siting and permit processing.

California has also initiated planning efforts to accelerate the permitting and development of new renewable energy projects, while protecting sensitive wildlife habitat. We offer these comments to improve the synergies between state and federal efforts.

In November 2008, Governor Schwarzenegger issued a renewable energy executive order¹ directing the California Natural Resources Agency to lead state-agency efforts to facilitate environmental permitting of Renewable Portfolio Standard-eligible energy projects located in the Mojave and Colorado Desert regions of California. The Energy Commission and Fish and Game have been working closely with the Bureau of Land Management (BLM) California Office and U.S. Fish and Wildlife Service (USFWS) Region 8 to implement this executive order.

¹ Executive Order S-14-08, See <http://gov.ca.gov/executive-order/11072/>.

One implementation activity will be to prepare a Desert Renewable Energy Conservation Plan (DRECP), which will identify areas where renewable energy development should be directed and where habitat conservation would occur to offset the environmental impacts from development of utility-scale renewable energy generating facilities. A program-level Environmental Impact Report will be prepared to comply with the California Environmental Quality Act (CEQA) and which will accompany the DRECP as it undergoes final public review and moves toward formal adoption. Similar to Secretary of Interior Salazar's Order² to identify and prioritize acceptable sites for renewable energy development on BLM-managed lands, the Governor's Executive Order is focused on renewable energy development in California's desert regions.

All four solar energy study areas were proposed within the geographic boundaries of the DRECP. As shown in the list below and enclosed maps, the proposed study areas in California have been co-located with selected competitive renewable energy zones (CREZs) from the Renewable Energy Transmission Initiative (RETI):³

- Imperial East Solar Energy Study Area: CREZ 30, Imperial South
- Iron Mountain Solar Energy Study Area: CREZ 37, Iron Mountain
- Pisgah Solar Energy Study Area: CREZ 43, Pisgah and CREZ 45, Barstow
- Riverside East Solar Energy Study Area: CREZ 36, Riverside East

We appreciate BLM's inclusion of these CREZs in the solar energy study areas and the linkage this creates between our state and federal efforts. Differences between a CREZ area and the solar energy study area are due, in part, to land ownership/management responsibility; only BLM-managed lands were included in the proposed solar energy study areas. As a result, blocks of land within a solar energy study area have been excluded because they are privately owned or managed by the California State Lands Commission. We believe this fact will reduce the effectiveness of the Solar PEIS in facilitating renewable energy development in California since projects located on adjoining private land may not be able to tier-off the document to assist with CEQA compliance. We also believe that limiting the scope of the review solely to federal land raises issues regarding the usefulness of the cumulative impacts analysis. In addition, the CREZ conceptual transmission line routes, which are necessary to move power from generation facilities to the load centers, may have been excluded.

² Order 3285, See http://www.doi.gov/news/09_News_Releases/SOenergy.pdf.

³ <http://www.energy.ca.gov/2009publications/RETI-1000-2009-001/RETI-1000-2009-001-F-REV.PDF>

Comments

Pursuant to the Governor's Executive Order, California currently has a goal of obtaining 33 percent of its electricity from renewable generation by 2020. To meet this ambitious RPS goal will require extensive development of solar, wind, geothermal and other renewable resources. Limiting the Solar PEIS in California to four study areas, and excluding private land, results in a project scope that is overly narrow and which will not facilitate the most economic and environmentally preferred development outcome. For example, none of the solar study areas are located in the western Mojave Desert which is more developed than other California desert areas, is closer to existing transmission infrastructure and load centers, and has more previously disturbed land that can be developed without the magnitude of environmental impacts that can occur when undisturbed land is developed.

The Renewable Energy Action Team (REAT) agencies will soon be working with a comprehensive group of stakeholders to create a DRECP that will identify areas for renewable development and areas to conserve, and will ultimately result in a California Endangered Species Act (CESA) permit for renewable energy projects within the DRECP planning area. The DRECP will also likely provide the basis for one or more large-scale Habitat Conservation Plans (HCPs) pursuant to Section 10 of the Federal Endangered Species Act (FESA). We believe that expanding the number of solar study areas in the Solar PEIS will serve to better coordinate the work of the Solar PEIS with the DRECP and lead to improved development and conservation plans for the Mojave and Colorado Deserts in California. We request that the California solar energy study areas be expanded to include the following as study areas, with the following caveats. First, we recognize that further study may determine that some of the areas we are proposing for review may not be appropriate for development for a variety of reasons, e.g., potential impact to biological resources – the suitability of these areas will be further evaluated through the DRECP planning process. Second, in recommending these areas for further study we have not had the benefit of input from the broad range of stakeholders who will be participating in the DRECP's development. Based upon this additional analysis and input, we may reach a conclusion that some of the areas we are asking to be studied should be removed from further consideration, and we may also determine that areas not identified would be good candidates for development.

Regardless, we believe it is important to perform a more robust analysis in the Solar PEIS and as a consequence, recommend the following be added to the current solar study areas.

The individual areas that we are requesting be examined in the Solar PEIS possess some or all of the following attributes, which indicate they could be suitable for

development: 1) have been previously identified in the RETI process as possessing significant renewable resource development potential; 2) have proximity to existing transmission line infrastructure; 3) have proximity to load centers; and 4) are located in areas that have been more heavily impacted by development and possess greater amounts of previously disturbed land.

These areas are numbered and shown on the enclosed maps. The boundaries shown are approximate but correspond closely to the general area the Energy Commission and Fish and Game believe warrants further joint study by BLM and the State.

1. Pisgah Expansion -- We recommend that the BLM extend the boundary of the Pisgah solar study area to the west and to the north. This expanded area would encompass private land immediately to the west and adjacent to the Pisgah CREZ; some of this land is highly disturbed due to former agricultural activities. The area is crossed by Interstate 15 and several high voltage transmission lines. The area north of Interstate 15 includes a mixture of BLM and private land with minimal slope that could accommodate a large amount of generating capacity and is adjacent to the Barstow CREZ.
2. Searles Valley -- We recommend that BLM add the area south of Searles Lake and State Highway 178 within the Searles Valley to the solar energy study areas. This area would be located to the north, west, and east of the Trona Pinnacles National Natural Landmark Area of Critical Environmental Concern (ACEC) so an appropriate buffer area would have to be established. The Searles Valley is one of the most highly impacted and industrialized areas of the Mojave Desert. There is a power plant in the community of Trona with an existing transmission line that runs to the west. The area is bounded on three sides by the China Lake Naval Air Weapons Station. The area recommended for further study is almost entirely managed by BLM. It is also located close to the Inyokern CREZ and a proposed solar thermal project, solar photovoltaic, and wind lease applications on BLM land, and RETI solar proxy projects.

3. Harper Lake Area Expansion -- The area shown on the map significantly expands the area around Harper Dry Lake but would exclude any ACECs. It is part of the area covered by the Kramer CREZ. We recognize there may be issues regarding significant impacts to Mojave ground squirrel, including connectivity issues between core population areas. Consequently, after further study, parts of the recommended study area could be determined to be inappropriate for development. However, given the current and proposed solar development adjacent to Harper Lake and the proximity of existing transmission lines, this area warrants further study. BLM is the majority land owner in the area and the region is served by two major highways. There is some previously disturbed land and the slope aspect of much of the land appears suitable for solar development.
4. Imperial South – For this proposed BLM solar energy study area, we recommend expanding the area to be studied to the northwest which would effectively double its size. BLM manages more than 90 percent of the land in this northwest expansion area. This area is being recommended, because it has been identified as having low biological resource potential, and the area has excellent access to existing transmission line infrastructure.
5. Eastern Shore of the Salton Sea -- This area is a mixture of BLM, private, and State-managed land with BLM and private land predominating. It borders the southeastern shore of the Salton Sea and extends south toward the Imperial Sand Dunes, which is a protected area. It is recommended for study, because it has been identified as having low biological resource value. This is also an area that has the potential for geothermal resource development. If it can be determined that solar development would not inhibit geothermal development in this area, this area merits review in the Solar PEIS.
6. Southwestern Shore of the Salton Sea -- This is part of the Imperial North CREZ. State Highway 86 bisects the area. The land is predominantly privately owned with several BLM parcels, and it appears to be highly disturbed. There is good transmission access, and as with the Eastern Shore of the Salton Sea, if this area can be developed without inhibiting geothermal development it appears to warrant further review.

7. Western Mojave (areas not yet mapped) -- The State is evaluating large areas of the Western Mojave for its suitability for renewable energy development. The proposed areas are not shown on the enclosed maps. The areas under consideration overlap several CREZs including the Fairmont, Tehachapi, Kramer, and Victorville CREZs. Obviously, there are areas within the Western Mojave that should be excluded from development due to factors such as zoning incompatibility and significant impacts to biological resources. However, this area possesses several distinct advantages for potential solar projects such as high solar insolation, proximity to load centers and transmission infrastructure, large tracts of previously disturbed land, and greater general development. Much of this area is also privately owned, which results in BLM being reluctant to include it for study, but which also means less public land is used for development if projects are located on private land. If private land ownership is problematic for BLM regarding including this large region as a solar study area, then BLM should consider including a smaller portion of the region, specifically the area where BLM ownership is significant, specifically the area north and west of Kramer Junction, bounded on the south by State Highway 58 and on the east by US Highway 395. If it is found that this area does not support high value habitat for the State Threatened Mojave ground squirrel, or that it is not critical for maintaining connectivity between Mojave ground squirrel core population areas, it would be an area where development could take advantage of proximity to existing transmission line infrastructure. The State proposes to work jointly with the BLM to designate additional solar study areas within the Western Mojave.

General comments

- Solar energy projects which straddle both BLM-managed and private/state-managed land have been proposed by several developers. By excluding non-BLM-managed lands, BLM will not be able to accelerate permitting of these projects, because state and local agencies would not be able to tier-off of the Solar PEIS for their environmental analyses, nor would BLM be able to use the Solar PEIS for projects on which BLM would be providing a Section 7 Federal Endangered Species Act nexus for the entirety of a project with mixed land ownership, a common scenario in the California desert. Instead, local lead agencies will need to prepare their own CEQA analysis and environmental document, and BLM would have to prepare a focused NEPA document that could not tier-off of the Solar PEIS. Similarly, state and local agencies would need to prepare their own environmental studies of solar energy projects that are inside a solar energy study area, but

located on private or State Lands Commission-managed land. If the California portion of the Solar PEIS was developed as a CEQA-equivalent document, all solar energy projects within the final, designated solar energy zones could benefit from accelerated approvals and permit processing. In areas where the Energy Commission and Fish and Game have proposed incorporating significant amounts of private lands into the proposed BLM solar study areas, the State will participate in the joint environmental analyses of these areas through the DRECP planning process, as a cooperating agency on the Solar PEIS effort, and as lead for the purposes of achieving CEQA equivalence.

- Riverside East Study Area – The Riverside East Study Area includes McCoy Wash in Eastern Riverside County. Although not identified in the BLM Northern and Eastern Colorado Desert Plan as an area of high biological diversity, this area contains an exceptional example of Desert Dry Wash Woodland. Desert Dry Wash Woodland provides habitat for numerous resident and migratory sensitive bird species, such as southwestern willow flycatcher, summer tanager, LeConte's thrasher, and gila woodpecker. In addition, it provides habitat for desert mule deer, and mountain lions. We are not recommending that this area be removed from the study area but that the analysis and any ranking of areas that occurs in the Solar PEIS should recognize the importance of focusing development in preferred areas that have already been impacted and avoiding, whenever possible, undisturbed areas and areas of high biological value.
- Iron Mountain -- The Energy Commission staff provided comments in November 2008 on the proposed RETI CREZs, including Iron Mountain. In those comments the staff expressed concern over the development of this and other CREZs based upon their remote location in the eastern Mojave. In these comments staff indicated a preference for development to occur in the Western Mojave, to the extent feasible, where there has been more development and which is located closer to load centers, and often in closer proximity to transmission line infrastructure. We agree that it is desirable to avoid development in pristine areas. While we do not recommend that Iron Mountain be eliminated as a solar energy study area, the analysis and any ranking of areas that occurs in the Solar PEIS should recognize the importance of focusing development in preferred areas that have already been impacted and avoiding, whenever possible, undisturbed and remote areas.

Ms. Linda Resseguie, Project Manager, BLM

September 14, 2009

Page 8

We would like to thank you for the opportunity to provide comments on the Solar PEIS and look forward to working together collaboratively as your work continues. The Energy Commission and Fish and Game have appreciated the close and productive working relationship that has developed between our agencies, the BLM (California Office), and the USFWS (Region 8) on the solar power plant applications and the work of the REAT on the DRECP. We look forward to working with BLM on all aspects of renewable energy development in California in the future. Questions on these comments can be directed to Terrence O'Brien, Deputy Director of Siting, Transmission and Environmental Protection at the Energy Commission at (916) 654-3933 or tobrien@energy.state.ca.us or Kevin Hunting, Deputy Director at the California Department of Fish and Game at (916) 653-1070 or khunting@dfg.ca.gov.

Sincerely,



KAREN DOUGLAS
Chairman,
California Energy Commission



For
KEVIN W. HUNTING
Deputy Director
California Department of Fish and Game

cc: Jim Abbott, CA BLM
Darrin Thome, USFWS

Enclosures

Legend for Maps Recommending Additional Solar Energy Study Areas in Southern California

Renewable Energy Transmission Initiative (RETI)

-  Draft Conceptual RETI Wind Projects
-  Draft Conceptual RETI Solar Projects
-  BLM Wind Lease Application
-  BLM Solar Lease Application
-  BLM Solar Energy Study Areas
-  Draft Conceptual RETI Transmission Trunk Lines to connect a Competitive Renewable Energy Zone to the Transmission Grid
-  Draft Conceptual RETI Substation to collect energy from projects in a Competitive Renewable Energy Zone

Renewable Project Data Sources

Bureau of Land Management solar and wind right of way applications at http://www.blm.gov/pgdata/content/ca/en/fo/cdd/alternative_energy/SolarEnergy.html

Renewable Energy Transmission Initiative Phase 1b Final Report at <http://www.energy.ca.gov/reti/documents/index.html>

Prohibited, Restricted & Limited Lands

-  Category I Lands - Energy Development Prohibited or Restricted by Policy including National Park Service (NPS), and Bureau of Land Management and US Forest Service Wilderness Areas.

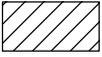
Other Features

-  Community
-  Road
-  Historic Route 66
-  County Boundary
-  Water Body
-  Dry Lake Bed
-  The Wildlands Conservancy (Catellus)
-  Area of Critical Environmental Concern
-  Draft Conceptual RETI Competitive Renewable Energy Zone Boundary
-  CEC/DFG Proposed Study Area Expansion

Substations

-  Imperial Irrigation District
-  Los Angeles Dept. of Water & Power (LADWP)
-  Southern California Edison (SCE)
-  Western Area Power Administration
-  Metropolitan Water District
-  All Others

Land Ownership

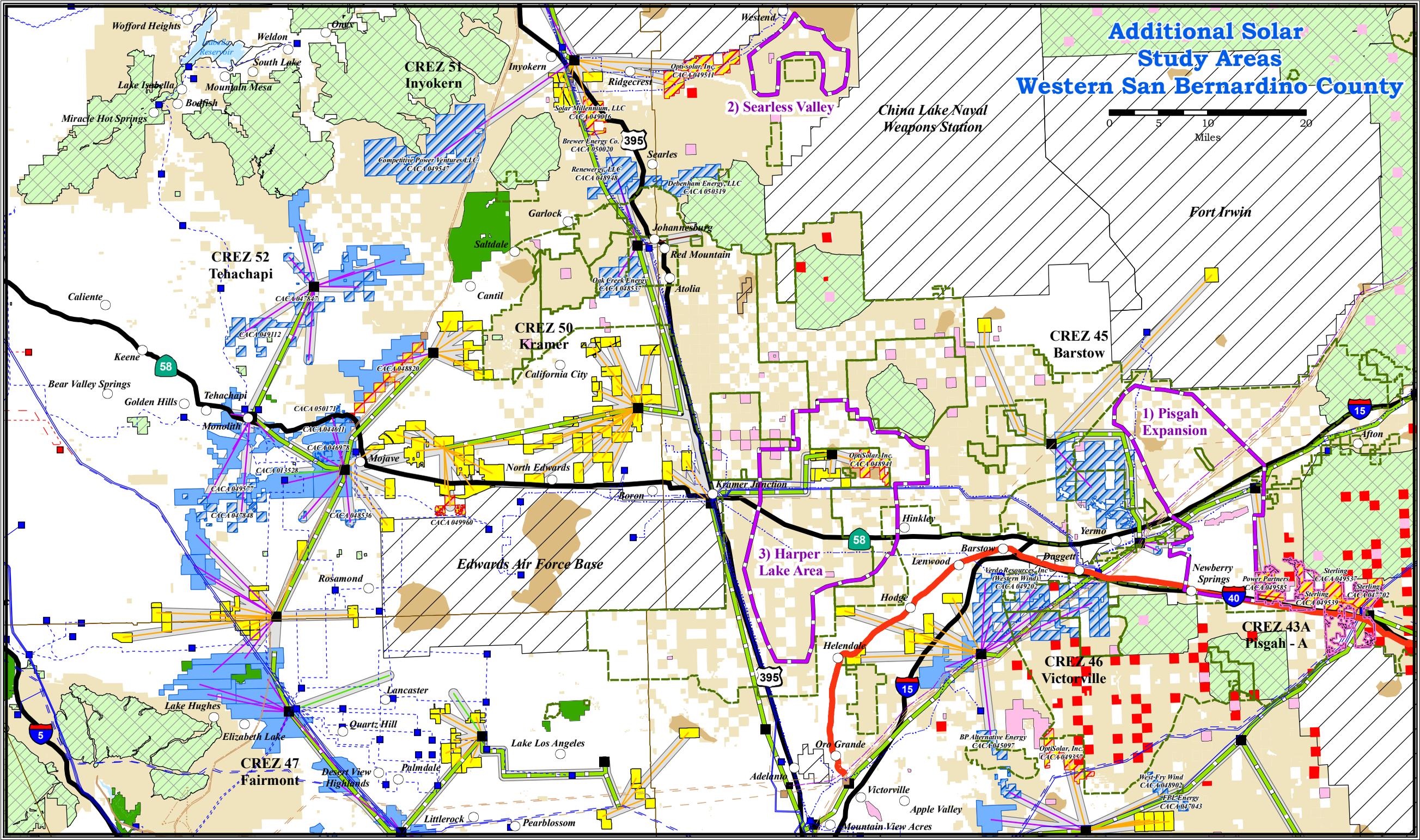
-  State Owned Lands
-  Bureau of Indian Affairs (BIA)
-  Bureau of Land Management (BLM) and US Forest Service (USFS)
-  Bureau of Reclamation (BOR)
-  Department of Defense (DOD)
-  US Fish and Wildlife Service
-  CA State Parks
-  Private Land

Transmission Lines

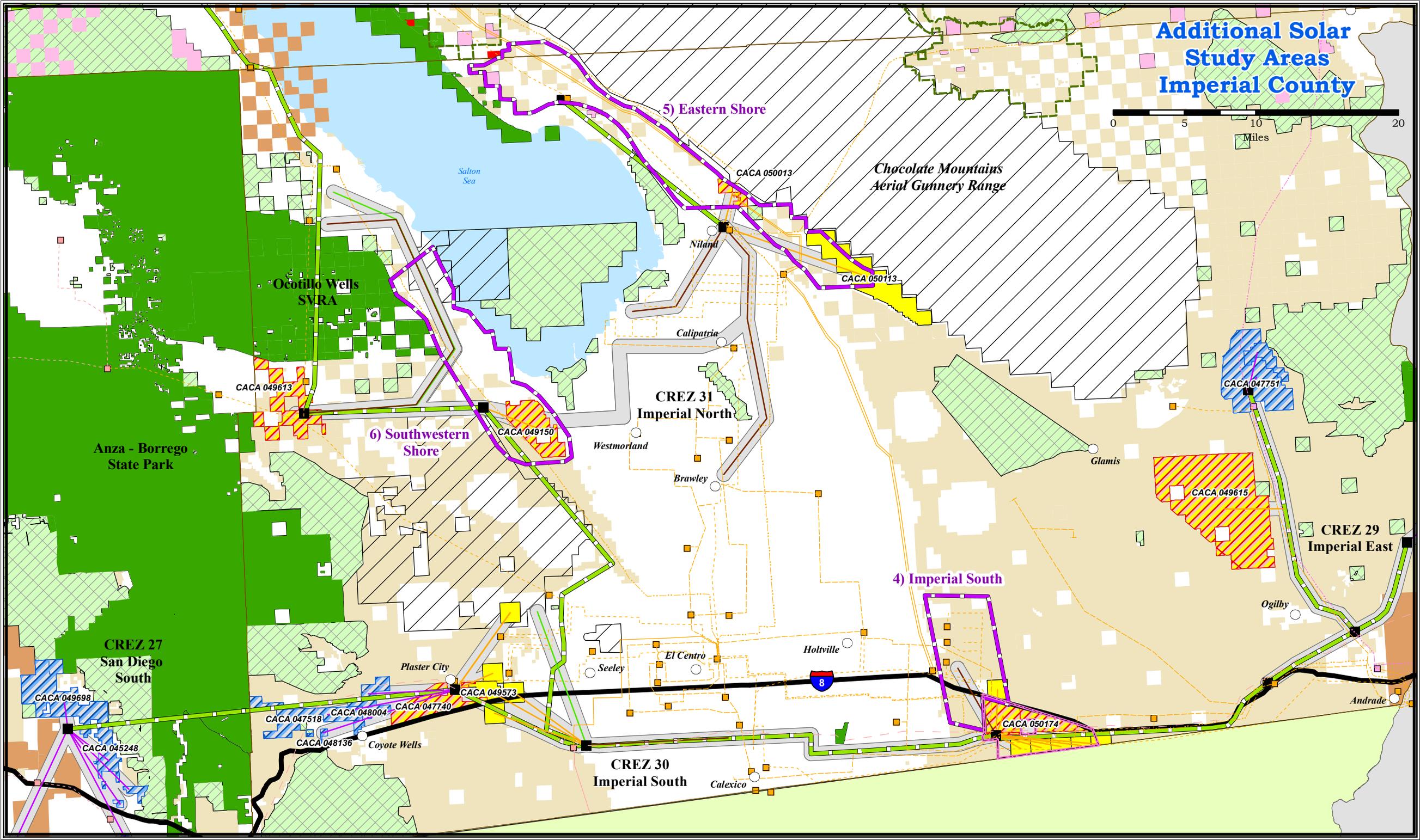
(Colorized according to Utility Ownership)

-  12 kV - 59 kV
-  60 kV - 92 kV
-  110 kV - 161 kV
-  220 kV - 287 kV
-  345 kV - 500 kV
-  345 kV - 500 kV DC

Additional Solar Study Areas Western San Bernardino County



Additional Solar Study Areas Imperial County



ATTACHMENT 6

**Standard Review Form for
Draft Solar Energy Development PEIS (Issued December 2010)**

Reviewer’s Name: David Bise/Amy Golden **Reviewer’s Organization:** California Energy Commission

Reviewer’s email address: dbise@energy.state.ca.us **Reviewer’s Telephone numbers:** (916) 654-5043

Primary Disciplinary Area: Biological Resources

Section(s) or Chapter(s) Reviewed: Volume 3 - Chapter 9, Parts 1 and 2, , Water Resources, Biology, Cumulative Impacts

EIS Section	Page/Line	Comment/Suggested Revision	Action (for use by ANL)
9.1.1.2	9.1-4/10	Mentions that no acreage impacts for transmission lines was assessed. Buildout of the SEZ would necessitate construction or upgrading of transmission lines. Specific analysis of these impacts cannot be adequately assessed at this time, but likely impacts from t-lines should be acknowledged within all SEZs.	
9.1.1.2	9.1-4/20	Paragraph references access from State Route 98. Will this route be able to support increased traffic during height of construction or would upgrades be required?	
9.1.1.3	9.1-8	Table 9.1.1.3-1 references potential water usage from wet cooled facilities. Projects under CEC jurisdiction will likely not be approved with wet cooling unless the project has access to reclaimed, non-potable water or impacts from a dry cooled project would actually be higher than that of a wet-cooled project. Section later states that wet cooling is likely to be infeasible, but should be stated here as well. This comment applies to all SEZ sections in respect to discussion of wet cooling.	
9.1.1.3	9.1-9	Discussion of wetland minimization and avoidance should mention that mitigation of Army Corps or CDFG-jurisdictional waters will require acquisition of at least 1:1 for impact acreage.	
9.1.1.3	9.1-13	Table states that less than 1% of suitable habitat within the region of the SEZ would be impacted (within 50 miles of the center of the SEZ). However, the preferred alternative of the PEIS allows for submittal of applications on BLM	

ATTACHMENT 6

		outside of the SEZ. Also, private lands may also allow for solar or other development outside of the PEIS process. So if the preferred alternative was accepted and impacts on private land were considered, the likely extent of impacts to various habitat types would be higher. This is a global comment for all SEZ sections that refer to the extent of habitat impacts within the respective SEZ regions (within a 50 mile radius).	
9.1.9.2.2	9.1-63/10	Line assumes that the maximum disturbance for an individual facility would be 3,000 acres. Several fast-track projects proposed or approved exceed this acreage limit.	
9.1.10	9.1-71/9	Line states that no direct or indirect effects are assumed for new access roads or transmission lines. New access roads may only be constructed within project boundaries. However, the PEIS has acknowledged the likely need for new or upgraded transmission lines at full buildout of the SEZ. Therefore, direct and indirect impacts from t-lines will likely occur.	
9.1.10.2.1	9.1-79	This reflects the previous comment on impacts to habitat within the SEZ region. The actual impact within 50 miles of the SEZ would likely be higher given the PEIS preferred alternative and the potential for projects to be constructed on private lands.	
9.1.10.2.1	9.1-80	Fourth paragraph refers to wetland communities that could be impacted by a drawdown in groundwater levels. Other communities such as wash scrub habitats are not classified as wetlands but are dependent on groundwater levels. All groundwater dependent vegetation communities should be included in this paragraph.	
9.1.11.1.2	9.1-90/7	Similar comment regarding likely impacts to habitat for plant and animal species in the region will likely be higher than stated based on potential impacts on private lands and BLM land outside of designated SEZs.	
9.1.11.2.1	9.1-91/29	Ravens should be removed from this discussion and from Table 9.1.11.2-1. While ravens are protected by the MBTA, ravens numbers in the desert are actually augmented by anthropological food and water sources. Ravens have been shown to feed on special-status wildlife species including desert tortoise. Approved projects are required to prepare raven management plans by USFWS, BLM, and CEC. Plans may in some circumstances require removal of offending ravens.	
TABLE 9.1.11.2-1	9.1-92	Neotropical migrant category in table should be replaced with passerine category or others as applicable. Many species listed under this category are	

ATTACHMENT 6

		year-round residents that do not migrate.	
TABLE 9.1.11.2-1	9.1-99	Add burrowing owl to the birds of prey section of table (global comment for all SEZ tables)	
<i>9.1.11.2.1</i>	9.1-102/41	Golden eagle should be listed as protected under the Bald and Golden Eagle Act. This act prevents any direct take of the species (Global comment for all SEZ sections)	
<i>9.1.11.2.2</i>	<i>9.1-103/44</i>	See previous comments on how impacts to habitats are calculated within SEZ regions. Note should be added to all SEZ sections with estimated impacts that impacts would likely be higher if BLM's preferred alternative were approved and considering potential projects on private lands.	
<i>9.1.11.2.2</i>	<i>9.1-104/2</i>	Avian collision could also occur from impacts with solar structures, especially for projects with tall power towers.	
<i>9.1.11.2.3</i>	<i>9.1-104/41</i>	Include opuntia species in this list as providing habitat for cactus wren	
<i>9.1.11.2.3</i>	<i>9.1-105/1</i>	Direct take of golden eagles must be avoided under the eagle protection act. Current guidelines do not allow for issuance of a take permit.	
<i>9.1.11.3.1</i>	<i>9.1-106/15</i>	Add desert kit fox to list of mammals potentially impacted with SEZs (global comment.) Species is a special status species in California and take of the species is not permitted. Avoidance and minimization measures are required for this species on projects with CEQA jurisdiction.	
<i>9.1.11.3.1</i>	<i>9.1-106/34</i>	Include desert kit fox and American badger in list of special status mammals and include in Table 9.1.11.3-1. Approved projects under CEQA must consider impacts to these species and incorporate avoidance and minimization measures.	
<i>9.1.12.1</i>	<i>9.1-120/25</i>	Include desert wash habitats as unique habitats that may be impacted	
<i>9.1.12.2</i>	<i>9.1-147/46</i>	Include American badger, western burrowing owl, and desert kit fox in special-status species listings	
<i>9.1.12.2</i>	<i>9.1-148/17</i>	See previous comments regarding likelihood of needed t-line upgrades or new construction of t-lines and discussion of subsequent impacts.	
<i>9.1.22.2.1</i>	<i>9.1-268</i>	Update approval status of projects as applicable (global comment for all SEZ sections)	
<i>9.1.22.2.1</i>	<i>9.1-270</i>	Imperial project is now proposed to be 100% PV.	
<i>9.1.22.2</i>	<i>9.1-278/18</i>	Cumulative impact discussion should consider additional impacts from adoption of the preferred alternative which would allow consideration of projects outside of the designated SEZ's. Cumulative impacts also have to	

ATTACHMENT 6

		address potential impacts to movement corridors or areas that provide connectivity to preserved areas of habitat (global comment for all SEZ sections).	
9.3.1.1	9.3-1/30	Update project acreage and project description for Calico. Project is now primarily a PV project and is 4,613 acres in size.	
9.3.2.1	9.3-21/23	Update project acreage to agree with approved project (see previous comment).	
9.3.3.1	9.3-23/13	There are additional issues concerning scenic resources. For example, impacts of Calico on the scenic vista of Route 66 was considered in final decision.	
9.3.3.2.2	9.3-29/13	Same as previous comments regarding transmission lines and the likely need to upgrade or construction new transmission lines because of SEZ development.	
9.3.9.2.2	9.3-66/4 TABLE 9.3.9.2-2	Temporary irrigation may be needed for the restoration of temporary impact areas as defined by each projects restoration plan.	
9.3.9.3	9.3-69/39	See previous comments regarding wet cooling of projects. Projects under CEC jurisdiction will likely not be able to utilize wet cooling unless a project has access to a reclaimed water source or the applicant can show that dry cooling would actually have a larger environmental impact than dry cooling.	
9.3.10	9.3-71/10	See previous comments regarding transmission lines.	
9.3.10.1	9.3-77/11	Section refers to lack of wetlands in SEZ. However, there are extensive drainages that are subject to a streambed alteration agreement with CDFG. Therefore, a permit for impacts to drainages will likely be required for most projects even if wetlands are not present within a project area.	
9.3.10.2.1	9.3-78/17	See previous comments regarding calculations of impacts with the SEZ region. Consideration of impacts on private lands outside of the SEZ and potential projects considered on BLM lands outside of SEZs under the PEIS preferred alternative would result in additional impacts to the region.	
9.3.10.2.1	9.3-79/22	Projects could also affect downstream sand recruitment by blocking sand transport corridors with solar fields.	
9.3.11	9.3-83/27	See previous transmission line comments (global comment)	
9.3.11.1.1	9.3-84/25	Mojave fringe-toed lizard is a BLM sensitive species and a California state species of special concern. Therefore, it has additional protections from other non special-status herpetofauna. Approved projects have had to include minimization and avoidance measures as well as compensatory mitigation for	

ATTACHMENT 6

		impacts to this species.	
9.3.11.1.2	9.3-84/16	See previous comments regarding calculation of impacts to habitat in SEZ region (global comment).	
9.3.11.2.1 TABLE 9.3.11.2-1	9.3-91/31	Remove common raven from this list and table. Ravens have to be managed as part of mitigation program of projects such as Calico to minimize impacts of this species on special-status species such as desert tortoise.	
TABLE 9.3.11.2-1	9.3-92	Re-classify birds taxonomically under neotropical migrant heading as appropriate. Most species listed under this heading are not migratory.	
TABLE 9.3.11.2-1	9.2-98	Loggerhead shrike is a California state species of special concern.	
TABLE 9.3.11.2-1	9.3-101	Golden eagle is a year-round resident. Golden eagle protection act requires no direct take of eagle individuals. Some habitat loss may be allowed. See USFWS draft guidelines on take permit from Jan 2011.	
TABLE 9.3.11.2-1	9.3-102	Add burrowing owl under birds of prey in this table.	
9.3.11.2.1	9.3-105	Golden eagles are year-round residents in these areas and are often found in areas with suitable nesting and foraging habitat in proximity to one another. Projects such as Calico are required to determine distance of project to nesting sites according to USFWS survey protocol. The species is protected by the federal eagle act which prohibits direct take of the species.	
9.3.11.2.2	9.3-106/30	See previous comments regarding calculation of impacts in SEZ region.	
9.3.11.2.3	9.3-107/22	Remove common raven from this list.	
9.3.11.2.3	9.3-107/33	Change should be avoided to must be avoided for take of golden eagles.	
9.3.11.3.1 TABLE 9.3.11.3-1	9.3-108/41	Add desert kit fox to this list and TABLE 9.3.11.3-1.	
TABLE 9.3.11.3-1	9.3-110	American badger is a species of special concern in California and projects subject to CEQA are required to consider project-related impacts to this species.	
9.3.12.1.1	9.3-123/43	Desert tortoise definitely occurs within the SEZ. It may or may not occur within any project footprint proposed within the SEZ given the habitat suitability and	

ATTACHMENT 6

		level of disturbance.	
TABLE 9.3.12.1-1	9.3-140	Mojave fringe-toed lizard is a California state species of special concern	
TABLE 9.3.12.1-1	9.3-142	The SEZ is not within the known range of Mohave ground squirrel. Known range is limited to west of the Mojave River.	
<i>9.3.12.1.1</i>	9.3-147	Number of tortoise within the SEZ is likely much higher than this number. The original Calico project was estimated to impact over 100 tortoises by itself.	
<i>9.3.12.1.2</i>	<i>9.3-152/24</i>	Known occurrences of western burrowing owl associated with Calico project.	
<i>9.3.12.1.2</i>	<i>9.3-152/37</i>	SEZ is outside of the known range of this species.	
<i>9.3.12.1.2</i>	<i>9.3-153/5</i>	Washes and other lowland habitat within the SEZ also provide important seasonal foraging habitat for sheep.	
<i>9.3.12.2.1</i>	9.3-157/10	Desert tortoise does occur within the SEZ	
<i>9.3.12.2.1</i>	9.3-157/27	See previous comment, number of tortoise within SEZ likely to be much higher than 260 based on results of Calico surveys.	
<i>9.3.12.2.2</i>	9.3-171/10	Burrowing owls found on Calico site	
<i>9.3.12.2.2</i>	9.3-171/40	SEZ is outside the known range of Mohave ground squirrel	
<i>9.3.22.2.1 and TABLE 9.3.22.2-1</i>	9.3-304/28	Update acreages with approved decision acreage and MW.	
<i>9.3.22.2.1</i>	9.3-306/4	Substation now proposed to be located adjacent to existing substation.	
<i>9.3.22.2.1</i>	9.3-308/24	Mojave solar station now approved with construction expected to begin in April 2011.	
TABLE 9.4.1.3-1 (Vegetation)	9.4-10	Revegetation plan should also address salvaging of cacti, yucca, and native trees to be used during revegetation of temporarily disturbed areas. Harvesting of native desert plants is regulated under California Native Plant Protection Act (Fish and Game Codes 1900-1913) and California Desert Native Plant Act of 1981 (Food and Agricultural code 80001 et seq).	
TABLE 9.4.1.3-1 (Vegetation)	9.4-10	Groundwater dependent vegetation includes other communities such as wash scrub, more developed microphyll woodland along desert washes, and playas.	

ATTACHMENT 6

TABLE 9.4.1.3-1 (Amphibians and Reptiles)	9.4-11	Discuss avoidance of potential Couch's spadefoot toad breeding areas, typically areas that can pond and hold water for a minimum of 9 consecutive days.	
TABLE 9.4.1.3-1 (Birds)	9.4-12	Avian impacts can also occur from collision with mirrors due to glint and glare. Other potential impacts: electrocution along transmission lines, habitat modification, harm from hypersaline conditions if foraging near evaporation ponds.	
TABLE 9.4.1.3-1 (Mammals)	9.4-12	Add Nelson's bighorn sheep, desert kit fox, American badger	
TABLE 9.4.1.3-1 (Mammals)	9.4-13	Corridors for bighorn sheep and mule deer should be maintained for movement between known or potentially occupied demes. Box culverts beneath I-10 provide important linkages.	
TABLE 9.4.1.3-1 (Mammals)	9.4-13	Siting of power plants and transmission facilities should not interfere with movement of bighorn sheep metapopulations and loss of spring foraging habitat on alluvial fans and bajadas should be minimized. Regional mitigation plan should take into account preserving critical wildlife movement linkages between ACECs, DWMAs, and Wilderness Areas.	
TABLE 9.4.1.3-1 (Aquatic biota)	9.4-13	Include desert washes in water bodies and stream sections as areas to be avoided.	
9.4.9.2.2	9.4-74/23	See previous comments on restrictions on wet-cooled projects under CEC jurisdiction	
9.4.10.3	9.4-93/17	Ironwood and palo verde are also phreatophytes and are highly groundwater dependent (global comment when discussing groundwater dependent vegetation in PEIS).	
9.4.11.1.1	9.4-96/8	Couch's spadefoot toad is a BLM Sensitive species, move to SSS section.	
9.4.11.1.1	9.4-96/22	Mojave fringe toed lizard is a BLM sensitive species and California species of special concern	
TABLE 9.4.11.1-1 (Amphibians)	9.4-97	10 to 12 consecutive days of ponding	
9.4.11.1.3	9.4-103/35	Sand dunes and sand transport corridors should be avoided	
9.4.11.1.3	9.4-103/46	See previous comment. Avoid sand transport corridors and sand dunes.	

ATTACHMENT 6

9.4.11.2.1	9.4-104/25	Other birds addressed in I-10 project staff assessments for CEC: brewer's sparrow, vermilion flycatcher, purple martin, yellow-breasted chat, yellow warbler, gilded flicker.	
9.4.11.2.1	9.4-104/29	Remove reference to common raven here.	
TABLE 9.4.11.2-1 (Shorebirds)	9.4-105	Consider netting over any evap ponds that are constructed to exclude shorebirds and other wildlife from drinking or landing in pond water. use at least 1.5-inch mesh netting (Global comment for all SEZ sections in PEIS)	
TABLE 9.4.11.2-1	9.4-106	See previous comments about use of neotropical migrant heading in impact tables.	
TABLE 9.4.11.2-1	9.4-108	See previous comments about removing discussion of protections for common raven.	
TABLE 9.4.11.2-1 (Birds of Prey)	9.4-116	Include burrowing owl in table	
9.4.11.2.1	9.4-119/16	Remove common raven	
9.4.11.2.1	9.4-119/32	Golden eagle is year-round resident. Protected by eagle act. No take allowed.	
9.4.11.2.2	9.4-121/8	Replace reptiles species with bird species	
9.4.11.2.3	9.4-121/35	Replace “should be avoided” with “must be avoided”	
9.4.11.2.3	9.4-121/36	USFWS is not issuing take permits for golden eagle.	
9.4.11.3.1	9.3-123/25	Include desert kit fox in this list	
9.4.11.3.1	9.3-123/37	Add hoary bat to this list	
TABLE 9.4.11.3-1 (Mammals)	9.4-126	Add desert kit fox to table	
9.4.11.3.3	9.4-134/31	Avoid stabilized and partially stabilized sand dunes	

ATTACHMENT 6

9.4.11.4.1	9.4-135/1	Add Corn Springs Wash	
9.4.11.4.1	9.4-135/2	Desert sink scrub occurs on the margins of Palen Dry Lake	
9.4.11.4.1	9.4-135/34	Add McCoy and Corn Springs washes	
9.4.11.4.3	9.4-137/21	Avoid impacts to major desert washes	
9.4.12.1 Affected Environment	9.4-140/44	Other CNPS List 1, 2, or State ranked 1 plants that the I-10 solar projects addressed include: chaparral sand verbena, angel trumpets, Arizona spurge, flat-seeded spurge, Harwood's eriastrum, white-margined penstemon, lobed cherry, and jackass clover.	
9.4.12.1 Affected Environment	9.4-141/3	Include loggerhead shrike in this list.	
TABLE 9.4.12.1-1		Fix labels (have mammals listed under bird section)	
TABLE 9.4.12.1-1 (Bighorn sheep)	9.4-165	Bighorn sheep are difficult to detect in ranges with very low number of individuals. Nearby occupied WHMAs include in the Palen and Granite Mountains. Recent surveys also suggest bighorn sheep may occur in the Little Maria Mountains. Also in December 2009 DNA testing of scat found in the Little Maria Mountains was confirmed to be that of a male bighorn sheep. Source: CEC June 2010, Blythe Solar Power Plant Revised Staff Assessment.	
TABLE 9.4.12.1-1 (Bighorn sheep)	9.4-165	Sheep do use lowland areas seasonally. In the spring, when annual plants are available, bighorn tend to disperse downhill to bajadas and alluvial fans to forage. Sheep are capable of crossing large expanses of lands between mountain ranges; for example, 5 peninsular BHS ewes were documented on the Imperial Valley Solar 2 site which is about 7 miles from the nearest mtn range. Telemetry data have documented animals traveling across the flats approximately 10 to 12 miles between Old Dad's and Marble Mountains. Also, DFG captured and moved a ram from the Colorado River near Parker to the Whipple Mtns. and he eventually traveled back down to the river area approximately 150 air miles (300 miles on land). Source: CEC June 2010, Blythe Solar Power Plant Revised Staff Assessment.	

ATTACHMENT 6

9.4.12.1.2	9.4-171/22	Include Couch’s spadefoot toad as BLM sensitive	
9.4.12.1.2	9.4-171/27	Include Yuma myotis as BLM Sensitive	
9.4.12.1.2	9.4-173/44	Known occurrences of Mohave fringe-toed lizard from sand dunes of Palen and Genesis solar projects, immediately north of I-10 between Desert Center and Blythe. Aeolian corridors identified as Palen Dry Lake-Chuckwalla Valley and Palen Pass sand corridors.	
9.4.12.2.1	9.4-180/45	Global change of CDGF to CDFG	
9.4.12.2.2	9.4-187/11	MFTL known to occur on sand dunes in association with Ford and Palen Dry Lakes.	
9.4.12.3	9.4-198/34	Conduct protocol surveys as appropriate not just pre-disturbance surveys	
9.4.12.3	9.4-199/1	Add Corn Springs Wash	
9.4.12.3	9.4-199/4	Abram's spurge is another species that could occur along margins of playas and washes.	
9.4.12.3	9.4-199/19	Habitat compensation required for loss of desert tortoise habitat (global comment for all SEZ sections)	
9.4.22.2.1 9.4.22.2-1	9.4-376	Update Rice status (now approved by CEC) and status of EIS for fast-track projects	
9.4.22.4.11	9.4-399/24	Need to discuss cumulative impacts to movement corridors and connectivity impacts including potential impacts from preferred alternative and development of private lands adjacent to SEZs.	

ATTACHMENT 6

**Standard Review Form for
Draft Solar Energy Development PEIS**

Reviewer’s Name: Serge Glushkoff

Reviewer’s Organization: California Department of Fish and Game

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Reviewer’s Telephone numbers: (916)539-5669

Primary Disciplinary Area (e.g., ecology, land use planning, regulatory oversight): Regulatory oversight, ecology

Section(s) or Chapter(s) Reviewed: Volume 3, Chapter 9, Parts 1 and 2

EIS Section	Page/Line	Comment/Suggested Revision	Action (for use by ANL)
General		<p>The California Energy Commission (CEC) and Department of Fish and Game (CDFG) provided jointly prepared comments on the solar energy study areas announced in the June 30, 2009 <i>Federal Register</i> Notice of Availability, in a joint letter to Argonne National Laboratory dated September 14, 2009. In that letter, CDFG and CEC outlined site- and regionally specific recommendations for further joint study by BLM and the State of California (State). The overall BLM Solar Energy Development complex has evolved since the initial scoping, and a great deal of valuable information is provided in this PEIS. The following comments add to and in some cases reiterate those presented in 2009, the scope of which reflects the substantial range of additional information and analysis included in the Draft Solar Energy Development Programmatic Environmental Impact Statement (PEIS). Currently, our chief concern with the PEIS pertains to its relationship to the pending federal-State interagency Desert Renewable Energy Conservation Plan (DRECP), a southern California desert region-wide natural community conservation plan/habitat conservation plan (NCCP/HCP). We present this concern in our joint CEC/CDFG letter to BLM, to which these comments are appended. That letter presents in broad terms our premise that the DRECP will provide a more effective framework and means for informing decisions about where to site solar energy developments and establish corresponding conservation approaches in the desert regions of California than would be possible through the larger-scale approach of the described in the PEIS. The following comments supplement those in the letter and respond in more detail to the specific attributes of the PEIS relative to potential impacts of SEZ and solar energy development alternatives.</p>	

ATTACHMENT 6

<p>General/ Chapter 9</p>		<p>CDFG is concerned that the majority of SEZ acreage, and the PEIS preferred alternative acreage of the Solar Energy Development Program, are still not being proposed in areas of the western Mojave Desert. The western Mojave Desert is more developed than other desert areas, and is closer to existing transmission infrastructure and load centers, Solar facilities sited near existing transmission infrastructure and in developed areas result in fewer impacts to species and natural communities. Solar facilities so situated require fewer new transmission facilities and previously disturbed land can usually be developed with lower impacts than in the generally higher-value habitats within the four proposed SEZ's.</p>	
<p>General/ Chapter 9</p>		<p>The primary regulatory focus for this PEIS is federal, but the document should also provide accurate information on State of California requirements, since proponents will also be held to those standards for Incidental Take Permits and Lake Streambed Alteration Agreements pursuant to California Fish and Game Code statutes. The document does often refer to state requirements or designations, but does not always do so consistently or correctly. A general review of all sections dealing with state jurisdictions, designations and procedures will improve this document's utility and accuracy.</p>	
<p>General/ Chapter 9</p>		<p>All State Waters that comprise ephemeral, intermittent or perennial streams or lakes are subject to statutory law, per Section 1600 <i>et seq.</i> of the California Fish and Game Code. This basic statutory parameter should be clearly referenced to accurately characterize the scope of environmental review and permitting requirements required for project development for sites with drainages of any kind. The document should not risk misleading proponents and other readers that reliance only on federal (U.S. Army Corps of Engineers, USACE) definitions of wetlands is the sole means by which to evaluate the habitat value and permitting nexus of features affected by surface and ground water. The jurisdictional criteria of Section 1600 <i>et seq.</i> of the Fish and Game Code, and California Fish and Game Commission policy, differ from those of USACE. The document does reference this requirement in Chapter 5, pg. 42, but only to the extent of noting that ephemeral drainages can be jurisdictional pursuant to State statutes and regulations. The reference does not note that features subject to Section 1600 <i>et seq.</i> jurisdiction include all components of streams and lakes, (i.e., beds, banks and floodplains) and not just the thalweg, active channel or lake basin. The jurisdictional determination of what may appear to be marginal features in arid desert environments is ultimately made by CDFG staff at the time a project is formally proposed. Consequently the document should recommend early</p>	

ATTACHMENT 6

		<p>consultation and/or formal notification to CDFG staff for proper jurisdictional demarcation.</p> <p>The document should also note that if impacts to streams and lakes are avoided altogether by having no project footprint in any component of a lake or stream, then no LSAA (Lake and Streambed Alteration Agreement) or equivalent process will be necessary. This is also valuable information because, in addition to protecting fish and wildlife resources, outright avoidance of these features would reduce project proponent’s permitting obligations and thereby likely result in shorter a shorter environmental review and permitting period.</p>	
General		<p>There is no mention of mitigation for species that meet the definition of “endangered” or “rare” pursuant to California Public Resources Code Section 15380 in the California Environmental Quality Act (CEQA) Guidelines. These include but are not limited to species for which survival and reproduction in the wild are in jeopardy from one or more causes, populations exist in such small numbers that it may become endangered if the environment worsens, or endangerment is likely within the foreseeable future.</p>	
General/ Chapter 9		<p>There are categorization and/or omission errors of listed or “rare” species in tables in sections 11 and 12 for all four SEZ’s. Information should be added for some species not previously addressed in the special status species section. The PEIS does not follow the process for designation of California special status species typically used in conjunction with CEQA. Thus, there are several species not correctly identified in the PEIS as warranting consideration under California State law and regulation. With some exceptions, species classified in this document as “rare“were selected on the basis of State status codes S1 and S2 in California or a species of concern by USFWS or the State of California (“CA-SC” in this document) or California Native Plant Society (CNPS) lists 1 and 2, which are the categories that State and local agencies will have to consider pursuant to CEQA.</p> <p>California fully protected (FP) species must be correctly identified throughout the PEIS. These are species with critical state permitting constraints. Fish and Game Code sections 3511, 4700, 5050, and 5515 prohibit take or possession of fully protected species at any time.</p> <p>For plant species, CDFG recommends that potential impacts to S3 species also be considered. For example, one plant species, <i>Ayenia compacta</i>, which is designated</p>	

ATTACHMENT 6

		<p>as S3 and CNPS List 2.3, which indicates it would be disclosed and impacts to it mitigated under CEQA, but would not be addressed by confining consideration to S1- and S2-designated species only).</p> <p>CDFG also recommends that potential impacts to avian Watch List (WL) species be considered. These are species identified in the California Bird Species of Special Concern Report (see Shuford and Gardali, eds., 2008. California Bird Species of Special Concern) as species that are not on the current special concern list that (1) formerly were on the 1978 (Remsen 1978) or 1992 (CDFG 1992) special concern lists and are not currently listed as State threatened and endangered, (2) have been removed (delisted) from either the State or federal threatened and endangered lists (and remain on neither), or (3) are currently designated as “fully protected” in California.</p> <p>We have identified species in the WL category below. Although consideration of this designations is not be legally required, or consistent with BLM definitions (see discussion in the PEIS Appendix A, pg. A-55, footnote 2), noting the presence or occurrence of these species at specific sites provides an additional and useful level of habitat assessment.</p> <p>USFWS no longer maintains a list of SC species; however, USFS does. As such, the PEIS should consider indicating this designation for the appropriate species within species lists. Also, the PEIS should review and redesignate all the species that are still designated in the PEIS as “FWS-SC”; some of them no longer have FWS status, and some should instead now be “FWS-BCC” (Birds of Conservation Concern).</p>	
<p>General/ Chapter 9</p>		<p>Although hunting of the Nelson bighorn sub-species <i>Ovis canadensis nelsoni</i> is allowed, it is limited to an annual quota that has ranged between 15-25 animals per year (Fish and Game Code sections 4900 <i>et seq.</i>). All bighorn sheep are State of California fully protected species, meaning that take, with the exclusion of the limited hunt and scientific research, cannot be authorized.</p>	
<p>General/ Chapter 9</p>		<p>CDFG recommends the PEIS fully analyze the potential loss of connectivity among species populations and natural communities in both the SEZ development and cumulative impacts sections. Retaining essential connectivity between natural areas was not discussed in detail, or mentioned in Impact Summary tables, for the Iron Mountain or Pisgah SEZ’s; the areas where the threat to retaining connectivity</p>	

ATTACHMENT 6

		<p>appears most acute. It is mentioned briefly – one sentence - in the desert tortoise and bighorn sheep discussions for these sites.</p> <p>We recommend the following, and associated GIS layers, for the wildlife impacts and cumulative impacts sections:</p> <p>Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.</p> <p>Also, the following information referenced in the PEIS supports the connectivity areas identified in Spencer et al. This model should also be referenced for both DT and bighorn sheep and in the cumulative impact sections:</p> <p>Bare, L., Bernhardt, T., Chu, T., Gomez, M., Noddings, C., and Viljoen, M. 2009. Cumulative Impacts of Large-scale Renewable Energy Development in the West Mojave: Effects on Habitat Quality, Physical Movement of Species, and Gene Flow, A Group Project Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Environmental Science and Management, University of California, Donald Bren School of Environmental Science and Management, Santa Barbara, Calif., May 8, 2009.</p>	
<p>General/ Chapter 9</p>		<p>Reference to mitigating under the California Endangered Species Act (CESA) and CESA consultation should be removed for all fully protected species. Except for purposes of scientific research, the California Fish and Game Code prohibits take of these species, and the document must not convey the impression that take can be mitigated through the CESA or CESA consultation.</p>	
<p>General/ Chapter 9</p>		<p>When calculating percentage of “potentially suitable habitat” by various species to discuss impact assessment, clarify if this is by multi-state species range or the species range within California. It is important to note that significantly reducing the range of a listed (or non-listed) species solely in California , or jeopardizing its potential future existence in California, could result in State-mandated regulatory project changes/actions and new species listings.</p>	
<p>General/ Chapter 9</p>		<p>Specially designated areas discussed in Chapter 9 should not be limited to those with a federal designation; mitigation lands with fee title or conservation easement held by the State, Ecological Reserves, Wildlife Areas, and State Parks should also be included to fully illustrate the extent of special designations at a landscape level. They should also be depicted on the special designated area maps for each SEZ.</p>	

ATTACHMENT 6

General: All		Conduct global search for “CDGF,” and replace with “CDFG” (California Department of Fish and Game).	
Chapter 9 9.1.12 9.2.12 9.3.12 9.4.12	9.1-119 / footnote 9, 9.2-123 footnote 4, 9.3-121/ footnote 7, 9.4-139 / foot-note 7	All references to species designated in California statute as fully protected (e.g. sections 3511 and 5515 of the California Fish and Game Code) should consistently reflect that these species are subject to a prohibition of take. Most parts of the document have does so but there are still some that appear to imply that take of these species can be mitigated pursuant to CESA. Footnotes that define fully protected species as “having the strictest take provisions” imply that there may be project-related forms of take that can be authorized.	
Chapter 9: All		Cumulative impact analysis should include impacts on State and federal lands that are adjacent to or near the SEZ’s. This should at a minimum include mitigation lands with fee title or conservation easement held by the State, Ecological Reserves, Wildlife Areas, and State Parks. Geographic extent of the cumulative impacts analysis (pages 9.1-265, 9.2-305, 9.3-301, 9.4-373) should address this issue.	
9.1.1		We note that the overall area of this SEZ has not been expanded as previously recommended by CEC/DFG (Scoping Comments 2009, items 4-6) (i.e., Imperial South, Salton Sea Eastern Shore, and Salton Sea Southwestern Shore). These areas were identified by these agencies as Study Areas, i.e. areas that had been identified as potential areas for utility scale renewable energy development on the basis of biological sensitivity data. Of the four SEZ’s, Imperial East poses the lowest incidence of biological resource concerns. CDFG notes that more information will ultimately be required about potential adverse effects on water birds from solar installations placed near to water bodies, but still hopes that expansion of this particular SEZ may be considered in future planning.	
Table 9.1.1.3-1	9.1-9 Vegetation	Avoidance of wetlands, riparian habitats, desert dry washes and sand dune habitats and sand transport areas to the “extent practicable” related to take of State-listed species may not be adequate mitigation for impacts pursuant to CEQA; “full mitigation” is the standard to be met pursuant to CESA. Wetlands that will be impacted should be replaced at ratios that are based on levels of impact and the value of the habitat being impacted or lost. Also, it is not adequate to state “Consultations with the USFWS and CDGF would be necessary to determine the appropriate mitigation ratio to acquire, enhance, and preserve desert tortoise compensation	

ATTACHMENT 6

		lands,” as take authorization in the form of State incidental take permits will be required if take of individuals is desired by project applicants.	
TABLES 9.1.1.3-1 and 9.1.11.2-1	9.1-10, 11, 94	Bird focal species list includes common raven. Expansion of desert raven populations poses a risk to the native desert fauna as they prey on desert tortoise and other species. Raven control plans are currently required for many sites as a part of conservation planning within the DRECP process. CDFG recommends deleting the reference to raven as a desert focal bird species, particularly the statement about avoidance of impacts to its potential nesting habitats. Inclusion of raven on focal species list implies it is a species of concern. If it is included, there must be mention of concerns over increased predation on desert tortoise and other species due to increases in raven populations associated with development, and more context provided about how its presence is generally an indication of site degradation rather than viability or diversity. A discussion of the need for raven management to counteract possible increases in raven populations associated with development would be useful.	
9.1.10	9.1-81/44-46	If avoidance is not possible, then direct habitat mitigation based on levels of impact and the value of the habitat being impacted or lost. The AAC was not lined in this section of the canal partly because of the high value of these wetlands, so the mitigation levels for this area are expected to be relatively high.	
TABLE 9.1.11.2-1	9.1-95	Horned lark is CA-WL, CA-S3 and should also be listed in TABLE 9.1.12.1-1	
TABLE 9.1.11.2-1	9.1-96	Loggerhead shrike is CA-SC, CA-S4 and should also be listed in TABLE 9.1.12.1-1	
TABLE 9.1.11.2-1	9.1-98	Golden eagle is a State of California fully protected species (CA-FP, CA-S3) and should also be listed in TABLE 9.1.12.1-1	
TABLE 9.1.11.2-1	9.1-99	Prairie falcon is a State of California WL species (CA-WL, CA-S4) and should also be listed in TABLE 9.1.12.1-1	
TABLE 9.1.11.3-1	9.1-105/36	Desert or Nelson’s bighorn sheep is a BLM-S species and should also be listed in TABLE 9.1.12.1-1	
9.1.11.3.1	9.1-105/39	The desert bighorn sheep is also a State fully protected species, and should be included in Section 9.1.12. Suggest addition of information that although hunting of the desert or Nelson bighorn sub-species is allowed, it is limited to an annual quota of 15-25 animals/year, and that all bighorn sheep are State of California fully protected species.	
TABLE	9.1-107	American badger is CA:SC, CA-S4 and should also be listed in TABLE 9.1.12.1-1	

ATTACHMENT 6

9.1.11.3-1			
Table 9.1.11.3-1	9.1-107/Big game	Text should note that because the section of canal between drops 3 and 4 is the only unlined section left, it will be utilized by deer for water. Solar facilities could make it difficult for the deer to get to the canal for water or push them to the lined sections where they could drown.	
Table 9.1.11.3-1	9.1-113	Spotted bat is CA:SC, CA-S2 and should also be listed in TABLE 9.1.12.1-1	
9.1.12	9.1-119/20	USFWS no longer maintains a list of SC species, but USFS does. Thus, you need to check all the species designated “FWS-SC”; some of them no longer have FWS status, and some should be instead “FWS-BCC” or Birds of Conservation Concern.	
TABLE 9.1.12.1-1	9.1-133	Colorado Desert fringe-toed lizard: add “CA-SC”	
TABLE 9.1.12.1-1	9.1-134	California black rail: add “FWS:BCC”	
TABLE 9.1.12.1-1	9.1-134/ California black rail	CDFG believes the potential impacts to this species are underestimated. If only looking at acreage, the relative impact is small, but this species does not occur in the entire potential suitable habitat and therefore where it is known to occur has higher value. This is a California fully protected species and therefore if the species occurs, no direct take is allowed. Compensatory mitigation in lieu of avoidance cannot be considered. This species has been recorded in the wetlands between drops 3 and 4 of the AAC.	
TABLE 9.1.12.1-1	9.1-135	Ferruginous hawk: add “CA-WL”	
TABLE 9.1.12.1-1	9.1-136	White-faced ibis: add “CA-WL”	
TABLE 9.1.12.1-1	9.1-137/Yuma clapper rail	CDFG believes the potential impacts to this species are underestimated. If only looking at acreage, the relative impact is small, but this species does not occur in all of the potential suitable habitat and therefore where it is known to occur has higher value. This is a California fully protected species and therefore if the species occurs, no direct take is allowed. Compensatory mitigation in lieu of avoidance cannot be considered.	
9.1.12.1.4	9.1-147/10	Indicate that California fully protected species designation does not allow take.	
9.1.12.2.1	9.1-149/22	Reference to mitigating under CESA and CESA consultation should be removed for this and all California fully protected species. State law prohibits take of these species, and the document must not convey the impression that take can be allowed	

ATTACHMENT 6

		or mitigated through the CESA or CESA consultation. Further rectify by stating that take of this species must be avoided.	
9.1.22.2	9.1-267/19-20	This cumulative impacts section should include an assessment of reasonably foreseeable impacts from the projects that are known to be in the bidding or research phase. While it is necessary to acknowledge that there are uncertainties related to the total number of currently pending applications on and in the vicinity of BLM land, it is also reasonable to assume that some of the projects will ultimately proceed with permitting and construction.	
FIGURE 9.1.22.2-1	9.1-271	The cumulative impacts map should include non-federal lands, both protected and unprotected.	
9.2	General	Iron Mountain SEZ has been viewed for some time by CEC/DFG as an area that should be a low priority for solar energy development given its current relative isolation and lack of development (Scoping Comments to BLM, 2009, page 7). The U.S. Fish and Wildlife Service have also identified it to be in a high value Mojave desert tortoise Habitat Corridor. A large portion of this area also overlaps with high value riparian zones identified the Areas of Conservation Emphasis (ACE II) conservation priority model developed by CDFG (Map 1). We recommend the elimination of this SEZ from the BLM Solar Energy Development Program.	
9.2	General	Development of the Iron Mountain SEZ alone may not have a substantial impact on connectivity, but cumulative effects of full development of the proposed projects in and around the SEZ are likely to decrease connectivity substantially. Retaining essential connectivity between natural areas was not discussed in detail, or mentioned in Impact Summary table. It is mentioned briefly – one sentence - in the desert tortoise and bighorn sheep discussions for these sites. Discussion of connectivity issues is essential for programs of this scope and size.	
Table 9.2.1.3-1	9.2-6/ Lands and Realty	This suggests that 1200 acres of state lands could be developed for solar energy in a manner compatible with surrounding land use. This would not be the case if these are mitigation lands, Ecological Reserves, Wildlife Areas, or State Parks. Ownership of adjacent lands should be clarified and any associated restrictions associated with these state lands should be disclosed.	
TABLE 9.2.1.3-1	9.2-11/ Amphibians and Reptiles	Include dune habitat and sand transport systems as a specific habitat type that needs consideration in the SEZ-Specific Design Features.	

ATTACHMENT 6

TABLE 9.2.1.3-1	9.2-12 9.2-124/38-45	Although bighorn sheep may not be groundwater dependent in this vicinity, drawdown of their water sources may still have an effect. This likely impact needs to be noted and considered in siting and water use strategies within the SEZ.	
7.2.7.2	9.2-51/42-43	Although the document states that Danby Lake may not be a suitable location for construction, because lakebed sediments are often saturated with shallow groundwater and likely collapsible, there should also be acknowledgment of the wildlife value of Danby Lake, including the active dunes at the southwest corner of the lake.	
9.2.9.2.1	9.2-63/43	Ephemeral drainages, and all state waters that comprise a lake or stream, are subject to State statute pursuant to California Fish and Game Code Section 1600 <i>et. seq.</i> It may not be possible to mass grade these areas, and the potential direct and offsite impacts associated with modification to drainage patterns (sediment and surface flow impacts) should be evaluated and mitigation measures identified. The reference to the state requirement for a formal lake or streambed alteration notification to the California Department of Fish and Game is correct, but there is no tentative mitigation approach suggested.	
9.2.9.3	9.2-70/3-4	Support for dry-cooling or very low water use technologies should be explicitly advanced at this programmatic level, given what is known about water availability in this area.,.	
9.2.10.3	9.2-80/25	Recommendation should stipulate that a plan be developed for agency review, rather than “approved and implemented.”	
9.2.11.1.2	9.2-91/26-29	The potential for indirect effects from water drawdown in springs in the SEZ region is not included.	
9.2.11.1.3	9.2-92 /4	After “ and portions of Danby Lake” add, “ including seasonal wetland habitat and sand dune habitat and its associated sand transport systems”	
TABLE 9.2.11.2-1	9.2-126	Horned lark is CA-WL, CA-S3 and should also be listed in TABLE 9.2.12.1-1	
9.2.11.3.1	9.2109/ 35-39	California fully protected species need to be clearly identified as such. Emphasizing the big game aspect of desert bighorn sheep may diminish its actual significance as a species of conservation concern. This species will likely be a covered or planning species in the DRECP.	
9.2.12	9.2-123/ 12-13,	Should include California fully protected species, and also state that no take is allowed for any species with a fully protected designation. This is different than a	

ATTACHMENT 6

	footnote 4	“take provision” as described in footnote 4.	
TABLE 9.2.11.2-1	9.2-126	Golden eagle is a State of California fully protected species (CA- FP, CA-S3) and should also be listed in TABLE 9.2.12.1-1	
TABLE 9.2.11.2-1	9.2-126	Prairie falcon is CA-WL, CA-S3 and should also be listed in TABLE 9.2.12.1-1	
TABLE 9.2.11.3-1	9.2-126	American badger is CA:SC, CA-S4 and should also be listed in TABLE 9.2.12.1-1	
TABLE 9.2.11.3-1	9.2-126	Spotted bat is CA:SC, CA-S2 and should also be listed in TABLE 9.2.12.1-1	
TABLE 9.2.12.1-1	9.2-141	Mojave Desert fringe-toed lizard: add “CA-S3”	
TABLE 9.2.12.1-1	9.2-142	Ferruginous hawk: add “CA-WL”	
TABLE 9.2.12.1-1	9.2-143	Hepatic tanager: add “CA-WL”	
TABLE 9.2.12.1-1	9.2-126	<ul style="list-style-type: none"> • Arizona pholistoma (<i>Pholistoma auritum</i> var. <i>arizonicum</i>) CA-S1 (CNPS List 2.3); • long-eared owl (<i>Asio otus</i>) CA-SC, CA-S3; • northern harrier (<i>Circus cyaneus</i>) CA-SC, CA-S3 • horned lark (<i>Eremophila alpestris actia</i>) CA:WL • golden eagle (<i>Aquila chrysaetos</i>) CA:FP, CA:WL • prairie falcon (<i>Falco mexicanus</i>) CA:WL • spotted bat (<i>Euderma maculatum</i>) CA:SC • American badger (<i>Taxidea taxus</i>) CA:SC 	
9.2.12.1.1	9.2-149/5	The desert tortoise is a species listed as threatened under the ESA throughout its entire range in CA, AZ, NV and UT, with the exception of AZ south and east of the Colorado River.	
9.2.12.1.1 9.2.12.2.1	9.2149/34 9.2-156/1	The desert tortoise analysis for this SEZ appears to conflict with the stated objectives for SEZ site selection, specifically “no Threatened and Endangered species conflicts.” The analysis for this SEZ states that between several hundred to over one thousand desert tortoise could be impacted by development in this SEZ and that the SEZ may provide important connectivity between desert tortoise critical habitat units. This also appears to conflict with the general mitigation measures indicating solar facilities should not be located in areas of important biological resources.	

ATTACHMENT 6

9.2.12.2.1	9.2155/30	<p>Connectivity: Iron Mountain SEZ is in an area that separates two Desert Tortoise Critical Habitat Areas: Chemehuevi to the northeast and the Pinto Mountains to the southwest. This is at a point where the eastern and western critical habitat areas are closest (approximately 18 miles; the next closest potential corridor area is near Baker, where there is also a number of pending BLM renewable energy leases). The Iron Mountain SEZ area may be (or may have been in the past) a critical corridor for DT between these two regions. Development in the SEZ and adjacent BLM lands is likely to effectively cut off this corridor. The area of the SEZ is not identified as an Essential Connectivity Area (Spencer et al 2010) for wildlife, presumably due to existing barriers, but the areas immediately to the north and south are. The area is also identified as an area of moderate connectivity for the DT under current conditions (Bare et al 2009). Under climate change scenarios and maximum solar development, the area is likely to substantially lose most of its value as a corridor, effectively cutting off migration through the area. This should be discussed more thoroughly in the Cumulative Impacts section.</p>	
9.2.12.2.1	9.2-156/2, 22, 44	<p>While the statement that CESA provides authority to CDFG to regulate impacts on state listed species is correct, this section should more clearly indicate that it would be an incidental take permit that would need to be applied for and secured before any take of animals could occur. Defining this legal requirement as just a consultation process undervalues its significance and rigor for project applicants. Rectify by including the following language: “Therefore, formal application for an incidental take permit, or a determination of consistency with a USFWS section 7 permit, would also be required for incidental take of desert tortoises in the SEZ.” This rectification should be applied in multiple places within the document when similar reference to CESA incidental take authorization is made.</p>	
9.2.12.2.3	9.2-166/39	<p>Bighorn sheep is also a State fully protected species, and needs to be identified as such throughout the document.</p>	
9.2.22.2	9.2-305/41	<p>Potential cumulative impacts to wildlife should be discussed more thoroughly. There will be likely substantial habitat fragmentation and blockage of dispersal corridors, particularly for bighorn sheep and desert tortoise (see Spencer et al 2010 and Bare et al 2009).</p>	

ATTACHMENT 6

9.2.22.2	9.2-307/ 13-14	To be more meaningful, the cumulative impacts section should include at least some form of assessment of projects in the bidding or research phase. Project such as Leopold Companies, Inc (CACA 049002) may not have been classified as “Reasonably Foreseeable” based on the stated criteria at the time of preparation of the EIS text. It is unclear whether this stage should be considered “Reasonably Foreseeable” and thus should be included in the Cumulative Analysis. This comment pertains to the corresponding sections in the other SEZ analyses also, but is mentioned only here because of the particularly strong interest in limiting impacts to the Iron Mountain vicinity.	
FIGURE 9.2.22.2-1	9.2-309	To be more meaningful, the cumulative impacts map should include non-federal lands, protected and non-protected. Impacts accumulate at a landscape level regardless of land ownership.	
9.2.22.4.10	9.2-327/9	In addition to avoidance of outright development within the shores of Danby Lake, offsite impacts to its function within the landscape also need to be considered. Interruption of surface and groundwater flows to the lake may need formal regulatory review through LSA (lake and streambed alteration) notification(s) pursuant to sections 1600-1616 of the California Fish and Game Code.	
9.3		A large portion of the Pisgah SEZ overlaps with an area (Area 2) identified in the Interim Management Strategy of the Desert Renewable Energy Conservation Plan (DRECP) and Areas of Conservation Emphasis (ACE II) conservation priority model developed by CDFG (<i>Interim Mitigation Strategy As required by SB X8 34</i> , California Department of Fish and Game, September 2010, Figures 3 and 4). The SEZ is within an area of high connectivity as noted in the California Essential Habitat Connectivity (CEHC) Project (CDFG and California Department of Transportation, Attachment 4). This can be seen in Maps 1 and 3 (Attachments 1 and 3) of the cover letter that accompanies this Table.	
9.3	General	Retaining essential connectivity between natural areas was not discussed in detail, or mentioned in Impact Summary table. It is mentioned briefly – one sentence - in the desert tortoise and bighorn sheep discussions. We recommend that potential reductions in connectivity be emphasized both for development of the SEZ alone and in the cumulative impacts sections. Development of this SEZ may cut off connectivity around the north side of Pisgah Crater (Spencer et al 2010). The permitting of the other planned energy developments in the vicinity could also cut off connectivity south of Pisgah Crater and north of Highway 15. Much of the approximately 4,600-acre SES Solar #3 and SES Solar #6 permitted project cited in	

ATTACHMENT 6

		the DPEIS (now known as the Calico Solar owned by K Road Power Holdings, LLC) are already within the northeast quadrant of the Pisgah SEZ, and the application for a wind energy project near Troy Lake (Power Partners SW, enXco) remains pending with BLM for an approximately 10,000 acre footprint. We recommend that final configurations of siting within the remainder of this and all other SEZ's should ensure that habitat and range connectivity is maintained, with onsite and nearby offsite projects considered. The area is also identified as an area of high connectivity for the DT under current conditions (Bare et al 2009). Under climate change scenarios and maximum solar development, the area may substantially lose its value as a corridor. DT dispersal between Ord-Rodman and areas to the east will be disrupted. Cumulative impacts to the value of the area as a wildlife corridor should be addressed.	
Table 9.3.1.3-1	9.3-5/ Lands and Realty	This would not be the case if these are mitigation lands, Ecological Reserves, Wildlife Areas, or State Parks. Clarify the ownership and any associated restrictions associated with these state lands.	
Table 9.3.1.3-1	9.3-13/ Special Status Species (cont'd.)	Mojave Tui Chub is a State fully protected species pursuant to California Fish and Game Code Section 5515, meaning project related take cannot be authorized under any circumstances, CESA permit or otherwise. Reference to mitigating under CESA and CESA consultation should be removed for this and all California fully protected species. State law prohibits take of these species, and the document must not convey the impression that take can be allowed or mitigated through the CESA or CESA consultation. Consultation may be provided only for minimization or avoidance. Further rectify by stating that take of this or any other fully protected species must be avoided.	
Table 9.3.1.3-1	9.3-7, 9, 12 7:Water Resources 9:Reptiles and Amphibians 12:Special Status Species	The appropriate mitigation for impacts to shorebirds and other resources that utilize Troy Lake is to remove it from the SEZ or otherwise formally ensure that it is not impacted.	

ATTACHMENT 6

9.3.11.1.3	9.3-85/ 36-37	To “e.g., Troy Lake.....toad” add “and sand dune areas that may be habitat to a number of reptile species including Mojave fringe-toed lizard”.	
9.3.12.1.1	9.3-123/ 21-46	Mojave Tui Chub is a State fully protected species pursuant to California Fish and Game Code Section 5515. Reference to mitigating pursuant to CESA and CESA consultation should be removed for all fully protected species. Except for purposes of scientific research, California State law (sections 3511 and 5515 of the California Fish and Game Code) prohibits take of these species, and the document must not convey the impression that take can be mitigated through the CESA or CESA consultation.	
Table 9.3.12.1-1	9.3-124	Horned lark is CA:WL and should also be listed in TABLE 9.3.12.1-1	
Table 9.3.12.1-1	9.3-124	Loggerhead shrike is CA-SC and should also be listed in TABLE 9.3.12.1-1	
Table 9.3.12.1-1	9.3-124	Golden eagle is a State of California fully protected species (CA: FP) and should also be listed in TABLE 9.3.12.1-1	
Table 9.3.12.1-1	9.3-124	Prairie falcon is CA:WL and should also be listed in TABLE 9.3.12.1-1	
Table 9.3.12.1-1	9.3-124	American badger is CA:SC and should also be listed in TABLE 9.3.12.1-1	
Table 9.3.12.1-1	9.3-124	Add the following species to the special status species table: horned lark, loggerhead shrike, golden eagle, prairie falcon, and American badger.	
Table 9.3.12.1-1	9.3-137	Arroyo chub: add “CA-SC”	
Table 9.3.12.1-1 9.3.12.2.1	9.3-138 9.3-156- 157/ 41-4	Groundwater withdrawals should be avoided in the habitats of this and other listed State and federal species. For fully protected species, the state legal standard is limited to avoidance, rather than mitigation for take. As written, this statement contemplates mitigation, which may imply the possibility of take. .	
9.3.12.2-1	9.3-156/ 46	Reference to mitigating under CESA and CESA consultation should be removed for this and all fully protected species. State law prohibits take of these species, and the document must not convey the impression that take can be mitigated through the CESA or CESA consultation.	
9.4	General	CDFG recommends that sensitive habitats in the proposed Riverside SEZ not be	9.4

ATTACHMENT 6

		exposed to development. This includes the vicinities of Palen Lake and Palen Dunes, Ford Dry Lake, and McCoy Wash. Portions of the SEZ are likely to presently have moderate value as wildlife corridors, particularly the area around Ford Dry Lake (Bare et al 2009 and Spencer et al 2010) and the area west of Palen Lake (Spencer et al 2010). A moderately important desert tortoise corridor was identified as passing through the SEZ from Chuckwalla DTMA (Bare et al 2009). Potential disruption of these corridors should be addressed in more detail in 9.4.12.1.1, 9.4.12.2.1, and the Cumulative Impacts section 9.4.22.4.11. If the PEIS addresses these concerns, significant impacts to sensitive habitats and corridor connectivity within the Riverside SEZ would likely be avoided	
9.4	General	McCoy Wash has previously been identified by CEC/DFG as habitat that contains an exceptional example of Desert Dry Wash Woodland. This aggregation provides habitat for numerous resident and migratory sensitive bird species, such as southwestern willow flycatcher, summer tanager, LeConte’s thrasher, and gila woodpecker and mammals such as desert mule deer and mountain lions. We recommend that this area be removed from the SEZ, and that the analysis and any ranking of areas that occurs in the Solar PEIS should recognize the importance of focusing development in preferred areas that have already been impacted and avoiding, whenever possible, undisturbed areas and areas of high biological value such as McCoy Wash.	
9.4 General	9.4-9/ 9.4-13 9.4-41/ 8-9	This SEZ should be redesigned to exclude McCoy Wash, the Palen Dunes, and the sand transport areas associated with the dunes in a formal way (rather than “to the extent practicable.”	
Table 9.4.1.3-1	94-6/ Lands and Realty	This suggests that State lands in the vicinity could be developed for solar energy in a manner compatible with surrounding land use. This would not be the case if these are mitigation lands, Ecological Reserves, Wildlife Areas, or State Parks. Ownership of adjacent lands should be clarified and any associated restrictions associated with these state lands should be disclosed.	
TABLE 9.4.1.3-1	9.4-10	Reword mitigation measure to “All wetland, riparian, playa, dry wash woodland, sand dune, and chenopod scrub habitats within the SEZ should be avoided. All sand transport areas should also be avoided.”	
TABLE 9.4.1.3-1	9.4-11, 12	See comments for 9.1-10, 11, 94	
Table	9.4-14/	The appropriate mitigation for impacts to shorebirds and other resources that utilize	

ATTACHMENT 6

9.4.1.3-1	Special Status Species	Palen and Ford Dry lakes is to remove them from the SEZ or otherwise formally ensure that those areas are not impacted.	
TABLE 9.4.1.3-1	9.4-15	The desert tortoise is listed as threatened pursuant to both ESA and CESA.	
9.4.9.2.1	Page 9.4-72/15	Rather than stating that disturbance to McCoy Wash should be minimized, the mitigation should be modified to avoid and/or preclude impact altogether. Failure to explicitly prohibit disturbance of McCoy Wash would conflict with the general stated goal of the EIS to plan projects to avoid impact to unique biological communities.	
9.4.9.2.2	9.4-76/10-12	Does this mean that wet-cooling won't be allowed? If so, state it clearly, or explain likely scenarios for cooling requirements.	
9.4.9.3	9.4-78	Change to “Wet-cooling would not be permitted.” (see comment for pg. 9.4-76/10-12)	
9.4.10.3	9.4-93, 9.4-198/37, 46	The phrase “to the extent practicable” appears throughout document. It is too vague. Suggest deletion of this phrase from the entire document.	
9.4.11.1.2	9.4-96/36	This list of impacts does not include the effects of shielding on sand dunes, and discussion of this problem is absent from Chapter 5 or Appendix A, Section 2.2, of the entire document.	
9.4.11.1.3	9.4-103/46-47	Add Palen Dunes to this list of important ecological landscape features.	
9.4.11.2.2	9.4-120/17	Impacts of “treatment ponds” on birds need to be discussed in this section. Discussion on impacts of treatment ponds on mammals is also needed.	
9.4.11.3.1	9.4-122/29-31	Mountain lions are no longer a game species, and California law prohibits their hunting (Fish and Game Code, sections 4800(a) and 4800(b); it is a “specially protected” mammal under state law. Although the non-game status of this species is clarified in a footnote, it is still erroneous to reference it as “big game species.” in California.	
9.4.11.3.1	9.4-123/12	Bighorn sheep is a California fully protected species.	
TABLE 9.4.12.1-1	9.4-143	The table needs to include “Fully Protected” status.	

ATTACHMENT 6

9.4.12.2.1	Page 9.4-180/10	This analysis states that when using lower density estimates, the SEZ may support up to 2,865 tortoises, as well as pose connectivity impediments between the Chuckwalla DWMA/Critical Habitat and the Pinto Mountains DWMA/Critical Habitat. Impacts to such high numbers of tortoise and of this general magnitude may not be feasible to mitigate. This also appears to conflict with the general mitigation principles in the EIS such as the statement that solar facilities should not be located in areas of important biological resources. The analysis should consider these basic concerns and more explicitly acknowledge the magnitude of this particular impact, beyond the standard referral to the requirement for federal and state permits.	
TABLE 9.4.12.1-1	9.4-143	Horned lark is CA:WL and should be also be listed in TABLE 9.4.12.1-1	
9.4.12.2.1	9.4-180/16-19	Areas that provide important connectivity for desert tortoise or other special status species should be avoided.	
TABLE 9.4.12.1-1	9.4-143	Golden eagle is a State of California fully protected species (CA: FP) and should also be listed in TABLE 9.4.12.1-1	
TABLE 9.4.12.1-1	9.4-143	Prairie falcon is CA:WL and should also be listed in TABLE 9.4.12.1-1	
TABLE 9.4.12.1-1	9.4-143	American badger is CA:SC and should also be listed in TABLE 9.4.12.1-1	
TABLE 9.4.12.1-1	9.4-143	Add the following species to the special status species table: horned lark, golden eagle, prairie falcon, and American badger.	
TABLE 9.4.12.1-1	9.4-143	Add the following species which were documented in the CNDDDB in the vicinity of the project, to the special status species table: <ul style="list-style-type: none"> • angel trumpets (<i>Acleisanthes longiflora</i>), CA-1.3, CNPS List 2.3 • banded gila monster (<i>Heloderma suspectum cinctum</i>), CA-SC • brown-crested flycatcher (<i>Myiarchus tyrannulus</i>), CA-WL • California ayenia, (<i>Ayenia compacta</i>), CA-S3, CNPS List 2.3 [Note: this species is S3 but because it is CNPS List 2.3 it needs to be addressed under CEQA) • Colorado River cotton rat (<i>Sigmodon arizonae plenus</i>), CA-SC • Darlington’s blazing star (<i>Mentzelia puberula</i>) CA-S2, CNPS List 2.2 • desert sand-parsley (<i>Ammoselinum giganteum</i>) CA-SH, CNPS List 2.3 • elf owl (<i>Micrathene whitneyi</i>), CA-E, CA-S1 (New CNDDDB record from Corn Spring quad) • gilded flicker (<i>Colaptes chrysoides</i>) CA-E, CA-S1 	

ATTACHMENT 6

		<ul style="list-style-type: none"> • Las Animas colubrina (<i>Colubrina californica</i>) CA-S2, CNPS List 2.3 • pallid San Diego pocket mouse (<i>Chaetodipus fallax pallidus</i>) CA-SC, CA-S3 • Robison's monardella (<i>Monardella robisonii</i>), CA-S2, CNPS List 1B.3 • slender-spined all-thorn (<i>Koeberlinia spinosa</i> ssp. <i>tenuispina</i>), CA-S2, CNPS List 2.2 • Sonoran yellow warbler (<i>Dendroica petechia sonorana</i>), CA-S1, CA-SC • Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>), ESA-E, CA-E • Summer tanager (<i>Piranga rubra</i>), CA-S2, CA-SC • Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>), CA-E, CA-S1 • Yellow-breasted chat (<i>Icteria virens</i>), CA-SC- CA-S3 • Yuma clapper rail (<i>Rallus longirostris yumanensis</i>), ESA-E, CA-T, CA-S1, CA-FP • Yuma myotis (<i>Myotis yumanensis</i>), BLM-S, CA-S4 	
TABLE 9.4.12.1-1	9.4-160	Crissal thrasher: add “CA-S3”	
TABLE 9.4.12.1-1	9.4-161	Ferruginous hawk : add “CA-WL. CA-S3”	
TABLE 9.4.12.1-1	9.4-161	hepatic tanager: add “CA-WL”	
TABLE 9.4.12.1-1	9.4-162	Loggerhead shrike: add “CA-S3”	
TABLE 9.4.12.1-1	9.4-165	Pallid bat: add “CA-S3”	
TABLE 9.4.12.1-1	9.4-166	Spotted bat: add “CA-SC”	
TABLE 9.4.12.1-1	9.4-167	Western mastiff bat: add “CA-S3”	
TABLE 9.4.12.1-1	9.4-168	Western yellow bat: add “CA-S3”	
TABLE 9.4.12.1-1	9.4-143	Add the following species to the special status species table: horned lark, golden eagle, prairie falcon, and American badger.	
9.4.12.2.1	9.4-180/ 16-19	Areas that provide important connectivity for desert tortoise or other special status species should be avoided.	

ATTACHMENT 6

9.4.12.2.1	9.4-181/ 8	Change “may be needed” to “shall be needed.”	
9.4.12.3	9.4-198/ 46	The recommendation to avoid impacts to desert playa and wash habitats "to the extent practicable" is suitable for federal standards but is problematic for California Environmental Quality Act requirements which call for mitigation according to level of impact.	
9.4.12.3	9.4-199/ 8-10	Note that the mechanism of disturbance to sand dunes is not only due to direct disturbance of dunes but to sand transport systems; if sand transport is blocked by new construction or obstruction, the sand dunes will not be replenished with source material and will not persist over time.	
9.4.22.4.10, 9.4.22.4.11	9.4-397/ 30, 398/34	This section lacks discussion of potential impacts to wildlife dispersal corridors associated with cumulative impacts, particularly in reference to desert tortoise and bighorn sheep.	

ATTACHMENT 6

**Standard Review Form
Draft Solar Energy Development PEIS**

Reviewer’s Name: Eric Veerkamp, AICP

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Primary Disciplinary Area (e.g., ecology, land use planning, regulatory oversight): Land Use

Section or Chapter Number and Date of Reviewed Document: Volume 3 - Chapter 9, Parts 1 and 2,

EIS Section	Page/Line	Comment/Suggested Revision	Action (for use by ANL)
Vol. 3, Parts 1 and 2, CA	Page 9.1-27, line 17-23	Figure 9.1.3.1-1 (page 26). This comment is closely intertwined with comments on text (same EIS Section), page 9.1-1 and Figure 9.1.1.1-1 (page 2). A discussion of features surrounding the Imperial East site on page 9.1-1 have no reference to the figure in which they appear. In the same vein, other somewhat similar features are discussed and shown in the figure on page 26. It would be clearer if all features, such as the Juan de Anza Bautista Trail and East Mesa ACEC appeared in the first figure and were referenced accordingly (less searching). The suggestion here is also that an additional figure illustrating the Imperial East site (and surrounding features) at a smaller scale would be helpful to the reader.	
Same	Page 9.1-2	While Figure 9.1.1.1-1 identifies the Section 368 corridor located in close proximity to the Imperial East site, there is no indication whatsoever that it is a transmission corridor (although it is clear in the text that it is a transmission corridor). Considering the significance of the 368 corridor (it covers 80% of the site) with respect to its potential to induce policy changes and/or the relocation of transmission facilities (and perhaps even facility buildout), the corridor should be more prominently identified to facilitate discussion of these issues. NOTE: this comment would also hold true for other figures for the remaining SEZ’s that contain references to a 368 corridor.	

ATTACHMENT 6

Appendix-I	Page I-1	The study area ecoregions described in this section, beginning with the Coast Range could benefit from additional description of each region's location within the greater six-state area. For example, on page I-12, line 1, Central Valley, it would be beneficial to the reader to know that the California's Central valley is located between approximately Redding on the north and Bakersfield on the south. Each description could benefit from a small amount of additional detail.	

ATTACHMENT 6

**Standard Review Form
Draft Solar Energy Development PEIS**

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Primary Disciplinary Area (e.g., ecology, land use planning, regulatory oversight): Regulatory Oversight

Section or Chapter Number and Date of Reviewed Document: Volume 3 - Chapter 9, Parts 1 and 2,

EIS Section	Page/Line	Comment/Suggested Revision	Action (for use by ANL)
		Vol.1	
3.7.3	3-51/9	Delete CEC, CDFG, BLM, and USFWS 2009 citation and replace with: <u>REAT 2010</u>	
	3-55/19	Replace/update reference with: <u>Renewable Energy Action Team (California Energy Commission, California Department of Fish and Game, U.S. Department of Interior Bureau of Land Management, and Fish and Wildlife Service). <i>Best Management Practices and Guidance Manual: Desert Renewable Energy Projects</i>. California Energy Commission, Siting, Transmission and Environmental Protection Division. REAT-1000-2010-009-F</u>	
		Vol. 3	
9.1.18.3	9.1-229/31	Add and delete the following text (underline/strikeout): “to follow CEC guidelines (for projects under the CEC’s jurisdiction) and other <u>laws/regulations for interacting with Native Americans, including federal, the California Environmental Quality Act and related guidelines, state regulations and policies governing treatment of Native American remains and artifacts, and tribal consultations for proposed local land use planning decisions in addition to Federal requirements (REAT 2010 CEC2009a).</u> ...”	
9.1.18.3	9.1-300/15	Replace/update reference with: <u>Renewable Energy Action Team (California</u>	

ATTACHMENT 6

		<u>Energy Commission, California Department of Fish and Game, U.S. Department of Interior Bureau of Land Management, and Fish and Wildlife Service). <i>Best Management Practices and Guidance Manual: Desert Renewable Energy Projects</i>. California Energy Commission, Siting, Transmission and Environmental Protection Division. REAT-1000-2010-009-F</u>	
9.2.18.3	9.2-267/33-35	See comments above for section 9.1.18.3. Also, the BMPs manual is not currently referenced in the 9.2 reference section and should be.	
9.3.18.3	9.3-267/22-24; 9.3-333/37	See section 9.1.18.3 comments above.	
9.4.18.3	9.4-335/11-13; 9.4-412/5	See section 9.1.18.3 comments above.	

ATTACHMENT 6

**Standard Review Form
Preliminary Draft Solar Energy Development PEIS**

Reviewer’s Name: James W. Reede, Jr., Ed.D **Reviewer’s Organization:** California Energy Commission

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Primary Disciplinary Area (e.g., ecology, land use planning, regulatory oversight): Regulatory Oversight

Section or Chapter Number and Date of Reviewed Document: Chapter 3, Volume 9, Parts 1 & 2

EIS Section	Page/Line	Comment/Suggested Revision	Action (for use by ANL)
9.3-1	11	Census data for San Bernardino is incorrect. Text shows population at 2,086,645. 2010 US Census shows population 2,035,210 with 20% growth since 2000	
9.4-1	21	Census data for Riverside County is incorrect. Text shows population of 84,443 persons. 2010 US Census shows 2,189,641.	
Volume 3 Chapter 9		Population data used throughout the DPEIS is from multiple sources which leads to inconsistencies of estimates. 2010 US Census data should be used for consistency to determine populations in areas of study.	

ATTACHMENT 6

**Standard Review Form
Draft Solar Energy Development PEIS**

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Primary Disciplinary Area (e.g., ecology, land use planning, regulatory oversight): Cultural Resources

Section or Chapter Number and Date of Reviewed Document: Chapter 3, Volume 9, Parts 1 & 2

EIS Section	Page/Line	Comment/Suggested Revision	Action (for use by ANL)
Section 9.1.17.1.5	p. 9.1-219	<p>While the PEIS states the quantity of known cultural resources surveys conducted within each SEZ area, it would be more meaningful to also include a <i>percentage</i> of the SEZ area that has been covered by the prior surveys in order to better understand extent of prior investigation and to assess the potential sensitivity of the area for the presence of cultural resources. For instance, page 9.1-219 states that one archaeological survey was conducted within the Imperial East SEZ; Page 9.2-255 states that at least three linear surveys have been conducted within the Iron Mountain SEZ; Page 9.3-257 states that at least 19 previous surveys have been conducted within the Pisgah SEZ; and Page 9.4-321 states that at least 109 previous surveys have been conducted in the vicinity of the proposed Riverside East SEZ. How many acres do these prior survey areas comprise relative to the overall acreage of each respective SEZ?</p>	
Section 9.2.17.1.5	p. 9.2-255		
Section 9.3.17.1.5	p. 9.3-257		
Section 9.4.17.1.5	p. 9.4-321		

ATTACHMENT 6

EIS Section	Page/Line	Comment/Suggested Revision	Action (for use by ANL)
<p>Section 9.1.17.2</p> <p>Section 9.2.17.2</p> <p>Section 9.3.17.2</p> <p>Section 9.4.17.2</p>	<p>p. 9.1-220, Lines 9, 10</p> <p>p. 9.2-258, Lines 9, 10, 11</p> <p>p. 9.3-259, Lines 24, 25</p> <p>p. 9.4-324, Lines 9, 10, 11</p>	<p>The first sentence of each of these paragraphs states, “Direct impacts on significant cultural resources could occur in the proposed [Imperial East SEZ; Iron Mountain SEZ; Pisgah SEZ; or Riverside East SEZ]; however, as stated in Section [9.1.17.1, 9.2.17.1, 9.3.17.1, 9.4.17.1] further investigation is needed in a number of areas.” The referenced sections (9.1.17.1, 9.2.17.1, 9.3.17.1, and 9.4.17.1), however, do not appear to contain any such statement or description about the need for further investigation.</p> <p>It should also be noted that a general statement that direct impacts may occur across an entire SEZ area does little to identify areas of high potential impacts or what type of further investigation is needed. The language is so broad as to be ineffective to an analysis intended to identify areas <u>best suited</u> for solar energy projects, with the least environmental impact.</p>	
<p>Volume 3, Chapter 9</p>	<p>General Comment regarding Cultural Resources Section for California SEZs</p>	<p>The PEIS provides only a preliminary cultural resources assessment of each SEZ based on very limited information. While some background research regarding the presence of cultural resources within each SEZ was conducted for this PEIS, the PEIS readily acknowledges that the available background data were limited and that further investigation is necessary for each site-specific project. The PEIS discloses the fact that the development of solar energy facilities within the SEZs could produce diverse impacts on cultural resources in and around the areas where solar facilities are proposed to be built. The PEIS also clearly outlines the site-specific NEPA analyses and Section 106 review process that would be required for proposed individual solar projects. It is important that applicants for site-specific projects within the SEZs recognize the more general and limited nature of the PEIS cultural resource assessment and that full cultural resources investigations would still be necessary once a project-specific APE is established. As the completion of cultural resources investigations are often critical-path items with respect to project schedules and timelines, the establishment of schedules for site-specific project siting and permitting cases should take into account all the requirements necessary for the satisfactory completion of the cultural resources investigations and compliance process. Investigations should also address related facilities, such as</p>	

ATTACHMENT 6

EIS Section	Page/Line	Comment/Suggested Revision	Action (for use by ANL)
		<p>transmission linears, substations, and access corridors. Given that the goal of the Solar PEIS is to facilitate environmental permitting for individual solar development projects and to enable accelerated siting and permit processing, and given the fact that the cultural resource investigation process can be lengthy (particularly if archaeological sites are identified within a given project area and need to be evaluated and/or mitigated), it should perhaps be made clearer in the PEIS that the project applicants must have completed a good portion of the Section 106 review process (i.e., early consultations, records searches, surveys, and resource evaluations) <u>prior</u> to submitting an application for a permit/license, if accelerated siting and permit processing is desired; otherwise, the amount of time needed to meet cultural resource compliance on site-specific projects may likely extend well beyond the desired siting and permit processing time frame.</p>	