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Sent via U.S. Mail and electronic mail

California Energy Commission
Dockets Office, MS-4
1516 Ninth Street
Sacramento, CA 95814-5512

Re: 09-Renew EO-01/Renewble Energy Executive Order/Due date 7/2/09

Dear Sir:

On behalf of Defenders of Wildlife ("Defenders") and our more than half a million members and supporters in the U.S., 200,000 of which are in California, I am writing to provide comments to the Renewable Energy Action Team (REAT) for consideration in developing the Desert Renewable Energy Conservation Plan (DRECP) as required by Executive Order S-14-09

Defenders is dedicated to protecting all wild animals and plants in their natural communities. To this end, Defenders employs science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions in order to impede the accelerating rate of extinction of species, associated loss of biological diversity, and habitat alteration and destruction.

Defenders strongly supports renewable energy production and utilization in California, but we do not consider the construction of large scale projects, and especially the very large-sized projects currently proposed in the California Desert on public lands to be the only way to meet our renewable energy goals. We realize that some large scale solar energy projects may be required to enable California to meet the mandated renewable energy production and delivery standards. Such large projects should be sited on degraded or disturbed land, such as abandoned agricultural fields and industrial sites, to the maximum extent possible, before projects are considered on public lands having biological resources and values.

In the pursuit of the generation and transmission of electrical energy in California, we urge all project proponents to design projects that are appropriately located, environmentally sustainable, and efficient. Defenders expects that all government agencies involved in the review and permitting of renewable energy project proposals will strictly adhere to the highest administrative standards and reach decisions that are fully in the public interest.

Defenders believes that renewable energy projects can be accommodated in the California Desert, but only if they are carefully designed and located in areas that avoid sacrificing what remains of our relatively intact desert landscape and its associated biological resources and values. The need for crafting and implementing a sound and effective DRECP could not be

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greater: the Bureau of Land Management (BLM) has received approximately 130 right of way applications for various forms of wind and solar energy projects involving 1,000,000 acres of public lands in the California Desert.

To begin with, the DRECP must be created and approved as a Natural Community Conservation Plan (NCCP) pursuant to California Fish and Game Code sections 2800, et seq. The NCCP Act is the only conservation planning statute in current law that sets forth strong standards for conservation, independent science, collaboration, and public participation. We would strongly oppose any efforts to put together a mutated form of an NCCP in which the California Energy Commission (CEC) is not subject to the requirements and permit conditions associated with receiving take authorization under the NCCP. We would question the biological and legal basis of any NCCP that relies upon the CEC promising to carry out a conservation strategy without any binding legal document such as a permit issued under Fish and Game Code section 2835.

Defenders appreciates the opportunity to provide the following input to the REAT as requested in the public notice:

1. Elements of the DRECP Planning Agreement (e.g., geographic planning area, description of covered activities, species and natural communities to be addressed, biological goals and objectives, process for scientific and public input, interim project review process, and commitment of resources).

Under the NCCP Act, the planning agreement sets forth the basic framework in which an NCCP is prepared. The NCCP Act requires that planning agreement must:

- establish the geographic scope of the plan,
- identify a preliminary list of species and habitats to be considered,
- identify preliminary conservation strategies,
- establish an independent scientific review process,
- establish an interim process during plan development by which projects can be reviewed for potential conflicts with the conservation goals of the plan, and
- establish a process for public participation.

Fish and Game Code § 2810.

We understand that a planning agreement is not the ultimate plan. However, that does not mean that planning agreements are in and of themselves unimportant. Indeed, planning agreements set forth key parameters of the planning process (e.g., the species to be researched and ultimately permitted for take, the planning area, the basic conservation goals, etc.) and set the tone for the process. In addition, planning agreements also detail the critical interim project review process, the scientific review process and the public participation process. Finally, since these documents are essentially contracts and thus binding on the signatories, the commitments made in a planning agreement create both the ceiling and the floor of the planning process. Rarely will plan participants exceed the commitments in a planning agreement. With that in mind, we offer the following comments as to what should be incorporated into the planning agreement:

a. The DRECP planning area should conform to the California Desert Conservation Area (CDCA), and build upon the significant conservation designations and policies for public and private lands across the entire CDCA. For BLM managed lands, the CDCA Plan, as amended (amendments include those for the Northern and Eastern Colorado Desert, Western Colorado Desert, Northeastern Mojave Desert, Western Mojave Desert, and Coachella Valley) should be used as a foundation to build a strong DRECP for multiple species on an ecosystem or landscape level that includes conservation strategies to assure the long term survival and viability of biological diversity on both federal and private lands with significant biological resources and values. All lands acquired by the federal and state government, as well as non-governmental organizations, for conservation purposes must also be part of the DRECP, with particular emphasis given to such lands acquired by the Department of Fish and Game, U.S. Army (Corps of Engineers), and BLM. The latter two agencies have acquired considerable land recently through acquisition from the Catellus Development Corporation and by donation from The Wildlands Conservancy).

b. The DRECP should cover all aspects of renewable energy development including power generation, transmission, facility decommissioning, and site rehabilitation. In order to consider the entire California Desert through a unified process, the DRECP must be coupled with the requirements for a federal Habitat Conservation Plan. Combined, these plans will facilitate streamlined incidental take permitting for state and federal listed species for projects occurring on private lands, allowing renewable energy projects to be fully permitted in a minimum amount of time.

c. In addition to the CEC and DFG, the DRECP should include the BLM, the Department of Defense, and the relevant counties as plan participants. The BLM is the largest federal land manager in the desert and, as discussed below, is already undertaking an ambitious effort to identify areas of solar energy development. The Department of Defense also controls a significant amount of land that could be available for conservation and energy development. Finally, the counties are critical to this process as they permit wind and solar PV projects on non-federal land.

d. The DRECP strategy should include the establishment of a robust Steering Committee comprised of the plan participants (as discussed above) as well as other interested parties such conservation non-profit organizations and tribes.

e. The DRECP should set forth a comprehensive process for public participation, including public workshops, availability of information and making Steering Committee meetings and other technical meetings largely open to the public. We believe an open, transparent process will lead to greater success and less opposition to a final product.

f. The DRECP should set forth a vigorous independent science process with multiple workshops on key issues. Sound science is an important component to this process. We would support hiring a science liaison to assist the REAT in putting together and facilitating the independent science review process.

g. The DRECP should focus renewable energy development to the maximum extent possible on degraded and disturbed lands in order to maintain and enhance existing natural communities and their biological resources. Defenders and other conservation organizations in California recently identified degraded and disturbed lands where renewable energy projects should be strongly considered and a large majority of these areas were abandoned agricultural fields in eastern Riverside, Imperial, Los Angeles and Kern Counties, all within the California Desert. Additional areas with high potential were located near Daggett, Yermo, California City and Desert Center.

h. Some renewable energy project applications will be processed pending the completion of the DRECP as well as the broader federal zones established through the Solar Programmatic Environmental Impact Statement and decision process. Many of these are under consideration by BLM and the CEC and occur in areas with relatively high biological resource values. We believe the BLM and CEC need to be extremely cautious in processing these existing applications in the absence of a renewable energy-based conservation plan for the California Desert. We urge a two step interim process that identifies those projects that could move forward because of low potential for causing significant impacts to important biological resources and landscapes; and those that should be placed on hold pending a determination of compatibility with DRECP goals and objectives.

i. The process for scientific and public involvement should result in draft documents that maximize the use and disclosure of existing data on species occurrence, species richness and species rarity. Where existing data are inadequate to support development of an effective, long-term plan, the REAT should seek to acquire essential new data through subject-matter experts or through short-term contracts or purchase orders. A high priority should be data collection and analysis that leads to the identification of landscape-level wildlife movement or linkage corridors. These areas function as pathways for movement of individual species over generations of time and facilitate the exchange of genes that allow for certain species and populations to evolve traits necessary to adaptation to environmental change. Science community involvement in the preparation of public review draft documents is essential in maximizing the amount of timely, relevant information available to the public and development of a meaningful and effective plan in the least amount of time.

j. Personnel and funding to complete a DRECP/HCP within a two year timeframe should be a goal considering the demands for renewable energy production and transmission in California under state and federal statutes, executive orders and policies. Decisions on up to 10 interim projects will probably be made within two years, thus setting the stage for processing of additional applications that are located in suitable locations for renewable energy development as defined through the coordinated planning processes (i.e., DRECP, HCP, CDCA Plan, Solar Programmatic EIS, etc.)

2. <u>Critical natural resource conservation issues that should be considered when developing the DRECP</u>.

Maintaining the abundance, diversity and viability of naturally occurring biological resources in the California Desert should be the basic goal of the planning process. This goal necessitates that conservation strategies be developed and applied on a landscape basis rather than on a single species approach. The California Desert has a rich assemblage of animals and plants that has undergone significant degradation over the past 150 years, beginning with excessive livestock grazing, then progressing to privatization and development, followed by expansion of transportation and utilities systems that supported growth of urban and industrial areas. Some plant and animal populations have suffered under the pressure of human development and their viability and long term existence is questionable in the absence of strong conservation intervention. The number of plant and animal species listed as threatened or endangered, being considered for such listing, or otherwise considered species of concern, is a strong indicator that considerable portions of the California Desert ecosystem are failing. Defenders urge the REAT to use this planning process to significantly stabilize and improve the overall ecosystem and health of plant and animal populations while allowing for environmentally compatible renewable energy development.

The REAT should prepare a conservation plan that is based on landscapes or ecosystems within the California Desert that are sufficient in size and number to accommodate all species, allow for continuation of ecosystem processes, and make the conservation strategies sufficiently robust to withstand the effects of climate change. We urge the REAT to consider non-listed, native species as essential components of the California Desert landscape and not simply craft a plan that is narrowly focused on species that are listed or otherwise at risk.

Defenders urge the REAT to pay particular attention to the adequacy of DRECP for the following species:

a. Desert Tortoise: The Desert Tortoise was listed as threatened by the California Fish and Game Commission and the U.S. Fish and Wildlife (USFWS) service nearly 20 years ago, but the species is generally in worse condition now than it was when listed due to a variety of factors including mortality from disease, roads and highways, habitat loss and fragmentation, drought, etc. The Desert Tortoise Recovery Plan called for a variety of important conservation actions to begin the slow process of recovery of this species, but they have largely been set aside during a long period of more land use planning in the California Desert that lasted from about 1990 through 2005. Projects that would have been effective in reducing tortoise mortality and habitat loss include off road vehicle route closures and enforcement, highway and road fencing, raven control, etc. The Draft Revised Desert Tortoise Recovery Plan in preparation by the USFWS proposes to fund and undertake various new activities such as education, collaboration, and research, as well as continue monitoring before taking aggressive action to combat the multitude of adverse factors driving the Desert Tortoise closer to extinction in California.

Desert Tortoise populations have declined alarmingly over the past 30 years throughout most of the California Desert, and especially in the Western Mojave region. Long term persistence of this species in the various recovery units and its ability to respond to climate change due to global

warming are two critical issues that need to be addressed. We strongly recommend the REAT address habitat connectivity between Desert Tortoise Critical Habitat Units, and newly designed Desert Tortoise Areas of Critical Environmental Concern. Major highways, fences and canals have effectively blocked Desert Tortoise movements and gene flow between core population areas, and the plan should address mitigation of these known, existing impediments to movements and gene flow.

Defenders strongly encourages the REAT evaluate the ecological importance of suitable habitat for the Desert Tortoise as a basis for identifying potential biological connectivity corridors in the California Desert. We are of the opinion, based on recent Desert Tortoise surveys performed in Ivanpah Valley and the area immediately south of the Cady Mountains near Pisgah Crater, that lower density populations likely occur over much larger areas than previously known, and that these lower density populations may be as ecologically important as those higher density populations within designated critical habitat. In conjunction with such an analysis of movement corridors, the REAT should determine which Desert Tortoise populations and habitat areas fall into the definition of metapopulations and craft a conservation strategy that provides for biological connectivity between subpopulations.

Critical habitat areas were established largely based on animal density rather than habitat suitability, and lower density populations were generally not included in critical habitats or in the newly designated Areas of Critical Environmental Concern for Desert Tortoise Recovery.

We strongly urge the team to identify important Desert Tortoise populations and movement corridors linking populations and flag them as being unsuitable for any large scale renewable solar or wind energy projects. Likewise, the team should clearly identify lands that are not in movement corridors therefore potentially suitable for renewable energy projects.

b. Mohave Ground Squirrel: The Mohave Ground Squirrel (MGS) was listed in 1971 by the California Fish and Game Commission due to concerns about habitat and population loss in the Antelope Valley region. This species occurs only in suitable habitat within a portion of the Western Mojave Desert.

The 2006 West Mojave amendments to the California Desert Conservation Area (CDCA) Plan established the MGS Wildlife Habitat Management Area, known during the multi-jurisdictional planning process as the Proposed MGS Conservation Area. The conservation provisions for this species for public land administered by BLM are substantial; a 5:1 ratio for habitat loss compensation and a one-percent development cumulative habitat impact limit for projects proposed within the designated management area. It is our understanding that the one-percent cumulative impact limit has been used by the BLM to deny several large scale solar and wind energy project proposals within the designated MGS management area.

We urge the team to expand MGS conservation strategies to include suitable habitat on private and public lands that provide biological connectivity with designated MGS Wildlife Habitat Management Area on public lands. We recommend inclusion of suitable habitat in the following areas: 1) public lands located between Highway 395 and the Navy's Mojave B Range access road, 2) Private lands located between Highways 14 and 395 that are north of Edwards Air Force

Base and the Rand Mountains. Of particular importance are the undeveloped private lands within the California City boundary that are located between the Desert Tortoise Natural Area and Highway 395.

c. Desert Bighorn Sheep: The CDFG in conjunction with other research biologists have recently reviewed the status of various populations of Desert Bighorn throughout the California Desert. Through their Resource Assessment Program, CDFG and others have characterized Bighorn herds occupying the numerous mountain ranges as metapopulations, or physically distinct subpopulations that are essential components of a larger population. Subpopulations or herds occupying mountain ranges are biologically linked to varying degrees depending on availability of movement corridors. These corridors are described by CDFG as "… vast open areas of alluvial fans and vast, dry expanses of relatively flat terrain." The metapopulation model for Desert Bighorn recognizes that metapopulations may persist for varying periods of time involving generations of individuals, or may become extirpated for various reasons, but over time they are recolonized by animals moving from other subpopulations across landscape corridors.

Defenders strongly recommend the REAT address the conservation of Desert Bighorn through protection of subpopulations in various mountain ranges and metapopulations. The model being developed by CDFG biologists should be used in the planning effort, and we urge the team to establish a goal of strict protection of movement corridors to preserve viable metapopulations throughout the range of this species in the California Desert. We also urge the team to examine the need to provide for movement corridors across strategic portions of Interstate Highways 10, 40 and 15. Based on the magnitude of the applications for renewable energy projects in the California Desert, Defenders urges the team to develop a conservation strategy for this species that preserves all existing movement corridors by prohibiting all large scale renewable energy projects in these areas. Likewise, the team should clearly identify lands that are not in movement corridors and therefore potentially suitable for renewable energy projects.

d. Birds of Prey: Numerous species of birds of prey, or raptors, occur in the California Desert either permanently or seasonally. Raptor nesting and foraging areas are particularly important areas to conserve because many of these species return to the same nesting and foraging sites over multiple years. And, viable nesting and foraging areas in the California Desert have been impacted by highways, mining, off-road vehicle use, urban development, etc.

RETI should consult with the raptor biologists having specific knowledge of the various species that nest and forage in the California Desert as it prepares the DRECP. The BLM conducted desert-wide raptor nesting surveys in the early stages of the California Desert Planning process beginning in about 1977 and the California Desert Conservation Area Plan of 1980 identifies raptor nesting and foraging areas (CDCA Plan, Map No. 4). The DRECP should address permanent protection needs for nesting and key foraging areas for the Red-tailed Hawk, Golden Eagle, and Prairie Falcon.

3. <u>Attributes that areas in the desert should possess to be considered for development</u>.

Defenders staff have discussed this topic with other conservationists, agency planners and biologists and have developed what we believe are appropriate criteria for use in identifying areas potentially suitable for renewable energy project development. Attached are siting criteria supported by a number of conservation organizations. These criteria include the following:

- Maximize the use of available, degraded private lands located near the periphery of the California Desert, or near population centers. Degraded lands are generally those that have been mechanically altered, such as abandoned or idle agricultural areas, abandoned industrial sites, etc. Such areas could also include sites that no longer support naturally occurring vegetation.

- Strongly consider isolated or scattered lands public lands (generally the Unclassified lands in CDCA Plan) and public lands immediately adjacent to or near degraded private lands located near the periphery of the California Desert or near population centers centers.

- Strongly consider Intensive Use Class public lands in the CDCA Plan.

- Strongly consider lands adjacent to or near federally designated utility corridors in the CDCA Plan and adjacent to major transportation routes.

4. <u>Attributes that areas in the desert should possess to be considered for long-term conservation.</u>

California Desert lands possessing or supporting the following characteristics, or designations should be considered by the REAT for long-term conservation and off-limits to renewable energy development:

- Designated and proposed critical habitat for federal endangered and threatened species.

- Habitat for State threatened, endangered and proposed species determined essential for long term persistence and viability throughout their ranges.

- Habitat for federal threatened, endangered, proposed and candidate species considered essential for long term persistence and viability throughout their ranges.

- Habitat for BLM designated sensitive species determined essential for long term persistence and viability throughout their ranges.

- BLM wildlife habitat management plan areas identified in the CDCA Plan.

- BLM areas of critical environmental concern for biological resources identified in the CDCA Plan.

- All highly sensitive Unusual Plant Assemblages designated in the CDCA Plan.

- Upland habitat adjacent to seeps, springs or wetlands that supports high wildlife species diversity or values. We consider upland habitat with native vegetation within two miles of seeps, springs or wetlands to be in this category.

- Wildlife and plant movement and linkage corridors required to maintain viable populations of various wide-ranging species throughout their ranges. See discussion of conservation and protection movement corridors for species occurring in metapopulations, above.

5. Public and private funding mechanisms/strategies for the purchase and long-term management of natural resource conservation lands.

A variety of opportunities for funding the purchase and long-term management of conservation lands have been developed and used in the California Desert. The issue of multiple parties seeking the same land acquisition opportunities has caused purchase prices to rise in some cases, but it appears this has largely been resolved through coordination of habitat acquisition plans and procedures between the BLM, CDFG, and others. Other issues involve long-term protection of these acquired lands for conservation of biological resources and values.

Considering that the BLM is by far the predominant land management agency in the California Desert, Defenders supports strategies for acquisition of lands for long term conservation that ultimately fall under BLM jurisdiction and management. However, lands acquired by BLM in this manner and for conservation purposes, must only be managed for conservation purposes and not subject to any inconsistent land uses authorized by permits, rights of way, sales, or lease. These lands should also be managed so they are not degraded or fragmented by casual, destructive off-road vehicle use.

It makes little sense for CDFG to be acquiring and retaining lands for wildlife habitat conservation purposes when they are surrounded by public lands managed by BLM. CDFG could enter into a land exchange agreement with BLM to allow for the acquisition of their currently owned land by BLM and expansion of CDFG lands near certain refuges, conservation reserves, etc.

With appropriate land classification, protection, restoration and law enforcement, acquired lands under BLM jurisdiction would be more efficiently managed than if held by CDFG or another entity. Effective long-term conservation of acquired lands necessitates that surrounding BLM public lands on a regional or bioregional scale be managed for conservation purposes as well. We see this trend unfolding in the California Desert, but much more remains to be done to ensure that BLM managed lands located outside of designated wilderness that have high wildlife values are managed for conservation and not general multiple use.

The single largest landowner of undeveloped lands having important wildlife and other resource values in the California Desert is the Catellus Development Corporation. Large amounts of Catellus land have been acquired by for conservation purposes by The Wildlands Conservancy,

U.S. Army, and the BLM. Wildlands acquired the largest amount, over 200,000 acres, and subsequently transferred title to the BLM. The U.S. Army acquired approximately 100,000 acres of Catellus land for conservation as part of their expansion of the National Training Center at Fort Irwin.

Defenders supports land acquisition directly by the BLM or through a BLM-contracted party using funding from a variety of sources such as the Land and Water Conservation Fund, and direct appropriations from Congress. We believe that additional funding for acquisition and long-term management of conservation lands should be derived from the holders of rights of way permits for renewable energy facilities, with an annual payment schedule for land acquisition tiered to the amount of energy generated or transmitted by the facilities. We urge the REAT to estimate the amount of funding required to complete land acquisition and long term management for conservation purposes and to include this as a component in the DRECP.

6. How to ensure effective coordination with other ongoing processes involving renewable energy development in the Mojave and Colorado Deserts, e.g., the federal Solar Programmatic Environmental Impact Statement and the Renewable Energy Transmission initiative (RETI).

We understand that renewable energy production and transmission will occur in certain portions of the California Desert, and Defenders' goal in this regard is to have those necessary facilities located in areas which will not degrade or compromise the natural biological diversity, abundance and viability throughout the entire desert region. We will continue to be a constructive participant with the regulatory agencies and renewable energy companies in determining where renewable energy facilities should be considered and permitted and where they should not.

The renewable energy project management processes or efforts underway by state and federal agencies have been somewhat independent, resulting in what appears to be conflicting or counter-productive outcomes. The critical performance dates for certain amounts of renewable energy production established through laws and executive orders, and especially those in California, have resulted in a land-rush for solar and wind energy development in the California Desert, largely in the absence of policies or constraints that would have been effective in specifying areas where renewable energy projects could be potentially permitted with the least environmental impact.

This land-rush, and the associated political influences, resulted in a two-phased approach to project analysis and permitting by the BLM: 1) First-tier projects (approximately 10 solar and 5 wind that will be analyzed and potentially permitted in the absence of pre-application requirements for project location, and 2) Second tier projects that will be analyzed and potentially permitted that fall within a newly designated federal solar energy zone. (Most of these right of way applications were filed with the BLM in 2007). One significant question remains, however: What will happen with the large number of remaining applications for solar and wind energy projects that do not fall within the newly designated zones? We are uncertain if the federal government will establish zones for both solar and wind, or just solar.

We also find the RETI process and its associated reports to be overly speculative and optimistic with regard to the number and size of energy production locations in the California Desert. There appears to be an overreliance on public lands for renewable energy production, and the primary RETI product (i.e., planning renewable energy transmission facilities) is flawed due to assumptions made about where renewable energy production facilities could be located. Thus, Defenders believes the REAT should build upon and refine the RETI reports as it crafts a DRECP that will effectively conserve multiple species and their habitats on a desert-wide scale, prevent further fragmentation of remaining plant communities and wildlife habitats, and identifies suitable areas for renewable energy production and transmission. We expect that the DRECP would significantly reduce the number of potentially suitable energy production and transmission facilities currently revealed in the RETI draft Phase 2A report.

We offer the following basic recommendations for making the various elements of renewable energy planning and permitting into a more effective and efficient:

- The Solar PEIS and Wind PEIS should be integrated for use in the California Desert because the areas covered by right of way applications are approximately equal in number and size – approximately 500,000 acres each for wind and solar, for a total of 1,000,000 acres)

- Renewable energy permit applications that meet certain criteria regarding environmentally acceptable locations and technologies in the California Desert should be given first priority. All others should be put on hold until an orderly and integrated planning and permitting process is in place.

Conclusion

We appreciate the opportunity to provide these comments on the DRECP process and will continue to remain actively involved throughout all phases of the planning effort. Our goal in this regard is to assist the state and federal agencies develop the best possible plan in a timely manner that provides effective, long-term protective policies for preserving our biological resources in the California Desert while streamlining the permitting process for renewable energy projects.

If you have questions or concerns about our comments please do not hesitate to contact me.

Sincerely,

Jeff Aardahl
California Representative

Attachment: Recommended Criteria for siting renewable energy projects

Audubon California * California Wilderness Coalition * Defenders of Wildlife
Desert Protective Council * Mojave Desert Land Trust
Natural Resources Defense Council * Sierra Club * The Nature Conservancy
The Wilderness Society * The Wildlands Conservancy

Renewable Siting Criteria for California Desert Conservation Area

Environmental stakeholders have been asked by land management agencies, elected officials, other decision-makers, and renewable energy proponents to provide criteria for use in identifying potential renewable energy sites in the California Desert Conservation Area (CDCA). Large parts of the California desert ecosystem have survived despite pressures from mining, grazing, ORV, real estate development and military uses over the last century. Now, utility scale renewable energy development presents the challenge of new land consumptive activities on a potentially unprecedented scale. Without careful planning, the surviving desert ecosystems may be further fragmented, degraded and lost.

The criteria below primarily address the siting of solar energy projects and would need to be further refined to address factors that are specific to the siting of wind and geothermal facilities. While the criteria listed below are not ranked, they are intended to inform planning processes and were designed to provide ecosystem level protection to the CDCA (including public, private and military lands) by giving preference to disturbed lands, steering development away from lands with high environmental values, and avoiding the deserts' undeveloped cores. They were developed with input from field scientists, land managers, and conservation professionals and fall into two categories: 1) areas to prioritize for siting and 2) high conflict areas. The criteria are intended to guide solar development to areas with comparatively low potential for conflict and controversy in an effort to help California meet its ambitious renewable energy goals in a timely manner.

Areas to Prioritize for Siting

- Lands that have been mechanically disturbed, i.e., locations that are degraded and disturbed by mechanical disturbance:
  - Lands that have been "type-converted" from native vegetation through plowing, bulldozing or other mechanical impact often in support of agriculture or other land cover change activities (mining, clearance for development, heavy off-road vehicle use).[1]
- Public lands of comparatively low resource value located adjacent to degraded and impacted private lands on the fringes of the CDCA:[2]
  - Allow for the expansion of renewable energy development onto private lands.
  - Private lands development offers tax benefits to local government.
- Brownfields:
  - Revitalize idle or underutilized industrialized sites.
  - Existing transmission capacity and infrastructure are typically in place.
- Locations adjacent to urbanized areas:[3]
  - Provide jobs for local residents often in underserved communities;
  - Minimize growth-inducing impacts;

    - Provide homes and services for the workforce that will be required at new energy facilities;
    - Minimize workforce commute and associated greenhouse gas emissions.
- Locations that minimize the need to build new roads.
- Locations that could be served by existing substations.
- Areas proximate to sources of municipal wastewater for use in cleaning.
- Locations proximate to load centers.
- Locations adjacent to federally designated corridors with existing major transmission lines.[4]

High Conflict Areas

In an effort to flag areas that will generate significant controversy the environmental community has developed the following list of criteria for areas to avoid in siting renewable projects. These criteria are fairly broad. They are intended to minimize resource conflicts and thereby help California meet its ambitious renewable goals. The criteria are not intended to serve as a substitute for project specific review. They do not include the categories of lands within the California desert that are off limits to all development by statute or policy.[5]

- Locations that support sensitive biological resources, including: federally designated and proposed critical habitat; significant[6] populations of federal or state threatened and endangered species,[7] significant populations of sensitive, rare and special status species,[8] and rare or unique plant communities.[9]
- Areas of Critical Environmental Concern, Wildlife Habitat Management Areas, proposed HCP and NCCP Conservation Reserves.[10]
- Lands purchased for conservation including those conveyed to the BLM.[11]
- Landscape-level biological linkage areas required for the continued functioning of biological and ecological processes.[12]
- Proposed Wilderness Areas, proposed National Monuments, and Citizens' Wilderness Inventory Areas.[13]
- Wetlands and riparian areas, including the upland habitat and groundwater resources required to protect the integrity of seeps, springs, streams or wetlands.[14]
- National Historic Register eligible sites and other known cultural resources.
- Locations directly adjacent to National or State Park units.[15]

EXPLANATIONS

[1] Some of these lands may be currently abandoned from those prior activities, allowing some natural vegetation to be sparsely re-established. However, because the desert is slow to heal, these lands do not support the high level of ecological functioning that undisturbed natural lands do.

[2] Based on currently available data.

[3] Urbanized areas include desert communities that welcome local industrial development but do not include communities that are dependent on tourism for their economic survival.

[4] The term "federally designated corridors" does not include contingent corridors.

[5] Lands where development is prohibited by statute or policy include but are not limited to: National Park Service units; designated Wilderness Areas; Wilderness Study Areas; BLM National Conservation Areas; National Recreation Areas; National Monuments; private preserves and reserves; Inventoried Roadless Areas on USFS lands; National Historic and National Scenic Trails; National Wild, Scenic and Recreational Rivers; HCP and NCCP lands precluded from development; conservation mitigation

banks under conservation easements approved by the state Department of Fish and Game, U.S. Fish and Wildlife Service or Army Corps of Engineers a; California State Wetlands; California State Parks; Department of Fish and Game Wildlife Areas and Ecological Reserves; National Historic Register sites.

[6] Determining "significance" requires consideration of factors that include population size and characteristics, linkage, and feasibility of mitigation.

[7] Some listed species have no designated critical habitat or occupy habitat outside of designated critical habitat. Locations with significant occurrences of federal or state threatened and endangered species should be avoided even if these locations are outside of designated critical habitat or conservation areas in order to minimize take and provide connectivity between critical habitat units.

[8] Significant populations/occurrences of sensitive, rare and special status species including CNPS list 1B and list 2 plants, and federal or state agency species of concern.

[9] Rare plant communities/assemblages include those defined by the California Native Plant Society's Rare Plant Communities Initiative and by federal, state and county agencies.

[10] ACECs include Desert Tortoise Desert Wildlife Management Areas (DWMAs). The CDCA Plan has designated specific Wildlife Habitat Management Areas (HMAs) to conserve habitat for species such as the Mohave ground squirrel and bighorn sheep. Some of these designated areas are subject to development caps which apply to renewable energy projects (as well as other activities).

[11] These lands include compensation lands purchased for mitigation by other parties and transferred to the BLM and compensation lands purchased directly by the BLM.

[12] Landscape-level linkages provide connectivity between species populations, wildlife movement corridors, ecological process corridors (e.g., sand movement corridors), and climate change adaptation corridors. They also provide connections between protected ecological reserves such as National Park units and Wilderness Areas. The long-term viability of existing populations within such reserves may be dependent upon habitat, populations or processes that extend outside of their boundaries. While it is possible to describe current wildlife movement corridors, the problem of forecasting the future locations of such corridors is confounded by the lack of certainty inherent in global climate change. Hence the need to maintain broad, landscape-level connections. To maintain ecological functions and natural history values inherent in parks, wilderness and other biological reserves, trans-boundary ecological processes must be identified and protected. Specific and cumulative impacts that may threaten vital corridors and trans-boundary processes should be avoided.

[13] Proposed Wilderness Areas: lands proposed by a member of Congress to be set aside to preserve wilderness values. The proposal must be: 1) introduced as legislation, or 2) announced by a member of Congress with publicly available maps. Proposed National Monuments: areas proposed by the President or a member of Congress to protect objects of historic or scientific interest. The proposal must be: 1) introduced as legislation or 2) announced by a member of Congress with publicly available maps. Citizens' Wilderness Inventory Areas: lands that have been inventoried by citizens groups, conservationists, and agencies and found to have defined "wilderness characteristics." The proposal has been publicly announced.

[14] The extent of upland habitat that needs to be protected is sensitive to site-specific resources. For example: the NECO Amendment to the CDCA Plan protects streams within a 5-mile radius of Townsend big-eared bat maternity roosts; aquatic and riparian species may be highly sensitive to changes in groundwater levels.

[15] Adjacent: lying contiguous, adjoining or within 2 miles of park or state boundaries. (Note: lands more than 2 miles from a park boundary should be evaluated for importance from a landscape-level linkage perspective, as further defined in footnote 12).