July 7th, 2009

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From:
The Wildlands Conservancy
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RE: SES Solar One Power Project (08-AFC-13) NEPA/CEQA Scoping Comments for SA/EIS and CDCA plan amendment, San Bernardino County, CA.

Dear Project Managers:

Thank you for the opportunity to provide written comments in addition to the public scoping hearing regarding Stirling Energy System's (SES) Solar One Power Project, on June 22nd, 2009. The Wildlands Conservancy (TWC) is 501c3 non-profit conservation organization with the dual mission to preserve the beauty and biodiversity of the earth and to fund outdoor education programs for the youth. TWC has preserved more land in California with private funds than any other conservation organization and owns the largest non-profit preserve system in CA.

TWC is very supportive of renewable energy and eliminating our dependence on fossil fuel energy sources and reducing our carbon footprint. TWC leads by example; our first preserve was established off-the-grid and self-sufficient in 1995. Since that time we have installed photovoltaic solar arrays on the majority of our preserves. TWC has a strong vested interest in the current renewable energy discussion and corresponding developments being proposed on federal lands within the California Desert region.

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TWC is passionate about land conservation and preserving functioning ecosystems. We initiated the largest private land acquisition project in U.S. History, The Catellus Land Purchase. The purchase of over 600,000 acres in the CA Desert connected Joshua Tree National Park to Mojave National Preserve with public conservation lands. These lands were all gifted to the Department of the Interior for management with the understanding that they were purchased for conservation purposes. Just 4 years after completion of the project, applications for renewable energy projects and the 'greening' of California's energy supply has become a targeted goal. This can be done while protecting our treasured landscapes and fragile ecosystems.

We attended the BLM and SES Solar One public scoping hearing on June 22nd, and we provided oral comments at that time. We would like to extend additional written comments on behalf of TWC regarding this project to aid in the preparation of the EIS/SA.

Solar One Project Site: The 8,230 acre/850 MW site for the proposed Solar One concentrated solar thermal project along Interstate 40 between Newberry Springs and Hector, CA is proposed to be constructed in two phases. Phase 1 exists on the boundary of the Pisgah Area of Environmental Concern (ACEC), Cady Mountains WSA, and proposed Mojave National Monument boundary (which includes the Catellus lands mentioned earlier). This is of great concern due the cumulative impacts this site would have on this highly environmentally sensitive area.

Phase 1 Site Area: We are concerned with the choice made to begin development of the Solar One Project in the site known as Phase 1. We think that, at the very least, the area known as Phase 2 should be where development of the project begins for several reasons. The Phase 2 area of the site is closer to the Pisgah substation, closer to several existing transmission ROWs, closer to the I-40, and provides a better acreage to megawatt production ratio than that of Phase 1. It makes more sense to start with the Phase 2 area and make the Phase 1 site optional instead of the reverse.

As noted in the executive summary of the application, SCE and CAISO performed studies demonstrating that there is capacity to deliver 275 MW currently until the new, upgraded Pisgah-Lugo line is ready in 2015 at the earliest, which supports our suggestion to start with the Phase 2 site of the project first, since it is to produce 350 MW, closer to 275MW than the 500 MW produced from the Phase 1 site.

- Issues regarding the Phase 1 site area: This site directly borders with the proposed national monument boundary and overlaps a few of the BLM managed Catellus sections that were purchased with funds received from TWC donors and LWCF monies. If Phase 1 must proceed as the first developed site, we urge you to, at the very least; shift the site west to eliminate encroachment into these previously

protected areas. Phase 1 also borders with the Cady Mountain WSA, an area of high environmental value and sensitivity, as well as proximity to several Desert Wildlife Management Areas (DWMA's). Phase 1 also has a significant impact on rare plants and the rare and endemic lizard that inhabits the lava flows and adjacent sandy soils. There has been a rare plant survey conducted in the site area, and it appears in the map provided in the application that rare plants, including the white-margined beardtongue (*Penstemon albomarginatus*) have been surveyed along the NE section of the Phase 1 site along the proposed transmission line, which further adds to our contention that Phase 1 should be shifted west if development begins here first, rather than at the Phase 2 site.

SES SunCatcher Technology: The mock-up visual of what your site will look like upon completion presented during the site tour does not accurately compare to the SunCatcher technology described and shown during the hearing. The SunCatcher was described as approx. 38 feet tall with a 40 foot diameter dish. The mock-up of your technology appears to be that of solar parabolic trough technology, as it was low to the ground and rectangular in shape. The array was also shown next to an approx. 40 foot high transmission tower, which was clearly at a higher level than the dishes. If this is accurate, you are misrepresenting to the public what your site will truly look like.

Furthermore, SES states that there will be minimal impact to the surrounding land due the vibrating mechanism that will be utilized to install the pedestals of each SunCatcher. It is obvious that SES has not done any ground surveying to assess the soil and sedimentary layers present in the desert soils. Much of the soil in the Mojave Desert contains caliche, an impenetrable subsurface layer of accumulated calcium carbonates and other salts, which is hardened into a crust. Water does not soak through this layer, and it is extremely difficult to dig through. This solidified calcium carbonate layer cannot be penetrated without more impactful mechanisms like large drills. Once the soil has been surveyed, it will be clear that other more impactful drilling methods will be required.

Ground disturbance is inevitable and vegetation will be lost, as well as irreplaceable microbiotic soil crusts, which help to stabilize the ground and sequester carbon. It has recently been documented that desert landscapes may sequester more carbon than most forests. Areas with high levels of cryptobiotic soil crusts and caliche layers are home to many rare and/or endemic plant species that will be lost. If pristine, intact desert lands are bladed for large-scale solar projects, tons of carbon will be released back into the atmosphere. This will contribute to climate change, lessening the benefits of renewable energy generated. This is why each large-scale solar project must be carefully scrutinized.

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Lack of adequate environmental and wildlife data: We agree with the testimony presented by case interveners C.U.R.E. (California Union for Reliable Energy) regarding the lack and inadequacy of land and environmental surveys and data collection. For instance, desert tortoise connectivity corridors exist in this area and within the proposed project boundaries. If the site is to be constructed, tortoise habitat and ultimately many tortoises will be lost. It is possible to transplant tortoise, however the survival rate is very low. It was said during the site tour that the project will be fenced in, cutting off any migrations or movement of wildlife through this area, which will lead to population declines. SES's own claim that their access road network will provide wildlife connectivity and movement is ludicrous and speaks to the fact that SES is not well informed about the environmental and biological impacts of such a project. Roads are in fact, one of the largest contributors to wildlife mortality. Furthermore, no habitat or microhabitat impact assessments have been made. They are necessary before any further project development occurs.

The Phase 1 site would also block off access to the historical trails and open routes on public lands in this area. This again supports our contention to begin the development closer to I-40 instead of the area labeled as Phase 2.

SES did not clarify during the hearing how water will be utilized and managed at the site when the panel was solicited on the subject. Because the desert is an area with limited water resources, it would be wise to utilize technology that is 'dry-cooled' instead of 'wet-cooled'. It is unclear how much water will be used for each phase of the project. Also, how will wastewater be managed? Where will it go, and will it be recycled? Water is one of the most important resources in the desert and should be one of the first things considered in the project.

Finally, we urge you to consider utilizing areas of both private and public lands that have previously been degraded or disturbed, and ones that are close to existing transmission, rather than choosing sites that border pristine desert habitats, ACEC's or any other protected lands. We feel that shifting the project west and beginning construction adjacent to the I-40 and the Pisgah substation would be a superior strategy, especially since the technology is untested on this scale.

Attached is a siting criterion that we have developed on with various environmental organizations (Renewable Siting Criteria for the California Desert Conservation Area memo) that outlines methods to identify the most appropriate places for solar development in the California desert region. We recommend its utilization in the preparation of the EIS/SA for the SES Solar One Power Project.

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Thank you for reviewing these comments in preparation for the Environmental Impact Statement and Staff Assessment for the SES/BLM Solar One Power Project.

Sincerely,

April Sall
The Wildlands Conservancy, Conservation Director

Attachment: Renewable Siting Criteria for the California Desert Conservation Area memo

Audubon California
California Native Plant Society * California Wilderness Coalition
Center for Biological Diversity * Defenders of Wildlife
Desert Protective Council * Mojave Desert Land Trust
National Parks Conservation Association
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).