

for Alison Shaller

from Joan Taylor

re Genesis

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BY EMAIL, FAX AND US MAIL

RE: Sierra Club comments on the proposed Genesis Solar Energy Project Staff Assessment and Draft Environmental Impact Statement and California Desert Plan Amendment

Dear Ms. Shaffer and Mr. Monasmith:

On behalf of the Sierra Club, I am writing to provide you with comments on the Staff Assessment and Draft Environmental Impact Statement (SA/DEIS) and California Desert Conservation Area Plan Amendment for the Genesis Solar Energy Project (09-AFC-8). The United States Department of the Interior, Bureau of Land



CALIFORNIA / NEVADA REGIONAL CONSERVATION DESERT COMMITTEE  
*Protecting the Desert*

Management's (BLM) SA/DEIS is a joint document prepared with the California Energy Commission ("Commission") in order to meet the requirements of the National Environmental Policy Act ("NEPA") and California Environmental Quality Act ("CEQA").

The Sierra Club is the oldest conservation organization in the United States, with over 600,000 members nationwide, and 151,000 members in California alone. Sierra Club is steadfastly committed to preserving the legacy of California's wildlands for future generations, while simultaneously recognizing that climate change has the potential to make radical changes in our habitats and landscapes. Sierra Club is working aggressively to reduce carbon emissions by supporting large scale renewable projects and by quickly ramping up energy efficiency and rooftop solar.

In order to help meet California's and the nation's renewable energy goals, the Sierra Club supports appropriately sited large-scale renewable development, i.e, projects that avoid or greatly minimize environmental impacts to wildlife and plants and the ecosystems they depend upon. For example, there are hundreds of thousands of acres of privately held agricultural lands in California that have marginal productivity or no longer support farming. These lands, with relatively high solarity and poor habitat values, present many opportunities to help meet our goals for large scale solar. The Sierra Club encourages companies and agencies to prioritize these types of lands going forward.

## **Introduction**

The applicant Genesis Solar LLC proposes to develop an electric-generating facility with a nominal capacity of 250 megawatts (MW) using a concentrated solar "trough" generating system. The Genesis project is proposed to be located in the eastern portion of Riverside County, California, north of Interstate 10 near Desert Center. The site is approximately 25 miles west of Blythe and several miles north of Interstate 10. The proposed project is comprised entirely of BLM managed lands. Construction and operation of the project would directly disturb 1800 acres for the project itself, plus 90 acres for transmisson, natural gas line and road (totaling approximately 3 square miles). In addition, the Project will disturb an undetermined number of acres off-site through indirect impacts.

The project also includes flood control facilities, propane supply tanks, a bioremediation site, and a site access road. The project would consume approximately 2440 acre feet of water during construction and 1644 acre feet of local groundwater per year thereafter for operations, washing mirrors, etc. Propane stored in onsite tanks would be used to heat project operating fluid at night and bring it up to operating temperature in the morning in an auxiliary boiler. The

project would be connected to the SCE Substation via 6.5 miles of a new gen-tie line, and its power would be transmitted to load centers via either the existing Devers to Palo Verde line, or the new Devers to Palo Verde 2 line which the Sierra Club supports. The project would have up to 50 acres of evaporation ponds as well as a several acre bioremediation site to deal with small amounts of leaking hazardous fluids; larger amounts would have to be removed and treated offsite. The actual electrical capacity factor would be a small fraction of the nameplate 250 MW. The project is proposed to be "wet cooled." There is no proposal at this site to "store" thermal energy for use after sundown.

The Genesis project is proposed in a portion of the Colorado Desert of California that is an intact, functioning ecosystem.<sup>1</sup> The immediate project area has no development. It is located on the shore of an ancient dry lake and immediately bordering the Palen-McCoy Wilderness. Water use of the project is unmitigated and unacceptable. Cultural, biological and other significant impacts of the project remain to be adequately addressed.

### **BLM & the Commission's Responsibilities under NEPA & CEQA**

The National Environmental Policy Act ("NEPA") is our "basic national charter for the protection of the environment." 40 C.F.R. § 1500.1. Congress enacted NEPA "[t]o declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; [and] to enrich the understanding of the ecological systems and natural resources important to the Nation." 42 U.S.C. § 4321. To accomplish these purposes, NEPA requires all agencies of the federal government to prepare a "detailed statement" that discusses the environmental impacts of, and reasonable alternatives to, all "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). This statement is commonly known as an environmental impact statement ("EIS"). See 40 C.F.R. Part 1502.

The EIS must "provide full and fair discussion of significant environmental impacts and shall inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment." 40 C.F.R. § 1502.1. This discussion must include an analysis of "direct effects," which are "caused by the action and occur at the same time and place," as well as "indirect effects which . . . are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.8. An EIS must also consider the cumulative impacts of the proposed federal agency action together with past, present and reasonably foreseeable future actions, including all

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<sup>1</sup> Sierra Club scoping comments on Genesis Solar Power Project, December 2009

federal and non-federal activities. 40 C.F.R. § 1508.7. Furthermore, an EIS must "rigorously explore and objectively evaluate all reasonable alternatives" to the proposed project. 40 C.F.R. § 1502.14(a).

The regulations implementing NEPA identify several factors that, when present, indicate that the environmental effects of a proposed action are significant. These include the presence of highly uncertain impacts, impacts to species listed as threatened under the Endangered Species Act, and cumulatively significant impacts. 40 C.F.R. §§ 1508.27(b)(5), (b)(7), (b)(9). This project contains federally listed sensitive species, California special status species, flood hazards, and will have a cumulatively significant impact on the desert environment.

The California Energy Commission, as the lead agency under CEQA, is responsible for preparing a document to inform the public and decision makers as to the project's environmental impacts. Pub. Res. Code § 25519(c), 21080.5. CEQA is designed to fulfill two important goals in the protection of the environment. EIR's (or their functional equivalent) must inform the public and decision makers about all potential, significant environmental effects of a project. Pub. Res. Code § 21100(b)(1). It is necessary to highlight the potential environmental effects "with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences." 14 Cal. Code Reg. § 15151. An agency must diligently examine these effects and "must use its best efforts to find out and disclose all that it reasonably can." Id. § 15144.

This SA/DEIS is legally and technically flawed under both NEPA and CEQA. As drafted, it is inadequate as an informational document because essential information was omitted, or is not available to the public or key agencies. The SA/DEIS also fails under substantive provisions of California law requiring the full mitigation of impacts to threatened species. This project will have serious unaddressed negative direct impacts to groundwater supplies, cultural and biological resources. Additionally its cumulative impacts have not been adequately analyzed. As such the SA/DEIS should have contained all feasible mitigation measures and reasonable alternatives available. Accordingly, the BLM and the Commission should fully and completely address the balance of deficiencies and concerns surrounding the SA/DEIS and revise and re-release the SA/DEIS. Additionally, it should require that the project utilize 100% dry cooling to ensure protection of desert water resources and dependent wildlife.

### **The SA/DEIS Is Inadequate Because it Lacks Critical Data For Issues that Will Impact the Environment and Defers Information Gathering and Analysis**

A major flaw with the SA/DEIS is the omission of relevant critical data in several important respects. Boiled down, the SA/DEIS omitted disclosure of the full-

range of potentially significant impacts associated with the Project. Although the SA/DEIS acknowledged these data gaps, it provided no legal reason under NEPA or CEQA as to why these gaps were permitted.

This is inadequate under both NEPA & CEQA. Under NEPA's implementing regulations: "If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement." 40 C.F.R. § 1502.22. The agency did not claim that this information was cost prohibitive to obtain, and the information that is omitted from the SA/DEIS is certainly "essential to a reasoned choice." 40 C.F.R. § 1502.22(a).

NEPA's implementing regulations make it clear that "NEPA procedures must ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA." 40 C.F.R. 1501.1 (emphasis added). CEQA contains similar requirements; public participation is at the heart of CEQA, therefore the public must be able to review and comment on technically accurate and complete EIRs. CEQA requires agencies to inform the public and responsible officials of the environmental consequences of their decisions before they are made, thereby protecting the environment and informed self-government. (Berkeley Keep Jets Over the Bay Com. v. Board of Port Comrs. (2001) 91 Cal.App.4th 1344, 1354.)

The following are a sample of the acknowledged areas where there are missing elements in the SA/DEIS.

- Groundwater Level Monitoring and Reporting Plan, Ground Subsidence Monitoring and Action Plan, Groundwater Level and Quality Monitoring and Reporting Plan, Channel Maintenance Program, Biological Resources Mitigation and Monitoring Plan, Draft Groundwater-Dependent Vegetation Monitoring Plan, Re-vegetation Plan, Decommissioning Plan, Final Drainage Erosion and Sedimentation Control Plan, Programmatic Agreement for Cultural Resources, Channel Maintenance Program, and other essential Project elements have not been developed due to critical data that is lacking.
- Grading and Drainage plans need to be revised: "Channel confluence design must be given special consideration, especially as the preliminary Grading and Drainage Plans show 90 degree angles of confluence at nearly all locations. The issues of confluence hydraulics and potential scour shall be specifically addressed in the revised Drainage Report." SA/DEIS C.9-102

- Spring and fall surveys for special status plant species within the disturbance areas are planned but not yet performed or available. SA/DEIS C.2-6.
- Protocol surveys for threatened desert tortoise have not yet been performed along the rerouted approximately six mile Project gen tie transmission line. SA/DEIS C.2-158
- Information related to translocation of the tortoise, specifically location of the proposed site for relocating tortoise and verification of disease testing requirements is missing or located in an appendix not accessible by the public, and as such that program cannot be assessed.<sup>2</sup>
- Project impacts to invertebrates are not adequately assessed
- Surveys for Couch's Spadefoot Toad, breeding habitat and Mojave Desert Tortoise along the Project's linear components have not been performed. SA/DEIS C.2-6.

These and other omissions and data gaps violate both NEPA and CEQA. The role of a SA/DEIS under NEPA is to provide the public with enough information to adequately assess the environmental dangers of a particular project. Indeed, if reasonably complete information is not included, "neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects." *Robertson v. Methow Valley Citizens Council*, U.S. 332, 352 (1989). Under CEQA, courts have made clear that environmental assessments must provide sufficient information to allow both decision-makers and the public to understand the consequences of the project. *Napa Citizens for Honest Gov't v. Napa County Board of Supervisors*, (2001) Cal.App.4th 342, 356. The information presented in an EIS must be of high quality. 40 C.F.R. § 1500.1(b). "Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA." *Id.* "Agencies shall insure the professional integrity, including scientific integrity, of the decisions and analysis in environmental impact statements." 40 C.F.R. § 1502.24. "They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement." *Id.*

The amount of missing, incomplete, or incorrect data requires the BLM and the Commission to deny the Applicant's proposal, or at the very least, complete gathering all of the necessary information for public review and comment in a revised SA/DEIS.

<sup>2</sup> "The final Plan shall be based on the draft Desert Tortoise Relocation/Translocation Plan submitted by the Applicant (TTEC 2010a) and shall include all revisions deemed necessary by BLM, USFWS, CDFG and the Energy Commission staff." SA/DEIS C.2-174.

## **The Analysis of Impacts to Groundwater is Inadequate**

The Project proposes to use local groundwater from onsite wells to provide cooling for the heat transfer fluid ("wet cooling") instead of using dry cooling as other solar trough projects in the Chuckwalla Groundwater Basin are proposing. SA/DEIS 88-89. This is unacceptable, and its proposed use of nearly 1,700 acre feet a year causes potentially significant unmitigated impacts to biological resources as well as groundwater supply and quality. Additionally, wet cooling (especially in arid regions) and its liquid discharges are out of compliance with State water policy. SA/DEIS C.9-2, C.9-88-89. Some of these unmitigated impacts are identified, but most are not because the SA/DEIS relies on vague and yet-to-be formulated mitigations.

### **Groundwater Supply**

The SA/DEIS correctly finds that the cumulative drawdown caused by water use of the Project, in combination with other projects and existing uses, would exceed the recharge of the Chuckwalla Groundwater Basin (CGWB). But then it goes on to assert that this cumulative drawdown is not significant compared to the recoverable storage in the CGWB. SA/DEIS C.9- 72-73. The problem is that the SA/DEIS fails to provide any basis for its assertion that the recoverable storage in the Chuckwalla Groundwater Basin is "as much as 15,000,000 acre feet." SA/DEIS C.9-72. In fact, there is no entity managing groundwater production and no management plan has been submitted to California Department of Water Resources for the CGWB. SA/DEIS C.9-16. But, even if the amount of water in storage were demonstrated to be as large as asserted, no evidence has been provided that 15,000,000 acre feet of water are actually recoverable, or if so, at what expense that might be accomplished.

Compounding this inadequacy, the SA/DEIS estimates the cumulative water groundwater extraction during operations of this and other reasonably foreseeable projects to be approximately 3,745 acre feet a year. SA/DEIS C.9- 72-73. However, the SA/DEIS has restricted its analysis to just the identified large energy-related projects. No consideration is given to water use of such reasonably foreseeable future projects as the Eagle Mountain Landfill project, or of urban growth in the Chuckwalla Valley, which is likely occur in order to accommodate the workforces of these various solar projects. Thus, the SA/DEIS has used an overly restricted number for future cumulative groundwater use, but has used the largest conceivable number ("as much as 15,000,000 acre feet" SA/DEIS C.9-72-73) to represent groundwater that is recoverable.

The overriding concern with the Project's unnecessary proposal to use wet cooling is the consequent massive use of a finite resource that has other beneficial uses, plus values for wildlife. This equates to a waste of water prohibited under the State

Constitution.<sup>3</sup> Unfortunately, here too the SA/DEIS leaves the reviewer less than adequately informed. It recognizes the Project's proposed wet cooling is a violation of State water policy (SA/DEIS C.9-88-89), but then fails to adequately address the issue. The only condition proposed for water policy compliance is Soil & Water-18, which reads in its totality: "Pending agreement on the actions needed to bring the project into compliance with the water policy." SA/DEIS C.9-110

### Groundwater Quality

The Project includes an onsite component called a Land Treatment Unit. Basically, the Land Treatment Unit is a 10 acre area used for bioremediation of soil expected to be contaminated with the heat transfer fluid, Therminol. SA/DEIS C.13-8. This is a hazardous material and there will be 2 million gallons of it in the trough system. The SA/DEIS acknowledges that there are expected leaks and spills and that storm water may accumulate in the bermed Land Treatment Unit. SA/DEIS B.10. 10

"Due to the uncertainty associated with the potential to impact groundwater quality<sup>4</sup> and the regulatory requirements for operation of the Land Treatment [sic] Unit, surface impoundments as well as stormwater and potentially septic system operations, staff recommends implementation of specific monitoring and mitigation requirements." SA/DEIS C.9-54.

But what are those specific monitoring and mitigation requirements, that the SA/DEIS is expected to disclose for public review? For one, the Waste Discharge Requirements have not been developed: "Conditions to require implementation of waste discharge requirements for LTU [Land Treatment Unit] and surface impoundments are currently in development and will be included in the SA/FEIS." SA/DEIS C.9-100. For another, six weeks prior to construction the following must be submitted for review and approval: the Groundwater Level and Quality Monitoring and Reporting Plan (SA/DEIS C.9-13); the Well Monitoring Installation and Groundwater Level Network Report. Id. Then, four weeks prior to construction groundwater quality and groundwater level monitoring data shall be reported to the

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<sup>3</sup> "It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare." article\_10 State of California Constitution Article X §2 <http://www.leginfo.ca.gov/const/>.

<sup>4</sup> Depth to groundwater is only 70 to 90 feet below the surface. SA/DEIS C.9-52. "However, due to the uncertainty associated with the amount of information available concerning shallow groundwater quality, continuity of confining layers and on vertical migration, implementation of Conditions of Certification .. are expected to minimize impacts to groundwater quality below the level of significance." C.9-51

CPM [SPELL]. SA/DEIS C.9-114.

In other words, there are virtually no relevant specifics to review. These mitigations must be spelled out in the SA/DEIS. And given the fast-track schedule of approval, any conditions purporting to reduce Project impacts to groundwater supply and quality are not likely to be subject to adequate environmental review unless they are developed immediately for inclusion in a revised and re-circulated SA/DEIS.

Further, monitoring is not mitigation. In some cases, the SA/DEIS does require actions to remediate future groundwater problems. However, these actions are either entirely non-specific or are of questionable feasibility. For example, if data from the proposed monitoring indicate that the water quality has deteriorated<sup>5</sup> for three consecutive years, the project owner shall provide treatment *or a new water supply* to either meet or exceed pre-project water quality conditions. SA/DEIS 9-115. The SA/DEIS does not indicate: where that new water supply would be found; whether it is expected to be available; at what cost it would be acquired and delivered; and why the SA/DEIS is not proposing a bond or other surety for what may become an enormously expensive water replacement scheme.

#### Subsidence

In view of the Project's massive groundwater draw, plus drawdown from other cumulative projects, the SA/DEIS identifies ground subsidence as an issue of concern. SA/DEIS C.9-110. Yet no assessment of this impact is provided; the SA/DEIS simply defers this issue to future preparation of a plan for monitoring and remedial action, not required to be prepared until 30 days prior to groundwater extraction. SA/DEIS C.9-110. This constitutes another impermissible deferral of information, analysis and mitigation.

#### Groundwater-Dependent Biological Resources

The Project has potential significant impacts to groundwater-dependent exosystems in the Chuckwalla Basin: "The lowering of groundwater levels could have a significant impact to biological resources... Even modest drawdowns of 0.3 feet can adversely affect vegetation." SA/DEIS C.2 -155. However the potential effects have not been adequately quantified nor has the proposed mitigation/remediation been identified.

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<sup>5</sup> The SA/DEIS does not disclose all the specific contaminants to be monitored or what level would constitute deteriorated. \*(exceeds pre-project constituent concentrations in TDS, sodium, chloride, or other constituents identified as part of the monitoring plan) SA/DEIS C.9-115 "Considerable uncertainty remains as to the potential extent of Project impacts to groundwater (see Soil and Water section) and to groundwater dependent plant communities, but staff considers these impacts to be potentially significant." SA/DEIS C.2-155.

The applicant contends that proposed deep pumping (800' or more before ground surface) would not affect the perched water table upon which various seeps, springs and groundwater-dependent communities rely.<sup>6</sup> Yet the SA/DEIS questions the impermeability of the layers separating the shallow groundwater zone from the deeper zones: "Staff, however, is concerned about the level of uncertainty in such a prediction and the potential influence of groundwater pumping in the shallow aquifer if the low permeability layers are fractured, as they often are (Deacon et al 2007)." SA/DEIS C.2-97.

In the face of the uncertainty on this critical issue, the agencies should adopt the Dry Cooling Alternative and require further testing. Instead, the proposed mitigation is uncertain and potentially infeasible. It relies on the development of a Groundwater Level Monitoring and Reporting Plan and a Vegetation Monitoring and Reporting Plan, neither of which are available for review. SA/DEIS C.2-155, 156. Further, since monitoring is not mitigation, the agencies are proposing that in the event the yet-to-be-determined monitoring triggers a concern, the applicant is to prepare a remedial action plan.

Here, as elsewhere in the SA/DEIS, the mitigation is inadequate. First, because feasible minimization of the Project impact, that is, adopting the Dry Cooling Alternative, was not done. Second, because both the monitoring and mitigation are too vague. Third, because there is potential for the monitoring to be discontinued at some unknown time, and the reviewer has no information as to when or why this should be permitted.<sup>7</sup> Fourth, because the trigger for remedial action is not only an abnormal lowering of the water table, but also a "decline in plant vigor," which is vague and subjective, and may not occur until it is too late to remediate.<sup>8</sup> And fifth, because the remedial action, presumably some sort of artificial irrigation or creation of artificial wildlife waters, may be infeasible, ineffective, prohibitively expensive, or have unintended impacts of its own. SA/DEIS C.2-202.

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<sup>6</sup> Personal communication, Worley-Parsons consultant to Joan Taylor on Genesis project site field trip Jan, 2010.

<sup>7</sup> "If the monitoring described in BIO-25 detects declining spring water tables—in any amount greater than the normal year-to-year variability—combined with a decline in plant vigor in groundwater dependent vegetation at the Project Monitoring Sites" SA/DEIS C.2-202

<sup>8</sup> "If, after review of the annual monitoring data described in BIO-25 and in Soil & Water- 5, the CPM and BLM's Authorized Officer agree, monitoring measurements and frequencies may be revised or eliminated." SA/DEIS C-2-202.

Additionally, the existing baseline condition at McCoy Spring, an important wildlife water identified as potentially affected by the Project, is not adequately described; the only information on it was gathered half a century ago.<sup>9</sup>

In conclusion, the SA/DEIS must revise the Soils and Water analysis to provide reliable information, analysis and avoidance/mitigation for impacts of the Project's massive proposed groundwater use. We urge adoption of the Dry Cooling Alternative to substantially reduce Project water use, water waste, and significant potential impacts to groundwater resources as well as other associated impacts.

### **Cultural Impacts Analysis is Unlawfully Deferred**

The Project is located at the shoreline of an ancient dry lakebed utilized by Native Americans in the past SA/DEIS C.3-67. Additionally, the area was used in World War II as part of the Desert Training Center, an important historical resource eligible for NRHP and the CRHR.<sup>10</sup> SA/DEIS C.3-122 But the SA/DEIS acknowledges "Staff had insufficient information to be certain about this relationship."<sup>11</sup> The SA/DEIS admits that development of the Project could have significant cultural impacts because "Construction usually entails surface and subsurface disturbance of the ground, and direct impacts to archaeological resources." SA/DEIS C.3-5, and that "Geo-archaeological studies of the Proposed Project indicate that *the entire area is highly sensitive for buried cultural resources*, particularly on the southern side closer to the Ford Lake." SA/DEIS B.2-35 (emphasis added) Evidently, these resources are likely to lie within two feet of the surface,<sup>12</sup> yet there is no indication that proper investigations were undertaken, or required to be undertaken, to determine the presence of buried cultural materials.

There are other potentially significant cultural impacts. As acknowledged by the

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<sup>9</sup> "McCoy Spring and Chuckwalla Spring are perennial springs; however, there is no information available regarding the discharge quantity for these springs. Published water quality data for McCoy Spring is included in DWR, 1963." SA/DEIS C.9-36.

<sup>10</sup> Construction activity on the main GSEP plant site and the proposed linear alignments is expected to cause the destruction of seven historic-period archaeological sites. Staff determined that these sites were not individually eligible for inclusion in the However, if these sites were associated with the DTC/C-AMA Cultural Landscape, they would be eligible as contributing elements.

<sup>11</sup> Data insufficiencies included site form recording inconsistencies between recorders, seeming incongruities in the co-occurrence of certain can types, and the lack of discussion of possible military uses of some artifacts... Misidentification could have resulted in sites that may date to the DTC/C-AMA era (1942-1944) being incorrectly interpreted as dating to the mid-twentieth century." SA/DEIS C.3-122

<sup>12</sup> the majority of the proposed site footprint is covered in deposits of Holocene age. Staff considers these deposits to have a moderate-to-high potential to contain well preserved, buried cultural materials... these materials would be expected within approximately 2 feet of the modern ground surface." SA/DEIS C.3-64.

SA/DEIS, the Project would destroy onsite portions of a Prehistoric Trail Network connecting the Colorado River with Ford Dry Lake and other important destinations. SA/DEIS C.3- 67. And the project has yet-to-be-determined potential impacts to Traditional Cultural Properties of significance to Native Americans, such as McCoy Springs. SA/DEIS C.3-67. In spite of legal mandates to analyze all the above under NEPA and CEQA, the SA/DEIS states that impacts to cultural resources are "undetermined" <sup>13</sup> SA/DEIS ES-20, and that assessment of the short and long term adverse impacts to cultural resources will be completed only in a Programmatic Agreement, development of which "is underway" SA/DEIS ES-21, and that "the resolution of the significant effects of the GSEP would be set forth in a PA." SA/DEIS C.3-119. Thus, on its face the SA/DEIS discussion of impacts to cultural resources is incomplete and inadequate.

The BLM has also failed to satisfy its obligations under section 106 of the NHPA. 16 U.S.C. § 470(f). This section of the NHPA requires agencies to take into account the impact of effects of their actions on historical resources "prior to the issuance of any license." 16 U.S.C. § 470(f). Instead of completing this required process, BLM is opting to use a programmatic agreement to defer evaluation, mitigation, and treatment until after approval and full public review is possible.

Here again, as with other resource issue areas requiring full environmental analysis, the assessment of impacts and the formulation of mitigation measures is impermissibly deferred. CEC plans to fulfill the bulk of its obligations under CEQA by conditioning approval on the applicant's compliance with a programmatic agreement whose contents are not disclosed. SA/DEIS C.3-119. Even though the anticipated mitigation would rely on programs and protocols, the SA/DEIS acknowledges that it does not lay forth the mitigation that would be eventually be employed.<sup>14</sup> This abdication of responsibility is clearly a violation of statutes enacted to ensure public participation in informed decision-making and to protect our nation's irreplaceable cultural heritage. Before committing to the permanent destruction of irreplaceable cultural resources for the sake of a temporary project, CEC and BLM must, at the very least, determine and disclose the nature and extent of the cultural heritage they are obliterating.

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<sup>13</sup> At C.3-1 the SA/DEIS is internally inconsistent on this point, asserting: "Staff concludes that the proposed Genesis Solar Energy Project (GSEP) would have a significant direct impact on 14 historically significant archaeological resources and a potential significant indirect impact on 1 ethnographic resource."

<sup>14</sup> Specific mitigation measures for the eligible and assumed-eligible cultural resources will be developed through the PA consultation process, so what staff presents below are *some general ideas* of what mitigation measures could eventually be included in the PA. *The list below is neither complete nor exhaustive.*" SA/DEIS C.3-119 (emphasis added)

## **The Analysis of Impacts to Sensitive Animals, Plants, and Other Biological Resources is Inadequate**

The SA/DEIS analysis of biological impacts of the Project is replete with instances where surveys have not yet been conducted and mitigation has not been formulated, and yet the SA/DEIS maintains that "The absence of the 2010 survey data has not precluded staff from coming to conclusions about the significance of potential impacts to biological resources or prevented development of appropriate mitigation." SA/DEIS C.2- 6. This conclusion is flatly contrary to NEPA/CEQA requirements to provide full information to the public and decision makers, a gross deficiency which is discussed more fully above.

### **Desert Tortoise**

The Project site lies within a broad alluvial plain which drains the Palen Mountains to the north. SA/DEIS C.2-1. The SA/DEIS considers the entire Project site to be suitable habitat for tortoise. SA/DEIS C.2-34. It contains 23 acres of designated critical habitat for desert tortoise, which will be mitigated at a ratio of 5:1, and 1763 acres of suitable habitat which is proposed to be mitigated at a ratio of 1:1. SA/DEIS c.2-1. This mitigation, however does not account for indirect impacts to tortoise of predation, road kill, harassment, etc.

The desert tortoise in and around the Project site are part of the Eastern Colorado Recovery Unit. SA/DEIS C.2-14. Desert tortoise recovery plans emphasize that activities occurring outside the boundaries of existing tortoise conservation areas can negatively affect tortoise populations.<sup>15</sup> Both the 1994 and draft 2008 Tortoise Recovery Plans recommend that land managers focus recovery efforts toward tortoise conservation areas; however, the Plans also emphasize that land managers should try to limit the loss of habitat outside conservation areas as much as possible.<sup>16</sup> The SA/DEIS acknowledges that the proposed project will result in the direct and permanent loss of all occupied tortoise habitat onsite. SA/DEIS C.2-70. Protocol spring surveys on the main project footprint were negative for live animals but indicated past use by tortoise. However the transmission line routing has changed since, and the surveys for the new routing were not adequate. Further surveys are scheduled for Spring 2010. SA/DEIS C.2-33. The results of those surveys are not available in the SA/DEIS.

The SA/DEIS proposes to relocate or translocate ("translocate") desert tortoise found onsite, but it presents no final Desert Tortoise Relocation/ Translocation Plan. SA/DEIS C.2-174. Nor does it adequately mitigate the dangers

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<sup>15</sup> See U.S. Fish and Wildlife Service, Draft revised recovery plan for the Mojave population of the desert tortoise (*Gopherus agassizii*) at 33 (2008).

<sup>16</sup> *Id.*

that disease poses to translocated tortoises. Specifically, it does not require adequate disease testing. Relocating tortoise without disease testing could imperil the health of both the animals to be moved and the resident populations into which tortoises will be released.<sup>17</sup> Based on the reports of Berry, et al. (2008), Mack, et al. (2008) and Mack and Berry (2009) that disease is not uniformly distributed across geographical areas, it is reasonable to assume that there will be pockets of diseased animals and pockets of healthy animals within the 5 kilometer range of the project site. Not fully testing animals that are to be "relocated" could result in the introduction of diseases into otherwise healthy populations. Also, as noted by the CDFG, "moving tortoises up to 5 km distance without disease testing presents risks to other populations." SA/DEIS C.2-57. Not testing the host populations within the 5 kilometer range could result in the introduction of healthy tortoises from the project site into a population that is diseased. Therefore, any translocation should follow the Desert Tortoise Council Guidelines for Handling Desert Tortoise During Construction. Additionally, any tortoises that are moved more than 1000' should be fully tested for disease and the host population should be tested to the same extent as well.

The SA/DEIS should be revised to disclose the survey results of the re-routed Project transmission lines and to require full disease testing for tortoise translocation.

#### Mojave Fringe-toed Lizard

The Mojave fringe-toed lizard (MFTL) is a BLM sensitive species that is found in sandy, hot, sparsely vegetated habitats. SA/DEIS C.2-69. It is restricted to habitats with fine, loose sand. Id. Because it is restricted to these sandy locations, and because of increasing development pressures, its habitat has become highly fragmented. Id. The habitat fragmentation has in turn left the species vulnerable to local extirpations. It is important to protect the fragile sandy ecosystem upon which the Mojave fringe-toed lizard is dependent. Id.

The SA/DEIS acknowledges that of the Project would destroy 66 acres of Mojave fringe-toed lizard habitat, and, by blocking aeolian fluvial and sand transport through the project, indirectly impact 453 acres of habitat downwind of the Project Disturbance Area. C.2-2. It also identifies that cumulative impacts of the Project to this sensitive species are significant and "of particular concern."<sup>18</sup>

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<sup>17</sup> Based on the reports of Berry, et al. (2008), Mack, et al. (2008) and Mack and Berry (2009) that disease is not uniformly distributed across geographical areas, it is reasonable to assume that there will be pockets of diseased animals and pockets of healthy animals within the 5 kilometer range of the project site.

<sup>18</sup> "Of particular concern are the cumulative effects of renewable energy projects within the geographic scope of the Chuckwalla Valley, which contains an isolated system of dunes and population of Mojave fringe-toed lizard. The direct loss of dune habitat and

However, although the SA/DEIS recognizes the fact that this population of Mojave fringe-toed lizard is at the southernmost extreme of the species' range, it only identifies impacts to the local population and the species in general (SA/DEIS C.2-2). Although the SA/DEIS briefly alludes to the potential for species-level impacts,<sup>19</sup> it fails to fully evaluate the importance of this population to genetic diversity and climate adaptation of the species. With the hotter and drier conditions expected with climate change,<sup>20</sup> the southernmost, lower elevation populations of MFTL are likely better adapted to extremes of heat and aridity than those in the higher, cooler areas of the Mojave desert. SA/DEIS C.2-69, 70. Thus it is essential to conserve the populations at the southern extreme of the species for genetic diversity, species fitness<sup>21</sup> and ability of the species to adapt to climate change stressors. This omission of climate change adaptation analysis is characteristic of the general deficiency as regards this pivotal issue, as more fully discussed below.

The SA/DEIS has an affirmative obligation to analyze an alternative that would avoid significant unmitigated impacts to MFTL, not only because of onsite loss of habitat but also because of offsite impacts to sand flow and potential species-level impacts to MFTL. The project should be realigned and reconfigured to avoid onsite dunes and Aeolian sand transport corridors. Additionally, while the SA/DEIS has analyzed the potential for the various configurations of the Project and its fences to serve as perches for birds of prey, to increase the Project impact to desert tortoise, it has failed to do so for MFTL (and other vulnerable species) outside the Project foot print. This, too, must be remedied.

The SA/DEIS must be revised and pertinent information and analysis on the above, including a feasible alternative to avoid impacts to MFTL and sand transport, must be provided to the public.

#### Desert Kit Fox and American Badger

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Mojave fringe-toed lizard is minor relative to the indirect downwind effects from obstructions within the active aeolian sand transport corridor, and the disruption of the fluvial processes that contribute sand to the system from the diversion of washes – approximately 63 miles of washes within the Ford watershed alone.” SA/DEIS C.2-149, 150.

<sup>19</sup> “This southern population may represent an important gene pool in light of the likely warming and drying that will occur in this region as a result of climate change; these southernmost lizards that may already be adapted to hotter and drier conditions than those further north and could represent a source of genetic variation that could stave off extinction of this species in selected refugia (Barrows pers. comm.). SA/DEIS C.2-69, 70.

<sup>20</sup> California Resources Agency *California Climate Change Adaptation Strategy Discussion Draft* 2009 p 4, Figures 5&6

<sup>21</sup> Booy et al, *Genetic Diversity and the Survival of Populations*, 2000

Desert kit foxes, State-protected Fur-Bearing Mammals, and American Badgers, State Species of Concern, will be destroyed or removed from the project site. SA/DEIS C.2-84. Although the Applicant has not performed focused surveys for these species, there is suitable habitat on site, and several individuals as well as many burrows complexes and scat were observed throughout the site. *Id.* The SA/DEIS provides no information as to the number of kit foxes that will be affected; although it does acknowledge that kit fox and American badger are sensitive species that must be protected. *Id.*

Nevertheless, the SA/DEIS provides almost no information as to how impacts to these species will be avoided; there is only a salvage operation proposed. The SA/DEIS suggests that impacts to these animals will be fully mitigated as follows: a preconstruction survey should be done; dens should be flagged, crushed or filled in if not occupied; and that habitat acquired for desert tortoise, wash resources and dunes should suffice as mitigation for these mammals SA/DEIS C.2-64. However, the SA/DEIS offers no assurance that habitat which is to be acquired specifically for desert tortoise and Mojave fringe-toed lizard, will have the primary constituent elements or the necessary carrying capacity for ranging predators such as desert kit fox and American badger. Once again, this analysis is insufficient under NEPA and CEQA as it provides inadequate information for the public or agencies to use in determining the adequacy of proposed mitigation.

### **The Cumulative Impacts Analysis is Deficient**

A discussion of the cumulative environmental effects of a proposed action is an essential part of the environmental review process, otherwise the agency cannot evaluate the combined environmental effect of related actions. Cumulative impact is defined in NEPA's implementing regulations as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions . . . . Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7

Under NEPA, an EIS must provide a sufficiently detailed catalogue of past, present, and reasonably foreseeable future projects, and provide an adequate analysis of how these projects, in conjunction with the proposed action, are thought to have impacted or are expected to impact the environment. See *Muckleshoot Indian Tribe v. United States Forest Serv.*, (9th Cir.1999) 177 F.3d 800, 810 (per curiam) (quoting 40 C.F.R. § 1508.7). In addition to an adequate cataloging of past projects, NEPA also requires a discussion of consequences of those projects. However, the SA/DEIS fails to properly assess and address the severe cumulative biological and other impacts of the project. Considered in the context of other proposed large energy projects in the region, the

cumulative impacts of the Project are significant in nearly every issue category. The cumulatively significant biological impacts include Desert washes – Ford Watershed and the broader NECO planning area; Desert tortoise habitat; Golden eagle foraging habitat; Mojave fringe-toed lizard and their habitat; Habitat for American badger, desert kit fox, and burrowing owl; LeConte's thrasher habitat; Couch's spadefoot toad range; Habitat for Harwood's milk-vetch and other dune/playa-dependent special-status plants; Wildlife habitat and connectivity within the Palen-Ford WHMA (for Mojave fringe toed lizard, dunes, and playa); Mojave and Sonoran creosote bush scrub; desert dry wash woodland (microphyll woodland); playa and sand drifts over playa, and dunes (active and stabilized). SA/DEIS C.2-149ff.

Of particular concern are the cumulative effects of renewable energy projects within the geographic scope of the Chuckwalla Valley, which contains an isolated system of dunes and population of Mojave fringe-toed lizard. The direct loss of dune habitat and Mojave fringe-toed lizard is minor relative to the indirect downwind effects from obstructions within the active aeolian sand transport corridor, and the disruption of the fluvial processes that contribute sand to the system from the diversion of washes – approximately 63 miles of washes within the Ford watershed alone.

On a human time scale, these cumulative impacts will be pervasive, causing landscape-level biological, cultural, visual and other impacts that will be permanent or last hundreds of years after the expected lifetime of the Project. The SA/DEIS fails to provide adequate analysis, identification, and mitigation or avoidance of Project cumulative impacts.

Inter alia, the SA/DEIS fails to provide an adequate analysis of how these related projects, in conjunction with the proposed action, are thought to have impacted or are expected to impact the environment. The acreages and intent of the identified related projects are given, but actual cumulative impacts of these projects on the affected environment are not analyzed in adequate specificity. In particular, the cumulative biological context is deficient. The SA/DEIS fails to analyze the threshold questions about the cumulative context: What is the existing condition for the species at risk? What is the expected future condition for the species and biological processes at risk from the cumulative impacts of this and other existing and reasonably foreseeable actions? And what relative contribution to these impacts is the proposed project expected to make?

Clearly, the SA/DEIS has not assembled enough information and performed the requisite analysis (and the responsible agencies do not have adequate planning guidance) to determine: 1) the level of cumulative impacts to habitats, species and ecosystems, especially in the context of likely climate-change-necessitated habitat and species migration, or: 2) the limits of acceptable change; or 3) how to avoid significant cumulative impacts that would foreclose future opportunities to sustain desert ecosystems and species. This is a violation not only of NEPA and CEQA, but of State and Federal mandates requiring sustainable resource protection, such as

FLPMA and the 2009 California Climate Change Adaptation Strategy (herein incorporated by reference). The latter stated, "In the face of a changing climate it is imperative that Departments work to maintain healthy, connected, genetically diverse populations" to "aids [sic] the movement of species within reserve areas as they adjust to changing conditions associated with climate change." 2009 California Department of Water Resources *Climate Change Adaption Strategy, Discussion Draft*, 56. This guidance document also directed California Department of Fish and Game to ensure that CEQA review addressed climate change issues in this context.<sup>22</sup>

At C2-2ff the SA/DEIS acknowledges that even with mitigation, certain cumulative Project impacts remain significant. To offset cumulative biological impacts to the region,<sup>23</sup> the SA/DEIS proposes new plan designations to designate two new linkage areas and one solar exclusion area. SA/DEIS Biological Resources, Appendix B, p 1-3. In context with the vast land conversion contemplated with renewable energy development, the concept of setting aside landscape-level conservation areas to mitigate for severe cumulative impacts of the project is laudable, and in fact it is mandated by NEPA and CEQA. However, there are some serious deficiencies in the proposed mitigation. Plan amendments can be changed; they are not permanent. The proposed mitigation of only Plan amendments does not provide the necessary permanent, unchangeable mitigation for severe cumulative impacts that will persist at least for hundreds of years beyond the life of the cumulative projects. The mitigation also does not specify management prescriptions, and it allows undefined activities, "Casual use of the area would remain unaffected." SA/DEIS Biological Resources, Appendix B, p3.

As a thorough cumulative impact analysis is required for public and the agencies to make an informed decision regarding the consequences of a proposed action, the SA/DEIS must be revised to thoroughly examine the above-referenced deficiencies.

### **The Alternatives Analysis is Inadequate Because BLM Unlawfully Rejected Feasible Alternatives**

**BLM's Statement(s) of Purpose and Need Reflects the Applicant's Needs, and Is Too Narrowly Drawn.**

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<sup>22</sup> CEQA Review/Department Guidance – The Department of Fish and Game will initiate the development of internal guidance for staff to help address climate adaptation and to ensure climate change impacts are appropriately addressed in CEQA documents. Id. 61.

<sup>23</sup> "Combined with the effects of historical grazing and military training, agriculture, and highway and aqueduct construction, the proposed wind and solar energy projects have the potential to further reduce and degrade native plant and animal populations." SA/DEIS C.2-111

The Alternatives Analysis "is the heart of the environmental impact statement."<sup>24</sup> CEQ regulations require that an alternatives analysis presents the environmental impacts of the proposal and the alternatives in comparative form, sharply defining issues and providing a clear basis for choice among options by the decision-maker and the public. 43 CFR § 1502.14. In the SA/DEIS Alternatives Analysis, BLM did not consider the Private Land and other private offsite alternatives under NEPA on the basis that these alternatives would not accomplish the purpose and need of the proposed action.<sup>25</sup>

The decision not to examine these alternatives was incorrect because BLM's statement of purpose and need for the SA/DEIS is too narrowly drawn. Courts have held that although an agency has discretion to define the purpose and need of a project, it cannot use "unreasonably narrow" terms to define a project's objective. The Department of Interior ("DOI") regulation, 40 C.F.R. § 1502.13 merely requires that an EIS briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action. DOI's NEPA handbook explains that the "purpose and need statement for an externally generated action must describe the BLM purpose and need, not an applicant's or external proponent's purpose and need." Department of Interior, Bureau of Land Management, National Environmental Policy Act Handbook 35 (citing 40 C.F.R. § 1502.13) (emphasis added).

Here, however, in contravention of NEPA guidelines, the BLM only looked to the Applicant's purpose and need. The SA/DEIS stated that the purpose and need is "to respond to Genesis Solar, LLC's application under Title V of Federal Land Policy and Management Act, FLPMA (43 U.S.C. 1761) for a ROW grant to construct, operate, and decommission a solar thermal facility on public lands in compliance with FLPMA, BLM ROW regulations, and other Federal applicable laws." SA/DEIS ES-6. Based on this narrow statement of purpose and need, BLM has declined to examine any private land off-site alternatives (as well as dismissing alternative technologies, distributed generation, energy efficiency and demand response). In so doing, BLM impermissibly rejected reasonable alternatives that resolved most if not all significant biological impacts of the project<sup>26</sup> on the basis of inconsistency with the applicant's purpose and need. Moreover, BLM did so in spite of numerous scoping comments requesting consideration of a private/disturbed land alternative.<sup>27</sup>

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<sup>24</sup> 40 C.F.R. § 1502.14.

<sup>25</sup> "since the proposed actions under review in this document are whether to approve or deny, or approve with modification an application for the Calico Solar project to be sited on public land, analysis of a private land alternative would not be consistent with the stated purpose and need of the proposal." SA/DEIS B.2-18.

<sup>26</sup> "The Gabrych Alternative site is preferred over the proposed GSEP site for six resource elements: recreation and wilderness, soils and water, worker safety and fire protection, biology, and cultural resources. SA/DEIS B.2-52.

<sup>27</sup> SA/DEIS ES-9ff.

As the Energy Policy Act, and related Secretarial and Executive Orders direct BLM to “encourage the development of environmentally responsible renewable energy” while complying with existing environmental laws, – the project purpose and need statement need not be so narrowly drawn as to preclude the consideration of alternative locations and technologies. To do so reflects the needs of the project applicant, not the needs of BLM, in violation of NEPA. In fact, an agency’s refusal to consider an alternative that would require some action beyond that of its congressional authorization is counter to NEPA’s intent to provide options for agencies. See 40 C.F.R. 1502.14. BLM’s decision to narrow its purpose and need to preclude the analysis of alternative sites, and to avoid analysis of offsite alternatives because they are outside of its jurisdiction, renders the SA/DEIS deficient.

### **The Cumulative Impacts Analysis Is Deficient**

A discussion of the cumulative environmental effects of a proposed action is an essential part of the environmental review process, otherwise the agency cannot evaluate the combined environmental effect of related actions. Cumulative impact is defined in NEPA’s implementing regulations as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions . . . Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” 40 C.F.R. § 1508.7

Under NEPA, an EIS must provide a sufficiently detailed catalogue of past, present, and reasonably foreseeable future projects, and provide an adequate analysis of how these projects, in conjunction with the proposed action, are thought to have impacted or are expected to impact the environment. See *Muckleshoot Indian Tribe v. United States Forest Serv.*, (9th Cir.1999) 177 F.3d 800, 810 (per curiam) (quoting 40 C.F.R. § 1508.7). In addition to an adequate cataloging of past projects, NEPA also requires a discussion of consequences of those projects. However, the SA/DEIS fails to properly assess and address the severe cumulative biological and other impacts of the project.

Considered in the context of other proposed large energy projects in the region, the cumulative impacts of the Project are significant in nearly every issue category. On a human time scale, these cumulative impacts will be pervasive, causing landscape-level biological, cultural, visual and other impacts that will be permanent or last hundreds of years after the expected lifetime of the Project. The SA/DEIS fails to provide adequate analysis, identification, and mitigation or avoidance of Project cumulative impacts.

Inter alia, the SA/DEIS fails to provide an adequate analysis of how these related projects, in conjunction with the proposed action, are thought to have impacted or are expected to impact the environment. The acreages and intent of the identified related projects are given, but actual cumulative impacts of these projects on the affected environment are not analyzed in adequate specificity. In particular, the cumulative biological context is deficient. The SA/DEIS fails to analyze the threshold questions about the cumulative context: What is the existing condition for the species at risk? What is the expected future condition for the species and biological processes at risk from the cumulative impacts of this and other existing and reasonably foreseeable actions? And what relative contribution to these impacts is the proposed project expected to make?

Clearly, the SA/DEIS has not assembled enough information and performed the requisite analysis (and the responsible agencies do not have adequate planning guidance) to determine: 1) the level of cumulative impacts to habitats, species and ecosystems, especially in the context of likely climate-change-necessitated habitat and species migration, or: 2) the limits of acceptable change; or 3) how to avoid significant cumulative impacts that would foreclose future opportunities to sustain desert ecosystems and species. This is a violation not only of NEPA and CEQA, but of State and Federal mandates requiring sustainable resource protection, such as FLPMA and the 2009 California Climate Change Adaptation Strategy (herein incorporated by reference). The latter stated, "In the face of a changing climate it is imperative that Departments work to maintain healthy, connected, genetically diverse populations" to "aids [sic] the movement of species within reserve areas as they adjust to changing conditions associated with climate change." 2009 California Climate Change Adaptation Strategy, 56. This guidance document also directed California Department of Fish and Game to ensure that CEQA review addressed climate change issues in this context.<sup>28</sup>

At C.2-6ff the SA/DEIS acknowledges that even with mitigation, certain Project impacts remain cumulatively significant. More importantly, in this, and every SA/DEIS, the agencies acknowledge that impacts from the limited set of identified present and future renewable projects are likely to remain cumulatively considerable even after the projects are mitigated. SA/DEIS C.2-150.

To offset cumulative biological impacts to the I-10 region, the SA/DEIS proposes new plan designations to designate two new linkage areas and one solar exclusion area. SA/DEIS Appendix B, 1-3. In context with the vast land conversion contemplated with renewable energy development, the concept of setting aside landscape-level conservation areas to mitigate for severe cumulative impacts of the project is laudable, and in fact it is mandated by NEPA and CEQA. However, there are some serious deficiencies in the

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<sup>28</sup> CEQA Review/Department Guidance – The Department of Fish and Game will initiate the development of internal guidance for staff to help address climate adaptation and to ensure climate change impacts are appropriately addressed in CEQA documents. Id. 61.

proposed mitigation. Plan amendments can be changed; they are not permanent. The proposed mitigation of only Plan amendments does not provide the necessary permanent, unchangeable mitigation for severe cumulative impacts that will be permanent or persist at least for hundreds of years beyond the life of the projects. The mitigation also does not specify management prescriptions, and it allows undefined activities, "Casual use of the area would remain unaffected." (Biological Resources, Appendix B-3)

Since a thorough cumulative impact analysis is required for public and the agencies to make an informed decision regarding the consequences of a proposed action, the SA/DEIS must be revised to thoroughly examine the above-referenced deficiencies.

### **BLM Does Not Adequately Analyze the Project Under the Requirements of FLPMA and the CDCA**

The Federal Land Policy and Management Act (FLPMA) was enacted in 1976 in part to ensure that public lands are:

managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use.

43 U.S.C. 1701.

Recognizing that the California desert is a rare and special place, Congress designated a large portion of the Southern California desert as the California Desert Conservation Area (CDCA). 43 U.S.C. § 1781(c). Congress understood that "the California desert environment is a total ecosystem that is extremely fragile, easily scarred, and slowly healed." 43 U.S.C. § 1781(a)2. Accordingly, FLPMA required the preparation and implementation of the CDCA Plan, "a comprehensive, long-range plan for the management, use, development and protection of these lands" 43 U.S.C. § 1781(b). The purpose outlined in the CDCA Plan is to provide for "multiple use and sustained yield, and the **maintenance of environmental quality.**" 43 U.S.C. 1781(b).

With this understanding came the mandate to the BLM that they should "take any action necessary to prevent unnecessary or undue degradation of the lands." 43 U.S.C § 1732(b). To ensure the overall maintenance of environmental quality, the CDCA Plan should provide a desert-wide perspective of the planning decisions for each major resource or issue of public concern. Since the CDCA Plan was completed

in 1980, there has been only one major amendment affecting this portion of the Colorado desert, the Northern and Eastern Colorado Management (NECO) Plan in 2002. But neither the NECO amendment nor the CDCA Plan contemplated cumulative industrial development, which could be as high as 500,000 to 1,000,000 acres as reflected in renewable energy development applications on public land in the California desert. Thus, there is no desert-wide planning perspective for land conversion of this scale and intensity. The Project alone entails three square miles of industrialization, with attendant loss of all biological resources onsite, all habitat connectivity through the project and immediate environs, loss of all public access, all visual resources, all recreational value, etc. Here also, the proposed CDCA Plan Amendment does not take into account a desert-wide perspective; rather it simply proposes that "[p]ermission [is] granted to construct solar energy facility (proposed Genesis Solar Project)." SA/DEIS A-7. Moreover, this action is proposed without any appropriate planning level guidance.

The Project is located in public lands that are designated as Class L. According to the CDCA Plan, "[m]ultiple-Use Class L (Limited Use) protects sensitive, natural, scenic, ecological, and cultural resource values. Public lands designated as Class L are managed to provide for generally lower-intensity, carefully controlled multiple use of resources, while ensuring that sensitive values are not significantly diminished." CDCA Plan 13. As such, the Plan should not be amended to allow for large scale industrial development unless "sensitive values are not diminished." Here, however, this project will cause a long-term loss of valuable resources, sensitive plants, and protected species. In nearly every important public land resource category--biological, cultural, land use, recreation, visual, wilderness, soils, water, etc.--the project has severe impacts, some of which are acknowledged by the SA/DEIS and some of which the SA/DEIS has failed to identify.

Under FLPMA BLM must "[prepare and maintain on a continuing basis an inventory of all public lands and their resource and other values." The inventory must be kept current "so as to reflect changes in conditions and to identify new and emerging resource and other values." 43 U.S.C. § 1711(a). FLPMA requires that this inventory form the basis of the land use planning process. 43 U.S.C. § 1701(a)(2). In *ONDA v. Rasmussen*, (D.Or. 2006) 451 F.Supp. 2d 1202, 1212-13, the court held that BLM had failed to satisfy the "hard look" requirement of NEPA because they relied on outdated inventories, in violation of FLPMA. *See also Center for Biological Diversity v. Bureau of Land Management*, 422 F.Supp.2d 1115, 1166-67 (N.D. Cal. 2006). Here too, BLM is violating its mandate by proposing a one-sentence Plan Amendment without adequately identifying the species and resources that will be affected by the Amendment.

As discussed in the earlier part of the comment letter, specifically Biological Resources, BLM has failed to adequately characterize the public lands and resources that will be affected by the Project. These include, but are not limited to, the desert tortoise, Mojave fringe-toed lizard, and multiple resources impacted by potential groundwater issues and flooding concerns. Multiple areas of the SA/DEIS state that

surveys are still ongoing or are concurrent with the public comment period; not only is deferral of surveys contrary to NEPA, but it also violates the BLM's responsibilities under FLPMA and the CDCA. Under FLPMA BLM must "take any action necessary to prevent unnecessary or undue degradation of the lands" and "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(b), 1732(d)(2)(a). Here, however, the SA/DEIS does not adequately address the consequences associated with translocating threatened desert. These vital data gaps illustrate that BLM cannot adequately show that they are preventing unnecessary degradation of public lands.

Further, FLPMA requires that when the BLM is amending a land use plan, they must "use a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences . . . consider the relative scarcity of the values involved . . ." 43 U.S.C. § 1712(c). Here, the SA/DEIS has not assembled enough information and analysis and the responsible agencies do not have adequate guidance to determine: 1) the level of cumulative impacts to habitats, species and ecosystems, especially in the context of likely climate-change-necessitated habitat and species migration; 2) the limits of acceptable change, or; 3) how to avoid significant cumulative impacts that would foreclose future opportunities to sustain desert ecosystems and species.

Additionally, BLM does not look into any alternative plan amendments, and appears to have looked at this amendment in isolation. However, under CDCA requirements, the BLM must determine "if alternative locations within the CDCA are available which would meet the applicant's needs without requiring a change in the Plan's classification . . ." and evaluate "the effect of the proposed amendment on BLM management's desert-wide obligation to achieve and maintain a balance between resource use and resource protection." CDCA Plan 121. As discussed below, the SA/DEIS does not adequately examine alternatives to the Project, and neglects to perform a thorough cumulative impact analysis. As the CDCA was designed to provide broad, **regional** guidance (CDCA Plan 11), the BLM should examine this project not only as to the effects on the Western Mojave, but also on the Mojave ecosystem and the CDCA as a whole. Without this analysis the overarching planning principles inherent in FLPMA and CDCA will be undermined. As such, this CDCA Plan Amendment should not be approved until the missing information is provided and the BLM provides a region-wide assessment per CDCA and FLPMA.

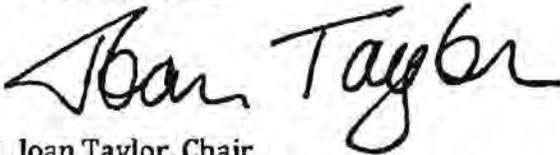
## **Conclusion**

For these reasons, the SA/DEIS violates NEPA, CEQA and potentially FLPMA. Accordingly, it should be revised and re-released. Also, the CDCA and NECO Plans should

be revised to give desert-wide guidance, prior to approval of the substantial public land conversion currently proposed by renewable energy projects. In terms of specific local impacts, we would urge adoption of the Dry Cooling Project Alternative, reduced or reconfigured to avoid impacts to groundwater resources and Aeolian sand source for dunes that support Mojave fringe-toed lizard. Additionally, we urge full identification, analysis and mitigation for likely Project caused impacts to important cultural resources on the ancient shoreline of Ford Dry Lake.

Thank you for the opportunity to comment on this important project.

Very truly yours,

A handwritten signature in black ink that reads "Joan Taylor". The signature is written in a cursive, flowing style.

Joan Taylor, Chair  
California/Nevada Desert Energy Committee  
Sierra Club  
1850 Smoke Tree Lane  
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**"Michael J. Connor"**  
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07/08/2010 04:17 PM

To: CAPSSolarNextEraFPL@blm.gov, Mike Monasmith  
<mmonasmi@energy.state.ca.us>

cc

bcc

Subject: Genesis Ford Dry Lake Solar Energy Project DEIS

Dear Ms. Shaffer and Mr. Monasmith:

Attached are Western Watersheds Project's comments on the Genesis (NextEra - Ford Dry Lake) Solar Energy Project Staff Assessment/Draft Environmental Impact Statement. Comments are due today.

Could you please respond to this email to confirm that you received and could open the attached file?

Thank you.

Michael Connor

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\*\*\*\*\*  
Michael J. Connor, Ph.D.  
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*Working to protect and restore Western Watersheds*

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July 8, 2010

By Email

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Re: GENESIS SOLAR ENERGY PROJECT STAFF ASSESSMENT/DRAFT  
ENVIRONMENTAL IMPACT STATEMENT

Dear Ms. Shaffer and Mr. Monasmith:

On behalf of Western Watersheds Project and myself, please accept the following comments on the Draft Environmental Impact Statement ("EIS") for the Genesis (NextEra - Ford Dry Lake) Solar Energy Project.

Western Watersheds Project works to protect and conserve the public lands, wildlife and natural resources of the American West through education, scientific study, research, public policy initiatives, and litigation. Western Watersheds Project and its staff and members use and enjoy the public lands, including the lands at issue here, and its wildlife, cultural and natural resources for health, recreational, scientific, spiritual, educational, aesthetic, and other purposes. Western Watersheds Project submitted scoping comments for this project on December 23, 2009.

The Bureau of Land Management ("BLM") is considering a possible plan amendment for a right-of-way (ROW) authorization filed by NextEra, LLC to develop an 1,800-acre, 250-megawatt (MW) solar generation facility, including a substation, administration facilities, operations and maintenance facilities, evaporation ponds, surface storm water control facilities, and temporary construction lay-down areas. The project is located approximately 25 miles west

of the city of Blythe, California, on BLM-managed lands. The project area is south of Palen/McCoy Wilderness Area and north of Ford Dry Lake.

This project will have significant direct, indirect and cumulative impacts on some of the desert's most sensitive resources including species listed under the Endangered Species Act such as desert tortoise and on important cultural resources. The DEIS is a rushed incomplete document that does not take NEPA's requisite "hard look" at the environmental impacts. Specific issues of concern that are inadequately addressed in the DEIS are summarized as follows:

### **(1) Range of Alternatives.**

The NEPA implementing regulations specify that NEPA documents must analyze a full range of alternatives. Based on the information and analysis presented in the sections on the Affected Environment (40 C.F.R. § 1502.15) and the Environmental Consequences (40 C.F.R. § 1502.16), the NEPA document should present the environmental impacts of the proposed action and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public

We had proposed that the BLM consider a number of alternatives, including the following:

- (a) "No Action Alternative" as is required by NEPA.
- (b) Alternative sites on public lands with fewer cultural resource conflicts.
- (c) Alternative that features technology that requires significantly less water.
- (d) A private lands alternative under which the project is built on private lands only.
- (e) A distributed energy alternative using "roof top" solar to avoid the need for construction of a power plant.

The BLM has ignored the three alternatives that would avoid the impacts to the resources at the project site and would conform with FLPMA's mandate that the BLM avoid the unnecessary and undue degradation of public lands i.e. (b) Alternative sites on public lands with fewer cultural resource conflicts; (d) A private lands alternative under which the project is built on private lands only; and, (e) A distributed energy alternative using "roof top" solar to avoid the need for construction of a power plant.

### **(2) Desert Tortoise.**

The Project would impact 1,786 acres of desert tortoise habitat, including 23 acres within the Chuckwalla Desert Critical Habitat Unit. Construction and operation of the Genesis Project would therefore require state and federal endangered species "take" authorization. In addition to direct loss of habitat the Project would fragment and degrade adjacent native plant and wildlife communities, and could promote the spread of invasive non-native plants and desert tortoise predators such as ravens. DEIS at C.2-1 The project will require construction of 1.6 miles of access road, 2.8 miles of transmission line route, and 1 mile of gas line route within desert tortoise critical habitat. Approximately 0.5 mile of the proposed transmission line is within the

Chuckwalla Desert Wildlife Management Area (“DWMA”) that was designated under the NECO Plan Amendment to the CDCA Plan.

The proposed project site is in California’s Colorado Desert within the Eastern Colorado Desert Tortoise Recovery Unit as designated in the 1994 Desert Tortoise (Mojave Population) Recovery Plan. The latest report from the Desert Tortoise Recovery Office cites a 37% decrease in tortoise density in the Eastern Colorado Recovery Unit between 2005 and 2007.<sup>1</sup> In our scoping comments we raised the concern that the project would disrupt connectivity between the Eastern Colorado Recovery Unit and the Northern Colorado Recovery Unit. This could reduce gene flow and impair desert tortoise recovery.

The DEIS takes the position outlined in the *Draft* (i.e. not final) revised recovery plan that California’s Colorado Desert desert tortoise population be treated as a single recovery unit. This is a scientifically controversial position since there is data indicating that tortoises from the 1994 Northern and Eastern Colorado Recovery Units are discernible using genetic analysis (see Murphy et al, 2007<sup>2</sup>). However, whether or not there is a scientific basis for the 1994 recovery units being combined into a single recovery unit the issue of loss of connectivity remains. This has not been addressed in the DEIS.

Maintaining connectivity is important especially given the threats posed by global climate change. As the USFWS 2008 Draft Revised Recovery Plan notes,

Climatic regimes are believed to influence the distribution of plants and animals through species-specific physiological thresholds of temperature and precipitation tolerance. Warming temperatures and altered precipitation patterns may result in distributions shifting northward and/or to higher elevations, depending on resource availability (Walther et al. 2002). We may expect this response in the desert tortoise to reduce the viability of lands currently identified as “refuges” or critical habitat for the species. (USFWS 2008 at 133)

The NEPA documents must fully describe, clearly characterize and identify the direct, indirect, and cumulative effects of each alternative on desert tortoises if the agencies are to satisfy NEPA’s requisite “hard look” at the environmental effects of this project. The proposed evaporation ponds could lead to increased numbers of predatory ravens, coyotes, and other subsidized predators in the area. Desert tortoises will also be impacted by this project if OHV riders displaced from the Ford Dry Lake recreation area move to areas with higher desert tortoise values. These indirect effects could impair recovery in the adjacent Chuckwalla DWMA.

### **(3) Mojave Fringe-toed Lizard.**

A number of sensitive species of wildlife and rare plants occur on the project or in the vicinity including the Mojave fringe-toed lizard. The Project will impact sand transport. Disruption of this ecological process will have potentially serious impacts on the Mojave fringe-

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<sup>1</sup> USFWS. 2009. Range-wide Monitoring of the Mojave Population of the Desert Tortoise: 2007 Annual Report. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.

<sup>2</sup> Murphy, R. W., Berry, K. H., Edwards, T. and Mcluckie, A. M. 2007. A Genetic Assessment of the Recovery Units for the Mojave Population of the Desert Tortoise, *Gopherus agassizii*. *Chelonian Conservation and Biology*. 6(2): 229–251.

toed lizard. The FLPMA precludes the BLM from authorizing projects that will result in undue degradation and the BLM is also precluding from authorizing actions that could propel the listing of this sensitive species under the Endangered Species Act. The DEIS should be revised to take a hard look at impacts to the Mojave fringe-toed lizard and explain the minimization and avoidance measures that will be adopted if this project is approved that will reduce impacts to sand transport to less than significant.

#### **(4) Rare Plants.**

The DEIS failed to adequately analyze impacts to special-status plants. Harwood's milk-vetch (CNPS List 2.2) and desert unicorn plant (CNPS List 4.3) were identified in the Project Disturbance Area and ribbed cryptantha (CNPS List 4.3) and Las Animas colubrina (CNPS List 2) were identified in the buffer area and outside of the Project Disturbance Area. However, the surveys were incomplete "One segment of the proposed Project linears was not included in spring 2009 surveys, and the Applicant has proposed surveys of this area in 2010. In addition to the species included on the target list for 2009 surveys, staff has identified additional species to include in the spring 2010 survey." DEIS at C.2-3.

Invasive plants and weeds are threats to native habitat, rare plants, and sensitive species. They pose an immense fire hazard. Using chemicals to kill weeds requires exposing the environment, species, and watershed area to a toxic substance which can be the source of further damage to environmental and human health. Manual weed control requires much human effort, machinery, and can cause even more disturbance, leading to erosion, disturbance, and, in some cases, more weeds. The EIS should carefully consider how invasive plants and weeds will be managed and controlled.

#### **(5) Cultural & Paleontological Resources.**

The Mojave Desert is rich in structures and artifacts of significant cultural value that are irreplaceable once lost and this particular project is located in a particularly archeologically rich area. The areas around dry lake beds are particularly rich in archaeological sites. The Ford Dry Lake area is a particularly important region with significant archaeological sites. According to the DEIS,

The proposed Genesis Solar Energy Project (GSEP) would have a significant direct impact on 14 historically significant archaeological resources and a potential significant indirect impact on 1 ethnographic resource. These resources include eight prehistoric-to-historic-period Native American archaeological sites, two of which are potential contributing elements to the prehistoric cultural landscape herein referred to as the Prehistoric Trails Network (PTN) Cultural Landscape; six sites that are potential contributing elements to a historic-period cultural landscape (historic district), herein referred to as the World War II Desert Training Center California-Arizona Maneuver Area (DTC/C-AMA) Cultural Landscape; and the ethnographic resource referred to herein as McCoy Spring National Register District (McCoy Spring). DEIS at C.3-1

However, the cultural surveys and analysis are incomplete. For example, the DEIS states, "the impacts to possible Traditional Cultural Property (TCP) McCoy Spring National Register District have not yet been determined." DEIS at C.3-2.

The BLM must take a hard look at the direct, indirect, and cumulative effects of the proposed project on all affected cultural resources.

**(6) Water Issues.**

We commented in our scoping comments on the need for the EIS to provide information on the water needs of the project and the source of these waters. The DEIS identifies the water source as the adjudicated Colorado River. The SA/DEIS concludes, “the Project has the potential to divert Colorado River water without any entitlement to the water, and all groundwater production at the site could be considered Colorado River water.” DEIS at C.9-47. Absent an entitlement this is obviously not a certain and reliable source of water. Nor does the DEIS explain the source and mechanisms for replacement water.

Western Watersheds Project thanks you for the opportunity to submit comments on the DEIS for this proposed solar plant project. Please keep Western Watersheds Project on the list of interested public for this project. If we can be of any assistance or provide more information please feel free to contact me by telephone at (818) 345-0425 or by e-mail at <mjconnor@westernwatersheds.org>.

Yours sincerely,

A handwritten signature in black ink that reads "Michael J. Connor". The signature is written in a cursive style and is underlined with a single horizontal line.

Michael J. Connor, Ph.D.  
California Director  
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Andrea.Compton@nps.gov

07/09/2010 09:13 AM

To: CAPSSolarNextEraFPL@blm.gov

cc: Andrea.Compton@nps.gov, Curt.Sauer@nps.gov, George.Turnbull@nps.gov, Carol.McCoy@nps.gov, David.A.Reynolds@nps.gov, Alan.Schmierer@nps.gov, bcc:

Subject: Fw: JOTR Comments on Genesis/Ford Dry Lake

Attached is a revised letter from the comments from Joshua Tree National Park on the Staff Assessment and Draft Environmental Impact Statement for the Genesis Solar Power Plant. Please accept these comments in lieu of the letter submitted yesterday. A copy is arriving via postal mail.

We have changed one sentence to more accurately reflect the park's perspective of the potential impacts (the last sentence of the paragraph before the "Water Resources" section).

Thank you.

Andrea Compton(See attached file: Genesis Solar Power Plant NPS comments.PDF)

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Chief of Resources  
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----- Forwarded by Andrea Compton/JOTR/NPS on 07/09/2010 09:07 AM -----

Cheri  
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07/08/2010 03:28  
PM

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To

cc

Andrea.Compton/JOTR/NPS@NPS, Curt.Sauer/JOTR/NPS@NPS, George.Turnbull/OAKLAND/NPS@NPS, Carol.McCoy/DENVER/NPS@NPS, David.A.Reynolds/OAKLAND/NPS@NPS, Alan.Schmierer/OAKLAND/NPS@NPS

Subject

JOTR Comments on Genesis/Ford Dry Lake

Attached are the comments from Joshua Tree National Park on the Staff

Assessment and draft Environmental Impact Statement for the Genesis Solar Power Plant.

Cheri Vocelka  
Program Assistant  
Joshua Tree National Park  
760-367-5502

"Unless someone like you cares a whole awful lot,  
Nothing is going to get better. It's not." --Dr. Seuss

[attachment "Genesis Solar Power Plant.PDF" deleted by Andrea



Compton/JOTR/NPS] Genesis Solar Power Plant NPS comments.PDF



# United States Department of the Interior

## NATIONAL PARK SERVICE

Joshua Tree National Park  
74485 National Park Drive  
Twentynine Palms, California 92277-3597

IN REPLY REFER TO

L7619 (JOTR-RM)

July 8, 2010

Allison Shaffer, Project Manager  
Palm Springs - South Coast Field Office  
Bureau of Land Management  
1201 Bird Center Drive  
Palm Springs, California 92262

**COMMENTS ON THE STAFF ASSESSMENT AND DRAFT ENVIRONMENTAL IMPACT (SA/DEIS) STATEMENT, GENESIS SOLAR POWER PLANT, Application For Certification (09-AFC-8), March 26, 2010**

Dear Ms. Shaffer:

Joshua Tree National Park, National Park Service (NPS), appreciates the opportunity to provide comments on the above noted document. The proposed Genesis (aka Ford Dry Lake) Solar Power Project is located approximately 18 miles east of the southern portions of Joshua Tree National Park.

We commend the Bureau of Land Management (BLM) for its cooperative approach with the State of California Energy Commission (CEC) to jointly evaluate the environmental implications of the Genesis Solar Power Project. Joshua Tree National Park is supportive of the proposed land use plan alterations to the Northern and Eastern Colorado Desert Coordinated Management Plan (NECO) in the Pinto-Basin-Chuckwalla Desert Wildlife Management Area (DWMA), Palen Dunes Exclusion Area, and Palen Wilderness-Chuckwalla DWMA Wildlife Linkage Area. The NPS recognizes and commends the objectives to preserve connected physical attributes and habitat to link populations of a wide diversity of organisms, both flora and fauna. These areas, as mentioned in the DEIS would also offset some of the cumulative effects from this and other projects proposed for the area.

To further enhance the protection of the region's sensitive wildlife and vegetation resources, the NPS recommends the following expansions to incorporate BLM lands in proximity to these areas:

- Pinto Basin-Chuckwalla DWMA Tortoise Linkage Area: include BLM lands west of Highway 177 and south and southwest of the Coxcomb Mountains, to more effectively link the habitat from the Chuckwalla DWMA to habitat to the north.
- Palen Dunes Exclusion Area: include BLM lands to the north and northwest of this area, on both sides of Highway 177 in the Palen Valley, to encompass additional habitat and the dunes and playas.
- Palen Wilderness-Chuckwalla DWMA Wildlife Linkage Area: include BLM lands east and south of Highway 177, north of I-10, and west of the Palen Mountains. to more effectively protect the sand dunes, habitat for the desert tortoise, and cultural sites.

In addition, the NPS suggests that the designations of “Solar Exclusion” areas for Palen Dunes and Palen Wildernenss/Chuckwalla DWMA Linkage be changed to match that of the Pinto-Basin-Chuckwall Tortoise Linkage to be defined as Right-of-Way (ROW) Exclusion. It is our interpretation that this ROW exclusion would limit future applications for projects in the areas, while the Solar Exclusion designation allows for additional projects which do not have major ground disturbing activities, but which could include additional public utility-scale use of these areas. To facilitate the best preservation of habitat and for other reasons stated in the DEIS, additional disturbances should be minimized rather than allowing partial development which requires some evaluation for the interpretation of the definition of “major” ground disturbing activities.

The NPS continues to have significant concerns about the analysis in the DEIS of the potential individual and cumulative impacts to groundwater resources in the Chuckwalla Valley Groundwater Basin and with the adequacy of the cumulative impact analysis in general. Impacts to water resource as a result of this project are anticipated to be mitigatable, but the document then also states that cumulative groundwater extraction will put the basin into overdraft condition. In our specific comments below, we provide detailed discussion and suggestions on ways to improve the DEIS.

The NPS reiterates its request submitted in its scoping comments on the Solar Energy Development Programmatic Environmental Impact Statement (dated 11/30/09), that the area west of the Palen Mountains be removed from consideration for public utility-scale development projects. The DEIS states that the Genesis project alone will result “in a substantial adverse cumulative impact to existing scenic resource values as seen from several wilderness viewing areas” (p.22) and that these impacts cannot be mitigated. These impacts will be magnified for every project that is developed in the Basin and the total cumulative effect has the potential to result in significant adverse impacts to the area’s air quality, viewsheds, wilderness values, and night sky qualities. The impacts cumulatively are incompatible with trying to maintain the existing experiences that visitors have on the eastern portions of the park.

Specific resource comments follow.

### **Water Resources**

The significance criteria used to evaluate the potential impact to groundwater resources are broadly and/or incompletely defined. The NPS recommends that the CEC and BLM better define the thresholds and significance criteria used to evaluate individual and cumulative impacts to groundwater resources in the Chuckwalla Valley groundwater basin. For example, in the second bulleted item on page C.9-4 of the SA/DEIS, does this criterion apply to individual and cumulative impacts, and how are “*substantial depletion*” and “*substantial interference*” to be interpreted from one solar project to another? Terms like “*substantial*”, “*significant*”, and “*considerable*”, unless constrained by quantitative (i.e., numerical) limits or bounds, are open to broad interpretation, which leads to confusion.

On pages C.9-46 and C.9-71, how is “*a significant percentage of the total amount of groundwater in storage*” defined? No quantitative, percentage value has been identified by which the reader can understand the agencies’ intent of significance. Furthermore, there is little or no discussion on how the groundwater storage value of 15,000,000 acre-feet was derived. A more conservative estimate of 9,100,000 acre-feet was estimated and proposed for groundwater storage in the basin by Eagle Crest Energy for their groundwater pumped storage

project. However, it is unclear whether either of these two storage estimates represents the total amount of water in storage versus the recoverable amount of water in storage, which is a smaller portion of the total amount of water in storage. For example, assuming a total amount of water in storage of 15,000,000 acre-feet and using the average aquifer storage (i.e., drainable porosity) values of 0.05 and 0.0002 reported for the alluvium and the Bouse Formation in Soil & Water Table 9 (page C.9-30), the recoverable amount of water in storage would be reduced to 750,000 acre-feet and 3,000 acre-feet, respectively. For the analysis, the recoverable amount of water in storage should be utilized to evaluate whether or not “*a significant percentage of the total amount of groundwater in storage*” has been exceeded. If both of these total storage estimates prove to be recoverable storage estimates, the NPS suggests using the more conservative value (9,100,000 acre-feet) so that this and other forthcoming SA/DEIS’s and foreseeable groundwater development projects are consistent in their evaluation of potential individual and cumulative impacts produced by these projects. It will be important for the CEC and BLM to utilize a consistent set of hydrologic parameter values (groundwater storage, water balance parameters, etc.) in this and future SA/DEIS’s so that the impact evaluations are comparable from one project to another.

On page C.9-72, second paragraph, the statement is made that “*the project’s contribution to the cumulative impact to basin balance is less than cumulatively considerable.*” Please elaborate on what is meant by this statement as it is unclear to the NPS. How much is “*cumulatively considerable*” and how do we know when this threshold has been exceeded?

The water balance estimate proposed for the Chuckwalla Valley Basin is not substantiated by the available water level data. In the water balance presented in Table 8 on page C.9-25, the current annual amount of water recharging the basin exceeds the amount of water discharging from the basin by 2,600 acre-feet (representing an overbalance of 23%). If an annual surplus is occurring, then the amount of groundwater stored within the basin should be increasing and one should see evidence of groundwater levels rising over time. To date, no evidence has been presented that water levels are rising in the basin to support this position, with the exception of some water levels suspected to be recovering from known periods of significant groundwater pumping in the basin. As a result of this overbalance, the NPS believes the preliminary analysis understates the potential individual and cumulative impacts that might result in the basin related to the proposed solar project and other reasonably foreseen projects.

Groundwater hydrologists commonly assume that a relatively undeveloped desert basin like the Chuckwalla Valley groundwater basin is in a quasi-equilibrium condition with respect to estimating a water balance for such a basin. Therefore, over a sufficiently long period of time, the amount of water coming into the basin (from precipitation and inflow from other basins) should be closely balanced by the amount of water leaving the basin (from natural evapotranspiration and outflow to other basins). This balance is disturbed when human activity disrupts inflow into the basin and/or the outflow from the basin (e.g., by pumping groundwater). In general, hydrologists have much better control in estimating outflow volumes than inflow volumes, and therefore, the outflow estimate should be used as the ultimate constraint on the water balance for the basin. This is an approach commonly adopted by the United States Geological Survey (USGS) when they conduct water resource investigations in the region.

Assuming a pre-development, quasi-equilibrium condition existed, the NPS believes the water balance inflow estimate should be adjusted downward to more closely match the reported water balance outflow estimate of

11,111 afy. For example, adjusting the annual recharge rate downward to a rate similar to the BLM's and County of Riverside's estimate of 5,600 afy and adjusting the combined subsurface inflow from Pinto Valley and Orocopia Valley to 2,500 afy and 1,700 afy, respectively (values reported in Eagle Crest Energy, 2009), results in an adjusted water balance inflow estimate of 10,431 afy. When compared to the current outflow estimate of 11,111 afy, this adjusted inflow estimate would produce a water balance deficit of 680 acre-feet, or an imbalance of about 6 percent, which is an improvement over the current imbalance. Closer examination of the hydrographs presented for wells 4/17-6C1, 5/17-19Q1, and 5/17-33N1 (see Soil and Water Figure 13), though hard to distinguish at the scale presented in the draft EIS document, suggests that slow declines in the basin groundwater level have been occurring since the 1960s, which is consistent with a deficit in the water balance (i.e., an overdraft condition). Unless it is shown through additional water level analysis that the higher water balance inflow value is justified, the NPS believes a lower inflow value provides a more "conservative" and correct estimate to use in the water balance analysis and subsequent evaluation of impacts to regional water level declines and storage depletion. If the CEC and BLM agree with the NPS's contention, several tables will need to be revised to reflect the updated water balance estimates.

Revise hydrographs on Figure 13 to aid evaluation of long-term water level trends. On page C.9-28, reference is made to Soil and Water Resources Figure 13 and discussion is presented about long-term water level trends in several wells distributed around the Chuckwalla Valley Basin. Please revise the vertical axis scale of the hydrographs presented in Figure 13 so that the reader can discern whether or not a long-term increase or decrease in water levels is occurring in the basin. The current vertical axis scale of the hydrographs makes it nearly impossible to determine these conditions. While stylistically pleasing, a consistent scale of 400 feet of elevational change for each hydrograph is not conducive to detecting changes in water level on the order of several feet. There is nothing preventing the vertical axis scale of each hydrograph from being unique relative to the range of water level change occurring within each hydrograph. Another solution would be to change the vertical axis from groundwater elevation to change in water level so that a smaller scale (e.g., 50 to 100 feet of change) could be developed.

Construction-related water requirements are comparatively high to other foreseeable projects in the valley. Estimates of water demands during the construction phase of the project seem high when compared to other solar projects proposed for the valley. For example, in Table 20 (page C.9-70), the water demands for the Genesis Solar Energy Project are estimated at 2,600 acre-feet for the three year construction period, while the construction water demand for the Palen Solar Power Project (also a parabolic trough project) is estimated at 1,440 acre-feet. The Palen project is larger in its disturbance footprint compared to the Genesis project (2,970 acres vs. 1,800), yet the Genesis project requires almost double the water for construction purposes. When compared to similarly- or larger-sized photovoltaic projects (> 200 Mw) proposed in the valley, the Genesis project uses 50 to 200 times more water during construction, even when photovoltaic projects reportedly require a larger disturbed footprint. According to the table, the Genesis project is the largest user of water during the assumed construction phase when compared to each foreseeable project. Is there a reason for this and can the Genesis project water demands for the construction phase be reduced?

Corrections to Table 21 are needed. Please correct the "Cumulative Project Requirements" and "Net Budget Balance" estimates for Year 2019 in Table 21 on page C.9-72. The values presented are incorrect. Additionally, in the first paragraph on page C.9-72, please correct the numbers quoted in the discussion as they seem to be different from the numbers presented in Table 21. If the CEC and BLM agree with the NPS's

contention in Comment #2 above, this table will need to be revised to reflect the updated water balance estimates.

Expand the discussion on how the individual and cumulative impacts to groundwater levels in the Chuckwalla Valley Basin were determined. In the discussion on page C.9-49 concerning individual impacts resulting from the project, a reference is made to a groundwater model developed by Worley-Parsons that was used to estimate the drawdown impacts between two water-bearing zones, the shallow alluvial zone (Layer 1 in the model) and the deeper Bouse Formation (Layers 11 and 12 in the model). Yet, little or no discussion is provided to give the public confidence in how the model was developed and whether it meets acceptable standards and results for a groundwater model under CEQA/NEPA. If a groundwater model was used to estimate the maximum drawdown that might occur from the Genesis Solar Energy Project, please provide additional discussion on the development and use of this model, including how it was calibrated (steady-state and transient), the results of the different modeling runs, and any sensitivity analyses that were conducted.

Similarly, in the discussion on page C.9-73 of cumulative water level impacts resulting from the proposed solar project and other reasonably foreseeable projects in the basin, a reference is made to a groundwater model used by AECOM which appears to have been developed for the Parker-Palo Verde-Cibola area to evaluate impacts from groundwater pumping on the Colorado River. Is this model different from the Worley-Parsons model noted above or might this be the model developed recently by the USGS and used to define the Colorado River accounting surface? Please provide additional discussion on the origin and use of the model referenced in the discussion as it pertains to this draft EIS, including how it was calibrated (steady-state and transient), and the results of the different modeling runs and sensitivity analyses that were conducted. If this model is different from the Worley-Parsons model, why were two different groundwater models used to assess individual and cumulative effects?

A single Groundwater Level Monitoring and Reporting Plan should be developed and managed for the CVGB. The NPS commends the CEC and BLM for requiring the applicant to comply with the measures stated on pages C.9-96 through C.9-100, in an attempt to evaluate potential individual and cumulative impacts resulting from the proposed project. However, the NPS has concerns as to whether similar measures will be applied to other foreseeable projects in the basin and how this information will be interpreted with respect to the degree of individual and cumulative impacts produced by each potential project. To avoid potential conflicting interpretations of impacts by individual project operators, the NPS recommends that a single Groundwater Level Monitoring and Reporting Plan be developed cooperatively by the appropriate regulatory agencies, solar energy operators and interested stakeholders, and managed and evaluated on a regular basis by an independent, scientifically respected organization such as the California Department of Water Resources or the United States Geological Survey. Funding for developing and implementing the plan should be provided by the applicant and other foreseeable project operators in an equitable manner as a condition of granting their right-of-way and operating permits. This funding would cover costs for installing and monitoring new wells needed in the network, monitoring existing wells in the network, processing and interpreting the water level and water quality data, and report production. Given that much of the basin may be developed as a solar energy study area, it would make more sense to develop and manage one Groundwater Level Monitoring and Reporting Plan and monitoring network for the solar energy study area instead of developing and managing several individual plans and monitoring networks for each project. Several individually managed plans invites several differing interpretations of potential individual and cumulative impacts to the groundwater resources of the hydrologically

connected basins and conflicts concerning who may be responsible for mitigating specific impacts to existing water users in these basins. Utilizing an independent third-party to manage and evaluate the information will provide assurances to existing water users that unbiased science is being utilized to evaluate whether potential impacts are occurring and whether mitigation is necessary.

### **Air Quality**

Mitigation measures to control fugitive dust at the completion of the grading operation and during operations should be addressed. The proposed project will be located in an area identified as containing desert pavements and sandy washes. Competing theories or attempts to rationalize the development of desert pavements is still at the forefront of debate by most experts. However, not in debate is the material type that underlies all desert pavements. The finest soil particles ranging from silt to silty clay underlie all desert pavements. The disruption of large areas of desert pavement during grading, post-grading and for the life of the project is likely to produce fugitive dust storms during mild to moderate wind activity. Heavier sand particles dislodged and transported over short distances by saltation<sup>1</sup>, require high winds to become airborne. Fine soil particles do not require high winds to become airborne and are suspended for long periods of time. During high wind events, saltation of larger sand grains over fine particulate landscapes may exacerbate the fugitive dust issue, possibly to a level of complete white-out events downwind from the project.

Impacts from fugitive dust have been addressed during the construction phase of the proposed project. However, controlling fugitive dust during the operational phase of the project should be clearly addressed. Large areas of disturbance, unmitigated for the control of fugitive dust, have the potential to create white-out conditions. Some (or substantial) grading will be required to facilitate the proposed development. Mitigation measures, such as compacting or treating areas to control fugitive dust at the completion of the grading operation should be addressed in the DEIS.

### **Viewshed/Recreation**

The preservation of the viewshed, in effect, visibility, needs to be addressed. As discussed above, fugitive dust will likely be a result of the grading operation and the exposure of fine particulate soils that underlie the desert pavements. The fine particulate soils brought to the surface during grading will remain at the surface for the life of the project creating the potential for long-term fugitive dust impacts. Significant viewshed impacts pose serious problems in other areas (e.g., Owens Valley) where fine particulate soil particles are exposed at the surface by anthropogenic activities.

The DEIS states that the viewshed will be significantly impacted by the proposed project as well as other renewable energy projects in the same vicinity (cumulative impacts). However, the DEIS needs to clearly communicate that in addition to visual impacts associated with fugitive dust, visitors to Joshua Tree National Park will experience some level of viewshed degradation due to the project. These impacts need to be analyzed. The DEIS should include a description of the current view from prominent overlooks in the park looking toward the proposed project area and include detailed maps and photos that clearly define the park and project boundaries. Each of the project alternatives addressing project footprint or equipment design (cooling towers,

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<sup>1</sup> Saltation is a geologic process by which sand or larger particles are transported by a fluid (air or water) over short distances that can impact other particles causing more particles to become airborne.

transmission towers, and power stations) should contain the same descriptive, map, and photo information to specifically inform the public and decision makers about potential impacts to Joshua Tree National Park visitor experiences.

### **Night Sky**

The proposed project is located in one of the most pristine areas for night sky viewing. Mitigation measures from light trespass, relating to security, nighttime operations for aircraft and other activities appear to have been addressed. We strongly encourage and support any further mitigation that would prevent light trespass from the proposed project. We suggest that a monitoring plan be developed to maintain existing levels of darkness throughout the life of the project, and we would be willing to work further with the BLM on developing this program.

### **Wildlife resources**

Measures to reduce impacts to the habitat of the Mojave fringe-toed lizard are encouraged (e.g., the Reduced Acreage Alternative). Park populations of the lizard are dependent on the nearby habitat of the Chuckwalla Valley for genetic migration purposes. The protection of the habitat and associated corridors will be essential in ensuring strong genetic structure within isolated Mojave fringe-toed lizard populations found in the Chuckwalla Valley and Pinto Basin.

The NPS also supports utilizing lands for the siting of renewable energy facilities that have already been disturbed (e.g., agricultural and grazing lands) and therefore would have a significantly reduced impact to natural resources (e.g., in the Gabrych Alternative). The park also supports using sites that are not identified as critical habitat for any threatened or endangered species, and are thus unlikely to have any impacts on special status species.

If you have any questions or need additional information, please contact the park superintendent's office at 760-367-5502, or Andrea Compton, Chief of Resources at 760-367-5560, [Andrea\\_Compton@nps.gov](mailto:Andrea_Compton@nps.gov).

Sincerely,



John Slaughter  
Acting Superintendent

Cc: Curt Sauer, Superintendent, Joshua Tree National Park  
George Turnbull, Acting Regional Director, Pacific West Region  
Carol McCoy, Geologic Resources Division, Natural Resource Program Center  
David Reynolds, Land Resources Program, Pacific West Region  
Alan Schmierer, Environmental Coordinator, Pacific West Region  
Andrea Compton, Chief of Resources, Joshua Tree National Park



**Brendan Hughes**  
<jesusthedude@hotmail.com>

07/11/2010 04:40 PM

To <capssolarnexterafpl@blm.gov>,  
<mmonasmi@energy.state.ca.us>

cc

bcc

Subject Comments on Genesis Solar Power Project DEIS

To whom it may concern:

My name is Brendan Hughes and I would like to comment on the Genesis Solar Power Project DEIS. This project, if constructed, will have severe impacts to biological and cultural resources, wilderness, and water. I encourage BLM and CEC to choose the No Action Alternative with an amendment to the CDCA Plan to prohibit solar development of this area in the future.

This project would destroy almost 2,000 acres of intact desert habitat, currently used by sensitive species such as the Mojave fringe-toed lizard, kit fox, American badger, mule deer, and many different types of raptors. Genesis will also cut off wildlife corridors between Wilderness Areas and the Chuckwalla DWMA ACEC. Additionally, although not currently occupied by desert tortoises, it is suitable habitat that they may re-occupy in the future. Moreover, the sensitive microphyll woodland habitat type will be impacted by this project. These threats to biological resources are not outweighed by the benefits of this project. Cultural resources will also be severely impacted by this project.

The Genesis Project is directly adjacent to the Palen-McCoy Wilderness Area, and within the viewshed of the Chuckwalla and Little Chuckwalla Wilderness Areas. These visual impacts cannot be mitigated, and will affect my visits to these special places. BLM and CEC should not allow this large-scale blemish on an otherwise clean viewshed to go forth. Impacts such as these should be concentrated in areas that already have surface disturbance and degradation to the viewshed.

Finally, this project will use an unacceptable amount of water for its operation and maintenance. Genesis will essentially be mining fossil groundwater, which is not a renewable resource, especially in the desert. This project combined with the potential of other groundwater development from solar and energy storage projects will have terrible impacts to the Chuckwalla Valley. BLM and CEC should not allow this wasteful use of Ice Age water resources.

Thank you for your consideration.

Brendan Hughes  
61093 Prescott Trail  
Joshua Tree, CA 92252

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The New Busy think 9 to 5 is a cute idea. Combine multiple calendars with Hotmail. [Get busy.](#)

Tom Budlong  
3216 Mandeville Canyon Road  
Los Angeles, CA 90049-1016

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July 8, 2010

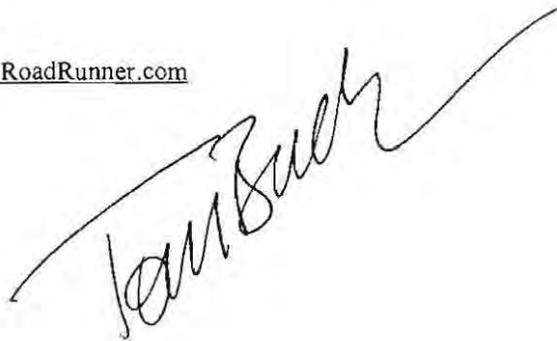
Allison Shaffer  
BLM Palm Springs Field Office  
1201 Bird Center Drive  
Palm Springs, CA  
92262

Dear Ms Shaffer

Below are comments on the joint CEC – BLM Staff Assessment and Draft Environmental Impact Statement Genesis Solar Energy Project (CEC project 09-AFC-8). Referenced exhibits are included.

Regards,

Tom Budlong  
310-476-1731  
[TomBudlong@RoadRunner.com](mailto:TomBudlong@RoadRunner.com)



## INTRODUCTION

Concern with the 250MW characterization of the project is described in the testimony. The actual output is approximately one quarter of the 250MW. Though probably unintentional, when seen by laymen and the general public the 250MW characterization is deceptive. Even when seen by most non-laymen involved in solar projects, the difference between capacity and actual is not understood or appreciated. One glaring example of damage is the biomass alternative, which incorrectly assumes equivalent outputs for the 250 MW proposed project and a 250 MW biomass project, despite the much higher biomass capacity factor. The geothermal alternative is almost certainly in the same category.

The alternatives section is inadequate. In numerous places is in violation of NEPA. Reasons for elimination of many alternatives are often illogical and incomplete.

Despite proposing conversion of 2000 acres of pristine untouched desert to industrial, mostly highly reflective mirrors, the DEIS concludes visual impact would be less than significant. It does this by assuming discretionary measures of questionable value that are specified in the Conditions of Certification would happen, and would be effective. The less than significant conclusion should be removed.

These problems with the DEIS, and others described in more detail in this document, are sufficient that the DEIS should be corrected and reissued as a second draft edition, with another full 90 day review period. I realize this would put the government guarantees and subsidies in jeopardy. These are not our responsibilities. Our responsibilities are to fairly present the project and alternatives, and to do the best to get the project done right.

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## 1) The project is in basic violation of NEPA

Reference Exhibit 701 - NEPA - The National Environmental Policy Act of 1969.

NEPA's Title I, Section 101, details basic and fundamental goals. Following are quotes from this section, and then the full text of the section.

In relating the quotes to the proposed project, it is important to keep in mind that the proposed project will completely use up undeveloped, essentially virgin land. The land will convert from near pristine and virtually untouched to a high-intensity industrial zone. It will destroy essentially all of the property's plant and animal life, environmental benefits, and prehistoric cultural evidence. It will be a complete change in the visual impact, inconsistent with most visually adjacent lands.

Quote	Comment
The Congress recognizing the profound impact ... industrial expansion ... resource exploitation... recognizing further the critical importance of ... maintaining environmental quality...	Congress understands the deep importance of maintaining environmental integrity.
... create and maintain conditions under which man and nature can exist in productive harmony ...	The phrase productive harmony is inapplicable for this project. Nature is effectively destroyed, and there can be no harmony with something that does not exist.
... fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.	We are trustees of the environment, responsible for the future. Destroying the environment violates this trust.
... assure...productive and aesthetically and culturally pleasing surroundings	The Genesis site as an industrial site is not aesthetically and culturally pleasing. The site may be productive, but is not both, as required.
...attain the widest range of beneficial uses of the environment without degradation...	The degradation mentioned would be complete.
Preserve...natural aspects, maintain..diversity ...	Both natural aspects and diversity would be entirely removed.
... each person has a responsibility to contribute to the preservation and enhancement of the environment.	The effect of the proposed project is exactly opposite of preserving and enhancing.

Here is the full text of NEPA's introduction, the source of the quotes:

### TITLE I

### CONGRESSIONAL DECLARATION OF NATIONAL ENVIRONMENTAL POLICY

#### Sec. 101 [42 USC § 4331].

(a) The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

(b) In order to carry out the policy set forth in this Act, it is the continuing responsibility of the Federal Government to use all practicable means, consist with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may --

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
3. attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

4. preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice;
5. achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

(c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.

## 2) Applicant Objectives

One of the applicant's primary objectives, profit at minimal risk, is omitted from the DEIS and should be included. This objective is more fundamental than the applicant objectives stated in the DEIS. To help understand that it is fundamental, consider that the applicant would not have conceived of and applied for project certification without a reasonable profit potential. It would not come to California for altruistic purposes.

That the applicant requires a profit is not a negative criticism. It is an enterprise which must be profitable to be viable, and so can only engage in ventures with a reasonable risk and reasonable profit potential. That the profit motive 'goes without saying' does not argue for its omission, since it is indeed the primary motivation.

This objective should be first in the list of applicant project objectives, to bring focus and understanding to the underlying motivation of the applicant. The DEIS should be understood in this context.

## 3) BLM Purpose and Need Statements are Incorrect.

DEIS page 7 lists authorities.

- 1) 'Executive order 13212 ... which mandates ...'

The full Executive Order is included as exhibit 702.

Use of the word 'mandate', and omission of mentions of environmental concerns in the executive order are misrepresentations of the flavor of the Executive Order, in violation of requirements for Environmental Impact Reports. They lead readers astray.

The sense of the text of the EO is a priority, not a mandate. In fact, the word mandate does not appear in the order. Also omitted is that the order is sensitive to the environment, with the clauses '*environmentally sound manner*' and '*while maintaining ... environmental protections*'. The full text of the paragraphs with these excerpts is:

### ***Section 1. Policy.***

*The increased production and transmission of energy in a safe and environmentally sound manner is essential to the well-being of the American people. In general, it is the policy of this Administration that executive departments and agencies (agencies) shall take appropriate actions, to the extent consistent with applicable law, to expedite projects that will increase the production, transmission, or conservation of energy.*

### ***Sec. 2. Actions to Expedite Energy-Related Projects.***

*For energy-related projects, agencies shall expedite their review of permits or take other actions as necessary to accelerate the completion of such projects, while maintaining safety, public health, and environmental protections. The agencies shall take such actions to the extent permitted by law and regulation, and where appropriate.*

- 2) 'Secretarial Order 3285 of March 11, 2009, which establishes the development of renewable energy as a priority for the Department of the Interior.' The order is included as Exhibit 704.

Please note that the order includes the clause '... while protecting and enhancing the Nation's water, wildlife and other natural resources.' Section 4, Policy, is:

### ***Sec. 4 Policy.***

*Encouraging the production, development, and delivery of renewable energy is one of the Department's highest priorities. Agencies and bureaus within the Department will work collaboratively with each other, and with other Federal agencies, departments, states, local communities, and private landowners to encourage the timely and responsible development of renewable energy and associated transmission while protecting and enhancing the Nation's water, wildlife and natural resources.*

Contrary to the impression in the DEIS, these show that Congress and the Interior Department are concerned with environmental and natural resources as well as energy sources, that they must co-exist, and that one does not

trump the other. They do not 'mandate', and they do not 'require', and they are as specific about environmental protection as about encouraging renewable energy. One does not take priority over the other.

The proposed project, having unmitigable significant impacts to several aspects of the environment, is out of compliance with the orders. We must be more clever in designing renewable energy solutions.

#### 4) BLM Purpose and Need is Too Restrictive

Note that NEPA Section 1502.14 states

*'agencies shall... rigorously explore and objectively evaluate all reasonable alternatives....'*

The BLM purpose and need (DEIS page A-13) states

*The BLM's purpose and need for the GSEP is to respond to the applicant's application under Title V of the FLPMA (43 USC 1761) for a Right-Of-Way (ROW) Grant to construct, operate and decommission a concentrated solar thermal electric generating facility, and associated infrastructure*

This purpose and need statement does not address the fundamental issue of renewable energy.

The purpose and need statement circumvents the NEPA requirement to evaluate reasonable alternatives, since it requires concentrated solar. Nothing in NEPA restricts alternatives to the technology proposed by the applicant, or precludes alternatives from using alternate technologies.

The purpose and need statement also appears to restrict the alternatives to the site the applicant has chosen. But NEPA demands reasonable off-site alternatives be considered. Reference Exhibit 706, which includes Question 2b from NEPA's 40 questions:

*2b. Must the EIS analyze alternatives outside the jurisdiction or capability of the agency or beyond what Congress has authorized?*

*A. An alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable. A potential conflict with local or federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered. Section 1506.2(d). Alternatives that are outside the scope of what Congress has approved or funded must still be evaluated in the EIS if they are reasonable, because the EIS may serve as the basis for modifying the Congressional approval or funding in light of NEPA's goals and policies. Section 1500.1(a).*

#### 5) Project Objectives

Several of the project objectives are unreasonably narrow.

NEPA explicitly prohibits this limiting of alternatives. It is properly concerned with finding the best solution, and specifically requires the alternatives considered not be limited to what the applicant wants or is capable of doing.

The limitations contained in the project objectives are in direct violation of Question 2a of NEPA's 40 Questions (see Exhibit 706).

*2a. Alternatives Outside the Capability of Applicant or Jurisdiction of Agency. If an EIS is prepared in connection with an application for a permit or other federal approval, must the EIS rigorously analyze and discuss alternatives that are outside the capability of the applicant or can it be limited to reasonable alternatives that can be carried out by the applicant?*

*A. Section 1502.14 requires the EIS to examine all reasonable alternatives to the proposal. In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.*

The DEIS has concluded there are no significant impacts. This may or may not be true. This testimony shows that visual impacts are not mitigated to less than significant. Other environmental impacts not discussed in this testimony may also be shown not to be less than significant.

If indeed, as claimed in the DEIS, the proposed project has no significant effects, then NEPA would not require any alternatives be analyzed. Of course, this is an absurd conclusion, completely violating the spirit of thrust is to determine the best reasonable and feasible solution. Accordingly, the DEIS uses 100 pages to discuss alternatives.

The proposed project meets the three restrictions that NEPA prohibits, arousing suspicion that the restrictions are chosen to favor the proposed project, the very situation NEPA is designed to prohibit.

## High Solarity Site

In violation of NEPA Question 1a (Exhibit 706), project objectives stated in the DEIS require the project be developed on a site with excellent solar resource. This restriction precludes Geothermal, Biomass and Wind alternatives, since they are independent of solarity, and technologies that could be considered unconventional but do not require high solarity. Although eliminated for other reasons, the high solarity requirement also precludes tide and wave technologies.

This requirement for a high solarity area occurs throughout the DEIS. Some of them:

- Applicant's Project Objectives (p. B.2-9)  
*To develop a site with an excellent solar resource*
- CEQA PROJECT OBJECTIVES / Energy Commission objectives (p. 6)  
*To locate the project in an area with high solar insolation (i.e., high intensity of solar energy);*
- GSEP specific objectives (p. A-12)  
*To locate the project in an area with high solar insolation (i.e., high intensity of solar energy);*

## Trough Technology

Also in violation of NEPA Question 2a, project objectives in the DEIS are narrowed to require parabolic trough technology:

Some occurrences:

- Applicant's Project Objectives (B.2-9)  
*To develop a new utility-scale solar energy project using proven concentrated solar trough technology.*
- PROJECT OBJECTIVES The Genesis Solar Energy Project objectives are as follows: (B.1-30)  
*To develop a new utility-scale solar energy project using proven concentrated solar trough technology*
- CEQA PROJECT OBJECTIVES / Energy Commission objectives (p.6)  
*To develop a utility-scale solar energy project utilizing parabolic trough technology;*
- PROPOSED PROJECT OBJECTIVES: The specific objectives of the Genesis Solar Energy Project are: (pA-12)  
*To develop a utility-scale solar energy project utilizing parabolic trough technology;*

## ARRA Funding

ARRA funding must not be considered a project objective. The applicant has stated that it intends to apply for ARRA funding. This artificial objective removes potentially viable alternatives, in violation of NEPA. Environmental impacts are not dependent on ARRA funding.

## 6) Economic Analysis

The EIS must include economic analyses of the proposed project and alternatives.

Economic analysis to examine and understand economic feasibility of the project is fundamental, and a foundation for analysis of the project and for alternatives analysis. The project will present a huge environmental disturbance to the area. If it becomes economically unfeasible it will eventually be abandoned, leaving an impact that cannot be repaired or returned to undisturbed condition in a reasonable time frame, perhaps essentially forever. The probability of such an environmental impact cannot be ignored in an Environmental Impact Report. Alternatives must be analyzed to the same economic criteria for the same reason. They cannot be considered in a vacuum of comparison to the proposed alternative.

### Recognition of Economic Importance by the DEIS

The concept that economic analysis is basic is recognized in many places the DEIS:

- Proposed Project Objectives (p.6):  
*To construct and operate an environmentally friendly, economically sound, and operationally reliable solar power generation facility...*
- This is repeated almost verbatim on pages A-12 and C.13-24 (The specific objectives of the GSEP are:)

*To construct and operate an environmentally and economically sound, and operationally reliable solar power generation facility*

- On pages B.1-30 and B.2-9, talking of applicant objectives:

*To construct, operate and maintain an efficient, economic, reliable, safe and environmentally sound solar powered generating facility*

- The discussion of the Reduced Acreage alternative on page B.2-15 states:

*A detailed cost-benefit analysis for a reduced-size project would be required in order to determine the economic feasibility of this alternative. As a result, feasibility is uncertain at this time.*

- Economics is of concern for the Reduced Acreage Alternative;  
page B.2-85:

*While the Reduced Acreage Alternative would meet most project objectives, it is uncertain whether the Reduced Acreage Alternative is economically feasible.*

page B.2-15:

*A detailed cost-benefit analysis for a reduced-size project would be required in order to determine the economic feasibility of this alternative. As a result, feasibility is uncertain at this time.*

- Economics appears to be of concern in at least one instance in the SEIS when discussing the economic feasibility of dry cooling.

Other considerations mentioned in regulations and the DEIS require consideration of economics.

- a) NEPA's Council of Environmental Quality is specific. Question 2a of the CEQ's 40 Most Asked Questions (Exhibit 706) requires economic analysis<sup>1</sup>:

*2a. Alternatives Outside the Capability of Applicant or Jurisdiction of Agency. If an EIS is prepared in connection with an application for a permit or other federal approval, must the EIS rigorously analyze and discuss alternatives that are outside the capability of the applicant or can it be limited to reasonable alternatives that can be carried out by the applicant?*

*A. Section 1502.14 requires the EIS to examine all reasonable alternatives to the proposal. In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the **technical and economic standpoint and using common sense**, rather than simply desirable from the standpoint of the applicant. [Emphasis added]*

NEPA is concerned with ensuring only reasonable alternatives need be considered. The definition of reasonable alternatives is practicality and feasibility from:

- the technical standpoint,
- the economic standpoint,
- and using common sense.

Section 1502.14 continues, requiring as the basis for choice, a presentation that includes the proposal and the alternatives defined as reasonable.

***Nepa Sec. 1502.14 Alternatives including the proposed action.***

*This section is the heart of the environmental impact statement. Based on the information and analysis presented in the sections on the Affected Environment (Sec. 1502.15) and the Environmental Consequences (Sec. 1502.16), it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and **providing a clear basis for choice among options** by the decision maker and the public. [Emphasis added]*

Elsewhere in NEPA, Section 1501.2(b) requires comparison of environmental effects and values with economic and technical analyses, and that these documents and analyses be made available.

*Each agency shall:*

*(b) Identify environmental effects and values in adequate detail so they can be compared to **economic and technical analyses**. Environmental documents and appropriate analyses shall be circulated and reviewed at the same time as other planning documents.*

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<sup>1</sup> The CEQ 40 Most Asked Questions and the answers are at <http://ceq.hss.doc.gov/nepa/regs/40/40p3.htm>.  
The CEQ authorization memo (Exhibit 705) is at <http://ceq.hss.doc.gov/nepa/regs/40/40p2.htm>

Clearly, NEPA intends economics be part of the decision process, parallel with technology and impacts to the environment.

b) The CEC requires that the project sell competitively priced electricity:

- Page B.2-68, discussing CEQA and NEPA criteria for distributed solar alternatives:

*...CEC project objectives to operate 250 MW of renewable power in California capable of selling competitively priced renewable energy.*

- Page B.2-80:

*However, gas-fired plants would fail to meet a major project objective: to construct and operate a renewable power generating facility in California capable of selling competitively priced renewable energy consistent with the needs of California utilities*

(The needs of California utilities are not described.)

Fulfillment of the project objective of competitive price cannot be verified or judged without an economic analysis.

c) The Alternatives Section, Summary of Conclusions, quite properly talks about costs of alternatives:

Page B.2-2 shows cost concern for rooftop solar:

*...increased deployment of distributed solar photovoltaics faces challenges in manufacturing capacity, cost, and policy implementation.*

It is impossible to consider alternatives and compare them to the proposed project without analyzing costs of each.

d) USACE regulations require cost consideration:

Page B.2-8, when discussing USACE alternative requirements :

*(2) An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.*

Cost must be considered in determining the practicality of an alternative. An analysis is required.

e) Evaluation of alternative sites requires consideration of cost:

Page B.2-21. One of the site selection criteria is:

- *site should be located on property currently available at a reasonable cost.*

g) That the project be economically sound is one of the CEQA Project Objectives. In fact, it is list first among the several objectives, implying its importance. Several discussions emphasize this. See page C.13-24:

*To construct and operate an environmentally and economically sound, and operationally reliable solar power generation facility that will contribute to the State of California's renewable energy goals:*

These examples demonstrate that economic and cost analysis is an integral, necessary component of the “basis for choice among options by the decision maker and the public” (The quote is from NEPA, as quoted above.)

That economic considerations are mentioned in numerous places in the documentation is understandable, since the project probably would not exist without economic justification and a cost-to-benefit analysis. An economic analysis is necessary to evaluate the project, and to compare it with alternatives. Without an economic analysis we are forced into the qualitative terms ‘cost more’, or ‘cost less’. Intelligent decisions cannot be made with acceptable confidence when based on unnecessary non-specific terms.

It is tempting to say that the project is necessary, no matter the cost, for the public good of reducing global warming, currently accepted as a necessary goal. But this is not an ‘at all cost’ project.

Additionally, since the project will likely be subsidized with public money and will likely use public land, transparency demands that the economics of the project be revealed to the public.

An economic analysis should include comprehensive details, including but of course not limited to:

- Cost of construction.
- Cost of financing the construction.
- Cost of land usage – purchase or lease.
- Operation costs when the facility is up and running.
- Cost of washing parabolic dish mirrors, compared to flat mirrors.
- Insurance costs.
- Revenues from electricity sales.

- Taxes
- Government subsidies
- Other costs and revenues.

## 7) Net Energy Analysis:

The DEIS is missing analysis of the net energy produced. It is impossible to judge if the project balances the environmental cost without knowing how well the project satisfies its basic purpose. It is even possible that energy used for construction and operation will exceed the total output over the project life. This balance cannot be estimated without an analysis. Common sense dictates that plans for a project intended to produce energy include analysis of the net energy that will be produced. I have not found in the documentation justification for the stated 40 year life, nor analysis to support the stated production of 1,620,000 KWh/year.

This analysis should compare net usable energy produced against the no-action alternative, which would neither use nor produce energy. It should also compare against the alternatives. It should include (but of course not be limited to):

- Energy delivered to the customer, after it has gone through transmission lines.
- Energy required to upgrade or make new transmission lines.
- Energy expended during construction – machinery fuel etc.
- Personnel commuting energy (gas for commuting vehicles), during construction and production.
- Energy to transport the plant machinery to the site.
- Life cycle analysis: Energy to make the parabolic mirrors, exclusion fence, and all other facilities. This energy should be compared to the no-action alternative, which would use no materials, and so should include the energy required to mine the materials, through the manufacturing process to the finished product.
- Construction will advance construction machinery to its eventual end of life. The energy analysis should include the energy needed to either replace worn out machinery, or a percentage of life used. Again, this should include total cost of replacement, from mine to finished product. (Without this project, these costs would be avoided.)
- Parasitic energy during production.
- Energy required for decommissioning at the end of the useful life of the power plant.

## 8) The Synergy of Cost, Motivation and Net Energy

Given the very large government economic incentive, it's even possible that the project will satisfy the applicant's basic profit motivation while providing an insignificant net energy. Should this happen, the huge environmental cost would have been spent for naught.

It is imperative the Environmental Impact Statement objectively examine the components of the issue separately, and subsequently examine them together.

## 9) The 250MW rating is incorrect

The facility will generate approximately 68MW, not 250MW.

Page B.1-3 states that each 125MW plant will produce approximately 300,000 MWh/year, approximately 27% capacity factor. Of course, the combined output of both equally plants would be 600,000 MWh/year.

Indeed, dividing 600,000 MWh/year by the number of hours in a year (24x365) gives 68 MW, and 68/250 is 27%. This is in line with capacity factors for CSP solar generators in general.

The actual output (600,000 MWh/year, or 68 MW) appears in very few places in the DEIS. Compare this statement with the 250MW rating used repetitively in the DEIS.

This conflict in emphasis is a gross, misleading mischaracterization, and must be corrected. The number invites almost all readers to assume the plant will produce almost four times as much as it actually will produce. The misconception carries to media reports and to general public perception. It misleads the public, and authors of the DEIS as well.

The difference between the oft-stated 250MW and actual production is not directly explained in the DEIS. Perhaps attempting to justify the discrepancy, many places the DEIS modify the 250MW with 'net', 'nominal' and 'capacity'.

- Use of the modifier 'nominal': The dictionary definition of nominal is "Existing in name only; not real or actual" (Houghton Mifflin), and 'without reference to actual conditions" (Merriam's Webster's).
- Use of the modifier 'net' when referring to the 250 MW rating. Of course, a net amount is the actual amount received. A common example is packaged foods and other goods. Use of this word here is incorrect.
- Capacity is a illusory and deceptive tool, requiring skepticism or experience to question it is not what you get. It is not explained.

This is important.

- Readers who are not aware of the discrepancy are misled. An extremely small number of people would think to question the 250 MW number. An even smaller number would be able to locate the infrequently mentioned actual output in the DEIS, understand the implication, and do the arithmetic to verify.
- Note that the CEC's main web page for the Genesis project says:

*The project consists of two independent solar electric generating facilities with a nominal net electrical output of 125 megawatts (MW) each, for a total net electrical output of 250 MW.*

- The authors of the biomass alternative in the DEIS were misled. They treated as equivalent the 250 MW proposed project, whose capacity factor is around 25% and a 250 MW biomass facility, whose capacity factor would be around 80%. The same error was made in the geothermal alternative analysis.
- The DEIS analysis of the geothermal alternative appears misled. It apparently makes the mistake of equating this '250 MW' project with a 250 MW geothermal facility, despite the greatly different capacity factors, and hence actual output, of geothermal plants.
- People outside the project assume it generates 250 MW. This is evident in press reports. The result is feeding incorrect information to the public.

**Cooler Planet**, Nov 12, 2009 (<http://solar.coolerplanet.com/News/11120901-california-paves-way-for-genesis-solar-energy-project-in-riverside-county.aspx>)

*The project, under the auspices of Tucson, Arizona-based, privately held Genesis Solar LLC, will consist of two independent solar electric generating facilities with a combined total output of 250 megawatts, sited on 1,800 acres of BLM- (Bureau of Land Management -)*

**Genesis Solar Energy Project (CACA 48880)** (undated) This is the BLM's announcement of the project. ( <http://www.blm.gov/ca/st/en/prog/energy/fasttrack/genesis.html>)

*The proposed project is a parabolic trough solar thermal power generating facility designed to produce 250 megawatts of power.*

**Solar Panels and Solar Energy.com** (undated) (<http://www.solarpanels-solarenergy.com/solar-panels/california%E2%80%99s-genesis-solar-energy-project-looking-up/>)

*The project will include of two independent photovoltaic electric generating facilities which will have a combined total output of 250 megawatts. Under the auspices of Tucson based private company, Genesis Solar LLC, the project will be situated on 1,800 acres Bureau of Land Management land. (<http://www.blm.gov/ca/st/en/prog/energy/fasttrack/genesis.html>)*

That this practice is common with most solar facility descriptions is not a reason or excuse to allow it to happen in this documentation. It is wrong and misleading to the point of being fraudulent. One responsibility of the documentation is to fairly describe the proposal, and 250 MW does not do that.

Because this is a common practice, the documents should explain the difference between maximum and average output, explain Capacity Factor, and explain that the output is commonly mis-stated. Because it is easy to miss a single explanation in such a large amount of documentation, or not understand its implication, or be seduced by repetition of the 250 MW number, all documentation connected with the project should be corrected. Perhaps both numbers should be used side-by-side, and when comparing Genesis with other facilities the 250 MW number could be used, with explanation. The purpose is to avoid misleading readers who are innocent of this situation.

Here are example locations in the DEIS that refer to 250 MW with no reference to actual output and no use of the conditional 'net', 'capacity, or 'nominal' words.

Page	Quote
C.5-21	The reduced emissions would decrease the cancer risk and chronic and acute hazard indices predicted for the 250 MW project as proposed.

Page	Quote
B.1-2	The overall site layout and generalized land uses are characterized as follows: 250-MW facility, including...
B.2-19	BLM's "action alternative" would be to amend the CDCA Plan to include GSEP (250 MW), and ...
B.2-5, B.2-70	While it will very likely be possible to achieve 250 MW of distributed solar energy over the coming years...
B.2-5	Therefore, the development of 250 MW of new geothermal generation capacity within the timeframe...
B.2-13	Sufficient disturbed, private lands for a 250 MW solar power plant were not available near the GSEP,...
B2-50	The design of a 250 MW project at the Gabrych Alternative would be similar to that of GSEP at the proposed site.

To put it more bluntly, the DEIS is fooling most everybody with the 250MW number. That's unethical.

## 10) Visual Impact

The proposed project is a 2,000 acre industrial site on and surrounded by untouched, pristine desert. Staff's conclusion that it will have less than significant visual impact is absurd. The proposed conditions of certification cannot promise and do not warrant the conclusion.

How is the conclusion possible? The answer is in certification condition language that is open to subjective interpretation and to evasion. Essentially, the requirements say to the constructors 'Implement your definition of feasible and minimization of visual impact – no more is required.' Many of the conditions are platitudes, with no concrete specifications. The conclusion of less than significant visual impact cannot be based on this level of discretion and imprecision. The reality is that no mitigation can make an industrial island in undisturbed visually intact surroundings visually less than significant.

With the level of latitude in implementation that is in the conditions, justification of project permission based on the prediction that visual impact will be less than significant could well be called insincere. After construction, when the visual impact turns out to be significant, it is inconceivable that any level of authority would stop the project, order it dismantled and the land returned to original condition.

### Imprecise requirements in the Conditions of Certification

Condition	Revised Staff Assessment Excerpt	Comment
VIS-1	...treat all non-mirror surfaces ... such that their colors minimize visual intrusion...	'minimize' is subjective. It implies the smallest possible, but possible must be viewed in terms of practicality – time and expense. Even given unlimited time and expense, it's doubtful a surface color could mimic light reflection, shading, texture, highlighting and other requirements to realistically mimic the natural world. No evidence is presented that minimizing makes the visual impact less than significant.
	... their [non-mirror surfaces] colors and finishes do not create excessive glare...	'Excessive' is subjective. Certainly project personnel and those who appreciate deserts could have different interpretations of 'excessive'.
	... coloring of security fencing...to blend to the greatest extent feasible with the background soil.	'greatest extent feasible' is completely subjective. The full quote mentions slats, vinyl, non-reflective, ... No evidence is presented that these would make the visual impact less than significant.

Condition	Revised Staff Assessment Excerpt	Comment
VIS-2	To the extent feasible...consistent with safety and security ...	The conditions are meaningless since: Safety and security can at any time justify violation of the goal. 'to the extent feasible' is subjective. The goal of less than significant visual impact could easily be deemed not feasible.
	a) lamps and reflectors are not visible from beyond the project site.	This could be deemed not feasible, or required for safety and security.
	b) lighting does not cause excessive reflective glare	'excessive' is subjective.
	c) direct lighting does not illuminate the nighttime sky...	'does not illuminate' is subjective.
	c)...except for required FAA aircraft safety lighting	I found nothing in the DEIS to describe FAA requirements. Do they define 'excessive' lighting? If FAA requirements result in high night-time light pollution, they would obviate the conclusion of less than significant visual impact.
	d)...illumination of the project and its immediate vicinity is minimized.	Both 'immediate vicinity' and 'minimized' are subjective.
	E. All lighting shall be of minimum necessary brightness consistent with operational safety and security.	'minimum necessary' is subjective. Security personnel and safety personnel can, at any time, cite safety and security to demand lighting that results in significant visual impact.
VIS-3	F. ...To the greatest feasible extent, project lighting shall be used on an 'as needed' basis...	'greatest feasible extent', and 'as needed' are subjective. Management at any time can install lighting that presents significant visual impact under the authority that the lighting is needed, and anything less is not feasible.
VIS-3	...set back the transmission line at least ½ mile from I-10, if possible.	The 'if possible' clause invites interpretation that it is not possible, or not possible on practical terms. No evidence is presented that a ½ mile setback would result in less than significant visual impact.
VIS-4	...chain link fencing ... opaque privacy slats of a minimum 8 feet in height...	The fence will be 8' high (page C.6-5), or 10 feet high (page C.10-13). Independent of this discrepancy, both are too low to hide the mirrors, which can be 25'-30' high (pages B.2-59, C.2-96) (30' at B.2-60). VR Fig 5 shows structures approaching 50' high. Structures, especially mirrors, substantially higher than fencing will produce a significant visual impact.
VIS-6	To the extent possible... ...reduction of unnecessary disturbance. Retain as much ...as possible Minimize the number of structures... Use natural appearing forms... Reduce the amount of disturbed area...	The phrases are subjective. Each can justify design that increases visual impact well above less than significant. Ignored is the bald fact that an industrial site in the midst of de-facto wilderness will be visually intrusive. The most sensitive designer could not avoid this fact.

### Glare Impacts

Glare impacts are discussed, with some confusion, starting on page C.12-21. The confusion is from using the term 'focal plane' of the troughs. Focal plane is a common term with lenses. The focus of a parabolic trough would be a line, the line occupied by the heat collection tube. Another confusion is the excerpt "...the bright spots depicted are believed by staff to be spread reflections of the sun." Unexplained is the contradiction of spot and spread.

Independent of this confusion, the discussion explains what could be called fugitive light from the mirrors, using several descriptions. These excerpts appear on page C.12-21 of the DEIS:

- during certain times of day the mirror units can produce substantial glare and that such glare can be experienced by the public from locations in the project vicinity as intrusive nuisances and may be a distraction
- ... bright spots ... may appear to be very bright.
- The bright spots also appear to 'follow' the viewer
- produce a linear reflected solar image which may be visible briefly to nearby observers.
- these reflections may, under the right conditions, be prominently visible from several miles away.
- The existing Chuckwalla Valley within the project viewshed is essentially dark at night. The pristine, unlit night sky is an important part of the camping experience for many visitors to remote areas such as the nearby Wilderness Areas.

It's obvious that the mirrors produce reflections visible well away from the project site, and that night-time light pollution is an issue of concern. The DEIS recommends VIS-4 to prevent bright spot reflections, but that this conclusion is based on 'available data', indicating that staff is working with incomplete data. It continues with recommending VIS-2, repeating words that are open to subjective interpretation and/or make recommended measures optional, or even impossible: 'does not cause excessive reflected glare, 'except for required FAA safety lighting', 'minimize to an as needed basis', 'wherever feasible'. These are the same potential exceptions to effective control that appear in the text of the Conditions of Certification.

### Further Discussion

The photos modified to show the project from I-10 locations show no glare (Figs, 8B, 9B, 10B). Since the mirrors will be visible from some part of the freeway to varying degrees during the day, the glaring surfaces are always visible to some drivers.

Typical is the KOP-1 discussion. KOP-1 will have the most visual impact from I-10. The discussion on page C.12-15 recognizes this:

<i>the project would occupy a vast horizontal area, extending across the entire width of the field of view</i>	This recognizes the potential for visual impact.
<i>the level of brightness of the mirror field could be much greater than depicted in the simulation [Figure 8B] substantially increasing the project's level of contrast under certain conditions.</i>	The discussion does not define the 'certain conditions'.
<i>Spatial and scale dominance of the vast mirror fields is potentially great, but again greatly moderated by the very narrow portion of the view affected. Dominance would be accentuated during conditions of bright mirror reflection, which would draw attention to the facility</i>	With no light coming from the mirror field, the narrow vertical field would indeed make the project hard to see. But during operation, the mirrors will reflect, most probably making them very noticeable.
<i>Overall visual change to viewers on I-10 is thus considered moderately low, or moderate during the brightest periods of diffuse glare as indicated in Visual Resources Figure 12</i>	
<i>Visual change could rise to a moderately high level if viewers were exposed to bright point spread reflections of the sun as depicted in Visual Resources Figure 13</i>	Figure 13 show Nevada Solar One with substantial glare.
The discussion then attempts to minimize the impact by citing VIS-4, and the conditions of certification in general.	
<i>With staff-recommended Condition of Certification VIS-4, bright point reflections could be blocked, reducing glare to occasional episodes of moderate visual change from diffuse reflection from the mirror fields as a whole.</i>	The text is not confident that glare would be blocked, using the conditional 'could' instead of 'would be blocked', perhaps in recognition that the fence is much lower than the mirrors.
<i>With all recommended conditions of certification, overall visual change would thus remain moderate.</i>	Most of the conditions of certification are worded to be optional, implemented at the discretion of the project, which could decide the exceptions are not feasible, are

*In the context of the setting's moderately high visual sensitivity, this moderate level of visual change would, with recommended conditions of certification, be less than significant.*

incompatible with safety and security, are minimized to the project's satisfaction, are not compatible with FAA regulations, are needed full time, ...  
Despite these flaws, the text manages to conclude the visual impact is 'less than significant'. But since there is no confidence the conditions would be implemented the conclusion of less than significant visual impact is not defensible.

## 11) Alternatives

### Introduction

NEPA's underlying principal is to understand and know before deciding, that inadequate information leads to unsound understanding, leading to unsound decisions when balancing environmental protection with our activities. Thus, the environmental policy contained in NEPA.

### NEPA Requirements

NEPA demands clear, adequate presentation and discussion of both impacts and alternatives. The text from NEPA (1502.14), for example, is explicit:

*... it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public.*

The DEIS alternative section does this, but only in a few places. Substantial parts are brief, qualitative where they should be quantitative, and do not present alternatives in comparative form. Too often, statements are made with no backup data or evidence, and have the flavor of arbitrary opinions. Reasons for elimination of an alternative often apply to GSEG as well as the alternatives. These shortcomings must be corrected before the DEIS can be considered an adequate depiction of the situation, for adequate understanding, and for intelligent decision making.

### CEQA Project Objectives

Section A4, page 6 of the Genesis DEIS emphasizes the project must be located in an area with high solar insolation.

*• To locate the project in an area with high solar insolation (i.e., high intensity of solar energy);*

This objective is stated twice in the section.

It is repeated elsewhere. Page B.2-66:

*The solar technology would not necessarily meet the objective to locate the facility in areas of high solarly, because the distributed technology could be located throughout the State.*

This objective is illogical, and in violation of NEPA. It disfavors alternative solutions. It does not allow for alternatives, still using the same technology, that could provide the same energy with less impact despite not being in an area with high solar insolation.

It is illogical for the very same reason that NEPA prohibits artificial conditions. It unreasonably restricts alternatives, throwing favor toward the applicant's proposed solution. Indeed, the overriding objective of the national exercise toward renewable energy makes no pretense to favor location – it is interested in renewable energy (with other considerations, such as environmental), and makes no judgment as to insolation or other similar properties such as air temperature, altitude, terrain... With this artificial requirement, alternatives such as geothermal, biomass, even tidal wave, could conceivably be chosen, but only they are in an area with high insolation despite being completely independent of solar radiation.

By way of hypothetical example, presume that tomorrow one of the labs working on PV announces a very low cost technology that converts at 100% efficiency, so long as the radiation on the PV does not exceed 50% of maximum that occurs in high solar areas. To force this technology to a high solarly site would require artificially shading the PVs, only to meet the artificial requirement. It would preclude the hypothetical PV from a location in a better area with lower radiation. Obviously, this would be ludicrous.

Indeed, the rooftop alternative is rejected because rooftops are not common in high solarly areas. This judgment is independent of the viability of the alternative.

## NEPA Requirements

NEPA has been interpreted by the Council of Environmental Quality, which issued answers to '40 Most Asked Questions' (Exhibit X00-07). Question 2a addresses the question of the alternatives that must be included. It seems obvious the CEQ was concerned that wild impractical schemes not be required to be considered, and that reasonable alternatives not primarily desirable to the applicant must be considered.

*2a. Alternatives Outside the Capability of Applicant or Jurisdiction of Agency. If an EIS is prepared in connection with an application for a permit or other federal approval, must the EIS rigorously analyze and discuss alternatives that are outside the capability of the applicant or can it be limited to reasonable alternatives that can be carried out by the applicant?*

*A. Section 1502.14 requires the EIS to examine all reasonable alternatives to the proposal. In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant. [Emphasis added]*

Implied in this answer is that artificial restrictions not be placed on alternatives considered.

## Summary of Impacts

The Summary of Impacts for the Gabrych alternative counts the number of impact categories that have impacts similar to, greater than, and less than the proposed project. Thought not stated explicitly, the implication is that comparing the number of greater impact categories to the number of lesser impact categories leads to a conclusion. Not considered by this method are the levels of impacts of the various categories.

I attempted to factor in level of impact for the Gabrych alternative by assigning impact levels derived from the impact discussions in the DEIS. They are subjective, and others may wish to assign different levels. The result shows the Gabrych alternative is superior to the GSEG proposal.

## Proposed Site

Major objections to the project include the effectively complete and permanent destruction of the biological, cultural, visual and aesthetic character of the site. No matter how you look at it, or how many mitigation measures are applied or devised, the result is that the site is essentially destroyed – it becomes single purpose industrial – a complete transformation out of character with its surroundings. Yet Riverside and Imperial Counties have abundant disturbed land in high solar areas. It's difficult to believe that a solution cannot be devised to put the project on disturbed land already exhausted of the values mentioned above. In the end, it's not necessary to consume the proposed site to provide solar power.

## Combined Alternative Analysis

The alternative analyses are restricted to either:

- Putting alternate technologies at sites other than the proposed site (e.g., at the Gabrych alternative).
- Putting alternate technologies at the proposed site.

Only one alternative analysis – geothermal – considers an alternate technology at an alternative site. Examples of other possible off-site/alternative technologies are putting a power tower installation, or using linear Fresnel, on the Gabrych site.

Another way of expressing this analysis deficiency is that it appears there has been no consideration of possible solutions combining other locations and other technologies. It appears highly likely that such an unrestricted alternative philosophy would uncover reasonable alternatives culminating in a better solution.

## Rejections of Alternatives

Many alternative's Rationales for Elimination are obviously illogical, bringing to question the objectivity of the analyses. These illogical conclusions are in gross violation of NEPA requirements. Typical are:

- Gabrych: With no discussion or analysis of ownership, the alternative is eliminated because there are too many landowners, other than stating, without evidence, the number of landowners. No evidence is presented to qualify the situation or to justify the conclusion.
- Geothermal: Rejected illogically because 'few new projects have been proposed'. The analysis did not establish a connection between the viability of the alternative and the existence new project proposals,

probably because there is none. The conclusion is illogical on its surface.

A second reason for rejection is that geothermal is not in the list of Renewable Energy Portfolio projects that have requested ARRA funds. This implies that projects must use public money to be considered. Again no connection was made in the analysis, likely for the same reason – that there is no connection.

Note that neither of these rejection reasons is dependent on analysis of the technology, the site, or environmental impacts. Yet, the DEIS provided analysis, however brief and inadequate, despite its irrelevance to the rejection reason. This indicates cloudy thinking in the DEIS.

- Linear Fresnel is dismissed because it would not eliminate the significant impact of the proposed alternative. This criterion would also remove parabolic mirrors from consideration, since these do not eliminate significant impacts.
- Utility Scale Photovoltaic: Eliminated because California must have access to all types of renewable technologies. Not only does the analysis fail to discuss this reason, it defies imagination to understand the logic.

Another reason for elimination is that water usage would be the same as the proposed project. The DEIS does not provide evidence that an alternative must be rejected if one of the impacts is the same as the proposed project, probably because it's not true.

- Biomass: Rejected because most biomass facilities are 3-10 MW. Again, no evidence was presented that rejection could be based on the size of 'most' biomass project.

These examples invite suspicion that parabolic mirrors are the prejudged as the only solution. The DEIS, however is not the proponent's sales brochure, and the purpose of the DEIS is not to promote the applicant's proposed solution or pretend it is better. The concept is in clear violation of the answer to Question 2b of NEPA's 40 questions (Exhibit 706). The applicant's proposed solution, in fact, must be better (or at least equal), to be preferred over other alternatives.

At the same time, at least one of the alternative analyses, Gabrych, appears to be well considered and as complete as could be expected as a 'first look' at potential alternatives.

To preserve credibility, the inadequate sections should be corrected.

## 12) Gabrych Alternative

The extensive analysis in the DEIS for this alternative is appreciated.

Analysis in the DEIS shows that the Gabrych alternative, and by extension the Farmland Reserve, Sunland and other sites, are superior to the proposed site, and that they should be seriously considered as viable alternatives.

### Levels of Impacts

The Gabrych alternative 'Summary of Impacts' lists the impacts that are similar, greater or lesser, without consideration of relative importance of the impact categories or degree of impact difference. It implies the decision be based on the number of categories with greater impact compared to the number of categories with lesser impact. But it does not explicitly make this comparison.

The table below uses a numeric score to measure degree of impact.

- The Summary of Impacts for the Gabrych alternative (page B.2-52) rates impact categories as either similar, greater than, or less than the proposed. Degree of impact difference is not described.
- The table below is a more sensitive measure than comparing the simple sum of categories that have greater or lesser impact.
- For categories with dissimilar impacts, the table estimates the degree of impact from the descriptions in the DEIS. Categories with similar impacts as stated in the Summary of Impacts paragraphs are ignored.
- The level of impact is judged on a 1-10 scale. Small difference is value 1. Huge difference is value 10. This variable is subjective.

**Note:** Page B.2-12 lists the impacts considered of greatest concern. They omit Visual, which surely should be in this category:

- Cultural Resources
- Biological Resources
- Soil & Water
- Cumulative impacts – visual, operational, land use (ag, recreational, wilderness, open space)

Impact Category	Comparison	Level (1-10)
<b>The proposed site is preferred for these impact categories.</b>		
Hazardous Materials	Potential impacts slightly greater at Gabrych, but Conditions of Certification result in no significant impacts.	1
Land Use	Gabrych: No BLM land, or CDCA amendment. Gabrych: Impact to ag land. LESA score 73 – adverse impact due to permanent conversion from agricultural. Not mentioned in the Comparison to Proposed Project are the various biological, cultural, visual and other losses from conversion of the proposed site to industrial. Also not mentioned is the cumulative impact recognized on C.6-2.	1
Noise, Vibration	Gabrych alternative ... slightly greater impact (proximity to residences)	1
Visual Resources	Gabrych has more viewers, so greater visual impact	2
Transmission Line Safety & Nuisance	Proximity at Gabrych of transmission lines to 15 residences.	1
<b>Total</b>		<b>6</b>

Impact Category	Comparison	Level (1-10)
<b>The Gabrych alternative is preferred for these categories.</b>		
Air Quality	The DEIS describes GHG emissions at the Gabrych site, but not at the proposed site, so does not compare these. I presume they are the same. It's presumed the work force will live primarily in Blythe. The Gabrych site is closer to Blythe than the proposed site (12 vs. 20 miles). GHG due to commuting would be reduced at the Gabrych site. The summary of impacts section omitted commuting distance. I therefore changed this impact from similar to Gabrych preferred, by a small amount – level 1.	1
Recreation, Wilderness	DEIS Gabrych alternative states impacts to recreation would be slightly less at the Gabrych alternative. Not mentioned are impacts to Wilderness. Since the proposed project and the Palen-McCoy Wilderness share a common boundary, the visual, noise, solitude and other impacts to wilderness would be substantial. These considerations are omitted from the Comparison to Proposed Project section. The DEIS incorrectly states the Chuckwalla Valley Dune Thicket ACEC is closed to recreation. The June 15, 2001 Federal Register Notice (Exhibit 700) closes the area to vehicles. It does not mention other forms of recreation. This ACEC also has a common boundary with the proposed project. Impacts to the ACEC were not considered. Because of the omission of the impact to Wilderness and the ACEC, the level assigned is much higher than if only the 'slightly less' characterization were used alone.	5
Soil & Water	Terrain: both level. No difference. Water quality: With BMPs applied, no difference. Water conservation: Gabrych is preferred since dry cooling uses less water than current agriculture, returning water to the Colorado River system. This analysis assumes comparison with the staff recommended dry cooling at the proposed site. The Gabrych site would have no impact to Chuckwalla or Palen-McCoy Wind Transport Corridors.	3
Worker Safety, Fire Protection	Similar impacts, except emergency response time is shorter at the Gabrych site.	1

Impact Category	Comparison	Level (1-10)
<b>The Gabrych alternative is preferred for these categories.</b>		
Biological Resources	From the alternative analysis: ... development of a solar project at the Gabrych Alternative site would impact fewer biological resources compared to the GSEP footprint because development of the alternative site would occur primarily on agricultural land, whereas development of the Proposed Project site would occur primarily on land supporting native vegetation communities. ... Colorado River supported riparian and undisturbed land, a small percentage of the area, should be avoided. ... If riparian and native habitats were avoided, development of a solar project on the Gabrych Alternative site would have fewer impacts to biological resources than development of a solar project on the Proposed Project site.	4
Cultural Resources	From the alternatives analysis ... <b>Proposed project:</b> Geoarchaeological studies of the Proposed Project indicate that the entire area is highly sensitive for buried cultural resources. ... <b>Gabrych:</b> 1905 acres of the 2138 acre area have been extensively agriculturally disturbed, destroying any surface component cultural resources. ... undiscovered subsurface sites are comparable ... impacts to potential, undiscovered subsurface archaeological sites at both the Gabrych Alternative and Proposed Project is comparable ... Gabrych Alternative would likely impact fewer surface cultural resources	5
<b>Total</b>		<b>19</b>

**The DEIS considered impacts for these categories to be similar.**

Air Quality	The summary of impacts did not consider commuting distance. Air Quality was moved to the Gabrych preferred section.
Public Health & Safety	
Socioeconomics	
Traffic, Transportation	
Waste Management	
Facility Design	
Geology, Paleontology, Minerals	
Plant Efficiency	
Plant Reliability	
Transmission System Engineering	

This analysis shows the Gabrych site is preferred over the Plaster City site by a ratio of 19:6 = 3.1.

The advantages of the Gabrych alternative are sufficient that a more thorough analysis should be done involving, at a minimum:

- Cost analysis of site preparation and other factors compared to the proposed site.
- An estimate of the resource savings (time and money) by satisfying the environmental community, which has been urging solar facilities to locate on previous disturbed land, not open space. Choosing Gabrych would probably convert opponents to enthusiastic supporters.
- Savings by eliminating the requirement of a CDCA plan amendment.
- Possible financial return from the water rights that come with the property.

**Other Properties**

Acreage, fallow or productive, is continually available in the farming areas. A moderate amount of property has been fallowed from excessive salinity. The attraction, of course, is that it is previously disturbed and already in a highly impacted area – similar to the attractiveness of the Gabrych. It's highly probably that a contiguous tract of previously disturbed land of acceptable size could be put together. There is no evidence in the DEIS that a search for such property was done.

### 13) Private Land Alternative

The three paragraphs describing this alternative are confusing, to say the least. They are a jumble of disconnected facts and non-sequiturs, only sometimes coming to direct or implied conclusions. Following is an attempt to paraphrase:

Farmland Reserve and Sunworld.	Rejected by NextEra, which prefers wet cooling. The water would come from the Colorado River Basin, and might be denied
	CEC staff, however, considers dry cooling feasible and did not reject these. The fully analyzed Gabrych alternative is considered a surrogate, and so they were not analyzed separately.
	They cannot be considered since they are potential alternatives to the Blythe project.
Land north of Desert Center	Cannot be considered since it is an alternative to the Palen project. The Palen project calls this the North of Desert Center alternative.
Gabrych alternative	Analysed. The analysis is a surrogate for Farmland, Sunworld, and presumably North of Desert Center.

I could not find references to the Farmland Reserve and Sunworld properties in the Blythe DEIS. Computer search on the Blythe DEIS pdf file for both Farmland Reserve and Sunworld was unsuccessful. If indeed these are not Blythe alternatives, they should be considered as reasonable alternatives along with Gabrych.

### 14) Geothermal Energy

The Geothermal alternative analysis leads to the conclusion that geothermal is potentially a viable alternative, since it would have fewer environmental impacts. Analysis in more detail is warranted.

The stated rationale for elimination is not supported by the analysis. The discussion has irrelevant statements and statements unsupported by evidence. The analysis apparently has a fundamental flaw that would make geothermal much more attractive, if true.

Geothermal should be seriously considered as a realistic alternative.

#### Fundamental DEIS Analysis Flaw

There is potentially a fundamental flaw in the geothermal analysis. If the flaw exists, it would make geothermal even more attractive.

Geothermal plants have capacity factors far greater than concentrated solar since they can run 24/7. For equal energy output, an equivalent geothermal with a 90% capacity factor would need a capacity rating of a little more than one quarter of a CSP's capacity rating, since CSPs have capacity factors close to 25%. I could find no recognition of this in the analysis of the geothermal alternative. The narrative strongly implies comparison to a geothermal plant with 250 MW capacity. All references to geothermal size use '250 MW'.

#### Invalid Rationale for Elimination

The following uses a paraphrase of the Rationale for Elimination

Despite being commercially available, using less ground, having fewer impacts, and encouragement from the Renewable Portfolio Standard and ARRA funding, the alternative is rejected:

Rejection reason	Comment
Few new projects have been proposed	The reason is ludicrous. It implies that if not many new projects of a technology are proposed, the technology can't be considered. It does not allow old projects to serve as precedent. I have not found in the DEIS a requirement that a few new proposals for a technology must exist for the technology to be considered.
No geothermal projects are on the Renewable Energy Action Team list of projects that request ARRA funds.	A reference to provide authority for this statement is needed. I searched both the DEIS and google attempting to verify this requirement, with no success. I am skeptical that omission from a REAT list of projects requesting ARRA funds would eliminate consideration of the geothermal alternative to the proposed project. Such a requirement would preclude technologies that REAT has not happened to think of. It would indicate that projects not asking for public funding are not to be considered, that private funding is unacceptable.

#### Logical Inconsistencies

- In Geothermal Alternative Scenario:

*There is no single 250 MW geothermal project that would be viable as an alternative to the GSEP.*

The relevance of this statement is not explained. It implies that since there is no such project, a project of that size cannot be considered. In fact, the English is flawed – it combines the absolute (is no) with conditional (would). The sentence is nonsensical.

- In the Geothermal Alternative Scenario paragraph

*Two hundred and fifty MW of geothermal energy could require the use of many thousands of acres of land.*

The ‘could require’ is not supported by evidence. No evidence is given. ‘Many thousands of acres’ applies equally to the proposed project. The statement comes to no conclusion. Simple replacement of ‘could’ with ‘might not’ would reverse the implication but not the validity. The statement is unsupported, meaningless and farcical.

### **Re-analysis Required**

Because of these flaws the above analysis should be discarded and replaced with a rational analysis.

## **15) Linear Fresnel Technology**

See page.

NEPA 1502.14(a) requires that the analysis “Rigorously explore and objectively evaluate all reasonable alternatives...”.

With a little less than a page of analysis, the DEIS cannot be rigorous or include sufficient information to allow meaningful evaluation.

The analysis consists only of a general description of the technology. It then rejects the alternative since it would not eliminate significant impacts, despite requiring half the acreage (the analysis hints, but is not specific). The statement implies an alternative must eliminate, not merely reduce, significant impact to be considered. By this criteria, the proposed project would be rejected since it does not eliminate impacts, it only purports to reduce them to less than significant. Of course, the implication is absurd.

The brief description of linear Fresnel does not discuss impacts relative to the proposed project. It does not compare the alternative to the proposed project, in comparative or any other form as required by NEPA. Conclusions concerning relative merits of this alternative are therefore not possible.

The only mention of comparative impact is in the Rationale for Elimination, which states that linear Fresnel would use less land. It then dismisses linear Fresnel using the impact elimination argument discussed above.

The option cannot be eliminated with such sparse data and analysis. Indeed, it may very well be a viable alternative. The analysis in the DEIS should be discarded and replaced with a rational analysis.

## **16) Utility Scale Solar Photovoltaic**

As with other alternative analyses, this violates the NEPA requirement to: “Rigorously explore and objectively evaluate all reasonable alternatives...”. The analysis is not rigorous, and is not compared to the proposed alternative in comparative or any other form. The advantages of PV are intriguing. Impacts mentioned are of such wide range and speculative nature that no conclusion can be drawn. The comparisons that do exist are scattered and incomplete.

The Summary of Impact paragraph mentions development impacts only, not production impacts. It does mention glare and water requirements, but qualitatively only, and does not mention other impacts.

Most puzzling is the Rationale for Elimination. It states it is a viable technology, but then eliminates with this:

*is not retained for analysis because, as stated above, in order for California to meet the renewable portfolio standards, it must have access to all types of renewable technologies.*

That California must have access to all types of renewable technologies is not a reason to eliminate this alternative. How would the proposed project be configured to satisfy this? Must the project use all types of technologies? All alternatives would be eliminated by this criterion, even the proposed project. The rationale is nonsense.

The last sentence in the Rationale for Elimination:

*While a utility solar PV alternative would reduce impact from water used during cooling, the Dry Cooling Alternative, retained for consideration for this project would also eliminate this impact. Therefore, this alternative technology was eliminated from further consideration...*

The blatantly stated elimination reason here is that water impacts are the same (despite the text equating 'reduced' with 'eliminate'). No other impacts are cited. This implies a general rule: If one impact is the same, eliminate the alternative. Nonsense.

The Rationale for Elimination also categorically states '*...the extent of land required would be similar.*' The Executive Summary says the proposed project will disturb 1800 acres. The PV discussion says: '*250 MW solar power plant would require between 750 and 2,500 acres.*' Somehow the 1800 acres of the proposed project is has become similar to a range of 750-2500 acres. Worse, this statement is followed by '*Therefore solar PV would not eliminate the impacts of GSEP associated with ground disturbance*', implying that to be retained, an alternative's impact must **eliminate** GSEP's impact. Again, nonsense.

The analysis is lacking sufficient data or rigor to be considered valid. It is incomplete, not objective, and is in violation of, and not in the spirit of, NEPA. It must be done right. It looks like the author was reaching for a reason – any combination of words – that could end by concluding to eliminate the alternative.

PV might indeed be a viable alternative. It deserves a quality analysis as required by NEPA. The analysis in the DEIS should be discarded and replaced with a rational analysis.

### 17) Distributed Solar Technology

The Distributed Solar PV Systems section has a description of installations. The discussion does not give data that lead to comparison with GSEP in direct violation of NEPA requirements. No conclusions are stated – the analysis comes to no point and has no value for comparison with the proposed project.

No 'Rationale for Elimination' section is included, although the last paragraph appears to serve this purpose:

*The conclusion of this section is that, while it will very likely be possible to achieve 250 MW of distributed solar energy over the coming years, the very limited numbers of existing facilities make it difficult to conclude with confidence that it will happen within the timeframe required for the GSEP project. As a result, this technology is eliminated from detailed analysis.*

Analysis of this spectacularly illogical conclusion:

Rationale for Elimination	Comment
... very limited number of installations...	No information about installation numbers has been given. PV installations are now common. More than 1800 Home / Rooftop installers are listed in California <sup>2</sup> , and ads for home PV installation regularly run on the radio, in the LA Times and on freeway billboards. The implication that there is a small number of installations is both misleading and false.
... difficult to conclude with confidence that it will happen in the time frame...	This is a speculative statement. No information is given with respect to current and predicted rates of rooftop installation, installation response to financial incentives, cost projections. Certainly with the huge interest in solar, at least some data must exist. The statement is unsupported, and enters the category of speculation.

The analysis in the DEIS should be discarded and replaced with a rational analysis in the spirit of the NEPA.

### 18) Wind Energy

The discussion in the alternative section is woefully inadequate.

Wind is a viable technology, used in a large number of places throughout the world, and so certainly is a possibility in this situation. Yet the DEIS analysis covers less than two pages, most of which is general to wind, not specific to this project. About a quarter of the space is allocated to a list of negative impacts, unsupported by analysis. There is no corresponding list of positive impacts. There is no comparison to GSEP.

Wind resources at the GSEP site are stated to be not viable. No supporting data is provided. The statement is speculative. It would be interesting to know if the site has been analyzed with met towers.

The San Gorgonio Pass description is interesting. It comes to no conclusion, and only weakly implies there is no room for another player. Other than curiosity, the paragraph is of no help without data, analysis of the data, and conclusions.

The discussion concludes with Rationale for Elimination:

*While wind electricity generation is a viable and important renewable technology in California, it would not reduce the large-scale ground disturbance and visual impacts associated with the GSEP. Therefore wind generation was eliminated from further consideration.*

<sup>2</sup> Database of Solar Installers, Contractors, and Retailers in California:  
<http://www.gosolarcalifornia.ca.gov/database/search-new.php>

The reasoning implies that independent of other impacts, reduction of ground disturbance and visual impact are a requirement for consideration of an alternative.

The analysis in the DEIS should be discarded and replaced with a rational analysis.

## 19) Biomass

The biomass analysis has the same conceptual flaw as the geothermal analysis. Presuming biomass has a high capacity factor since it can run 24/7, the analysis ignores the capacity factor difference. The difference is probably on the order of 3:1 (75% for biomass to 25% for solar). From the biomass discussion in the DEIS:

*Most biomass facilities produce only small amounts of electricity (in the range of 3 to 10 MW) and so could not meet the project objectives related to the California Renewable Portfolio Standard. In addition, between 25 and 80 facilities would be needed to achieve 250 MW of generation, creating substantial adverse impacts.*

The 250 MW capacity of the proposed project with 25% capacity factor would provide 67 MW actual output.

Twenty-three 3 MW biomass facilities at 75% capacity factor would be equivalent, not 80. Similarly, seven 10MW biomass facilities at 75% capacity factor would be equivalent, not 25. The number of biomass facilities needed is overstated by a factor of three. It appears this is an artifact of misrepresenting the project as generating 250 MW, as explained in the 'The 250 MW Rating is Incorrect' section.

The biomass analysis qualitatively lists positives and negatives. It does not quantify them, or compare them to the proposed alternative.

<u>Advantages</u>	<u>Disadvantages</u>
<u>Locational flexibility increases siting options</u>	<u>Must be sited near a biomass source.</u>
<u>Small amounts of land are required.</u>	<u>Delivery truck noise.</u>
	<u>Grinding equipment and other noises.</u>
	<u>Emissions are unavoidable</u>

### Rationale for Elimination

*Most biomass facilities produce only small amounts of electricity (in the range of 3 to 10 MW) and so could not meet project objectives.*

The reasoning does not support the rejection. The size of this biomass facility would be independent of the size of 'most biomass facilities'. That most biomass facilities are in the 3-10 MW range cannot be used to dismiss biomass in this instance. This facility could be larger than most, or multiple facilities could be used.

The statement requires that the distribution of facility sizes is skewed. If most are 3-10, and average is 21 (page B.2-75), then quite large biomass generators must exist to get the average so much larger than 'most'. Note that three average size 21 MW plants would be close to generating as much as the GSEG 250 MW plant running at 25% capacity factor, or 67 MW. Perhaps a single large size plant would generate as much as the GSEG.

The remainder of the elimination reason concerns air emissions only. No data are given to quantify the emissions.

No analysis of the balance of the 20 impacts considered is given. There is no comparison of impacts with the GSEG in comparative form as required by NEPA, or in any other form. Data supporting elimination is absent.

The analysis in the DEIS should be discarded and replaced with a rational analysis.

## 20) Exhibits

Exhibit 700, Dune Thicket Closure Fed Reg Notice.txt  
Exhibit 701, NEPA - The National Environmental Policy Act of 1969.doc  
Exhibit 702, Executive Order 13212.doc  
Exhibit 703, Energy Policy Act of 2005.pdf  
Exhibit 703-01, EPAct 2005, Front page.xps  
Exhibit 703-02, EPAct 2005, Sense of Congress page.xps  
Exhibit 704, Secretarial Order 3285.pdf  
Exhibit 705, CEQ Authorization Memo.doc  
Exhibit 706, CEQ 40 Questions, Questions 1-10.doc  
Exhibit 707, CEQA 15126.6, Alternatives.pdf  
Exhibit 708, 250MW Press Reports.pdf  
Exhibit 709, Revised Staff Assessment.doc

END

Exhibit 700, Dune Thicket Closure Fed Reg Notice.txt  
Proposed Order for Temporary Closure of Selected Routes of Travel or Areas in  
Imperial County, Riverside County, and San Bernardino County, California | Federal  
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Areas in Imperial County, Riverside County, and San Bernardino County,  
California

Proposed Order for Temporary Closure of Selected Routes of Travel or Areas in  
Imperial County, Riverside County, and San Bernardino County, CaliforniaNote:  
EPA no longer updates this information, but it may be useful as a reference or  
resource.

[Federal Register: June 15, 2001 (Volume 66, Number 116)]  
[Notices]  
[Page 32639-32640]  
From the Federal Register Online via GPO Access [wais.access.gpo.gov]  
[DOCID:fr15jn01-84]

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DEPARTMENT OF THE INTERIOR  
Bureau of Land Management  
[CA-610-01-1610-DL]

Proposed Order for Temporary Closure of Selected Routes of Travel  
or Areas in Imperial County, Riverside County, and San Bernardino  
County, California

AGENCY: Bureau of Land Management, Interior.  
SUMMARY: Selected routes of travel or areas in two locations in the  
California Desert Conservation Area (CDCA) will be temporarily closed  
to vehicle use pursuant to 43 CFR 8364.1. The proposed closure is to  
provide interim protection for the desert tortoise, desert tortoise  
habitat, and other resource values from motorized vehicle use  
authorized under the CDCA Plan. By taking these interim actions, BLM  
contributes to the conservation of the endangered and threatened  
species in accordance with section 7(a) (1) of the Endangered Species  
Act (ESA). BLM also avoids making any irreversible or irretrievable  
commitment of resources which would foreclose any reasonable and  
prudent alternatives which might be required as a result of the  
consultation on the CDCA plan in accordance with 7(d) of the ESA. These  
closures will remain in effect until records of decision are signed for  
amendments to the CDCA Plan for the Northern and Eastern Colorado  
Desert and the West Mojave Desert.

The vehicle route closures are as follows: 1. In the Edwards Bowl  
area vehicle use is restricted to specified routes. 2. In two areas of  
desert tortoise critical habitat in the Northern and Eastern Colorado  
Desert (NECO) planning area vehicle use is restricted to specified  
routes.

Exceptions to the vehicle closures include Bureau of Land  
Management (BLM) operation and maintenance vehicles, law enforcement  
and fire vehicles, and other emergency vehicles.

The Orders for closure will be posted in the appropriate BLM Field  
Office and at places near and/or within the area to which the closure  
or restriction applies (see Field Offices at end of this Notice).

DATE: No sooner than July 16, 2001, Federal Register Orders of final  
closure will be published for each of the two areas.

Exhibit 700, Dune Thicket Closure Fed Reg Notice.txt  
ADDRESSES: Written comments may be sent to the appropriate Field Office, Attn: Route Closure, at the addresses listed below.

SUPPLEMENTARY INFORMATION: On March 16, 2000, the Center for Biological Diversity, and others (Center) filed for injunctive relief in U.S. District Court, Northern District of California (Court) against the Bureau of Land Management (BLM) alleging that the BLM was in violation of Section 7 of the Endangered Species Act (ESA) by failing to enter into formal consultation with the U.S. Fish and Wildlife Service (FWS) on the effects of adoption of the California Desert Conservation Area Plan (CDCA Plan), as amended, upon threatened and endangered species. On August 25, 2000, the BLM acknowledged through a court stipulation that activities authorized, permitted, or allowed under the CDCA Plan may adversely affect threatened and endangered species, and that the BLM is required to consult with the FWS to insure that adoption and implementation of the CDCA Plan is not likely to jeopardize the continued existence of threatened and endangered species or to result in the destruction or adverse modification of critical habitat of listed species.

Although BLM has received biological opinions on selected activities, consultation on the overall CDCA Plan is necessary to address the cumulative effects of all the activities authorized by the CDCA Plan. Consultation on the overall Plan is complex and the completion date is uncertain. Absent consultation on the entire Plan, the impacts of individual activities, when

[[Page 32640]]

added together with the impacts of other activities in the desert are not known. The BLM entered into negotiations with plaintiffs regarding interim actions to be taken to provide protection for endangered and threatened species pending completion of the consultation on the CDCA Plan. Agreement on these interim actions avoided litigation of plaintiffs' request for injunctive relief and the threat of an injunction prohibiting all activities authorized under the Plan. These interim agreements have allowed BLM to continue to authorize appropriate levels of activities throughout the planning area during the lengthy consultation process while providing appropriate protection to the desert tortoise and other listed species in the short term. By taking interim actions as allowed under 43 CFR Part 8364.1, BLM contributes to the conservation of endangered and threatened species in accordance with 7(a)(1) of the ESA. BLM also avoids making any irreversible or irretrievable commitment of resources which would foreclose any reasonable and prudent alternative measures which might be required as a result of the consultation on the CDCA plan in accordance with 7(d) of the ESA. In January 2001, the parties signed the Stipulation and Proposed Order Concerning All Further Injunctive Relief and included the closures (paragraphs 40 and 43) described in this Notice.

All existing routes in the subject areas are being or will be evaluated and proposed for designation as Open, Closed, or Limited through the land use planning process as amendments to the California Desert Conservation Area Plan. These designations will be based on criteria identified in 43 CFR 8342.1. Management of routes proposed for closure will minimize the potential for any adverse effects pending designation.

The BLM Field Offices listed below have prepared environmental assessments (EA) which are available for a 15 day public review prior to publication of the final Federal Register Order. The beginning of the 15 day review for each EA may be different but all generally coincide with the publishing of this Notice. Interested parties should contact the Field Offices for the EAs and review dates.

In general, the EAs indicate the following reasons for each

Exhibit 700, Dune Thicket Closure Fed Reg Notice.txt

closure:

Edwards Bowl: By reducing the size of the available route network and better controlling OHV use in the area, the potential for direct impacts to desert tortoise, Mojave ground squirrel, burrowing owl, and other species will be diminished. The proposed closure will help to prevent burrow collapse and species mortality caused by motorized vehicles. In addition the closure will have an overall positive impact on habitat by reducing soil loss and erosion and increasing vegetation regrowth and plant community establishment.

NECO Routes: The proposed closure will have a positive impact on many special status and other species. The proposed closure will reduce potential for significant adverse impacts to wildlife in critical seasons, such as when young are being reared. As desert tortoise commonly travel in washes and use the banks of washes for burrowing, restricting motorized vehicle use to specific routes and prohibiting use of certain washes within desert tortoise habitat management units 1 and 2 of the NECO plan will reduce tortoise mortality and crushing of burrows. The proposal will also provide added protection for other species including bighorn sheep, burro deer, several species of bats, prairie falcon, golden eagle Couch's spadefoot toad, and other species occurring in the area of the proposed closure.

The closures are described as follows:

1. Edwards Bowl (Barstow Field Office): The proposed route closures are north of the El Mirage Recreation Area and the town of Adelanto. The area covered by the closure will include all of the public lands within Sections 6, 7, 8, 16, 20 in T.8N., R.7W., San Bernardino Principle Meridian.

2. NECO Routes Areas (Palm Springs, Needles, El Centro Field Offices): The geographic center of Unit 1 is located about 35 miles southwest of Needles, California. It is generally bounded on the north by Interstate Highway 40; on the northeast by the Camino to U.S. Highway 95 powerline road; on the east by U.S. Highway 95, except that a portion of the Chemehuevi Valley east of Highway 95, and west and northwest of the Whipple Mountains Wilderness is included in the unit; on the southeast by the Colorado River Aqueduct; on the south by the northern end of the Turtle Mountains; on the southwest by the eastern flank of the Old Woman Mountains; and on the northwest by the western boundary of the Clipper Mountains Wilderness. The geographic center of Unit 2 is located about 50 miles east-southeast of Indio, California. It is generally bounded on the north by the southern boundary of Joshua Tree National Park and Interstate Highway 10; on the east by the southeast boundary of the Chuckwalla Mountains wilderness and the lower northeastern boundary of the Chocolate Mountains Aerial Gunnery Range, though detached segments of the unit further to the east are comprised of the Little Chuckwalla Mountains Wilderness, a portion of the Palo Verde Mountains Wilderness, and the Chuckwalla Valley Dune Thicket Area of Critical Environmental Concern; and on the south and southwest by a line running southeast to northwest through the middle of the Chocolate Mountains Aerial Gunnery Range and extending to the boundary of Joshua Tree National Park.

FOR FURTHER INFORMATION CONTACT:

Edwards Bowl:

Barstow Field Office Manager, 2601 Barstow Road, Barstow, CA 92311,  
Tel: 760-252-6000.

NECO Routes:

El Centro Field Office Manager, 1661 So. 4th Street, El Centro, CA  
92243, Tel: 760-337-4000.

Palm Springs-South Coast Field Office Manager, 690 W. Garnet Ave., P.O.  
Box 1260, North Palm Springs, CA 92258, Tel: 760-251-4800.

Exhibit 700, Dune Thicket Closure Fed Reg Notice.txt  
Needles Field Office Manager, 101 W. Spikes Rd., Needles, CA 92363,  
Tel: 760-326-7000.

Dated: June 8, 2001.  
James Wesley Abbott,  
Associate State Director.  
[FR Doc. 01-15242 Filed 6-14-01; 8:45 am]  
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## **The National Environmental Policy Act of 1969, as amended**

(Pub. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258, § 4(b), Sept. 13, 1982)

An Act to establish a national policy for the environment, to provide for the establishment of a Council on Environmental Quality, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "National Environmental Policy Act of 1969."*

### **Purpose**

#### **Sec. 2 [42 USC § 4321].**

The purposes of this Act are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.

## **TITLE I**

### **CONGRESSIONAL DECLARATION OF NATIONAL ENVIRONMENTAL POLICY**

#### **Sec. 101 [42 USC § 4331].**

(a) The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

(b) In order to carry out the policy set forth in this Act, it is the continuing responsibility of the Federal Government to use all practicable means, consist with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may –

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
3. attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
4. preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice;
5. achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

### **Exhibit 701**

### **NEPA - The National Environmental Policy Act of 1969**

6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

(c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.

**Sec. 102 [42 USC § 4332].**

The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act, and (2) all agencies of the Federal Government shall –

(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;

(B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by title II of this Act, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on --

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of title 5, United States Code, and shall accompany the proposal through the existing agency review processes;

(D) Any detailed statement required under subparagraph (C) after January 1, 1970, for any major Federal action funded under a program of grants to States shall not be deemed to be legally insufficient solely by reason of having been prepared by a State agency or official, if:

(i) the State agency or official has statewide jurisdiction and has the responsibility for such action,

(ii) the responsible Federal official furnishes guidance and participates in such preparation,

(iii) the responsible Federal official independently evaluates such statement prior to its approval and adoption, and

(iv) after January 1, 1976, the responsible Federal official provides early notification to, and solicits the views of, any other State or any Federal land management entity of any action or any alternative thereto which may have significant impacts upon such State or affected Federal land management entity and, if there is any disagreement on such impacts, prepares a written assessment of such impacts and views for incorporation into such detailed statement.

The procedures in this subparagraph shall not relieve the Federal official of his responsibilities for the scope, objectivity, and content of the entire statement or of any other responsibility under this Act; and further, this subparagraph does not affect the legal sufficiency of statements prepared by State agencies with less than statewide jurisdiction.

(E) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

(F) recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(G) make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment;

(H) initiate and utilize ecological information in the planning and development of resource-oriented projects; and

(I) assist the Council on Environmental Quality established by title II of this Act.

#### **Sec. 103 [42 USC § 4333].**

All agencies of the Federal Government shall review their present statutory authority, administrative regulations, and current policies and procedures for the purpose of determining whether there are any deficiencies or inconsistencies therein which prohibit full compliance with the purposes and provisions of this Act and shall propose to the President not later than July 1, 1971, such measures as may be necessary to bring their authority and policies into conformity with the intent, purposes, and procedures set forth in this Act.

#### **Sec. 104 [42 USC § 4334].**

Nothing in section 102 [42 USC § 4332] or 103 [42 USC § 4333] shall in any way affect the specific statutory obligations of any Federal agency (1) to comply with criteria or standards of environmental quality, (2) to coordinate or consult with any other Federal or State agency, or (3) to act, or refrain from acting contingent upon the recommendations or certification of any other Federal or State agency.

#### **Sec. 105 [42 USC § 4335].**

The policies and goals set forth in this Act are supplementary to those set forth in existing authorizations of Federal agencies.

## TITLE II

### COUNCIL ON ENVIRONMENTAL QUALITY

#### Sec. 201 [42 USC § 4341].

The President shall transmit to the Congress annually beginning July 1, 1970, an Environmental Quality Report (hereinafter referred to as the "report") which shall set forth (1) the status and condition of the major natural, manmade, or altered environmental classes of the Nation, including, but not limited to, the air, the aquatic, including marine, estuarine, and fresh water, and the terrestrial environment, including, but not limited to, the forest, dryland, wetland, range, urban, suburban and rural environment; (2) current and foreseeable trends in the quality, management and utilization of such environments and the effects of those trends on the social, economic, and other requirements of the Nation; (3) the adequacy of available natural resources for fulfilling human and economic requirements of the Nation in the light of expected population pressures; (4) a review of the programs and activities (including regulatory activities) of the Federal Government, the State and local governments, and nongovernmental entities or individuals with particular reference to their effect on the environment and on the conservation, development and utilization of natural resources; and (5) a program for remedying the deficiencies of existing programs and activities, together with recommendations for legislation.

#### Sec. 202 [42 USC § 4342].

There is created in the Executive Office of the President a Council on Environmental Quality (hereinafter referred to as the "Council"). The Council shall be composed of three members who shall be appointed by the President to serve at his pleasure, by and with the advice and consent of the Senate. The President shall designate one of the members of the Council to serve as Chairman. Each member shall be a person who, as a result of his training, experience, and attainments, is exceptionally well qualified to analyze and interpret environmental trends and information of all kinds; to appraise programs and activities of the Federal Government in the light of the policy set forth in title I of this Act; to be conscious of and responsive to the scientific, economic, social, aesthetic, and cultural needs and interests of the Nation; and to formulate and recommend national policies to promote the improvement of the quality of the environment.

#### Sec. 203 [42 USC § 4343].

(a) The Council may employ such officers and employees as may be necessary to carry out its functions under this Act. In addition, the Council may employ and fix the compensation of such experts and consultants as may be necessary for the carrying out of its functions under this Act, in accordance with section 3109 of title 5, United States Code (but without regard to the last sentence thereof).

(b) Notwithstanding section 1342 of Title 31, the Council may accept and employ voluntary and uncompensated services in furtherance of the purposes of the Council.

#### Sec. 204 [42 USC § 4344].

It shall be the duty and function of the Council --

1. to assist and advise the President in the preparation of the Environmental Quality Report required by section 201 [42 USC § 4341] of this title;
2. to gather timely and authoritative information concerning the conditions and trends in the quality of the environment both current and prospective, to analyze and interpret such information for the purpose of determining whether such conditions and trends are interfering, or are likely to interfere, with the achievement of the policy set forth in title I of this Act, and to compile and submit to the President studies relating to such conditions and trends;

3. to review and appraise the various programs and activities of the Federal Government in the light of the policy set forth in title I of this Act for the purpose of determining the extent to which such programs and activities are contributing to the achievement of such policy, and to make recommendations to the President with respect thereto;
4. to develop and recommend to the President national policies to foster and promote the improvement of environmental quality to meet the conservation, social, economic, health, and other requirements and goals of the Nation;
5. to conduct investigations, studies, surveys, research, and analyses relating to ecological systems and environmental quality;
6. to document and define changes in the natural environment, including the plant and animal systems, and to accumulate necessary data and other information for a continuing analysis of these changes or trends and an interpretation of their underlying causes;
7. to report at least once each year to the President on the state and condition of the environment; and
8. to make and furnish such studies, reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.

**Sec. 205 [42 USC § 4345].**

In exercising its powers, functions, and duties under this Act, the Council shall –

1. consult with the Citizens' Advisory Committee on Environmental Quality established by Executive Order No. 11472, dated May 29, 1969, and with such representatives of science, industry, agriculture, labor, conservation organizations, State and local governments and other groups, as it deems advisable; and
2. utilize, to the fullest extent possible, the services, facilities and information (including statistical information) of public and private agencies and organizations, and individuals, in order that duplication of effort and expense may be avoided, thus assuring that the Council's activities will not unnecessarily overlap or conflict with similar activities authorized by law and performed by established agencies.

**Sec. 206 [42 USC § 4346].**

Members of the Council shall serve full time and the Chairman of the Council shall be compensated at the rate provided for Level II of the Executive Schedule Pay Rates [5 USC § 5313]. The other members of the Council shall be compensated at the rate provided for Level IV of the Executive Schedule Pay Rates [5 USC § 5315].

**Sec. 207 [42 USC § 4346a].**

The Council may accept reimbursements from any private nonprofit organization or from any department, agency, or instrumentality of the Federal Government, any State, or local government, for the reasonable travel expenses incurred by an officer or employee of the Council in connection with his attendance at any conference, seminar, or similar meeting conducted for the benefit of the Council.

**Sec. 208 [42 USC § 4346b].**

The Council may make expenditures in support of its international activities, including expenditures for: (1) international travel; (2) activities in implementation of international agreements; and (3) the support of international exchange programs in the United States and in foreign countries.

**Sec. 209 [42 USC § 4347].**

There are authorized to be appropriated to carry out the provisions of this chapter not to exceed \$300,000 for fiscal year 1970, \$700,000 for fiscal year 1971, and \$1,000,000 for each fiscal year thereafter.

**The Environmental Quality Improvement Act**, as amended (Pub. L. No. 91- 224, Title II, April 3, 1970; Pub. L. No. 97-258, September 13, 1982; and Pub. L. No. 98-581, October 30, 1984.

**42 USC § 4372.**

(a) There is established in the Executive Office of the President an office to be known as the Office of Environmental Quality (hereafter in this chapter referred to as the "Office"). The Chairman of the Council on Environmental Quality established by Public Law 91-190 shall be the Director of the Office. There shall be in the Office a Deputy Director who shall be appointed by the President, by and with the advice and consent of the Senate.

(b) The compensation of the Deputy Director shall be fixed by the President at a rate not in excess of the annual rate of compensation payable to the Deputy Director of the Office of Management and Budget.

(c) The Director is authorized to employ such officers and employees (including experts and consultants) as may be necessary to enable the Office to carry out its functions ;under this chapter and Public Law 91-190, except that he may employ no more than ten specialists and other experts without regard to the provisions of Title 5, governing appointments in the competitive service, and pay such specialists and experts without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title relating to classification and General Schedule pay rates, but no such specialist or expert shall be paid at a rate in excess of the maximum rate for GS-18 of the General Schedule under section 5332 of Title 5.

(d) In carrying out his functions the Director shall assist and advise the President on policies and programs of the Federal Government affecting environmental quality by --

1. providing the professional and administrative staff and support for the Council on Environmental Quality established by Public Law 91- 190;
2. assisting the Federal agencies and departments in appraising the effectiveness of existing and proposed facilities, programs, policies, and activities of the Federal Government, and those specific major projects designated by the President which do not require individual project authorization by Congress, which affect environmental quality;
3. reviewing the adequacy of existing systems for monitoring and predicting environmental changes in order to achieve effective coverage and efficient use of research facilities and other resources;
4. promoting the advancement of scientific knowledge of the effects of actions and technology on the environment and encouraging the development of the means to prevent or reduce adverse effects that endanger the health and well-being of man;
5. assisting in coordinating among the Federal departments and agencies those programs and activities which affect, protect, and improve environmental quality;
6. assisting the Federal departments and agencies in the development and interrelationship of environmental quality criteria and standards established throughout the Federal Government;
7. collecting, collating, analyzing, and interpreting data and information on environmental quality, ecological research, and evaluation.

(e) The Director is authorized to contract with public or private agencies, institutions, and organizations and with individuals without regard to section 3324(a) and (b) of Title 31 and section 5 of Title 41 in carrying out his functions.

**42 USC § 4373.** Each Environmental Quality Report required by Public Law 91-190 shall, upon transmittal to Congress, be referred to each standing committee having jurisdiction over any part of the subject matter of the Report.

**42 USC § 4374.** There are hereby authorized to be appropriated for the operations of the Office of Environmental Quality and the Council on Environmental Quality not to exceed the following sums for the following fiscal years which sums are in addition to those contained in Public Law 91- 190:

- (a) \$2,126,000 for the fiscal year ending September 30, 1979.
- (b) \$3,000,000 for the fiscal years ending September 30, 1980, and September 30, 1981.
- (c) \$44,000 for the fiscal years ending September 30, 1982, 1983, and 1984.
- (d) \$480,000 for each of the fiscal years ending September 30, 1985 and 1986.

**42 USC § 4375.**

(a) There is established an Office of Environmental Quality Management Fund (hereinafter referred to as the "Fund") to receive advance payments from other agencies or accounts that may be used solely to finance --

1. study contracts that are jointly sponsored by the Office and one or more other Federal agencies; and
2. Federal interagency environmental projects (including task forces) in which the Office participates.

(b) Any study contract or project that is to be financed under subsection (a) of this section may be initiated only with the approval of the Director.

(c) The Director shall promulgate regulations setting forth policies and procedures for operation of the Fund.



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*To submit questions and comments about CEQ NEPANet,  
please use the NEPANet Feedback System.*



**Exhibit 702**  
**Executive Order 13212**

Executive Order 13212: 66 FR 28357 (22 May 2001)  
**Executive Order 13212--Actions To Expedite Energy-**

**May 18, 2001**

By the authority vested in me as President by the Constitution and the laws of the United States of America, and in order to take additional steps to expedite the increased supply and availability of energy to our Nation, it is hereby ordered as follows:

Section 1. Policy.

The increased production and transmission of energy in a safe and environmentally sound manner is essential to the well-being of the American people. In general, it is the policy of this Administration that executive departments and agencies (agencies) shall take appropriate actions, to the extent consistent with applicable law, to expedite projects that will increase the production, transmission, or conservation of energy.

Sec. 2. Actions to Expedite Energy-Related Projects.

For energy-related projects, agencies shall expedite their review of permits or take other actions as necessary to accelerate the completion of such projects, while maintaining safety, public health, and environmental protections. The agencies shall take such actions to the extent permitted by law and regulation, and where appropriate.

Sec. 3. Interagency Task Force.

There is established an interagency task force (Task Force) to monitor and assist the agencies in their efforts to expedite their review of permits or similar actions, as necessary, to accelerate the completion of energy-related projects, increase energy production and conservation, and improve transmission of energy. The Task Force also shall monitor and assist agencies in setting up appropriate mechanisms to coordinate Federal, State, tribal, and local permitting in geographic areas where increased permitting activity is expected. The Task Force shall be composed of representatives from the Departments of State, the Treasury, Defense, Agriculture, Housing and Urban Development, Justice, Commerce, Transportation, the Interior, Labor, Education, Health and Human Services, Energy, Veterans Affairs, the Environmental Protection Agency, Central Intelligence Agency, General Services Administration, Office of Management and Budget, Council of Economic Advisers, Domestic Policy Council, National Economic Council, and such other representatives as may be determined by the Chairman of the Council on Environmental Quality. The Task Force shall be chaired by the Chairman of the Council on Environmental Quality and housed at the Department of Energy for administrative purposes.

Sec. 4. Judicial Review.

Nothing in this order shall affect any otherwise available judicial review of agency action. This order is intended only to improve the internal management of the Federal Government and does not create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.

George W. Bush

The White House,  
May 18, 2001.

PUBLIC LAW 109-58—AUG. 8, 2005

ENERGY POLICY ACT OF 2005

**Exhibit 703**  
**Energy Policy Act of 2005**

(e) **REPORT.**—Not later than October 1, 2010, the Secretary of Agriculture, in consultation with the Secretary of the Interior, shall submit to the Committee on Energy and Natural Resources and the Committee on Agriculture, Nutrition, and Forestry of the Senate, and the Committee on Resources, the Committee on Energy and Commerce, and the Committee on Agriculture of the House of Representatives, a report describing the results of the grant programs authorized by this section. The report shall include the following:

(1) An identification of the size, type, and use of biomass by persons that receive grants under this section.

(2) The distance between the land from which the biomass was removed and the facility that used the biomass.

(3) The economic impacts, particularly new job creation, resulting from the grants to and operation of the eligible operations.

**SEC. 211. SENSE OF CONGRESS REGARDING GENERATION CAPACITY OF ELECTRICITY FROM RENEWABLE ENERGY RESOURCES ON PUBLIC LANDS.**

It is the sense of the Congress that the Secretary of the Interior should, before the end of the 10-year period beginning on the date of enactment of this Act, seek to have approved non-hydro-power renewable energy projects located on the public lands with a generation capacity of at least 10,000 megawatts of electricity.

## Subtitle B—Geothermal Energy

John Rishel  
Geothermal  
Steam Act  
Amendments of  
2005.  
30 USC 1001  
note.

**SEC. 221. SHORT TITLE.**

This subtitle may be cited as the “John Rishel Geothermal Steam Act Amendments of 2005”.

**SEC. 222. COMPETITIVE LEASE SALE REQUIREMENTS.**

Section 4 of the Geothermal Steam Act of 1970 (30 U.S.C. 1003) is amended to read as follows:

**“SEC. 4. LEASING PROCEDURES.**

“(a) **NOMINATIONS.**—The Secretary shall accept nominations of land to be leased at any time from qualified companies and individuals under this Act.

“(b) **COMPETITIVE LEASE SALE REQUIRED.**—

“(1) **IN GENERAL.**—Except as otherwise specifically provided by this Act, all land to be leased that is not subject to leasing under subsection (c) shall be leased as provided in this subsection to the highest responsible qualified bidder, as determined by the Secretary.

“(2) **COMPETITIVE LEASE SALES.**—The Secretary shall hold a competitive lease sale at least once every 2 years for land in a State that has nominations pending under subsection (a) if the land is otherwise available for leasing.

“(3) **LANDS SUBJECT TO MINING CLAIMS.**—Lands that are subject to a mining claim for which a plan of operations has been approved by the relevant Federal land management agency may be available for noncompetitive leasing under this section to the mining claim holder.

“(c) **NONCOMPETITIVE LEASING.**—The Secretary shall make available for a period of 2 years for noncompetitive leasing any



THE SECRETARY OF THE INTERIOR  
WASHINGTON

**Exhibit 704**  
**Secretarial Order 3285**

ORDER NO. 3285

Subject: Renewable Energy Development by the Department of the Interior

**Sec. 1 Purpose.** This Order establishes the development of renewable energy as a priority for the Department of the Interior and establishes a Departmental Task Force on Energy and Climate Change. This Order also amends and clarifies Departmental roles and responsibilities to accomplish this goal.

**Sec. 2 Background.** The Nation faces significant challenges to meeting its current and future energy needs. Meeting these challenges will require strategic planning and a thoughtful, balanced approach to domestic resource development that calls upon the coordinated development of renewable resources, as well as the development of traditional energy resources. Many of our public lands possess substantial renewable resources that will help meet our Nation's future energy needs while also providing significant benefits to our environment and the economy. Increased production of renewable energy will create jobs, provide cleaner, more sustainable alternatives to traditional energy resources, and enhance the energy security of the United States by adding to the domestic energy supply. As the steward of more than one-fifth of our Nation's lands, and neighbor to other land managers, the Department of the Interior has a significant role in coordinating and ensuring environmentally responsible renewable energy production and development of associated infrastructure needed to deliver renewable energy to the consumer.

**Sec. 3 Authority.** This Order is issued under the authority of Section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended, and pursuant to the provisions of Section 211 of the Energy Policy Act of 2005 (P.L. 109-58).

**Sec. 4 Policy.** Encouraging the production, development, and delivery of renewable energy is one of the Department's highest priorities. Agencies and bureaus within the Department will work collaboratively with each other, and with other Federal agencies, departments, states, local communities, and private landowners to encourage the timely and responsible development of renewable energy and associated transmission while protecting and enhancing the Nation's water, wildlife, and other natural resources.

**Sec. 5 Energy and Climate Change Task Force.** A Task Force on Energy and Climate Change is hereby established in the Department. The Deputy Secretary and the Counselor to the Secretary shall serve as Co-Chairs. The Task Force on Energy and Climate Change shall:

a. develop a strategy that is designed to increase the development and transmission of renewable energy from appropriate areas on public lands and the Outer Continental Shelf, including the following:

(1) quantifying potential contributions of solar, wind, geothermal, incremental or small hydroelectric power on existing structures, and biomass energy;

(2) identifying and prioritizing the specific locations in the United States best suited for large-scale production of solar, wind, geothermal, incremental or small hydroelectric power on existing structures, and biomass energy (e.g., renewable energy zones);

(3) identifying, in cooperation with other agencies of the United States and appropriate state agencies, the electric transmission infrastructure and transmission corridors needed to deliver these renewable resources to major population centers;

(4) prioritizing the permitting and appropriate environmental review of transmission rights-of-way applications that are necessary to deliver renewable energy generation to consumers;

(5) establishing clear roles and processes for each bureau/office;

(6) tracking bureau/office progress and working to identify and resolve obstacles to renewable energy permitting, siting, development, and production;

(7) identifying additional policies and/or revisions to existing policies or practices that are needed, including possible revisions to the Geothermal, Wind, and West-Wide Corridors Programmatic Environmental Impact Statements and their respective Records of Decisions; and

(8) working with individual states, tribes, local governments, and other interested stakeholders, including renewable generators and transmission and distribution utilities, to identify appropriate areas for generation and necessary transmission;

b. develop best management practices for renewable energy and transmission projects on the public lands to ensure the most environmentally responsible development and delivery of renewable energy;

c. establish clear policy direction for authorizing the development of solar energy on public lands; and

d. recommend such other actions as may be necessary to fulfill the goals of this Order.

#### Sec. 6 Responsibilities.

a. Program Assistant Secretaries. Program Assistant Secretaries overseeing bureaus responsible for, or that provide assistance with, the planning, siting, or permitting of renewable energy generation and transmission facilities on the public lands and on the Outer Continental Shelf, are responsible for:

(1) establishing and participating in management structures that facilitate cooperation, reporting, and accountability across agencies, including the Task Force on Energy and Climate Change;

(2) establishing joint, single-point-of contact offices that consolidate expertise to ensure a coordinated, efficient, and expeditious permitting process while ensuring appropriate siting and compliance with the National Environmental Policy Act, the Endangered Species Act, and all other applicable laws; and

(3) working collaboratively with other departments, state, and local authorities to coordinate and harmonize non-Federal permitting processes.

b. The Assistant Secretary - Policy, Management and Budget is a member of the Task Force and shall:

(1) ensure that investments associated with Interior managed facilities meet Federal standards for energy efficiency and greening applications; and

(2) coordinate with the Energy and Climate Change Task Force, as appropriate.

c. Bureau Heads. Each bureau head is responsible for designating a representative to the Task Force on Energy and Climate Change.

**Sec. 7 Implementation.** The Deputy Secretary is responsible for ensuring implementation of this Order. This responsibility may be delegated as appropriate.

**Sec. 8 Effective Date.** This Order is effective immediately and will remain in effect until its provisions are converted to the Departmental Manual or until it is amended, superseded, or revoked, whichever comes first. The termination of this Order will not nullify implementation of the requirements and responsibilities effected herein.

  
Secretary of the Interior

Date: 3/11/2009



# **MEMORANDUM FOR FEDERAL NEPA LIAISONS, FEDERAL, STATE, AND LOCAL OFFICIALS AND OTHER PERSONS INVOLVED IN THE NEPA PROCESS**

**Subject:** Questions and Answers About the NEPA Regulations

During June and July of 1980 the Council on Environmental Quality, with the assistance and cooperation of EPA's EIS Coordinators from the ten EPA regions, held one-day meetings with federal, state and local officials in the ten EPA regional offices around the country. In addition, on July 10, 1980, CEQ conducted a similar meeting for the Washington, D.C. NEPA liaisons and persons involved in the NEPA process. At these meetings CEQ discussed (a) the results of its 1980 review of Draft EISs issued since the July 30, 1979 effective date of the NEPA regulations, (b) agency compliance with the Record of Decision requirements in Section 1505 of the NEPA regulations, and (c) CEQ's preliminary findings on how the scoping process is working. Participants at these meetings received copies of materials prepared by CEQ summarizing its oversight and findings.

These meetings also provided NEPA liaisons and other participants with an opportunity to ask questions about NEPA and the practical application of the NEPA regulations. A number of these questions were answered by CEQ representatives at the regional meetings. In response to the many requests from the agencies and other participants, CEQ has compiled forty of the most important or most frequently asked questions and their answers and reduced them to writing. The answers were prepared by the General Counsel of CEQ in consultation with the Office of Federal Activities of EPA. These answers, of course, do not impose any additional requirements beyond those of the NEPA regulations. This document does not represent new guidance under the NEPA regulations, but rather makes generally available to concerned agencies and private individuals the answers which CEQ has already given at the 1980 regional meetings. The answers also reflect the advice which the Council has given over the past two years to aid agency staff and consultants in their day-to-day application of NEPA and the regulations.

CEQ has also received numerous inquiries regarding the scoping process. CEQ hopes to issue written guidance on scoping later this year on the basis of its special study of scoping, which is nearing completion.

NICHOLAS C. YOST  
General Counsel

**Exhibit 705**  
**CEQ Authorization Memo**

## Exhibit 706

### CEQ 40 Questions, Questions 1-10

#### NEPA's Forty Most Asked Questions Questions 1-10

1a. Range of Alternatives. What is meant by "range of alternatives" as referred to in Sec. 1505.1(e)?

A. The phrase "range of alternatives" refers to the alternatives discussed in environmental documents. It includes all reasonable alternatives, which must be rigorously explored and objectively evaluated, as well as those other alternatives, which are eliminated from detailed study with a brief discussion of the reasons for eliminating them. Section 1502.14. A decisionmaker must not consider alternatives beyond the range of alternatives discussed in the relevant environmental documents. Moreover, a decisionmaker must, in fact, consider all the alternatives discussed in an EIS. Section 1505.1(e).

1b. How many alternatives have to be discussed when there is an infinite number of possible alternatives?

A. For some proposals there may exist a very large or even an infinite number of possible reasonable alternatives. For example, a proposal to designate wilderness areas within a National Forest could be said to involve an infinite number of alternatives from 0 to 100 percent of the forest. When there are potentially a very large number of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in the EIS. An appropriate series of alternatives might include dedicating 0, 10, 30, 50, 70, 90, or 100 percent of the Forest to wilderness. What constitutes a reasonable range of alternatives depends on the nature of the proposal and the facts in each case.

2a. Alternatives Outside the Capability of Applicant or Jurisdiction of Agency. If an EIS is prepared in connection with an application for a permit or other federal approval, must the EIS rigorously analyze and discuss alternatives that are outside the capability of the applicant or can it be limited to reasonable alternatives that can be carried out by the applicant?

A. Section 1502.14 requires the EIS to examine all reasonable alternatives to the proposal. In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.

2b. Must the EIS analyze alternatives outside the jurisdiction or capability of the agency or beyond what Congress has authorized?

A. An alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable. A potential conflict with local or federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered. Section 1506.2(d). Alternatives that are outside the scope of what Congress has approved or funded must still be evaluated in the EIS if they are reasonable, because the EIS may serve as the basis for modifying the Congressional approval or funding in light of NEPA's goals and policies. Section 1500.1(a).

3. No-Action Alternative. What does the "no action" alternative include? If an agency is under a court order or legislative command to act, must the EIS address the "no action" alternative?

A. Section 1502.14(d) requires the alternatives analysis in the EIS to "include the alternative of no action." There are two distinct interpretations of "no action" that must be considered, depending on the nature of the proposal being evaluated. The first situation might involve an action such as updating a land management plan where ongoing programs initiated under existing legislation and regulations will continue, even as new plans are developed. In these cases "no action" is "no change" from current management direction or level of management intensity. To construct an alternative that is based on no management at all would be a useless academic exercise. Therefore, the "no action" alternative may be thought of in terms of continuing with the present course of action until that action is changed. Consequently, projected impacts of alternative management schemes would be compared in the EIS to those impacts projected for the existing plan. In this case, alternatives would include management plans of both greater and lesser intensity, especially greater and lesser levels of resource development.

The second interpretation of "no action" is illustrated in instances involving federal decisions on proposals for projects. "No action" in such cases would mean the proposed activity would not take place, and the resulting environmental effects from taking no action would be compared with the effects of permitting the proposed activity or an alternative activity to go forward.

Where a choice of "no action" by the agency would result in predictable actions by others, this consequence of the "no action" alternative should be included in the analysis. For example, if denial of permission to build a railroad to a facility would lead to construction of a road and increased truck traffic, the EIS should analyze this consequence of the "no action" alternative.

In light of the above, it is difficult to think of a situation where it would not be appropriate to address a "no action" alternative. Accordingly, the regulations require the analysis of the no action alternative even if the agency is under a court order or legislative command to act. This analysis provides a benchmark, enabling decisionmakers to compare the magnitude of environmental effects of the action alternatives. It is also an example of a reasonable alternative outside the jurisdiction of the agency which must be analyzed. Section 1502.14(c). See Question 2 above. Inclusion of such an analysis in the EIS is necessary to inform the Congress, the public, and the President as intended by NEPA. Section 1500.1(a).

4a. Agency's Preferred Alternative. What is the "agency's preferred alternative"?

A. The "agency's preferred alternative" is the alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors. The concept of the "agency's preferred alternative" is different from the "environmentally preferable alternative," although in some cases one alternative may be both. See Question 6 below. It is identified so that agencies and the public can understand the lead agency's orientation.

4b. Does the "preferred alternative" have to be identified in the Draft EIS and the Final EIS or just in the Final EIS?

A. Section 1502.14(e) requires the section of the EIS on alternatives to "identify the agency's preferred alternative if one or more exists, in the draft statement, and identify such alternative in the final statement . . ." This means that if the agency has a preferred alternative at the Draft EIS stage, that alternative must be labeled or identified as such in the Draft EIS. If the responsible federal official in fact has no preferred alternative at the Draft EIS stage, a preferred alternative need not be identified there. By the time the Final EIS is filed, Section 1502.14(e) presumes the existence of a preferred alternative and requires its identification in the Final EIS "unless another law prohibits the expression of such a preference."

4c. Who recommends or determines the "preferred alternative"?

A. The lead agency's official with line responsibility for preparing the EIS and assuring its adequacy is responsible for identifying the agency's preferred alternative(s). The NEPA regulations do not dictate which official in an agency shall be responsible for preparation of EISs, but agencies can identify this official in their implementing procedures, pursuant to Section 1507.3.

Even though the agency's preferred alternative is identified by the EIS preparer in the EIS, the statement must be objectively prepared and not slanted to support the choice of the agency's preferred alternative over the other reasonable and feasible alternatives.

5a. Proposed Action v. Preferred Alternative. Is the "proposed action" the same thing as the "preferred alternative"?

A. The "proposed action" may be, but is not necessarily, the agency's "preferred alternative." The proposed action may be a proposal in its initial form before undergoing analysis in the EIS process. If the proposed action is [46 FR 18028] internally generated, such as preparing a land management plan, the proposed action might end up as the agency's preferred alternative. On the other hand the proposed action may be granting an application to a non-federal entity for a permit. The agency may or may not have a "preferred alternative" at the Draft EIS stage (see Question 4 above). In that case the agency may decide at the Final EIS stage, on the basis of the Draft EIS and the public and agency comments, that an alternative other than the proposed action is the agency's "preferred alternative."

5b. Is the analysis of the "proposed action" in an EIS to be treated differently from the analysis of alternatives?

A. The degree of analysis devoted to each alternative in the EIS is to be substantially similar to that devoted to the "proposed action." Section 1502.14 is titled "Alternatives including the proposed action" to reflect such comparable treatment. Section 1502.14(b) specifically requires "substantial treatment" in the EIS of each alternative including the proposed action. This regulation does not dictate an amount of information to be provided, but rather, prescribes a level of treatment, which may in turn require varying amounts of information, to enable a reviewer to evaluate and compare alternatives.

6a. Environmentally Preferable Alternative. What is the meaning of the term "environmentally preferable alternative" as used in the regulations with reference to Records of Decision? How is the term "environment" used in the phrase?

A. Section 1505.2(b) requires that, in cases where an EIS has been prepared, the Record of Decision (ROD) must identify all alternatives that were considered, ". . . specifying the alternative or alternatives which were considered to be environmentally preferable." The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources.

The Council recognizes that the identification of the environmentally preferable alternative may involve difficult judgments, particularly when one environmental value must be balanced against another. The public and other agencies reviewing a Draft EIS can assist the lead agency to develop and determine environmentally preferable alternatives by providing their views in comments on the Draft EIS. Through the identification of the environmentally preferable alternative, the decisionmaker is clearly faced with a choice between that alternative and others, and must consider whether the decision accords with the Congressionally declared policies of the Act.

6b. Who recommends or determines what is environmentally preferable?

A. The agency EIS staff is encouraged to make recommendations of the environmentally preferable alternative(s) during EIS preparation. In any event the lead agency official responsible for the EIS is encouraged to identify the environmentally preferable alternative(s) in the EIS. In all cases, commentors from other agencies and the public are also encouraged to address this question. The agency must identify the environmentally preferable alternative in the ROD.

7. Difference Between Sections of EIS on Alternatives and Environmental Consequences. What is the difference between the sections in the EIS on "alternatives" and "environmental consequences"? How do you avoid duplicating the discussion of alternatives in preparing these two sections?

A. The "alternatives" section is the heart of the EIS. This section rigorously explores and objectively evaluates all reasonable alternatives including the proposed action. Section 1502.14. It should include relevant comparisons on environmental and other grounds. The "environmental consequences" section of the EIS discusses the specific environmental impacts or effects of each of the alternatives including the proposed action. Section 1502.16. In order to avoid duplication between these two sections, most of the "alternatives" section should be devoted to describing and comparing the alternatives. Discussion of the environmental impacts of these alternatives should be limited to a concise descriptive summary of such impacts in a comparative form, including charts or tables, thus sharply defining the issues and providing a clear basis for choice among options. Section 1502.14. The "environmental consequences" section should be devoted largely to a scientific analysis of the direct and indirect environmental effects of the proposed action and of each of the alternatives. It forms the analytic basis for the concise comparison in the "alternatives" section.

8. Early Application of NEPA. Section 1501.2(d) of the NEPA regulations requires agencies to provide for the early application of NEPA to cases where actions are planned by private applicants or non-Federal entities and are, at some stage, subject to federal approval of permits, loans, loan guarantees, insurance or other actions. What must and can agencies do to apply NEPA early in these cases?

A. Section 1501.2(d) requires federal agencies to take steps toward ensuring that private parties and state and local entities initiate environmental studies as soon as federal involvement in their proposals can be foreseen. This section is intended to ensure that environmental factors are considered at an early stage in the planning process and to avoid the situation where the applicant for a federal permit or approval has completed planning and eliminated all alternatives to the proposed action by the time the EIS process commences or before the EIS process has been completed.

Through early consultation, business applicants and approving agencies may gain better appreciation of each other's needs and foster a decisionmaking process which avoids later unexpected confrontations.

Federal agencies are required by Section 1507.3(b) to develop procedures to carry out Section 1501.2(d). The procedures should include an "outreach program", such as a means for prospective applicants to conduct pre-application consultations with the lead and cooperating agencies. Applicants need to find out, in advance of project planning, what environmental studies or other information will be required, and what mitigation requirements are likely, in connection with the later federal NEPA process. Agencies should designate staff to advise potential applicants of the agency's NEPA information requirements and should publicize their pre-application procedures and information requirements in newsletters or other media used by potential applicants.

Complementing Section 1501.2(d), Section 1506.5(a) requires agencies to assist applicants by outlining the types of information required in those cases where the agency requires the applicant to submit environmental data for possible use by the agency in preparing an EIS.

Section 1506.5(b) allows agencies to authorize preparation of environmental assessments by applicants. Thus, the procedures should also include a means for anticipating and utilizing applicants' environmental studies or "early corporate environmental assessments" to fulfill some of the federal agency's NEPA obligations. However, in such cases the agency must still evaluate independently the environmental issues [46 FR 18029] and take responsibility for the environmental assessment.

These provisions are intended to encourage and enable private and other non-federal entities to build environmental considerations into their own planning processes in a way that facilitates the application of NEPA and avoids delay.

9. Applicant Who Needs Other Permits. To what extent must an agency inquire into whether an applicant for a federal permit, funding or other approval of a proposal will also need approval from another agency for the same proposal or some other related aspect of it?

A. Agencies must integrate the NEPA process into other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts. Specifically, the agency must "provide for cases where actions are planned by . . . applicants," so that designated staff are available to advise potential applicants of studies or other information that will foreseeably be required for the later federal action; the agency shall consult with the applicant if the agency foresees its own involvement in the proposal; and it shall insure that the NEPA process commences at the earliest possible time. Section 1501.2(d). (See Question 8.)

The regulations emphasize agency cooperation early in the NEPA process. Section 1501.6. Section 1501.7 on "scoping" also provides that all affected Federal agencies are to be invited to participate in scoping the environmental issues and to identify the various environmental review and consultation requirements that may apply to the proposed action. Further, Section 1502.25(b) requires that the draft EIS list all the federal permits, licenses and other entitlements that are needed to implement the proposal.

These provisions create an affirmative obligation on federal agencies to inquire early, and to the maximum degree possible, to ascertain whether an applicant is or will be seeking other federal assistance or approval, or whether the applicant is waiting until a proposal has been substantially developed before requesting federal aid or approval.

Thus, a federal agency receiving a request for approval or assistance should determine whether the applicant has filed separate requests for federal approval or assistance with other federal agencies. Other federal agencies that are likely to become involved should then be contacted, and the NEPA process coordinated, to insure an early and comprehensive analysis of the direct and indirect effects of the proposal and any related actions. The agency should inform the applicant that action on its application may be delayed unless it submits all other federal applications (where feasible to do so), so that all the relevant agencies can work together on the scoping process and preparation of the EIS.

10a. Limitations on Action During 30-Day Review Period for Final EIS. What actions by agencies and/or applicants are allowed during EIS preparation and during the 30-day review period after publication of a final EIS?

A. No federal decision on the proposed action shall be made or recorded until at least 30 days after the publication by EPA of notice that the particular EIS has been filed with EPA. Sections 1505.2 and 1506.10. Section 1505.2 requires this decision to be stated in a public Record of Decision.

Until the agency issues its Record of Decision, no action by an agency or an applicant concerning the proposal shall be taken which would have an adverse environmental impact or limit the choice of reasonable alternatives. Section 1506.1(a). But this does not preclude preliminary planning or design work which is needed to support an application for permits or assistance. Section 1506.1(d).

When the impact statement in question is a program EIS, no major action concerning the program may be taken which may significantly affect the quality of the human environment, unless the particular action is justified independently of the program, is accompanied by its own adequate environmental impact statement and will not prejudice the ultimate decision on the program. Section 1506.1(c).

10b. Do these limitations on action (described in Question 10a) apply to state or local agencies that have statutorily delegated responsibility for preparation of environmental documents required by NEPA, for example, under the HUD Block Grant program?

A. Yes, these limitations do apply, without any variation from their application to federal agencies.

(c) Mitigation Measures Related to Greenhouse Gas Emissions.

Consistent with section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:

- (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;
- (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures, such as those described in Appendix F;
- (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;
- (4) Measures that sequester greenhouse gases;
- (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

**Note:** Authority cited: Sections 21083, 21083.05, Public Resources Code. Reference: Sections 5020.5, 21002, 21003, 21083.05, 21100 and 21084.1, Public Resources Code; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553; *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376; *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359; *Laurel Heights Improvement Association v. Regents of the University of California* (1993) 6 Cal.4th 1112; ~~and~~ *Sacramento Old City Assn. v. City Council of Sacramento* (1991) 229 Cal.App.3d 1011; *San Franciscans Upholding the Downtown Plan v. City & Co. of San Francisco* (2002) 102 Cal.App.4th 656; *Ass'n of Irrigated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383; *Environmental Council of Sacramento v. City of Sacramento* (2006) 147 Cal.App.4th 1018.

## **15126.6 CONSIDERATION AND DISCUSSION OF ALTERNATIVES TO THE PROPOSED PROJECT.**

- (a) Alternatives to the Proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason. (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553 and *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376).
- (b) Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

### **Exhibit 707**

### **CEQA 15126.6, Alternatives**

- (c) Selection of a range of reasonable alternatives. The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.
- (d) Evaluation of alternatives. The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed. (*County of Inyo v. City of Los Angeles* (1981) 124 Cal.App.3d 1).
- (e) "No project" alternative.
  - (1) The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (see Section 15125).
  - (2) The "no project" analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.
  - (3) A discussion of the "no project" alternative will usually proceed along one of two lines:
    - (A) When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the "no project" alternative will be the continuation of the existing plan, policy or operation into the future. Typically this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan.
    - (B) If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the "no project" alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed. In certain instances, the no project alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis

should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.

- (c) After defining the no project alternative using one of these approaches, the lead agency should proceed to analyze the impacts of the no project alternative by projecting what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.
- (f) Rule of reason. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.
- (1) Feasibility. Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives. (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553; see *Save Our Residential Environment v. City of West Hollywood* (1992) 9 Cal.App.4th 1745, 1753, fn. 1).
- (2) Alternative locations.
  - (A) Key question. The key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.
  - (B) None feasible. If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR. For example, in some cases there may be no feasible alternative locations for a geothermal plant or mining project which must be in close proximity to natural resources at a given location.
  - (C) Limited new analysis required. Where a previous document has sufficiently analyzed a range of reasonable alternative locations and environmental impacts for projects with the same basic purpose, the lead agency should review the previous document. The EIR may rely on the previous document to help it assess the feasibility of potential project alternatives to the extent the circumstances remain substantially the same as they relate to the alternative. (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 573).
- (3) An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative. (*Residents Ad Hoc Stadium Committee v. Board of Trustees* (1979) 89 Cal. App.3d 274).

**Note:** Authority cited: Section 21083, Public Resources Code. Reference: Sections 21002, 21002.1, 21003, and 21100, Public Resources Code; *Citizens of Goleta Valley v. Board of Supervisors*, (1990) 52 Cal.3d 553; *Laurel Heights Improvement Association v. Regents of the University of California*, (1988) 47 Cal.3d 376; *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th

1359; and *Laurel Heights Improvement Association v. Regents of the University of California* (1993) 6 Cal.4th 1112.

### **15127. LIMITATIONS ON DISCUSSION OF ENVIRONMENTAL IMPACT**

The information required by Section 15126.2(c) concerning irreversible changes, need be included only in EIRs prepared in connection with any of the following activities:

- (a) The adoption, amendment, or enactment of a plan, policy, or ordinance of a public agency;
- (b) The adoption by a Local Agency Formation Commission of a resolution making determinations; or
- (c) A project which will be subject to the requirement for preparing an environmental impact statement pursuant to the requirements of the National Environmental Policy Act of 1969, 42 U.S.C. 4321-4347.

**Note:** Authority cited: Section 21083, Public Resources Code; Reference: Section 21100.1, Public Resources Code.

### **15128. EFFECTS NOT FOUND TO BE SIGNIFICANT**

An EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. Such a statement may be contained in an attached copy of an Initial Study.

**Note:** Authority cited: Section 21083, Public Resources Code; Reference: Section 21100, Public Resources Code.

### **15129. ORGANIZATIONS AND PERSONS CONSULTED**

The EIR shall identify all federal, state, or local agencies, other organizations, and private individuals consulted in preparing the draft EIR, and the persons, firm, or agency preparing the draft EIR, by contract or other authorization.

**Note:** Authority cited: Section 21083, Public Resources Code; Reference: Sections 21104 and 21153, Public Resources Code.

### **15130. DISCUSSION OF CUMULATIVE IMPACTS**

- (a) An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065 ~~(a)(3)~~. Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.
  - (1) As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.
  - (2) When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency shall identify facts and analysis supporting the lead agency's conclusion that the cumulative impact is less than significant.
  - (3) An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the

## California Paves Way for Genesis Solar Energy Project in Riverside County

Thursday, November 12, 2009 at 10:45:07 AM - by Jeanna Roberts

It's only the first step in a long and arduous process, but the California Energy Commission's has okayed the application for certification for the Genesis Solar Energy Project based on facility data.

The project, under the auspices of Tucson, Arizona-based, privately held Genesis Solar LLC, will consist of two independent solar electric generating facilities with a combined total output of 250 megawatts, sited on 1,800 acres of BLM- (Bureau of Land Management ) managed land.

Genesis Solar is a wholly owned subsidiary of Juno Beach, Florida-based NextEra Energy Resources LLC, itself a consortium of FPL Group, Inc. (including the FPL's capital investment arm) and Florida Power & Light, who jointly provide energy services and project management.

The Genesis Project, once it has met California Energy Commission approval, must also seek federal approval before the construction process can begin. The original AFC (application for certification) was submitted on Aug. 31.

The concentrating solar thermal project comprises two groups of parabolic mirrors which concentrate solar energy and use it to create steam to power generators. The project will use wet cooling techniques, but only from non-potable water wells located on the project site 25 miles from Blythe adjacent to Interstate 10, and the residual water from the cooling tower will be fed into lined, on-site evaporation ponds.

This is reportedly an undeveloped area of the Sonoran Desert, with the McCoy Mountains to the East, the Palen Mountain/McCoy Wilderness area to the north, and Ford Dry Lake to the south, on the other side of I-10. The proposed site sits within 40 miles of Joshua Tree National Park, and has been used for grazing and off-road vehicle sports but has since been closed.

Reports say the Genesis Project will use 536 million gallons of water per year, and with southern California utility Pacific Gas & Electric (PG&E) committed to buying the entire output it seems like a profitable venture from both a solar electricity production and revenue model. The water issue may, however, impact final approvals. Solar thermal trough developers use wet cooling because dry- (or air-) cooling reduces electricity output by up to five percent, and with budgets structured to wring every penny out of capital outlays, five percent is significant loss. Dry-cooling technology is also more expensive, adding to up-front costs that are not always recaptured via electricity sales.

### Energy Commission Facility Certification Process

The California Energy Commission is the lead agency (for licensing thermal power plants 50 megawatts and larger) under the California Environmental Quality Act (CEQA) and has a certified regulatory program under CEQA. Under its certified program, the Energy Commission is exempt from having to prepare an environmental impact report. Its certified program, however, does require environmental analysis of the project, including an analysis of alternatives and mitigation measures to minimize any significant adverse effect the project may have on the environment.

## Exhibit 708 250MW Press Reports



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**California**

**Genesis Solar Energy Project (CACA 48880)**

**Fast Facts**

- The Genesis Solar Energy Project (GSEP), proposed by NextEra Energy Resources, would be located north of I-10, near Ford Dry Lake, 25 miles west of Blythe, in Riverside County.
- The proposed project is a parabolic trough solar thermal power generating facility designed to produce 250 megawatts of power.
- The project's total footprint is 4,640 acres, with project operations occurring on 1,800-acres of BLM-managed public land.
- The GSEP will consist of two independent concentrated solar electric generating facilities.
- The proposed project will deliver power via a generator that will tie-in to the Blythe Energy 500-kilovolt line; with interconnect to the Colorado River Substation.
- The project is expected to take 39 months to complete and will average 646 workers including laborers, craftsmen, supervisory support, and management personnel.
- The Genesis Solar Energy Project is expected to employ 40-50 full-time employees once the project is fully operational.

<p><b>Genesis CACA-48880</b></p> <p>Status of Federal Process</p> <p>State of California Process</p> <p>Executive Summary and Maps</p> <p>Environmental Document</p> <p>Policy, Guidance, and Documents</p> <p>Fast Track Projects</p>
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Artist rendering of Genesis Solar Energy Project

For information about this project contact:

Bureau of Land Management  
 Palm Springs South Coast Field Office  
 1201 Bird Center Drive  
 Palm Springs, California 92262  
 Phone: (760) 833-7100  
 Fax: (760) 833-7199  
 Office Hours: 8:00 a.m. - 4:30 p.m., M-F  
 Contact us by Email

Last updated: 05-26-2010

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## California,Ãs Genesis Solar Energy Project Looking Up

Written on November 13, 2009 by Ivan Cooper in [Solar Panels](#)

It,Ãs just the first step in a long and difficult process; however the Californian Energy Commission has approved the certification application, based on facility data, for the Genesis [Solar Energy Project](#).

The project will include of two independent photovoltaic electric generating facilities which will have a combined total output of 250 megawatts. Under the auspices of Tucson based private company, Genesis Solar LLC, the project will be situated on 1,800 acres Bureau of Land Management land.

Genesis Solar is a wholly owned subsidiary NextEra Energy Resources LLC of Juno Beach, Florida, which is itself a consortium of Florida Power & Light and FPL Group, Inc. These two companies already provide energy services and project management on a joint basis.

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## News Room

October 26, 2009

### NextEra Energy Resources to supply solar power to PG&E

JUNO BEACH, Fla. – NextEra Energy Resources, LLC, already the country's leading generator of wind and solar, announced today that it has entered into a contract to sell 250-megawatts of solar thermal power from the p Solar Energy Project to Pacific Gas and Electric Company (PG&E).

The proposed Genesis Solar Energy Project will be comprised of two 125-megawatt units. Once both units are up, the project is expected to produce approximately 560 gigawatt-hours of renewable electricity each year. This annual usage of more than 80,000 homes.

"This agreement is an important step forward in the development of solar power in California," said Mitch Dandridge, CEO of NextEra Energy Resources. "With increasing concerns about greenhouse gases, solar electricity can have a meaningful impact in reducing carbon dioxide emissions. In addition to clean energy, this project will create a number of positive economic impacts for Riverside County."

"Solar energy is a reliable and environmentally-friendly way to help meet California's peak energy demands," said a senior vice president for energy procurement at PG&E. "Through our agreement with NextEra Energy, we will increase the amount of clean, renewable energy we provide to our customers in the years to come."

This is NextEra Energy Resources' first contract to sell solar power to PG&E, and it is subject to approval by the California Public Utilities Commission. In August, NextEra Energy Resources filed an Application for Certification with the California Public Utilities Commission (CEC) to construct, own and operate this 250-megawatt solar plant in the Sonoran Desert. In addition, NextEra Energy Resources has filed for a right-of-way grant with the Bureau of Land Management (BLM) for this project.

For the Genesis Project, NextEra Energy Resources plans to utilize proven and scalable parabolic trough solar technology that has been used commercially for more than two decades. NextEra Energy Resources has near 20 years of experience operating similar technology at its SEGS solar facilities in the Mojave Desert.

The proposed Genesis Solar Energy Project will be located on an approximately 1,800-acre site between Desert Blythe, on land managed by the BLM in Riverside County, California. The more than 500,000 parabolic mirrors are assembled in rows to receive and concentrate the solar energy to produce steam for powering a steam turbine. Genesis is one of about a dozen solar projects identified by BLM for fast track consideration to receive permit approval by 2010.

Assuming timely regulatory approvals, NextEra Energy Resources plans to start construction on the project later this year, with operations expected to begin approximately 30 months later. Once complete, this project will reduce the emissions of approximately 500,000 tons per year, when compared to a high-efficiency natural gas plant. The U.S. Environmental Protection Agency estimates this is the equivalent of removing about 83,000 passenger vehicles from the road each year.

The recently filed Application for Certification with the CEC is the latest example of NextEra Energy Resources' leadership and commitment to renewable energy generation. This is the second Application for Certification filed with the CEC. In March 2008, NextEra Energy Resources filed an Application for Certification with the CEC for a 250-megawatt Beacon Solar Project to be located in eastern Kern County. The company is waiting for a final decision from the CEC on its pending application.

In addition to being the largest operator of solar power in the United States with 310 megawatts, NextEra Energy Resources, through its subsidiaries, is also the largest owner and operator of wind power in the country with more than 1,000 megawatts currently in operation. NextEra Energy subsidiaries also currently own and operate nearly 700 megawatts of

#### NextEra Energy Resources

NextEra Energy Resources is a clean energy leader and one of the largest competitive energy suppliers in North America. A subsidiary of Juno Beach, Fla.-based FPL Group (NYSE: FPL), NextEra Energy Resources is the largest generator of renewable energy from the wind and sun. It operates clean, emissions-free nuclear power generators in Massachusetts, Iowa and Wisconsin as part of the FPL Group nuclear fleet, which is the third largest in the U.S. FPL Group has revenues of more than \$16 billion, approximately 39,000 megawatts of generating capacity, and more than 15,000 employees in the United States and Canada. For more information, visit these Web sites: [www.NextEraEnergyResources.com](http://www.NextEraEnergyResources.com), [www.FPL.com](http://www.FPL.com)

#### Cautionary Statements And Risk Factors That May Affect Future Results

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements typically express or involve discussion as to expectations, beliefs, plans, strategies, assumptions or future events or performance and often can be identified by the use of words such as "will," "may," "anticipate," "estimate," and similar terms.

Although FPL Group, Inc. (FPL Group) believes that its expectations are reasonable, because forward-looking statements are subject to certain risks and uncertainties, it can give no assurance that the forward-looking statements contained in this release will prove to be correct, including FPL Group's expectations with respect to the Genesis Solar Energy Project. Important factors could cause FPL Group's actual results to differ materially from those projected in the forward-looking statements in this press release. Factors that could have a significant impact on FPL Group's operations and financial performance and could cause FPL Group's actual results or outcomes, both generally and specifically with respect to the Genesis Solar Energy Project, to differ materially from those discussed in the forward-looking statements include, among other things:

- Inability to complete construction of, or capital improvements to, the Genesis Solar Energy Project or other power generation facilities
- Inability to obtain the required regulatory approvals and permits for the construction and operation of the Genesis Solar Energy Project, including obtaining CEC Certification and Bureau of Land Management permits
- Inability to obtain the supplies necessary for the construction, operation, and maintenance of the Genesis Solar Energy Project or other FPL Group power generation facilities
- Changes in laws, regulations, governmental policies and regulatory actions regarding the energy industry or other matters
- Inability of FPL Group to access capital markets or maintain its credit rating
- Inability to hire and retain skilled labor for the construction and operation of the Genesis Solar Energy Project or changes or disruptions related to FPL Group's workforce
- Inability to sell the energy generated by the Genesis Solar Energy Project
- Transmission constraints or other factors limiting the Genesis Solar Energy Project's or FPL Group's ability to deliver power
- General economic conditions
- Hazards customary to the operation and maintenance of power generation facilities, including unanticipated events
- Unusual or adverse weather conditions, including natural disasters
- Volatility in the price of energy
- Failure of FPL Group customers to perform under contracts
- Increased competition in the power industry
- Changes in the wholesale power markets
- Costs and other effects of legal and administrative proceedings
- Terrorism or other catastrophic events

These foregoing factors should be considered in connection with information regarding risks and uncertainties regarding FPL Group's future results included in FPL Group's filings with the Securities and Exchange Commission at [www.fpl.com](http://www.fpl.com).

FPL Group undertakes no obligation to update or review any forward-looking statement to reflect events or circumstances, including unanticipated events, after the date on which such statement is made. New factors emerge from time to time and it is not possible for management to predict all of such factors, nor can it assess the impact of each such factor or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those stated in any forward-looking statement.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

JUL 12 2010

John Kalish  
Field Manager  
Palm Springs South Coast Field Office  
Bureau of Land Management  
1201 Bird Center Drive  
Palm Springs, California 92262

Subject: Draft Environmental Impact Statement for the NextEra Energy Resources Genesis Solar Energy Project, Riverside County, California (CEQ #20100115)

Dear Mr. Kalish:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the NextEra Energy Resources Genesis Solar Energy Project (Project). Our review and comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) Regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act (CAA).

EPA supports increasing the development of renewable energy resources in an expeditious and well planned manner. Using renewable energy resources such as solar power can help the nation meet its energy requirements while reducing greenhouse gas emissions. While renewable energy facilities offer many environmental benefits, appropriate siting and design of such facilities is of paramount importance if the nation is to make optimum use of its renewable energy resources without unnecessarily depleting or degrading its water resources, wildlife habitats, recreational opportunities, and scenic vistas.

The Bureau of Land Management (BLM) has identified thirty-four proposed renewable energy projects as "fast track" projects that are expected to complete the environmental review process and be ready to break ground by December 2010 in order to be eligible for funding under the American Recovery and Reinvestment Act (Section 1603). Twenty-eight of these projects are located in our Region, of which fourteen are located in California. We are aware that many more projects that have not been designated "fast-track" are also being considered by BLM. Many, if not all, of these projects, fast track or otherwise, are proposed for previously undeveloped sites on public lands.

In making its decisions regarding whether or not to grant rights-of-way for such projects, we recommend that BLM consider a full range of reasonable alternatives to minimize the adverse environmental impacts. Such alternatives could include alternative technologies or altered project footprints at the proposed locations, as well as alternate sites, such as inactive landfill or other disturbed sites that may offer advantages in terms of availability of infrastructure and less vulnerable habitats. Given the large number of renewable energy project applications currently under consideration, particularly in the Desert Southwest, we continue to encourage BLM to apply its land management authorities in a manner that will promote a long-term

sustainable balance between available energy supplies, energy demand, and protection of ecosystems and human health.

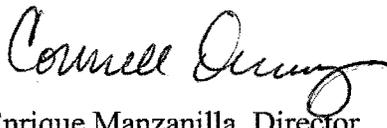
On November 30, 2009, EPA provided extensive formal scoping comments for the Project which included a variety of detailed recommendations regarding purpose and need, range of alternatives, water resources, and other resource areas of concern. Based on our review of the DEIS, we have rated the document as *Environmental Objections – Insufficient Information* (EO-2). Please see the enclosed “Summary of EPA Rating Definitions.”

The primary basis for EPA’s rating is that the technology for the Project includes wet cooling, and the extraction of over 500 million gallons of groundwater annually to support it, while similar proposed projects within the vicinity propose less-impactful, available Dry Cooling technology (e.g. the Blythe and Palen Solar Power Projects). EPA continues to recommend technologies maximizing water conservation in desert environments as a key criterion for renewable energy projects. EPA supports the Dry Cooling Alternative evaluated in the DEIS, which would substantially reduce groundwater extraction, as well as impacts to air quality and species. In addition, we strongly encourage BLM to consider a reduced-footprint alternative, including the Reduce Acreage Alternative or, at a minimum, an alternative that protects the 23 acres of critical desert tortoise habitat as well as the 65 acres of sand dune and sand drift over playa habitats. EPA believes that there are cases where effective mitigation for impacts on rare or unusual habitat can only be obtained by avoiding impacts. Fewer adverse impacts would significantly reduce required mitigation security payments and adverse cumulative impacts.

In the enclosed detailed comments, we also provide specific recommendations regarding analyses and documentation needed to assess potential significant impacts from the proposed Project. Specifically, EPA is concerned with the: 1) mitigation for groundwater and ephemeral wash impacts, 2) mitigation for impacts to biological resources and special status species, 3) analysis of cumulative impacts to air quality, 4) current justification for the Project purpose, need and range of alternatives, 5) project siting, and 6) impacts to cultural resources.

EPA appreciates the opportunity to provide input on this Project and the multitude of DEISs under preparation for renewable energy projects in our Region. We are available to further discuss all recommendations provided. When the FEIS is released for public review, please send two hard copies and two CDs to the address above (Mail Code: CED-2). If you have any questions, please contact me at (415) 972-3843 or contact Tom Plenys, the lead reviewer for this Project. Tom can be reached at (415) 972-3238 or [plenys.thomas@epa.gov](mailto:plenys.thomas@epa.gov).

Sincerely,



*For*  
Enrique Manzanilla, Director  
Communities and Ecosystems Division

Enclosures: Summary of EPA Rating Definitions  
EPA's Detailed Comments

cc: Jim Abbott, Bureau of Land Management, California State Office  
Michael Picker, California Governor's Office  
Allison Schaffer, Bureau of Land Management, Project Manager  
Shannon Pankratz, US Army Corps of Engineers  
Tannika Engelhard, United States Fish and Wildlife Service  
Becky Jones, California Department of Fish and Game  
Mike Monasmith, California Energy Commission

## **SUMMARY OF EPA RATING DEFINITIONS\***

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

### **ENVIRONMENTAL IMPACT OF THE ACTION**

#### ***"LO" (Lack of Objections)***

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

#### ***"EC" (Environmental Concerns)***

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

#### ***"EO" (Environmental Objections)***

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

#### ***"EU" (Environmentally Unsatisfactory)***

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

### **ADEQUACY OF THE IMPACT STATEMENT**

#### ***"Category 1" (Adequate)***

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

#### ***"Category 2" (Insufficient Information)***

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

#### ***"Category 3" (Inadequate)***

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

**U.S. EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE NEXTERA ENERGY RESOURCES GENESIS SOLAR ENERGY PROJECT, RIVERSIDE COUNTY, CALIFORNIA, JULY 8, 2010**

Project Description

NextEra, LLC (NextEra) has requested a right-of-way (ROW) authorization to develop an 1,890-acre, 250-megawatt (MW) solar generation facility including a substation, administration, operations and maintenance facilities, evaporation ponds, surface storm water control facilities, and temporary construction areas (Project). The Project area is located approximately 25 miles west of the city of Blythe, California and north of Ford Dry Lake and Interstate 10 on lands managed by the Bureau of Land Management (BLM). The Project area is located in an undeveloped area of the Sonoran Desert that has been used for grazing and off-highway vehicle (OHV) use in the past.

NextEra proposes to construct two, independent, concentrated solar electric generating facilities with a combined electrical output of 250 MW. Electrical power would be produced using steam turbine generators fed from solar steam generators. The solar steam generators would receive heated transfer fluid from arrays of parabolic solar troughs. The Project would use a wet cooling tower for power plant cooling. Water for cooling tower makeup, process water makeup, and other industrial uses such as mirror washing would be supplied from on-site groundwater wells. Project cooling wastewater would be piped to lined, on-site evaporation ponds. The Project would tie into a 230 kilovolt (kV) on-site switchyard and 500 kV transmission line with an interconnection to the Colorado River Substation.

Water Resources

*Dry Cooling*

To maximize environmental acceptability, EPA continues to recommend technologies which conserve water as a key criterion for renewable energy projects currently under review by our agency. The proposed use of wet cooling would result in groundwater extraction in the Sonoran Desert of over 500 million gallons of water annually (1,644 acre-feet per year). The Project does not propose the use of reclaimed water nor the recycling of water.

The proposed Project's use of wet cooling is inconsistent with the recommendations of the "Best Management Practices and Guidance Manual: Desert Renewable Energy Projects," which was jointly developed by the Bureau of Land Management (BLM), the U.S. Fish and Wildlife Service (USFWS), the California Energy Commission, and others<sup>1</sup>. That manual states, "[t]he following critical actions provide guidance on how to address the major significant issues that usually arise when conducting environmental reviews... 2) The project will not use fresh groundwater or surface water for power plant cooling."

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<sup>1</sup> Renewable Energy Action Team (California Energy Commission, California Department of Fish and Game, U.S. Department of Interior Bureau of Land Management and Fish and Wildlife Service). CEC-700-2009-016SD-REV

Under the Dry Cooling Alternative, water use would be reduced by over 90% to 132 acre-feet per year (at pg. C.2-157). Additionally, dry cooling provides environmental benefits beyond water conservation. Dry cooling reduces emissions of particulate matter, both 10 micron (PM<sub>10</sub>) and 2.5 micron (PM<sub>2.5</sub>), due to the elimination of cooling towers. The Dry Cooling Alternative reduces annual PM<sub>10</sub> emissions by 19% (3.8 tons) and PM<sub>2.5</sub> emissions by 53% (3.8 tons) (at pg. C.1-19 and C.1-33). Additionally, the six, eight-acre evaporation ponds that would collect blowdown water from the cooling towers pose several threats to wildlife. The ponds are a danger to the birds attracted by the water due to the toxic concentration of salt and possibly other constituents within the groundwater (at pg. C.2-95). The ponds could also attract ravens which could increase predation rates on juvenile desert tortoise in adjacent habitats. A combination of dry cooling with zero liquid discharge (ZLD) would eliminate impacts from wildlife exposure to the evaporation ponds and is recommended by staff, California Department of Fish and Game and the US Fish and Wildlife Service (USFWS) (at pg. C.2-95).

We also point out the limited use of wet cooling in similar large scale solar energy projects. Of the 21 solar energy projects within Region 9 that have appeared in the Federal Register recently (as a notice of intent to prepare an Environmental Impact Statement), only four projects continue to propose wet cooling. Of those projects, three are sponsored by a subsidiary of the same corporate entity, FPL Energy. NextEra concludes that the use of dry cooling will decrease the project output, which will render the Project economically unsound or noncompetitive (at pg. B.2-18). However, as the DEIS indicates, the Final Staff Assessment for the Beacon Solar Energy Project found that dry cooling was economically feasible because it surpassed the benchmark internal rate of return established for economic feasibility. Further, three solar thermal projects (Blythe, Palen and Desert Sunlight Solar Projects) propose the use of dry cooling in the same general area with a similar climate as the proposed Project, and have similar if not identical efficiency losses from using dry cooling (at pg. B.2-18).

Lastly, during our recent meeting with BLM's California and Nevada State Directors on June 30, 2010, Ron Wenker indicated he had sent a letter to renewable energy applicants in Nevada to eliminate wet cooling as an option for projects in the Amargosa Valley. EPA supports this guidance and request that it apply to all applications on BLM's lands throughout the Desert Southwest.

*Recommendations:*

EPA strongly recommends that BLM not approve the use of wet cooling. The Dry Cooling Alternative would reduce water use from 1,644 acre-feet per year to 132 acre-feet per year, and reduce the projects impacts on air quality and birds.

*Groundwater*

BLM has proposed monitoring future changes to groundwater levels and water quality caused by the proposed Project and other pumping in the Basin (Soil & Water – 4 and 20). Measures are also proposed to mitigate potential future impacts to neighboring well owners (Soil & Water – 5) and potential impacts to the Colorado River from pumping (Soil & Water –15). While the Soil

and Water Resources section references these monitoring and mitigation measures, the DEIS does not include a discussion of the effectiveness of the monitoring and the impacts of the mitigation. The FEIS should further describe groundwater mitigation and detail its effectiveness in minimizing groundwater withdrawal.

The DEIS also acknowledges that, due to the high volume of projects in the region, cumulative impacts to groundwater may place the Chuckawalla Valley Groundwater Basin in overdraft condition. Overdraft is described as the amount of water withdrawn exceeding the amount of water that recharges the basin (at pg. C.9-71). Cumulative impacts from reasonably foreseeable projects as well as other unidentified renewable energy projects in the I-10 corridor are dismissed due to the total recoverable groundwater in storage (estimated to be as much as 15,000,000 acre feet) (at pg. C.9-72). The Soil and Water section does not provide a reference for this groundwater storage figure and does not discuss other estimates for the storage amount which may be lower (at pg. C.9-72).

Despite the amount of water in basin storage which exceeds the potential cumulative overdraft during the 30 year Project life, the DEIS indicates that even modest drawdowns of 0.3 feet can adversely affect vegetation if groundwater drops below the effective rooting levels sustained over time so that plants are unable to recover (at pg. C.2-4 and C.2-98). Modeling results presented in the DEIS suggest that during the life of all the reasonably foreseeable projects, groundwater level declines of five feet or more would be located at a distance of approximately 4 miles from the Project site and up to one foot or more up to 8 miles from the proposed production wells. A drop in groundwater levels could also potentially impact neighboring wells, lower the water table, and impact groundwater dependent vegetation and microfill woodlands (at pg. C.2-20).

The DEIS also indicates that operations for all reasonably foreseeable projects could result in indirect impacts to the Palo Verde Mesa Groundwater Basin by inducing underflow from the Colorado River to the Palo Verde Mesa Groundwater Basin. Such basin balance analyses for the cumulative effects to the Palo Verde Mesa Basin are not provided in the DEIS.

*Recommendations:*

Impacts to groundwater in the Chuckawalla Valley Groundwater Basin and the Palo Verde Mesa Groundwater Basin should be minimized as much as possible. In addition to adopting the Dry Cooling Alternative, this may involve altering project design, implementing recycled water techniques, as well as considering reduced acreage alternatives. The FEIS should describe the effectiveness of, and commitments to, the mitigation and monitoring plans described in the Mitigation Measures Section C.9 Soil & Water - 3, 4, 5, 15, 18 and 20.

The FEIS should also further describe the estimation of the impacts from withdrawing groundwater that is recharged by the Colorado River (at pg. C.9-2) and the effectiveness of the mitigation proposed. The expected effectiveness of the mitigation must be documented and committed to, and the FEIS should clarify whether or not an entitlement

to water from the Colorado River aquifer would be needed. This information should be made available in the FEIS and the ROD.

The FEIS should discuss and estimate the additional impact from other renewable energy projects in the I-10 corridor that may result from its selection as an area for further renewable energy development (at pg. C.9-116).

The FEIS should include a basin balance analysis for the Palo Verde Mesa Groundwater Basin.

The FEIS should address what measures would be taken, and by whom, should groundwater resources in the basins become overextended to the point that further curtailment is necessary due to, for example, additional growth, the influx of large-scale solar projects, drought, and the utilization of existing or pending water rights in the basin.

The FEIS should describe the reasonably foreseeable future land use and associated impacts that will result from the additional power supply. The document should provide an estimate of the amount of growth, likely location, and the biological and environmental resources at risk.

### *Reclaimed Water*

The DEIS considered the use of reclaimed water (treated wastewater), but eliminated the option from detailed evaluation. EPA seeks further clarification and discussion of this, particularly in light of the viability of reclaimed water uses described in the Alternatives Evaluated section (at pg. B.2-57). These sources should also be discussed in light of the smaller amount of water necessary for the Dry Cooling Alternative. A subsidiary of FPL Energy has sponsored the Beacon Solar Energy Project on BLM land in California. The California Energy Commission's Final Staff Assessment<sup>2</sup> evaluates dry cooling and two water sources for wet cooling considered feasible. The water sources are treated wastewater from 15 and 40 miles away. Both treated wastewater sources have similar costs. In one alternative the solar energy facility will pay the cost of a 40 mile pipeline, in the other, the facility will pay the cost of a 15 mile pipeline and the cost to connect residents to the treatment plant (to generate a sufficient quantity of wastewater).

#### *Recommendation:*

The FEIS should evaluate potential sources of reclaimed water from all wastewater treatment plants in at least a 40-mile radius.

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<sup>2</sup> Final Staff Assessment, Beacon Solar Energy Project, Application for Certification (08-AFC-2) Kern County, California Energy Commission (<http://www.energy.ca.gov/2009publications/CEC-700-2009-005/CEC-700-2009-005-FSA.PDF>)

### *Floodplains, Drainages and Ephemeral Washes*

The Project would directly impact 91 acres of state jurisdictional waters including 16 acres of micro phyllous riparian vegetation, eliminating the functions of this network of ephemeral drainages (at pg. C.2-2).

Natural washes perform a diversity of hydrologic, biochemical and geochemical functions that directly affect the integrity and functional condition of higher-order waters downstream. Healthy ephemeral waters with characteristic plant communities control rates of sediment deposition and dissipate the energy associated with flood flows. Ephemeral washes also provide habitat for breeding, shelter, foraging, and movement of wildlife. Many plant populations are dependent on these aquatic ecosystems and adapted to their unique conditions. The potential damage that could result from disturbance of flat-bottomed washes includes alterations to the hydrological functions that natural channels provide in arid ecosystems: adequate capacity for flood control, energy dissipation, and sediment movement, as well as impacts to valuable habitat for desert species.

The DEIS states that off-site storm water flows impacting the Project site are from a large watershed area to the north of the site which covers approximately 91,627 acres. The upstream extents of the contributing watershed extend into the Palen Mountains (at pg. C.9-32). The proposed Project is located on an alluvial fan where flash flooding and mass erosion could impact the Project (at pg. C.9-115). As a result, natural drainage across the site is episodic, shallow, and occurs over a broad area primarily as sheet flow or in shallow washes (at pg. B.1-16). All existing washes and floodplains within the Project boundary will be completely eliminated by the grading of approximately 1,800 acres to provide the flat, uniform and vegetation-free topography required for the construction and operation of the solar mirror array (at pg. C.9-56).

The applicant proposes to divert flows downstream of the site utilizing existing drainage paths. Three engineered channels and associated diversion berms across the Project site with energy dissipaters at the end would restore sheet flow down slope of the Project (at pg. B.1-16 and pg. C.9-55). Onsite flows would be discharged directly into detention basins via a series of smaller internal swales and channels (at pg. C.9-55). According to staff analysis in the DEIS, the applicant's drainage plans do not provide sufficient information to establish the post-Project flooding conditions or to determine the potential impacts to vegetation downstream (at pg. C.2-66).

#### *Recommendations:*

Demonstrate that downstream flows will not be disrupted due to proposed changes to natural washes, the excavation of large amounts of sediment or as a result of major storm events.

Discuss the feasibility of utilizing existing natural drainage channels on site. Discuss the feasibility of utilizing more natural features, such as earthen berms or channels, rather than concrete-lined channels, if proposed.

Include the finalized drainage plan for the Project in the FEIS, to facilitate assessment of impacts and effectiveness of mitigation measures.

The FEIS should clarify the flow path of exterior storm water flow, and summarize modeled impacts (hydraulics of flow, velocity, sediment transport, sediment delivery and potential stream channel changes) of diverting drainages and floodplains.

The Project proposes to minimize and offset the direct and indirect impacts to state waters via acquiring and enhancing 132 acres of ephemeral dry washes within the Chuckwalla Valley watershed. In light of the multiple applications for renewable energy projects in the near vicinity, availability of such compensation lands should be discussed, including a comparison of the quality and functions of the desert washes to those lost on the Project site.

*Recommendation:*

Discuss the availability of sufficient compensation lands to replace desert wash functions lost on the Project site.

As the DEIS indicates, the Concept Drainage Study and the Draft Channel Maintenance Plan do not appear to adequately address the issue of the collection of offsite flows or the mitigation of erosion to offsite areas caused by the presence and operation of the proposed collector and conveyance channels. We also have concerns that reliance on substantial maintenance will reduce effectiveness of the mitigation, and question whether the main goals of the channel maintenance program will be met. If such substantial maintenance is needed, the implementation mechanism, accountability, enforcement, and funding of such a program should be identified. In general, the viability of this mitigation is not discussed and the mitigation specifics are deferred to a later approval process. Additionally, the DEIS does not clarify discharge locations for any sediment or detention basins.

*Recommendations:*

The FEIS should fully describe how offsite flows will be collected and how erosion to offsite areas will be mitigated. Describe the specifics of the needed maintenance program necessary to prevent significant erosion and offsite damage and flooding, including the implementation mechanism, responsible parties, enforcement, and funding sources.

The FEIS should describe the Best Management Practices to be used to ensure that discharges from the project site match pre-development conditions. The FEIS should also define the term “peak discharges,” explain procedures for non-peak discharges, describe the downstream impacts of flow changes, and identify discharge points and flow controls for the sediment/retention basins’ water.

The FEIS should clarify discharge locations for any detention or sediment basins and describe the impacts of excess water provided to some drainages and reduced or no discharges to other drainages.

The DEIS indicates that the proposed Project does not comply with the State of California's water policies including the proposed method of wastewater discharge which is inconsistent with the Energy Commission's policy that encourages the use of Zero Liquid Discharge (ZLD) systems that are designed to eliminate wastewater discharge and inherently conserve water (at pg. C.9-88). While mitigation measure Soil and Water – 18 is intended to address inconsistencies with state water policies, the measure as presented in the DEIS does not contain any specifics.

*Recommendations:*

The FEIS should fully describe compliance with state water policies and incorporate specific measures as part of measure Soil and Water – 18.

The FEIS should discuss how the Dry Cooling Alternative combined with Zero Liquid Discharge (ZLD) systems may assist the Project in achieving consistency with California's water policies.

*Fencing*

The FEIS should provide more detailed information about fencing and its potential effects. The DEIS does not provide detailed information about fencing nor the effects of fencing on drainage systems. In this region, storms can be sudden and severe, resulting in flash flooding. Fence design must address hydrologic criteria, as well as security performance criteria. The National Park Service recently published an article<sup>3</sup> on the effects of the international boundary pedestrian fence on drainage systems and infrastructure. We recommend that BLM review this article to ensure that such issues are adequately addressed.

*Recommendation:*

Provide more detailed information about fencing and its potential effects on drainage systems within the FEIS. Ensure that the fencing proposed for this project will meet appropriate hydrologic, wildlife protection and movement, and security performance standards.

*Jurisdictional Determination*

At the time of publication of this DEIS, the U.S. Army Corps of Engineers had not yet made a jurisdictional determination for this Project. We understand this has been completed and the findings should be discussed in the FEIS. Measures to reduce impacts to any waters of the United States should be included in the FEIS, as well as measures to mitigate impacts that cannot be reduced or avoided.

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<sup>3</sup> National Park Service, August 2008, Effects of the International Boundary Pedestrian Fence in the Vicinity of Lukeville, Arizona, on Drainage Systems and Infrastructure, Organ Pipe Cactus National Monument, Arizona,

## Biological Resources

### *Endangered Species and Other Species of Concern*

The site supports a diversity of mammals, birds, and reptiles, including some special status wildlife species. Grading on the Project site would result in direct impacts to special status animal species and special status plant species through the removal of vegetation that provides cover, foraging, and breeding habitat for wildlife (at pg. C.2-61 to C.2-65). As the DEIS states, severe damage involving vegetation removal and soil disturbance can take from 50 to 300 years for partial recovery; complete ecosystem recovery may require over 3,000 years (at pg. C.2-61). We understand that the Biological Opinion for this Project is not scheduled for completion until after the Final EIS is published. The Biological Opinion will play an important role in informing the decision on which alternative to approve and what commitments, terms, and conditions must accompany that approval.

Approximately 1,786 acres of desert tortoise habitat (including 23 acres of critical habitat) would be permanently impacted by the proposed Project. Long-term impacts may occur as a result of permanent loss of habitat, increased predation, and habitat fragmentation. Additionally, 66 acres of Mojave fringe-toed lizard (MFTL) habitat would be permanently lost in addition to 453 acres of indirect impacts to sand dunes that would result from disruption to the sand transport corridor on site (at pg. C.2-62). The MFTL is restricted to Aeolian (wind-blown) sand habitats. The Project site contains stabilized and partially stabilized sand dune habitat (28 acres) and playa/sand drift over playa habitat (37 acres) (at pg. C.2-35).

EPA appreciates the extensive discussion on the impacts to MFTL and desert tortoise as well as the proposed mitigation measures and compensatory mitigation. The Reduced Acreage Alternative would roughly reduce impacts to desert tortoise habitat by 50% and have substantially less impact on the MFTL. While EPA supports consideration of this alternative, we also suggest evaluation of a "Resource Avoidance" alternative in the FEIS which modifies the proposed 1,800 acre Project footprint by protecting, at a minimum, the 23 acres of critical desert tortoise habitat as well as the 65 acres of sand dune habitat and sand drift over playa habitats. This alternative may provide an opportunity to balance species protection with power production and allow sufficient acreage to offset any potential efficiency losses due to dry cooling. EPA believes that there are cases where effective mitigation for impacts on rare or unusual habitat can only be obtained by avoiding impacts. Rarely, if ever, is restoration or compensation an adequate mitigation for the loss of these habitats. In such cases, mitigation occurs by siting projects away from habitats of concern<sup>4</sup>.

EPA continues to recommend that proposed designs for renewable energy projects should avoid and minimize impacts to all federally threatened and endangered species, as well as BLM species of concern and State species of concern. In addition to desert tortoise and MFTL, the site of the proposed Project includes potential breeding and foraging habitat for sensitive species such as the American badger, desert kit fox, Western burrowing owl, golden eagle, among others. Any

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<sup>4</sup> *Habitat Evaluation: Guidance for the Review of Environmental Impact Assessment Documents* (January, 1993), p. 88. Available: <http://www.epa.gov/compliance/resources/policies/nepa/habitat-evaluation-pg.pdf>

mitigation measures that result from consultation with the USFWS to protect sensitive biological resources should be included in the FEIS and, ultimately, the ROD. The FEIS should also clearly articulate under which alternatives sensitive biological resources, including the desert tortoise, MFTL and Western burrowing owl, would be least impacted and to what extent impacts can be mitigated.

*Recommendations:*

We urge BLM to coordinate with USFWS on the timing of FEIS and the Biological Opinion. The FEIS should provide an update on the consultation process, and we strongly recommend including the Biological Opinion as an appendix.

Mitigation measures that result from consultation with the US Fish and Wildlife Service to protect sensitive biological resources, including desert tortoise and MFTL should be included in the FEIS and, ultimately, the ROD.

We recommend consideration of the Reduced Acreage Alternative that would reduce impacts to desert tortoise by 50% and have substantially fewer impacts to the MFTL. The FEIS should also evaluate a "Resource Avoidance" alternative in the FEIS which modifies the proposed 1,800 acre Project footprint by protecting, at a minimum, the 23 acres of critical desert tortoise habitat as well as the 65 acres of sand dune habitat and sand drift over playa habitats. Present environmental impacts from all alternatives considered in comparative form, sharply defining the issues and providing a clear basis for choice among options for the decision maker and the public (40 CFR 1502.14).

*Mitigation Commitments and Funding*

The Biological Resources Table 6 (at pg. C.2-65) summarizes the recommended mitigation acreage for the proposed Project, including 1,878 acres for direct impacts to desert tortoise, 424 acres for direct and indirect impacts to the Mojave fringe-toed lizard and 132 acres for direct impacts to State waters. The Applicant proposes to achieve a 3:1 compensation ratio for direct impacts to microphyllous riparian vegetation and a 1:1 ratio for unvegetated ephemeral swales. The costs associated with desert tortoise compensatory mitigation include an acquisition fee of \$500 per acre, an initial habitat improvement cost of \$330 per acre, and a long-term management endowment of \$1,450 per acre (for total of \$2,280 per acre security fee) (at pg. C.2-75).

Detailed mitigation measures are determined on a Project specific basis, and must be contained in each Project's environmental analyses and decision documents. Project proponents have a number of options by which they can fulfill their mitigation requirements. The California Renewable Energy Action Team (REAT) recently announced a Memorandum of Agreement (MOA) with the National Fish and Wildlife Foundation for operation of the Renewable Energy Action Team Mitigation Account (REAT Account). The REAT Account is designed to help project proponents and the State and Federal governments more effectively implement biological resources mitigation for renewable energy projects in the Mojave and Colorado Desert region of southern California. It also will aid project proponents in carrying out contracting and construction activities in a timely manner per requirements for American Recovery and

Reinvestment Act (ARRA) funding eligibility. Use of the REAT Account is only one of several options available to the proponent, and participation is voluntary.

*Recommendations:*

The FEISs should describe the final biological resources mitigation commitments and how they would be funded and implemented. They should state whether and how the Project Applicant would utilize the REAT account or other mechanism.

Include, in the FEIS, mitigation plans for unavoidable impacts to waters of the State and biological resources such as desert tortoise, desert kit fox, burrowing owls, Mojave fringe toed lizard, golden eagles, and their habitats. Such mitigation plans are described briefly in the sections BIO-1 to 27 in the DEIS; further details should be provided in the FEIS. Specifically, if the applicant is to acquire compensation lands, the location(s) and management plans for these lands should be fully disclosed.

Analyze the environmental and economic trade-offs of acquiring the off-site lands versus reducing the size of on-site alternatives for equivalent protection.

All mitigation commitments should be included in the Record of Decision (ROD).

Air Quality

*Mitigations*

EPA commends BLM for incorporating fugitive dust control measures to limit PM<sub>10</sub> impacts, and mitigation measures to address exhaust emissions (at pg. C.1-22). We also were pleased at the inclusion of mitigation measure AQ-SC2 which would require the development of an Air Quality Construction Mitigation Plan (AQCMP) as well as engine requirements for diesel equipment specified by mitigation measure AQ-SC5.

In light of the number of renewable energy projects to be constructed in the area as well as staff's conclusion that fugitive dust emissions and the results of the air dispersion modeling were underestimated (at pg. C.1-17), EPA supports incorporating mitigation strategies to reduce or minimize fugitive dust emissions as well as more stringent emission controls for PM and ozone precursors for construction-related activity. However, we also support minimizing disturbance to the natural landscape as much as possible, so that measures to reduce fugitive dust are not required to mitigate land disturbance from the Project. All applicable state and local requirements and the additional and/or revised measures listed below should be included in the FEIS in order to reduce impacts associated with PM, ozone precursors, and toxic emissions from construction-related activities:

Fugitive Dust Source Controls:

- Reduce land disturbance activities as much as possible so that natural, stable soil conditions remain.

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing, and phase grading operations, where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage, and limit speeds to 15 miles per hour (mph) or lower. Limit speed of earth-moving equipment to 10 mph, 5 mph on unpaved roads and unsealed site areas. *(Note the discrepancy between vehicular speeds on pages C.1-22 and C.1-27 in the DEIS).*

#### Mobile and Stationary Source Controls:

- Reduce use, trips, and unnecessary idling from heavy equipment.
- Maintain and tune engines per manufacturer's specifications to perform at California Air Resources Board (CARB) and/or EPA certification, where applicable, levels and to perform at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications. CARB has a number of mobile source anti-idling requirements. See their website at: <http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm>
- Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations
- If practicable, lease new, clean equipment meeting the most stringent of applicable Federal or State Standards.
- Utilize EPA-registered particulate traps and other appropriate controls where suitable, to reduce emissions of diesel particulate matter and other pollutants at the construction site.

#### Administrative controls:

- Identify all commitments to reduce construction emissions and incorporate these reductions into the air quality analysis to reflect additional air quality improvements that would result from adopting specific air quality measures.
- Identify where implementation of mitigation measures is rejected based on economic infeasibility.
- Prepare an inventory of all equipment prior to construction, and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking. (Suitability of control devices is based on: whether there is reduced normal availability of the construction equipment due to increased downtime and/or power output, whether there may be significant damage caused to the construction equipment engine, or whether there may be a significant risk to nearby workers or the public.) Meet CARB diesel fuel requirement for off-road and on-highway (i.e., 15 ppm), and where appropriate use alternative fuels such as natural gas and electric.
- Develop a construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow.
- Identify sensitive receptors in the project area, such as children, elderly, and infirm, and specify the means by which you will minimize impacts to these populations. For

example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.

### *Cumulative Analysis*

The methodology used for the cumulative impacts air quality analysis appears to be quite robust; however, the results are not presented nor described. The methodology describes consideration of projects in close proximity to the proposed Project, but limits the scope of the cumulative impact analysis to only those projects occurring within 6 miles of the proposed Project site. The scope of the cumulative impact analysis is limited to focus on 'localized' cumulative impacts; however, in an area in nonattainment for multiple criteria pollutants, including PM<sub>10</sub>, the cumulative impacts analysis should cast a wider net. Without further information about projects in the region, it is difficult to conduct a thorough cumulative impacts analysis. The FEIS should include a more extensive analysis that defines the parameters of the analysis and the reasons for the establishment of those parameters.

#### *Recommendations:*

Update the list of reasonably foreseeable projects used in the air quality analysis to include all projects that may have impacts that may cumulatively affect the region's ability to continue achieving air quality goals.

The FEIS should include a more extensive cumulative air impacts analysis as discussed above, and specify the parameters of the analysis and the reasons for the establishment of those parameters. If additional mitigation measures would be needed, or if the Project would affect the ability of other foreseeable projects to be permitted, the FEIS should discuss this.

### *Update Air Quality Standards*

The Federal Standards noted in Air Quality Table 2 (at pg.C.1-8) should be updated as recommended below.

#### *Recommendations:*

Sulfur Dioxide 1 hour standard should be corrected to read 0.075 ppm. Also, the Annual and 24 hour standards were revoked.

Lead standard should be updated to reflect a 3 month rolling average of 0.15 ug/m<sup>3</sup>

### Climate Change

EPA commends BLM for including a substantive discussion on greenhouse gases as well as estimates of carbon dioxide emissions from the construction of the proposed Project. Scientific evidence supports the concern that continued increases in greenhouse gas emissions resulting from human activities will contribute to climate change. Effects on weather patterns, sea level, ocean acidification, chemical reaction rates, and precipitation rates can be expected. These

changes may affect the proposed Project as well as the scope and intensity of impacts resulting from the proposed Project. The DEIS does not include measures to avoid, minimize, nor mitigate the effects of climate change on the proposed Project.

*Recommendations:*

Consider how climate change could affect the proposed Project, specifically within sensitive areas, and assess how the impacts of the proposed Project could be exacerbated by climate change.

Identify specific mitigation measures needed to 1) protect the Project from the effects of climate change, 2) reduce the Project's anticipated adverse air quality effects, and/or 3) promote pollution prevention or environmental stewardship.

Identify strategies to effectively monitor for climate change impacts in the surrounding area, such as monitoring groundwater change or special status species.

Quantify and disclose the anticipated climate change *benefits* of solar energy. We suggest quantifying the greenhouse gas emissions that would be produced by other types of electric generating facilities (solar, geothermal, natural gas, coal-burning, and nuclear) generating comparable amounts of electricity, and compiling and comparing these values.

Purpose, Need and Reasonable Range of Alternatives

EPA believes the discussion in the DEIS regarding the purpose and need for the Project should be expanded. As we indicated in our scoping comments, the *purpose* of the proposed action is typically the specific objectives of the activity, while the *need* for the proposed action may be to eliminate a broader underlying problem or take advantage of an opportunity. The Purpose and Need for a project should be broad enough to spur identification of the full breadth of a reasonable range of alternatives, regardless of what the future findings of an alternatives analysis may be.

While we commend BLM for including a Reduced Acreage Alternative and the Dry Cooling Alternative, for NEPA purposes, the DEIS eliminates all off-site and alternative technology alternatives from consideration. Elimination of such alternatives is, in part, influenced by the BLM's narrowly defined Purpose and Need. According to the DEIS, BLM's Purpose and Need for the proposed action is to approve, approve with modifications, or deny issuance of a Right-of-Way (ROW) grant for the Project (at pg. B.2-10). EPA understands the rationale in considering the "federal" Purpose and Need for the Project; however, EPA recommends that the FEIS further characterize the "project" Purpose and Need as part of BLM's statement. BLM's purpose statement should be broad enough to allow for a reasonable range of alternatives, including off-site alternatives such as the Gabrych Alternative. The Gabrych Alternative, evaluated by the California Energy Commission under the California Environmental Quality Act (CEQA) in the DEIS, was identified by the Renewable Energy Transmission Initiative (RETI) Final Phase 2a Report as disturbed land that would support renewable energy development (at pg. B.2-23). The Gabrych Alternative is preferred over the proposed Project for six resource

elements including biological, cultural, soils and water and recreation and wilderness (at pg. B.2-52).

*Recommendations:*

The FEIS should reflect a broader purpose and need statement that is broad enough for analysis and consideration of a full range of reasonable alternatives for addressing the underlying need including off-site alternatives, such as the Gabrych Alternative or other environmentally preferable off-site alternatives, and other modes of renewable energy generation.

Describe BLM's options for acting upon an application for a right-of-way grant. For instance, describe the extent of BLM's authority to require the adoption of a "modified" project design or alternate site on BLM land, to deny an application, or to select another ROW application submitted by the same applicant or its corporate owner.

Include supporting documentation and additional discussion on BLM's rationale for the elimination of off-site alternatives from further consideration under NEPA.

As indicated in our scoping comments, the FEIS should discuss the proposed Project in the context of the larger energy market that this Project would serve. While the DEIS appears to indicate the need for the proposed Project has its basis in Federal orders and laws that require government agencies to evaluate energy generation projects and facilitate the development of renewable energy sources, EPA does not believe the current Purpose and Need section fully describes the specific Federal, State, and individual utility power provider renewable energy targets, timelines, and underlying needs to which BLM is responding. EPA believes this context is imperative for decision makers and the public to have, in light of the large number of renewable energy projects moving forward.

Presumably, some number of renewable energy facilities will be constructed pursuant to the joint Department of Energy (DOE)/BLM Programmatic Solar DEIS effort as well as the Desert Renewable Energy Conservation Plan (DRECP) process. It would be helpful to know the likely locations, construction timing, and generation capacities of such facilities relative to the proposed Project.

*Recommendations:*

Fully describe the specific Federal and State renewable energy targets, timelines, and underlying needs to which BLM is responding, and explain how the Project meets those needs in the context of the many renewable energy project applications in the Desert Southwest and California. Update the discussion regarding the *need* for the individual proposed projects, utilizing more accurate, robust, and up-to-date references.

To the extent practicable, the FEIS should discuss how many of the total renewable energy applications received by BLM are likely to proceed pursuant to the joint Department of Energy (DOE)/BLM Programmatic Solar DEIS effort and the Desert

Renewable Energy Conservation Plan (DRECP) process, and the level of energy production those applications represent.

Further describe the utility purchases of power and provide a description of how the power would be bought, sold, and used so that the reader can better evaluate the tradeoffs between resource protection and power generation.

### Project Siting

EPA continues to recommend the identification of potential project site locations that have been previously disturbed or contaminated. For example, the EPA's Re-Powering America initiative works to identify disturbed and contaminated lands appropriate for renewable energy development. For more information on this initiative visit <http://www.epa.gov/oswerepa/>. EPA strongly encourages BLM to promote the siting of renewable energy projects on disturbed, degraded, and contaminated sites before considering siting on large tracts of undisturbed public lands. We also recommend consideration of each proposed renewable energy project in comparison with others proposed in the Desert Southwest region and their adverse effects on waters of the State, jurisdictional waters of the United States, biological resources, air quality, and visual and cultural resource impacts.

#### *Recommendations:*

Describe the criteria used to identify and compare siting locations for renewable energy facilities, and to ascertain whether or not any disturbed sites are available that would be suitable for the proposed project.

Incorporate alternatives such as the Gabrych Alternative and a "Resource Avoidance" alternative that would avoid and minimize adverse effects on biological, aquatic and cultural resources. Fewer adverse impacts would significantly reduce required mitigation security payments and adverse cumulative impacts.

The FEIS should include a table comparing the life-cycle costs of the different alternatives. Include information on the cost of the land, different project design criteria that would be required, acquisition effort, scheduling effects, and cost of mitigation.

The FEIS should demonstrate that the approved Project site is consistent with the Desert Renewable Energy Conservation Plan for the Mojave and Colorado Desert Regions. At a minimum, the FEIS should describe and commit to a process to ensure approved projects are consistent with the Desert Renewable Energy Conservation Plan.

### Cultural Resources and Coordination with Tribal Governments

The Project could have direct impacts on 14 historically significant archaeological resources including 8 prehistoric to historic period Native American archaeological sites (at pg. C.3-1) According to the DEIS, BLM is presently in the process of initiating formal consultation with the ACHP, the State Historic Preservation Officer (SHPO), California Energy Commission staff,

Native American groups, and the public at large on the development of a Programmatic Agreement (PA) for the proposed Project (at pg. C.3-18). The DEIS indicates that CUL-1 would require compliance with the PA under Section 106 of National Historic Preservation Act (NHPA).

Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments* (November 6, 2000), was issued in order to establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, and to strengthen the United States government-to-government relationships with Indian tribes.

*Recommendation:*

The FEIS should discuss how the concerns raised by Tribes were addressed and resolved, provide an update on the status of the Programmatic Agreement and whether coordination with Tribes is occurring, and indicate whether the Tribes are in agreement that the Programmatic Agreement will reduce impacts to prehistoric and sacred sites to less than significant. We recommend that these measures be adopted in the Record of Decision (ROD).

Consultation for tribal cultural resources is required under Section 106 of NHPA. Section 106 of the NHPA requires a federal agency, upon determining that activities under its control could affect historic properties, consult with the appropriate State Historic Preservation Officer/Tribal Historic Preservation Officer (SHPO/THPO). Under NEPA, any impacts to tribal, cultural, or other treaty resources must be discussed and mitigated. Section 106 of the NHPA requires that Federal agencies consider the effects of their actions on cultural resources, following regulation in 36 CFR 800.

Executive Order 13007, *Indian Sacred Sites* (May 24, 1996), requires federal land managing agencies to accommodate access to, and ceremonial use of, Indian sacred sites by Indian Religious practitioners, and to avoid adversely affecting the physical integrity, accessibility, or use of sacred sites. It is important to note that a sacred site may not meet the National Register criteria for a historic property and that, conversely, a historic property may not meet the criteria for a sacred site.

*Recommendation:*

The FEIS should address Executive Order 13007, distinguish it from Section 106 of the NHPA, and discuss how the BLM will avoid adversely affecting the physical integrity, accessibility, or use of sacred sites, if they exist.

Socio-Economic Analysis

The Blythe, Palen, and Genesis projects are located within approximately 40 miles of one another and the region anticipates an influx of hundreds of workers. Combined, construction of these three projects will require an average of 1,816 workers over the three to five year

construction periods. Construction workers may come from the local counties of La Paz, AZ, Riverside, CA, and San Bernardino, CA.

*Recommendation:*

We recommend that the FEIS for all projects contain analyses of the impacts of workers to the areas of Desert Center and Blythe, CA. The documents should provide an estimate of the amount of growth, likely location(s), the impacts on municipal services, and the biological and environmental resources at risk. The FEIS should include a discussion of potential transit options (including formal Rideshare, Carpooling, and Bussing) to transport workers from the nearest population centers to the remote project sites, as well as other measures to facilitate accessibility.





July 7, 2010

[Jim\\_Stobaugh@blm.gov](mailto:Jim_Stobaugh@blm.gov)

Re: Staff Assessment and Draft Environmental Impact Statement for the Proposed Genesis Solar Energy Project

Dear Mr. Stobaugh:

This letter constitutes the comments on the Proposed Genesis Solar Energy Project and accompanying draft environmental impact statement (DEIS) of the Natural Resources Defense Council (NRDC), The Wilderness Society (TWS), and Defenders of Wildlife, national environmental membership organizations with long histories of advocacy on behalf of the lands and resources administered by the Bureau of Land Management (BLM). More recently these organizations have been intensively involved in the Bureau's work to develop a comprehensive solar program as well as its efforts to "fast track" the permitting of individual utility-scale solar projects in California so that they may be eligible for grant funding under the American Recovery and Reinvestment Act of 2009 (ARRA).

**Introduction:** Our organizations recognize the need to develop the nation's renewable energy resources and to do so rapidly in order to respond effectively to the challenge of climate change. Unique natural resources here in California are already being affected by climate change, including, for example, the pikas of the High Sierra Nevada and the Joshua trees in the Mojave Desert. We also recognize that renewables development can help create jobs in communities that are eager for them, because of the nation's economic crisis. For these and other related reasons, our organizations are working with regulators and project proponents to move renewables projects forward. That said, renewable development is not appropriate everywhere on the public lands and must be balanced against the equally urgent need to protect unique and sensitive resources of the California Desert Conservation Area (CDCA). California is lucky indeed that we have sufficient renewable resources, including solar resources, to do their development in an environmentally and fiscally sensitive way.<sup>1</sup>

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<sup>1</sup> California's Renewable Energy Transition Initiative found, for example, that the state potentially could access 500 GW of renewable energy, an order of magnitude greater than the state's peak demand and far beyond the ability of our electric grid could handle, although not all of this potential is located in environmentally desirable places.

As we and our colleagues at sister organizations have repeatedly stated, the best way to develop the solar resources of the CDCA is through comprehensive, pro-active planning by both the federal government and the state to identify the most appropriate areas for such development -- *i.e.*, solar development zones -- and to guide development to those zones. *See, e.g.*, letter dated June 29, 2009 to Interior Secretary Salazar and California's Governor Schwarzenegger and signed by 11 organizations, including our own, attached as Exhibit 1.

We support the BLM's adoption of zone designation for its forthcoming solar programmatic EIS because of the benefits inherent in this approach, including but not limited to clustering development of large-scale projects in appropriate places, rather than permitting them to be located across the landscape in numerous locations. We also applaud the agency's -- and the Interior Department's -- commitment to work closely with the State of California in the development of the Desert Renewable Energy Conservation Plan which, as you may already know, will designate not only renewable energy development zones, but also zones for conservation. In addition, it will include a comprehensive mitigation strategy. The integration and completion of both of these efforts offers the promise of a balanced plan that will facilitate development of renewable resources in the desert while protecting desert resources.

Despite our fundamental belief in the critical importance of agency-guided development of renewables, rather than developer-initiated development, we have, as indicated, been investing a great deal of time and effort into the fast track projects. We have done so in response to the emphasis that Interior, the BLM and the developers place on meeting ARRA deadlines as well as the potential role these projects could play in meeting the renewable generation and economic goals of the state and federal governments. We have also done so because we wanted to make the projects, and especially the utility-scale solar projects, as environmentally sensitive as they can be and because we wanted to ensure, to the extent possible, that their accompanying environmental documents are as sound as they can be. It is now apparent to us that not even the best of the environmental documents being produced for the fast track projects and/or the best projects should be models or precedents for the future.

The fast track project sites were chosen without the benefit of siting criteria developed either by desert activists, environmental organizations, scientists and others. *See* Renewable Siting Criteria for California Desert Conservation Area, attached to June 29, 2009 letter referred to above, or by the Bureau. The Bureau in fact has yet to publish any siting guidance that would help field staff, developers and others identify appropriate sites -- *i.e.*, those with relatively low resource values and fewer resource conflicts. Moreover, the projects themselves were designated by Interior and the BLM as fast track projects without consideration of potential environmental issues. And, equally important, the timetable established for review of these projects did not take into account their scale, the agency's lack of experience with the technologies involved, and the agency's lack of experience permitting these kinds of projects.

Regardless of the outcome of the environmental review process for this or any other fast track project, we urge the BLM and the Interior Department to acknowledge publicly the deficiencies of the current process and to commit publicly to improving it. More specifically, we urge both entities to affirm that neither the current process, nor any of the project sites, nor any of the environmental documents, establish any legal or procedural precedents for future decision-making, siting or environmental review.

The Genesis Solar Energy Project: This proposed Project site is located on largely undisturbed desert land within the Multispecies Wildlife Habitat Management Area (WHMA) designation for

the eastern Colorado Desert region of the CDCA and, if constructed, will result in almost 2,000 acres of desert habitat loss, including potential habitat for desert tortoise and the Mojave fringe-toed lizard. In addition, unless the dry-cooling alternative is adopted, the Project will utilize approximately 1,644 acre-feet of groundwater per year, resulting in significant groundwater impacts. We therefore have significant concerns about the impacts to desert plant and wildlife communities which we urge the BLM to address fully.

Biological Resources: The Project area is potential habitat for a number of special-status plant and animal species and the DEIS fails to fully consider impacts to many of these species, including desert tortoise, Mojave fringe-toed lizard, Couch's spadefoot toad, Nelson's bighorn sheep, and groundwater dependant plant species.

First, the applicant indicates that the Project area is unoccupied by desert tortoise and that the majority of the site is not suitable habitat for desert tortoise. DEIS at C.2-34. However, agency staff concluded that the entire site contains suitable desert tortoise habitat and that the site could be potentially occupied by desert tortoise in the future. Id. at C.2-34. The document concludes that "although the project contributes a relatively small percentage of lower quality habitat, it contributes to a significant cumulative effect to an imperiled species." Id. at C.2-120. Furthermore, the NECO plan includes a desert tortoise recovery objective to "mitigate effects on desert tortoise populations and habitat outside DWMA's to provide connectivity between DWMA's." Given the threats posed by global climate change, maintaining habitat connectivity is particularly important. Id. We urge the BLM to ensure that impacts to desert tortoise habitat and connectivity are minimized.

Second, the Project will have significant impacts on Mojave fringe-toed lizards, including directly impacting 28 acres of stabilized/partially stabilized sand dune habitat and 38 acres of playa/sand drifts over playa, and indirectly impacting 453 acres of habitat downwind of the Project site. Id. at C.2-68. We urge BLM to consider in its alternatives analysis an alternative Project site that avoids significant impacts to Mojave fringe-toed lizard habitat.

Third, the Project is located at the western border of the Couch's spadefoot toad range. Id. at C.2-78. The DEIS states that "[n]o Couch's spadefoot toads were observed during surveys; however, because of the short time this species is above ground, and because the surveys were not conducted during the proper season (i.e., after summer rains), the lack of observations does not suggest the species is absent from the Project site." Id. at C.2-36. Without an accurate assessment of Couch's spadefoot toad on the property, it is not possible to conclude that the proposed mitigation (BIO-27) would reduce Project impacts to less than significant levels. We urge BLM to adequately document and consider the impacts of the Project on the Couch's spadefoot toad.

Fourth, the DEIS concludes that "[n]o sign or evidence of Nelson's bighorn sheep were found during field surveys and bighorn sheep are not expected to occur in the Project area. The Project Area is not within a known bighorn sheep corridor as identified in the NECO Plan." Id. at C.2-42. However, the applicant's surveys of the main Project site were conducted within a very narrow timeframe during the spring of 2009. Additional studies should be conducted before concluding that the Project will not impact bighorn sheep.

Finally, of significant concern regarding impacts to groundwater dependant vegetation is the significant uncertainty surrounding the groundwater calculations.

[T]he calculations and assumptions used to evaluate potential Project impacts to groundwater levels are imprecise and have limitations and

uncertainties associated with them. Given this uncertainty, the magnitude of potential Project impacts that could occur to groundwater dependent plant communities cannot be determined precisely.

DEIS at C.2-98. Water in arid areas, even brackish water, is an incredibly valuable resource, not only to the groundwater dependant plant species, but also to animal populations that depend on these plants. We expect to see greater certainty related to impacts to groundwater and by association overall biological resources in the final EIS.

Water Resources: This Project proposes to utilize approximately 1,644 acre-feet of groundwater per year which would impact groundwater levels in the area. *See id.* at C.9-5. This project is the *only* fast track project on public lands in California proposing to use wet cooling. The Project would also disrupt the natural flow of surface water from Palen Wash onto Ford Dry Lake by re-routing ephemeral drainages through engineered channels. *See id.* at C.9-63.

Because of impacts to groundwater resources, we urge the BLM to adopt the dry-cooling alternative. In addition, we urge BLM to further analyze the Project's effects on groundwater levels.

The DEIS states that because

[t]he cumulative change in storage over the construction and operational period (33 years) would amount to approximately 57,000 af, which would equate to less than 0.5 percent of the total amount of the estimated total recoverable groundwater in storage (15,000,000 af)...the project's contribution to the cumulative impact to basin balance is less than cumulatively considerable.

DEIS at C.9-72. However, this calculation overlooks the biological and hydrological impacts of aquifer overdraft. BLM also fails to support its concluding statement that cumulative effects of groundwater depletion would be insignificant. *See id.* at C.9-72. Finally, the potential for long-term drought or climate change effects on groundwater recharge and groundwater-dependent resources have not been evaluated. We urge BLM to consider these factors.

It is an engineering challenge to redesign desert washes. The proposed action would remove these waterways, eliminating their hydrological and biological functions and impeding wildlife movement through the washes, *id.* at C.9-56, C.2-66, and re-route them through three engineered channels. *Id.* at C.9-57, C.2-66. Engineered channel design is based on current conditions and the 100-year flood and is not finalized. *Id.* at C.2-66. An increase in the frequency or duration of extreme rainfall events may change upstream and downstream surface water features, soil moisture and the frequency and characteristics of the 100-year flood. BLM must evaluate the effects of climate change on surface water hydrology, the reasonableness of the assumptions behind the 10-, 25- and 100-year flood modeling, the efficacy of the engineered channels and the ecological and mitigation values of the waterways to be acquired and protected in a climate-changed environment and use this information to produce more reliable findings of significance. This information can also remedy deficiencies in the drainage report and improve any FLO-2D analysis and drainage channel design. Because of the impacts to natural drainage channels, we urge BLM to consider additional alternatives, including an alternative site that avoids desert washes or an engineering alternative on the current site that avoids reengineering the drainage channels.

Water Availability: Groundwater analysis suggests that any groundwater produced at the site would be Colorado River water. DEIS at C.9-46. The Boulder Canyon Project Act, 43 U.S.C. § 617 *et seq.*, and the Supreme Court Decree in *Arizona v. California*, 547 U.S. 150 (2006), require anyone who uses Colorado River water to have a contract with the Secretary of the Interior for the use of such water. All Colorado River water apportioned for use in California is already under contract. New users, such as the applicant, could seek a water delivery subcontract with the City of Needles (via the Lower Colorado Water Supply Project), a water transfer or exchange agreement with an existing contractor in California or seek a water supply that is not connected to the Colorado River.

Given that all Colorado River water in California is already under contract and that the Lower Colorado Water Supply Project is not a viable option for the applicant, *see* Letter from Gerald R. Zimmerman, Exec. Dir., Colorado River Board, to Alan H. Solomon, California Energy Comm'n (March 22, 2010), the applicant would have to enter into an agreement, to be approved by the Bureau of Reclamation, with another contractor, the Metropolitan Water District of Southern California ("MWD") in order to perform wet cooling at the proposed site. MWD's water supply may be vulnerable to shortages due to shortages on the Colorado River, in northern California, or from other sources of supply. Given these conditions and with the lower Colorado River over-appropriated and in the midst of drought conditions, we recommend that BLM require the applicant to utilize dry cooling for the proposed project.

Cultural Resources: The BLM must fully consider the comments submitted by the Quechan Tribe (see Quechan Tribe comments dated February 16, 2010 on the Section 106 Consultation Process for the First Solar Desert Sunlight, Palen Solar; Ford Dry Lake Solar; and Blythe Solar Projects) regarding the Section 106 process. BLM should insure that the regulatory approval schedule allows adequate time to consult with tribes before the Record of Decision is issued.

DEIS Elements: Our concerns with the draft environmental review document itself relate to five key elements: the purpose and need statement, the alternatives considered, the cumulative impact analysis, climate change and new information.

The DEIS states that the BLM's purpose and need is "to respond to" the company's Right-of-Way application. DEIS at B.2-10. The BLM should avoid both this mindset as well as too narrow a statement of purpose and need in order to help ensure that its EISs are legally defensible documents. In place of the statement that was used here, our organizations urge the adoption of the following to achieve these goals:

The purpose of the proposed action is to "facilitate environmentally responsible commercial development of solar energy projects"<sup>2</sup> consistent with the statutory authorities and policies applicable to the Bureau of Land Management, including those providing for contributions towards achieving the renewable energy and economic stimulus and renewable energy development objectives under the Energy Policy Act of 2005 (EPAAct), the American Recovery and Re-Investment Act, and Presidential and Secretarial orders as well as the Federal Land Policy and Management Act (FLPMA).

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<sup>2</sup> This quotation is from Secretary Salazar himself.

The need for this action is to implement Federal policies, orders and laws that mandate or encourage the development of renewable energy sources, including the Energy Policy Act of 2005, which encourages the Department of the Interior to seek to approve at least 10,000 MW of non-hydropower renewable energy on public lands by 2015, and the Federal policy goal of producing 10% of the nation's electricity from renewable resources by 2010 and 25% by 2025; to enable effective implementation of the economic incentives for qualifying projects intended by the American Recovery and Reinvestment Act; and to support the State of California's renewable energy and climate change objectives, consistent with BLM's mandates and responsibilities under FLMPA.

This kind of purpose and need statement would clearly satisfy applicable legal requirements, *see, e.g., Nat'l Parks Conservation Ass'n v. BLM*, 586 F.3d 735 (9th Cir. 2009), and thus help ensure that environmentally acceptable projects will not only be permitted but will also be built without unnecessary delays.

Alternatives Analysis: We applaud the inclusion of a dry-cooling alternative. Because of the shallow groundwater table, and the potential impacts the Project may have on groundwater-dependant plant communities and other biological resources in the area, we urge BLM to adopt this alternative. However, the current alternatives analysis is inadequate and we urge the BLM to include additional alternatives in its alternatives analysis, including an alternative site.

In defining what is a reasonable range of alternatives, NEPA requires consideration of alternatives "that are practical or feasible" and not just "whether the proponent or applicant likes or is itself capable of carrying out a particular alternative." Even "an alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable." Council on Environmental Quality, *Forty Most Asked Questions*; 40 C.F.R. §§ 1502.14, 1506.2(d). We therefore urge BLM to consider, among other alternative sites, the Gabrych Alternative – a privately owned site with one owner – in its alternatives analysis. Without an alternative site, it is difficult for the reader to evaluate the biological impacts of the Project, including impacts to desert tortoise and Mojave fringe-toed lizards. Although the project may now be sited on the best portion of the originally-proposed project site, it is not clear that this is the most appropriate, or even an appropriate, site for the project. We also urge the BLM to combine alternatives, for example by combining the dry-cooling alternative with an alternative site. We urge the BLM to include additional options in order to establish a real range of alternatives as well as to provide readers with a fuller understanding of the tradeoffs inherent in the other "action" alternatives.

Cumulative Impacts: In order to properly site renewable energy projects, it is essential that a cumulative impacts analysis be conducted to fully evaluate the implications of this type of development on public lands. There are several proposed solar and wind projects in the vicinity of the Genesis Solar Energy Project that will contribute to overall cumulative impacts to sensitive resources in this area. A list of existing and future foreseeable projects is included in the draft EIS. DEIS B.3-6 to B.3-16. In addition, the DEIS utilizes qualitative information about these existing and foreseeable projects to develop estimates and model impacts on key topics such as air quality and biological resources. More quantitative information is necessary to supplement this quantitative material.

In addition to the proposed solar and wind projects, the DEIS identifies nineteen commercial and residential development projects, several transmission line projects, a proposed landfill, and several

other projects that will also contribute to cumulative impacts. DEIS B.4-11 to B.4-16. While these projects are not all being permitted by the Bureau, all reasonable efforts must be made to obtain information regarding their potential impacts and construction timing so that a full picture of cumulative impacts can be presented in the final EIS.

Climate Change Impacts: The DEIS's discussion of climate change focuses on the reduction of greenhouse gases and the development of renewable energy resources. That is, it looks at the effects of the proposed action on climate change. It does not, however, analyze the impacts of climate change on species of concern in the project area or on their habitats. The latter impacts are clearly relevant. *See, e.g.,* Secretarial Order 3289, Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources (February 22, 2010). Such an analysis will allow the BLM to assess and reduce the vulnerabilities of the proposed action to climate change, integrate climate change adaptation into the proposed action and alternatives and produce accurate predictions of environmental consequences of the proposed actions and alternatives.

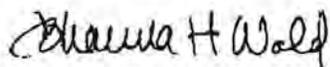
New Information: Lastly, we are concerned about the new information that will be developed after the DEIS was printed and released. In particular, there is an extensive list of information that is not yet available for public review and/or integration into the environmental analyses contained in the DEIS. For example, according to the draft the BIO-7 Biological resources Mitigation and Monitoring Plan, the BIO-17 Impact Avoidance and Minimization Measures for the American Badger and Desert Kit Fox, BIO-22 Mitigation for Impacts to State Waters, and BIO-25 Groundwater Dependant Vegetation Monitoring Plan have yet to be completed and/or presented to the public. DEIS at C.2-165, C.2-183, C.2-194, C.2-199. All of this information plus many more similar measures and plans are clearly relevant to this project and the analyses and conclusions presented in the DEIS.

BLM should make every effort to ensure that all this new information is made available to the public (and other agencies) for comment along with assessments and analyses of the information. Public input on agency proposals is one of the hallmarks of NEPA review and it is to prevent the undermining of that critical aspect that limits have been imposed on agency efforts to "load up" final EISs with excessive amounts of new information.

In conclusion, the impacts to the resources identified in these comments and to other desert resources must be fully analyzed and mitigated through the BLM process. As we have previously noted, renewable development is not appropriate everywhere on the public lands and must be balanced against the equally urgent need to protect unique and sensitive resources of the CDCA. California is lucky indeed that we have sufficient renewable resources, including solar resources, to do their development in an environmentally responsible manner.

Thank you in advance for considering our comments. If you have any questions about them, please do not hesitate to contact us.

Sincerely,



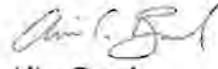
Johanna Wald  
Natural Resources Defense Council



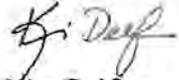
Helen O'Shea  
Natural Resources Defense Council



Elizabeth Forsyth  
Legal Intern, Natural Resources Defense Council



Alice Bond  
The Wilderness Society



Kim Delfino  
Defenders of Wildlife

cc: Jim Abbott, Acting California State Director, BLM  
cc: Chris Meyer, Project Manager, California Energy Commission