December 23, 2009

Delivered via electronic mail (asolomon@energy.state.ca.us **,**
CAPSSolarPalen@blm.gov, and
CAPSSolarBlythe@blm.gov***) and U.S. mail.***

Alan Solomon, Project Manager
California Energy Commission

Holly L. Roberts, Project Manager
Bureau of Land Management

Re: Scoping comments on the Proposed Chevron Energy Solutions/Solar Millennium Palen and Blythe Solar Power Plants

Dear Mr. Solomon and Ms. Roberts,

Please accept and fully consider these comments on the Proposed Chevron Energy Solutions/Solar Millennium Palen and Blythe Solar Power Plants (Palen and Blythe Solar Plants) on behalf of The Wilderness Society and the Natural Resources Defense Council.

The mission of The Wilderness Society is to protect wilderness and inspire Americans to care for our wild places. We have worked for more than 70 years to maintain the integrity of America's wilderness and public lands and ensure that land management practices are sustainable and based on sound science to ensure that the ecological integrity of the land is maintained. With more than half a million members and supporters nation-wide, TWS represents a diverse range of citizens.

Natural Resources Defense Council (NRDC) is a non-profit environmental organization with over 1.2 million members and online activists nationwide. NRDC uses law, science and the support of its members and activists to protect the planet's wildlife and wild places and to ensure a safe and healthy environment for all living things. NRDC has worked to protect wildlands and natural values on public lands and to promote pursuit of all cost-effective energy efficiency measures and sustainable energy development for many years.

It is clear that the nation’s growing addiction to fossil fuels, coupled with the unprecedented threats brought about by global warming, imperil the integrity of our wildlands as never before. To sustain both our wildlands and our human communities, The Wilderness Society and NRDC believe the nation must transition away from fossil fuels as quickly as possible. To do this, we must eliminate energy waste, moderate demand through energy efficiency, conservation, and demand-side management practices, and rapidly develop and deploy clean, renewable energy technologies, including at the utility-scale. Renewable resource development is not appropriate everywhere on the public lands, however, and development that does occur on the public lands must take place in a responsible manner. Development in the CDCA should be

steered away from unique and sensitive areas, from the region's undeveloped core, and from lands that are not adjacent to transmission and other needed infrastructure.

Moving these projects toward success

We urge you to ensure thorough consideration of the Palen and Blythe Solar Power Plants, including identifying potential impacts and making commitments to protecting sensitive resources and minimizing and mitigating unavoidable impacts. Our criteria for evaluating appropriate areas for renewable energy development are discussed in detail below. While we acknowledge that it is early in the environmental review process, we feel that the Palen and Blythe Solar Power projects, with modifications, show promise for meeting many of our criteria for responsible renewable energy development.

In general, as your agencies, the Bureau of Land Management (BLM) and the California Energy Commission (CEC), process applications for solar development on public lands, we urge you to continue to improve the process. Among the areas where additional guidance is needed are: incorporating additional required operating procedures, refining the Right of Way (ROW) application process to properly address the differences between solar development and other uses of ROWs, and incorporating recommendations from ongoing transmission planning. In general, BLM and CEC (the agencies) should prioritize and help guide renewable energy development toward land that has already been developed for industrial, agricultural, or other intensive human uses which are close to existing transmission over ecologically-intact public lands.

Our organizations support and are actively engaged in a number of multi-stakeholder processes aimed at identifying environmentally appropriate areas for solar energy development in California and the West, including the California Renewable Energy Transmission Initiative (RETI), the Western Governors' Association's Western Renewable Energy Zone process, the BLM's plan to develop a Programmatic Environmental Impact Statement on Solar Energy, and the California Desert Renewable Energy Conservation Plan (DRECP). We urge you to incorporate the work of these processes as you move forward with permitting solar energy projects in the desert.

In addition, our organizations have worked with other members of the environmental community in California to develop criteria for use in identifying appropriate areas for development in the CDCA as well as a vision for both the kind of planning and the kind of plan needed to protect the desert's remarkable resources while addressing the climate challenge effectively. Fundamentally, success in selecting appropriate areas and achieving the over-arching objective which we all share will require an unprecedented degree of state and federal cooperation as well as close collaboration with our community. This joint Environmental Impact Statement/Staff Assessment is a key step in the kind of cooperation we envision, but it is not sufficient alone. Given what is at stake, such cooperation is unquestionably warranted and it is our hope that the identification and application of these criteria will contribute to that result.

The criteria, which are attached (Attachment A), are designed to help guide renewable development, principally solar development, to appropriate locations. More specifically, the criteria are intended to inform current and future planning processes and to provide ecosystem level protection to the CDCA (including public, private and military lands) by giving preference for development to disturbed lands, steering development away from lands with high environmental values, and protecting the desert's undeveloped cores. Developed with input from field scientists, land managers and conservation professionals, the criteria in essence seek to steer renewable energy projects to areas with comparatively low potential for conflict and controversy in order to facilitate their timely development. In other words, the "message" the criteria are intended to deliver is that to expedite development, avoid areas that will generate significant controversy.

The environmental community will be employing the criteria in reviewing "fast-track" energy projects such as the Palen and Blythe Solar Plants, as well as in reviewing proposed Solar Energy Study Areas and we encourage your agencies to do so as well. "Fast-track" projects are those which may be able to qualify for stimulus funding through the American Recovery and Reinvestment Act of 2009 by breaking round by December, 2010. Because of the significant timing challenges facing projects seeking permits under such a short timeframe, it is especially important that these projects be screened for characteristics conducive to solar development and potentially difficult or controversial issues. Use of the attached criteria, as well as other screens, will allow your agencies to realistically assess the feasibility of getting projects permitted and "shovel ready" by December, 2010. A realistic assessment of "shovel ready" viability will allow for better allocation of limited agency resources to those projects with the highest likelihood for success.

While we understand the motivation behind expedited environmental review of fast-track projects, we want to reiterate that the best way to do solar development will be through comprehensive planning as exhibited in the Solar PEIS and the DRECP.

I. RELATIVE SUITABILITY OF THE PALEN PROJECT PROPOSAL SITE

As indicated above, the Palen Solar Power Plant has been identified by BLM as a "fast track" project. In reviewing this project, we will continue to apply the criteria we developed (Attachment A) in addition to considering the issues identified by the agencies and through review of the applicant's documents. Our initial evaluation of the Palen project is presented in this document and is based on the project description included in the Application for Certification (Docket Number 09-AFC-7) for the Palen Solar Energy Project.

Characteristics Conducive to Utility-Scale Solar Development

The site does not overlap with designated Areas of Critical Environmental Concern or Desert Wildlife Management Areas, nor has it been proposed by citizens for designation

as wilderness. In addition, the area has relatively limited use for other activities such as recreation.

The site does have high value solar resources and is close to major infrastructure including a major interstate highway and other developments, as well as existing transmission which could be upgraded to support the project.

All of these attributes contribute to the possibility that development of a commercial scale solar facility on this site could result in an overall benefit in limiting the negative impacts of climate change on public lands by decreasing the amount of greenhouse gas emissions from electricity production.

Resource Concerns

There are a number of significant resources on the site that require an in-depth analysis of the impacts of the proposed project and development of a comprehensive impacts minimization and mitigation strategy.

Through the permitting process, BLM, CEC, and Chevron/Solar Millennium may be able to develop this project in a way that supports climate change goals while adequately avoiding, minimizing, and mitigating impacts.

The Application for Certification (AFC) describes the project disturbance area as "relatively undisturbed" (AFC p. 1-4) – development of such a site requires further study to ensure that other values will not be unacceptably impacted, as well as careful consideration of alternative configurations and alternative sites in the forthcoming federal/state environmental review.

A. <u>Biological Resources</u>

The desert tortoise is protected under federal and state Endangered Species Acts as "threatened" (USFWS 2006). During surveys, no live desert tortoise (*Gopherus agassizii*) were observed in the disturbance area. According to the Application for Certification (AFC), the site is considered suitable for desert tortoise, but is low-quality tortoise habitat. (AFC p. 1-4). However, a "moderate amount" of signs indicating the presence of and use by desert tortoise were found (AFC p. 1-4). Although, the project also overlaps with 183-acres of desert tortoise critical habitat, it is our understanding that this is because the habitat boundaries had been adjusted to follow section lines and are not necessarily an accurate representation of habitat suitability. The DWMA, located outside of the disturbed area, is a more accurate representation of habitat suitability for desert tortoise.

In addition to the desert tortoise, there are approximately 1,735 acres of Mojave fringe-toed lizard (*Uma scoparia*) suitable habitat within the disturbance area. (AFC p. 5-3-26). Mojave fringe-toed lizards are mostly present in the northeastern section of the disturbance area and buffer where fine sandy soils are present in the active and stabilized

sand dunes. (AFC figure 5.3-9). The disturbance area also includes 133 acres of Desert Dry Wash Woodland and 124 acres of Unvegetated Ephemeral Dry Wash. (AFC p. 5.3-16).

Furthermore, the AFC states that there will be "unmitigable significant impacts to desert tortoise (DT) and Mojave fringe-toed lizard (MFTL) movement." (AFC p. 5.3-1).

Recommendation: The agencies should prioritize protection of species in the project proposal area by further analyzing potential impacts and developing required operating procedures and steps to avoid, minimize, and mitigate any unavoidable impacts. The agencies should also consider alternative configurations of the project site that avoid impacts to the northeast and eastern portions of the site where the stabilized and partially stabilized sand dunes are located. Finally, the agencies should work to address impacts from the project to desert tortoise and Mojave fringe-toed lizard movement.

B. Cultural Resources

The BLM must adequately evaluate the environmental consequences of the proposed project on historic resources. They must address cultural resource issues in the DEIS. The NEPA regulations recognize that impacts to cultural resources such as historic properties and "scientific resources" can comprise a significant impact on the environment. 40 CFR 1508.27(b)(3),(8). Additionally, BLM must analyze the direct, indirect, and cumulative impact of each alternative on areas of importance to local Tribes and areas of high cultural site density.

The AFC identified the "potential for significant impacts at six archaeological sites that are considered potentially significant resources under CEQA." We urge BLM to begin the Section 106 process under the National Historic Preservation Act (NHPA), 16 U.S.C. § 470f, because of the potential to significantly impact archaeological sites. The requirements of NHPA are separate from NEPA's requirements, although the Section 106 regulations encourage federal agencies to coordinate the two processes. See 36 C.F.R. § 800.2(a)(4). Proper coordination of the NHPA and NEPA compliance actions is necessary to ensure that adverse effects to historic properties are adequately considered pursuant to the Section 106 regulations, 36 C.F.R. § 800, *et seq.* Proper coordination with Native American tribes will be a central component of the consultation process.

Recommendation: BLM should develop strategies to minimize and mitigate impacts on the area's outstanding cultural resources and engage in consultation with local Native American tribes.

C. Soil Resources

Impacts to soil resources are one of the most challenging issues for solar projects proposed in the desert. As seen in the ongoing permitting process for the proposed Ivanpah Solar Energy Generating System, development of adequate drainage, erosion and sediment control plans is a complicated, time consuming and challenging task. To ensure

robust environmental protections and timely completion of permitting documents and steps, it is critical that both the project applicant and the agencies dedicate adequate time and resources early in the process to addressing these issues thoroughly.

Although the AFC states that the project would not have "significant" impacts on soils and soil erosion impacts would be "less than significant", we are concerned about impacts to the ephemeral washes within the project site. (AFC p. 1-8 and 1-10).

Recommendation: Both the applicant and the agencies should dedicate adequate time and resources early in the process to addressing soil resources issues adequately, including through the preparation of a detailed drainage, erosion and sediment control plan that addresses these potential impacts and provides mitigation measures that will render these hazards to a level less than significant.

D. Water Resources

Water is a limited resource in the desert southwest, and any project proposal should fully analyze the water needs and identify sources to meet those needs. The applicant has committed to using dry cooling technology that greatly reduces the water use for the project and minimizes its impact to water resources compared to alternative technologies. (AFC p. 1-10).

Expected average water consumption is 480 acre-feet per year (afy) during the approximately 39-month construction period, and 300 afy during operation. The AFC indicates that water would be provided via a groundwater well from two onsite wells from the Chuckwalla Valley Groundwater Basin. (AFC p. 1-10). The AFC also indicates that the Chuckwalla Basin has recoverable storage of about 15 million acre feet and that 300 afy is quite small in comparison. However, as the BLM evaluates other solar projects in this region, the cumulative impact of additional water use should be evaluated.

Recommendation: The agencies should gather additional information to confirm that the water needed for the Palen Solar Power Project will be available as well as that the source of the needed water will conform to existing California Energy Commission policy[1] and all laws, ordinances, regulations and standards (LORS).

E. Visual Resources

The construction of an almost 4,000 acre industrial development anywhere on public lands will entail significant visual impacts. However, the benefits which the Palen Solar Power Project will provide may well outweigh the costs of the visual impacts from this development.

However, there are a significant number of projects proposed for the California Desert. Accordingly, we urge the agencies to assess not just the visual impacts from the Palen

[1] We understand that current CEC policy discourages use of groundwater for power plants. Final RETI Phase 1B Report, Section 3-3, p. 3-3 (January 2009).

Solar Power Project, but also the likely cumulative visual impacts from proposed renewable energy and transmission development in the Desert and begin right now to develop comprehensive mitigation strategies to address these impacts in connection with future projects.

Recommendation: The BLM and CEC should continue to collaborate on a visual analysis conforming to BLM regulations to address concerns.

G. Land Use

As we stated above, the site does not overlap with designated Areas of Critical Environmental Concern or Desert Wildlife Management Areas, nor has been it been proposed by citizens for designation as wilderness.[2] However, the project site does overlap with 183 acres of desert tortoise critical habitat (described above in the biological resources section). In addition, the entire project site is located within a multiple-species Wildlife Habitat Management Area (WHMA). This management area was established to provide long-term conservation of various species of special concern such as the Mojave Fringe-toed Lizard, Burrowing Owl, Desert Kit Fox, and many species of plants.[3]

The AFC describes the WHMA as:

> "complementary to existing restricted areas within the NECO planning area and DWMAs, which also cover other special-status species and habitats (e.g., DT and bighorn sheep). No restrictions are designated in the WHMA other than closure of some routes of travel. **Management emphasis is placed on active management, specific species and habitats mitigation, and restoration from authorized allowable uses (**emphasis added**).** Section 5.7, Land Use, provides an additional discussion of the requirements of the CDCA Plan/NECO Plan." (AFC p. 5.3-5).

The Palen Solar Power Project will require a CDCA Plan Amendment, as will all new solar projects. We assume that the environmental review of the proposal and the necessary plan amendment will occur simultaneously. See 43 CFR § 1601.6-3(b). The size of the project must clearly be addressed in any review.

In addition, the site includes private parcels (with a Riverside County zoning designation of Open Space Rural). (AFC p. 1-6). While the private parcels are not part of the project, resources on these parcels and the county's ability to protect these resources could be impacted by construction and operation of the Palen Solar Power Project.

Recommendation: The plan amendment must fully analyze the impacts of this scale of industrial development on public lands of a largely undisturbed nature including impacts to the Wildlife Habitat Management Area.

---

[2] The site does overlap a section of the Catellus land acquisition. This issue is discussed below.

[3] *See* the Proposed Plan Amendments for the Northern and Eastern Colorado Desert Planning Area (NECO Amendment), Map 2-21, and Plan page 2-2

II. RELATIVE SUITABILITY OF THE BLYTHE PROJECT PROPOSAL SITE

As indicated above, the Blythe Solar Power Plant has been identified by BLM as a "fast track" project. In reviewing this project, we will continue to apply the criteria we developed (Attachment A) in addition to considering the issues identified by the agencies and through review of the applicant's documents. Our initial evaluation of the Blythe project is presented in this document and is based on the project description included in the Application for Certification (Docket Number 99-AFC-8) for the Blythe Solar Energy Project.

Characteristics Conducive to Utility-Scale Solar Development

The site does not overlap with designated Areas of Critical Environmental Concern or Desert Wildlife Management Areas, nor has it been proposed by citizens for designation as wilderness. In addition, the area has relatively limited use for other activities such as recreation.

The site does have high value solar resources and is close to major infrastructure and other developments including the Blythe airport. A new 500 kV transmission line will intersect with transmission located five miles southwest of the site along I-10.

In addition, the eastern portion of the project site was included in our Solar Programmatic EIS recommendations for the Riverside East Solar Energy Study Areas (SESA) because of its low potential for significant resource conflicts.

All of these attributes contribute to the possibility that development of a commercial scale solar facility on this site could result in an overall benefit in limiting the negative impacts of climate change on public lands by decreasing the amount of greenhouse gas emissions from electricity production.

Resource Concerns

There are a number of significant resources on the site that require an in-depth analysis of the impacts of the proposed project and development of a comprehensive impacts minimization and mitigation strategy.

Through the permitting process, BLM, CEC, and Chevron/Solar Millennium may be able to develop this project in a way that supports climate change goals while adequately minimizing and mitigating impacts.

AFC describes the project site as "relatively undisturbed" (AFC, p.1-4) – development of such a site requires further study to ensure that other values will not be unacceptably impacted, as well as careful consideration of alternative configurations and alternative sites in the forthcoming federal/state environmental review.

A. Biological Resources

The desert tortoise (*Gopherus agassizii*) has been observed in the project area and is protected under federal and state Endangered Species Acts as "threatened" (USFWS 2006). According to the AFC, the 7,030-acre disturbance area is low-quality tortoise habitat. Only one desert tortoise was observed in the disturbance area during surveys. The AFC also concludes that the proposed project's impacts on desert tortoise and its habitat will be "below significance levels". However, numerous signs indicating the presence of and use by desert tortoise were found across the project site (see AFC Figure 5.3-7). The AFC concludes that there will be "unmitigable significant impacts" to dispersal of desert tortoise. The project may "increase the number of desert tortoise generations it takes for individuals to move across the valley floor from southwest to northeast." (AFC p. 1-4).

The proposed project is located east of the McCoy Wilderness located in the McCoy Mountains and the project site is used by a variety of species moving to and from the mountains and the valley. The ephemeral desert washes and associated wash-dependent vegetation communities located in the western portion of the project site are especially important as movement corridors for species such as kit fox, American badger, and mountain lion. (AFC, p. 5.3-33).

Recommendation: The agencies should consider alternative configurations of the project site that avoid impacts to the western portions of the site where the desert dry wash woodland communities are located. In addition, the agencies should work to address impacts from the project to desert tortoise dispersal and movement of other important species.

B. Cultural Resources

The BLM must adequately evaluate the environmental consequences of the proposed project on historic resources. They must address cultural resource issues in the DEIS. The NEPA regulations recognize that impacts to cultural resources such as historic properties and "scientific resources" can comprise a significant impact on the environment. 40 CFR 1508.27(b)(3),(8). Additionally, BLM must analyze the direct, indirect, and cumulative impact of each alternative on areas of importance to local Tribes and areas of high cultural site density.

The AFC identified the "potential for significant impacts under CEQA at 38 archaeological sites and one historic architectural resource. We urge BLM to begin the Section 106 process under the National Historic Preservation Act (NHPA), 16 U.S.C. § 470f, because of the potential to significantly impact archaeological sites. The requirements of NHPA are separate from NEPA's requirements, although the Section 106 regulations encourage federal agencies to coordinate the two processes. See 36 C.F.R. § 800.2(a)(4). Proper coordination of the NHPA and NEPA compliance actions is necessary to ensure that adverse effects to historic properties are adequately considered pursuant to the Section 106 regulations, 36 C.F.R. § 800, *et seq.* Proper coordination with Native American tribes will be a central component of the consultation process.

Recommendation: BLM should develop strategies to minimize and mitigate impacts on the area's outstanding cultural resources and engage in consultation with local Native American tribes.

C. Soil Resources

Impacts to soil resources are one of the most challenging issues for solar projects proposed in the desert. As seen in the ongoing permitting process for the proposed Ivanpah Solar Energy Generating System, development of adequate drainage, erosion and sediment control plans is a complicated, time consuming and challenging task. To ensure robust environmental protections and timely completion of permitting documents and steps, it is critical that both the project applicant and the agencies dedicate adequate time and resources early in the process to addressing these issues thoroughly.

Although the AFC states that the project would "not have significant impacts" on soils, the applicants are currently developing soils data for the project site and limited data is available. (AFC p. 1-8).

Recommendation: Both the applicant and the agencies should dedicate adequate time and resources early in the process to addressing soil resources issues adequately, including through the preparation of a detailed drainage, erosion and sediment control plan that addresses these potential impacts and provides mitigation measures that will render these hazards to a level less than significant.

D. Water Resources

Water is a limited resource in the desert southwest, and any project proposal should fully analyze the water needs and identify sources to meet those needs. The applicant has committed to using dry cooling technology that greatly reduces the water use for the project and minimizes its impact to water resources compared to alternative technologies. (AFC p. 1-10).

Expected average water consumption is 540 acre-feet per year (afy) during the approximately 69-month construction period, and 600 afy during operation. The AFC indicates that water would be provided via a groundwater well from onsite wells from the Palo Verde Mesa Groundwater Basin. (AFC p. 1-10). The AFC also indicates that the Palo Verde Mesa Basin has storage capacity of about 6.8 million acre feet and that 540 afy is quite small in comparison. However, as the BLM evaluates other solar projects in this region, the cumulative impact of additional water use should be evaluated.

In addition, as described above in the biological resources section, the Blythe Solar Power Project would impact several ephemeral desert washes and associated wash-dependent vegetation communities located in the western portion of the project site. The applicant proposes to create channels across the project site that reroute the washes in as natural a way as feasible. (AFC p. 5.3-54).

Recommendation: The agencies should gather additional information to confirm that the water needed for the Blythe Solar Power Project will be available as well as that the source of the needed water will conform to existing California Energy Commission policy[4] and all laws, ordinances, regulations and standards (LORS). The agencies should consider alternative configurations of the project site that avoid impacts to the western portions of the site where the desert dry wash woodland communities are located.

E. Visual Resources

The construction of an almost 6,000 acre industrial development anywhere on public lands will entail significant visual impacts. However, the benefits which the Blythe Solar Power Project will provide may well outweigh the costs of the visual impacts from this development.

However, there is a significant number of projects proposed for the California Desert. Accordingly, we urge the agencies to assess not just the visual impacts from the Blythe Solar Power Project, but also the likely cumulative visual impacts from proposed renewable energy and transmission development in the Desert and begin right now to develop comprehensive mitigation strategies to address these impacts in connection with future projects.

Recommendation: The BLM and CEC should continue to collaborate on a visual analysis conforming to BLM regulations to address concerns.

G. Land Use

As we stated above, the site does not overlap with designated Areas of Critical Environmental Concern or Desert Wildlife Management Areas, nor has been it been proposed by citizens for designation as wilderness.[5]

The Blythe Solar Power Project will require a CDCA Plan Amendment, as will all new solar projects. We assume that the environmental review of the proposal and the necessary plan amendment will occur simultaneously. See 43 CFR § 1601.6-3(b). The size of the project must clearly be addressed in any review.

Recommendation: The plan amendment must fully analyze the impacts of this scale of industrial development on public lands of a largely undisturbed nature.

III. OTHER ISSUES RAISED BY THE PROPOSED CHEVRON ENERGY SOLUTIONS/SOLAR MILLENNIUM PALEN AND BLYTHE SOLAR POWER PLANTS

[4] We understand that current CEC policy discourages use of groundwater for power plants. Final RETI Phase 1B Report, Section 3-3, p. 3-3 (January 2009).
[5] The site does overlap a section of the Catellus land acquisition. This issue is discussed below.

A. Public Benefits (GhG reduction)

Renewable energy development can have multiple public benefits, most importantly combating climate change by reducing greenhouse gas (GhG) emissions from energy production, and including reduced local and regional air and public health impacts, increased energy resource diversity and decreased price volatility. A reduction in GhG emissions from developing renewable energy is based on comparative emissions from fossil fuel-based energy production.

Because a reduction in GhG emissions is a primary public benefit of renewable energy development, it is critical that the agencies quantify this reduction to the extent possible. The agencies' analysis of GhG reductions should also include a comprehensive look at the project's impacts, including GhG emissions during manufacture, construction, operation, decommissioning, and reclamation of the project site.

The results of this analysis should then be compared to similar analyses for fossil-fuel based energy production, including combined-cycle natural gas fired and coal fired power plants.

Such an analysis will provide the public a clear indication of the costs and benefits of the proposed project and allow stakeholders to make decisions regarding the project based on the best available science and data.

Recommendation: The agencies should comprehensively analyze the SES Solar One project's net reductions to GhG emissions, including GhG emissions during manufacture, construction, operation, decommissioning, and reclamation of the project site. The analysis should consider both the potential for the project to reduce GhG emissions as well as potential for the project to increase GhG emissions, for example, by disturbing undisturbed land currently useful for carbon sequestration. The results of this analysis should then be compared to the same type of analysis for fossil-fuel based energy production, including combined-cycle natural gas fired and coal fired power plants.

B. Bonding

We encourage the BLM to thoroughly assess bonding requirements for this project.

Recommendation: The agencies should do a thorough analysis of the anticipated costs of decommissioning and restoring the project site. The agencies should also require bonds be purchased prior to development.

C. Alternative Sites

Consideration of alternative sites is critical to ensuring the project sites chosen for the Palen and Blythe Solar Power Plants are the best possible locations for the projects. This consideration should be based on solar resource, proximity to existing transmission and infrastructure, and conflicts with other resources and values on the project site. Both

BLM and CEC policy require consideration of alternatives. The National Environmental Policy Act (NEPA) requires that BLM consider a range of management alternatives, and this analysis is "the heart of the environmental impact statement." 40 C.F.R. § 1502.14. NEPA requires BLM to "rigorously explore and objectively evaluate" a range of alternatives to proposed federal actions. See id. §§ 1502.14(a) and 1508.25(c). "An agency must look at every reasonable alternative, with the range dictated by the nature and scope of the proposed action."[6] An agency violates NEPA by failing to "rigorously explore and objectively evaluate all reasonable alternatives" to the proposed action.[7] This evaluation extends to considering more environmentally protective alternatives and mitigation measures.[8]

NEPA requires that an actual "range" of alternatives is considered, such that the Act will "preclude agencies from defining the objectives of their actions in terms so unreasonably narrow that they can be accomplished by only one alternative (i.e. the applicant's proposed project)."[9] This requirement prevents the EIS from becoming "a foreordained formality."[10] A range of alternatives to the proposed project must also be evaluated under Section 15126.6 of the California Environmental Quality Act (CEQA).

The AFCs spends pages describing the numerous alternative sites that were considered and rejected by the applicant. (AFC Section 4). Though the applicant has already considered and rejected alternate sites, it is the agencies' responsibility to identify alternative sites to be analyzed and it may be that options rejected previously should be re-evaluated.

Many project applicants have signed Power Purchase Agreements with public utility companies for a certain amount of electrical power prior to siting decisions being made. This practice appears to have made some applicants unwilling to consider alternatives to their projects, including possible re-configurations of project footprints and associated changes in energy production. This perceived lack of flexibility cannot be allowed to preclude the BLM's consideration of a reasonable range of alternatives as required by NEPA. The BLM must consider more alternatives than merely the project as proposed or no project.

Without thorough consideration of multiple alternative sites, the agencies will have reduced the EIS to a "foreordained formality" and improperly limited the alternatives under consideration.

As previously expressed in these comments, we strongly encourage the agencies to engage in a broader landscape level assessment of solar development in the desert as

---

[6] Northwest Envtl Defense Center v. Bonneville Power Admin., 117 F.3d 1520, 1538 (9th Cir. 1997).
[7] City of Tenakee Springs v. Clough, 915 F.2d 1308, 1310 (9th Cir. 1990) (quoting 40 C.F.R. § 1502.14).
[8] *See, e.g.*, Kootenai Tribe of Idaho v. Veneman, 313 F.3d 1094,1122-1123 (9th Cir. 2002) (and cases cited therein).
[9] Colorado Environmental Coalition v. Dombeck, 185 F.3d 1162, 1174 (10th Cir. 1999), citing Simmons v. United States Corps of Engineers, 120 F.3d 664, 669 (7th Cir. 1997).
[10] City of New York v. Department of Transp., 715 F.2d 732, 743 (2nd Cir. 1983). *See also*, Davis v. Mineta, 302 F.3d 1104 (10th Cir. 2002).

exhibited in the Solar PEIS and DRECP. While a comprehensive desert plan balancing multiple land uses including solar will be a long term process, in the interim we urge the agencies to compare the Palen and Blythe Solar Plants, and all other fast track projects, to each other in order to identify which of these first phase of projects is likely to have the least environmental impacts.

Recommendation: The agencies must thoroughly consider and present the public with a true range of alternative sites. In addition the agencies should compare the Palen and Blythe Solar Plants and their impacts with all other identified "fast-track" projects on BLM land in order to identify the least environmentally harmful projects among the applications that have been selected for expedited permitting.

D. Develop a Comprehensive Mitigation Program and Apply it to these Projects

Development of utility-scale solar power generation facilities will transform the lands upon which they are located and preclude most other uses. As noted by the BLM, other uses of these sites "are unlikely due to the intensive use of the site for PV [photovoltaic] or CSP [concentrating solar power] facility equipment," Instruction Memorandum (IM) No. 2007-097.

The BLM is obligated to manage the public lands to protect their varied natural resources. (A discussion of BLM's general mitigation requirements is included in Attachment B). In the body of these comments, we are focusing on additional mitigation measures necessary for solar development of these projects.

1. **Mitigation of impacts to individual resources and values.**

Existing policy and regulations require mitigation for impacts to certain individual resources and values. For example, mitigation is required for impacts to species protected under the Endangered Species Act. *See, e.g.*, 16 U.S.C. § 1536(a)(1). Endangered species recovery plans can help provide guidance on appropriate mitigation measures. Similarly, impacts to cultural resources require mitigation under the National Historic Preservation Act. *See, e.g., 36 C.F.R.* §§ 800.1(a), 800.2(a)(4). Additional regulations may require specific mitigation measures to other individual resources and values.

Recommendations: The BLM must comply with all regulations requiring mitigation of impacts from solar energy development on individual resources and values.

2. Mitigation for the loss of availability for multiple-use on public lands.

Unlike many activities on public lands which allow for multiple uses, solar development is a single use of the land which prescribes any other activities or uses. For this reason, it is critical that the BLM mitigate for the effective loss of any lands approved for solar development from the public domain. Onsite mitigation for solar development is extremely important, and all efforts should be made to mitigate impacts onsite. However, since the opportunity for effective mitigation of onsite impacts on many resources and

values is limited for solar development, off-site mitigation will also be necessary for all projects. This mitigation should also compensate for the loss of all other resources and values on those lands, including recreation, wildlife migration corridors, scenic vistas, and water resources.

Off-site mitigation should address a number of issues, including: a “no net loss” or a “net gain” requirement for resources and values. The BLM should ensure that any loss of resources or values on a solar development site is compensated with new addition and protection of equivalent resources and values off-site. These additions should equal or exceed the value of any resources or values which are lost. Additions for land impacts mitigation could be gained through some combination of these four mechanisms; however, requirements should ensure that the majority of mitigation efforts be focused on the first two mechanisms, with the highest priority given to the first mechanism:

1) Purchase of additional private lands to be put in the federal estate under conservation management to guarantee the maintenance of the equivalent values and resources lost on the project site, or
2) Additional conservation designations on existing federal lands which would protect the equivalent resources and values lost on the project site, or
3) Restoration and research efforts to improve the quality and quantity of equivalent resources and values off-site, or
4) Purchase and retirement of grazing rights.

Mitigation for impacts to water resources could be addressed by purchase and retirement of water rights to offset groundwater pumping by the project.

Achieving this outcome will require detailed understanding and knowledge of the resources and values present on the project site before development occurs. The BLM should require that any necessary study and analysis of the project site be completed prior to implementing off-site mitigation measures and site development.

Project developers should be required to make deposits to a mitigation fund based on the amount of land or water used for the project and the fair market value of that land or water. The funds should be required to be spent on the four mechanisms outlined above. As a prerequisite, project developers should work with the agencies to identify appropriate land for acquisition to mitigate these projects. A centralized body, such as the California Desert Managers Group, should be established to oversee the funds and maximize the effectiveness of their use. This body should be required to take into consideration recommendations from the public in the distribution of funds.

Off-site mitigation involving land protection should be required to take place in the same ecoregion as the project site. The World Wildlife Fund defines an ecoregion as a "large unit of land or water containing a geographically distinct assemblage of species, natural communities, and environmental conditions"[11]. Ecoregional health is critical for maintaining the health of individual ecosystems within the ecoregion. In addition to ensuring that off-site mitigation meets a “no net loss” requirement for resources and

[11] http://www.panda.org/about_our_earth/ecoregions/about/what_is_an_ecoregion/

values lost on the project site, BLM should require that mitigation take place in the same ecoregion as the project site, to ensure the continued health of the overall ecoregion. In situations where availability of private lands for purchase and addition to the federal estate under conservation protection is limited, additional conservation designations on existing BLM land, as well restoration, research, and other mitigation measures, will be necessary.

Off-site mitigation efforts involving water resources should be limited to the affected groundwater basin as defined by the California Department of Water Resources.

Recommendations: Because of the extremely limited ability to mitigate impacts from solar development on-site, the BLM should require off-site mitigation for impacts which cannot be mitigated on-site. Off-site mitigation should follow the guidelines described above including: 1) a "no net loss" or a "net gain" requirement for resources and values; 2) requirements for project developers to fund mitigation efforts based on the amount and value of the land impacted from development; 3) a centralized body should be established to oversee the funds and maximize the effectiveness of their use; and 4) off-site mitigation should be required to take place in the same ecoregion (or, if involving water, the same groundwater basin) as the project site.

Thank you for your consideration of these comments.

Sincerely,

The Wilderness Society
Alice Bond, Policy Analyst
California/Nevada Regional Office
655 Montgomery Street, Suite 1000
San Francisco, CA 94111

The Wilderness Society
Alex Daue, Renewable Energy Coordinator
BLM Action Center
1660 Wynkoop St. Suite 850
Denver, CO 80202

Natural Resources Defense Council
Johanna Wald, Senior Attorney
111 Sutter Street, 20th floor
San Francisco, CA 94104

Natural Resources Defense Council
Helen O'Shea, Policy Associate
111 Sutter Street, 20th floor
San Francisco, CA 94104

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).

Attachment B to
Scoping Comments on the Sonoran Solar Energy Project

BLM's Mitigation Requirements

The Federal Land Policy and Management Act requires the BLM to "minimize adverse impacts on the natural, environmental, scientific, cultural, and other resources and values (including fish and wildlife habitat) of the public lands involved," 43 U.S.C. §1732(d)(2)(a). In order for the BLM to rely on mitigation to reduce potentially significant impacts, NEPA requires that the BLM make a firm commitment to the mitigation and discuss the mitigation measures "in sufficient detail to ensure that environmental consequences have been fairly evaluated…"[1] NEPA defines "mitigation" of impacts (at 40 C.F.R. § 1508.20) to include:

1. Avoiding the impact altogether by not taking a certain action or parts of an action;
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or
5. Compensating for the impact by replacing or providing substitute resources or environments.

Simply identifying mitigation measures, without analyzing the effectiveness of these measures violates NEPA. The BLM must "analyze the mitigation measures in detail [and] explain how effective the measures would be . . . A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA."[2] NEPA also directs that the "possibility of mitigation" should not be relied upon as a means to avoid further environmental analysis. *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*.[3]

1. Mitigation measures must be mandatory

The BLM should specify which mitigation measures are required for the project. Unless the mitigation measures are guaranteed to be applied, the BLM cannot rely upon them to avoid or lessen potential impacts from the project.

Recommendations: The EIS should include language requiring that the mitigation measures and other applicable measures be included in the grant of rights-of-way or other permits for the project.

---

[1] Communities, Inc. v. Busey, 956 F.2d 619, 626 (6th Cir. 1992).
[2] Northwest Indian Cemetery Protective Association v. Peterson, 764 F.2d 581, 588 (9th Cir. 1985), rev'd on other grounds 485 U.S. 439 (1988).
[3] *See also* Davis v. Mineta, 302 F.3d 1104,1125 (10th Cir. 2002).

2. Mitigation measures must be based on credible science

As noted above, both NEPA and the Data Quality Act require the agencies to use and present information of sufficient scientific quality.

Recommendations: The EIS must assess and present the scientific basis for the proposed mitigation measures.

3. Monitoring and adaptive management approaches must include specific standards and commitments

In order to fulfill the agency's obligations to protect the natural resources of our public lands and to comply with NEPA's requirements regarding mitigation measures, the EIS must include or require that the BLM's permits for projects include concrete commitments to specific actions, including definitive standards, timing and details for actions that will be taken and a discussion of the BLM's basis for relying on their success, including likely funding.

Recommendations: The EIS should contain and/or require permits for projects to contain specific commitments, including timelines, for preparation and implementation of inventorying and monitoring programs, and standards for when monitoring as part of management is not appropriate.

All such programs should also identify the existing condition of resources, standards for when management change will be triggered and the use of a "fallback prescription" where adaptive management is not suitable or funding for necessary monitoring is not sufficient. All data should be identified in terms of its source, location, and time. Furthermore, data, and its application, should be available for independent review and evaluation; it should be formalized and standardized to allow for sophisticated and accurate aggregate understanding of the landscape and the impacts of management practices within the landscape to enhance agency credibility and accountability. The BLM should disclose not only the results of a given analysis, but the underlying methodology and data management practices used. The focus of data collection should be on the impacts – whether adverse or beneficial – caused by particular activities and not the activity itself.

The BLM should limit use of this type of "adaptive management" to appropriate situations (where the risk of failure will not cause harm to sensitive resources). The management framework should be based on best available science and include the following elements:

- *Ensure adequate baseline prior to starting adaptive management and identify indicators.* Projects can only be approved along with a requirement for a detailed analysis of current inventory status to accompany the environmental analysis, which clearly specifies resources that may be affected by various activities and their baseline

condition, then identify indicators for resources or groups of resources that will demonstrate the effects of management decisions.

- *Set out a detailed monitoring plan and ensure agency commitment to fund monitoring.* A detailed monitoring plan is crucial for assessing potential impacts on resource conditions, ensuring that indicators are measured at regular and consistent intervals. Commitment of adequate resources should be firm and sufficient to support the full implementation of adaptive management. Funding for adaptive management should not be dependent on shifting the financial and personnel burden to various user interests or other cooperating community groups.

- *Include defined limits of acceptable change in resource conditions and specify actions to be taken if change reaches or exceeds those limits.* For all indicators, the EIS must require that, for all projects, the BLM prepare an identification of range of acceptable change from the baseline condition, using best available science, and specify those actions that will be taken in the event that unacceptable levels of change are identified.

- *Have a "fallback" plan should monitoring or other aspects of the adaptive management process not be fully carried out.* Adaptive management must include requirements for when and how the proposed outcome will be reevaluated if it is not being met. The BLM's ability to reevaluate or amend desired outcomes should not be the sole fallback if either the adaptive management process is not working or outcomes are not being met. The EIS should require BLM to build into project analysis and approvals provisions to address situations based on new information, circumstances, regulatory requirements, or discontinued agency funding for monitoring that would trigger a plan amendment or revision under a new EIS.