BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION
OF THE STATE OF CALIFORNIA

APPLICATION FOR CERTIFICATION FOR THE BEACON SOLAR ENERGY PROJECT	DOCKET NO. 08-AFC-2

BEACON SOLAR, LLC'S OPENING BRIEF IN SUPPORT OF THE APPLICATION FOR CERTIFICATION FOR THE BEACON SOLAR ENERGY PROJECT

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I. BEACON SOLAR ENERGY PROJECT STANDS AS A MODEL FOR SOLAR DEVELOPMENT IN THE CALIFORNIA DESERT.[1]

Beacon Solar, LLC's ("Beacon") Beacon Solar Energy Project ("Project") exemplifies how solar development should occur in California. The Project site is previously disturbed with minimal biological resources values. This fact is clear from the 100 acres of biological resources mitigation required for an approximately 2,000-acre site. Because of the disturbed nature of the site, environmental groups have not intervened or expressed concerns about the development of this site. Beacon has responded to and worked with the local governments and the local community.[2] The only remaining request is from Kern County for supplemental fees, and Kern County expressed its support for the Project, "We do support this project."[3] Both California City and the Rosamond Community Services District have offered to provide recycled water to meet the Project's cooling water needs. (*See* Ex. 506.)

The California Energy Commission ("Commission") Staff ("Staff") has reviewed and evaluated this Project for over two years: the evaluation has not been rushed.[4] Beacon responded to concerns expressed by Staff including accepting Staff's recommendation to use recycled water and a partial zero liquid discharge system to reduce water use. The Project before this Committee is the result of an extensive amount of evaluation and careful planning by Beacon improved and modified in response to Staff's rigorous review.

This Project will provide 250 megawatts of installed solar capacity to the California grid. This generation will help meet California's renewable portfolio standard and greenhouse gas reduction goals. This Project will provide an average of 477 construction jobs over a 25 month period with a peak construction workforce that exceeds 800 people. (Ex. 15. at 5.11-13) Project construction is expected to benefit the local economy by $304,000,000. (Ex. 15 at 5.11-25.) Once operational the Project is expected to employ 66 workers and an annual job creation of 164 jobs. (Ex. 15 at 5.11-26 to 27.)

Despite the efforts by the California Unions for Reliable Energy (CURE) to cloud the evaluation or cast doubt on the efforts conducted by your Staff and Beacon, this Project is an example of how best to develop a large solar project in the California desert area providing needed renewable and low greenhouse gas energy in an environmentally responsible manner. This Committee should not be swayed by CURE's arguments and instead should act expeditiously to

[1] Beacon is one of the first solar thermal project's analyzed by the California Energy Commission since the early 1990's when review of Luz SEGS X, XI and XII was suspended in May of 1992. The Commission approved the Victorville 2 (07-AFC-01) project on July 16, 2008, a gas fired combined cycle facility that included 50 MW of solar troughs. This project has not yet been built.

[2] "The applicant has been very involved with the planning department in attempting to answer our questions and provide information to the community." (3/22/10 RT 384:6-9.) Also, *See* Ex. 77 and Ex. 93.

[3] Quoting Lorelei Oviatt, the Acting Planning Director of the Kern County Planning Department. (3/22/10 RT 384:10.)

[4] Beacon filed the Application for Certification on March 14, 2008. The Commission found the application complete on May 5, 2008.

approve this Project and allow it to initiate construction in time to qualify for American Recovery and Reinvestment Act of 2009 funding.

A. The Project Will Provide California With Overwhelming Environmental Benefits That Clearly Outweigh Any Unavoidable Significant Adverse Visual Impact.

Staff has concluded that the Project may cause a significant unmitigable impact to visual resources. (Ex. 505.) As discussed below in Section II of this brief, Beacon disputes this conclusion and believes the Project as proposed would not cause any significant unmitigated impacts. However, even if the Project did cause a significant unmitigated impact to visual resources, the Project's benefits clearly outweigh such an impact, and the Commission should approve the Project. Staff concurs that the Project's benefits and the concerns regarding the adverse impacts that global warming will have upon our environment, including desert resources, support the approval of the Project, as discussed below. (Ex. 505.)

1. Both California Environmental Quality Act and the Commission's Regulations Allow Project Approval Despite a Finding of Significant Impacts.

The Commission's regulations require certain findings regarding a Project's environmental impacts. Specifically, the regulations state that the Commission may not certify any site and related facilities for which one or more significant adverse environmental effects have been identified unless the Commission finds "[w]ith respect to matters within the authority of the commission, that changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant environmental effects identified in the proceeding." (20 C.C.R. § 1755[c].) However, if the Commission cannot make both of these findings, the Commission may certify the Project if it makes the following supplemental findings:

> (1) That specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the application proceeding; and
>
> (2) That the benefits of the project outweigh the unavoidable significant adverse environmental effects that may be caused by the construction and operation of the facility.

(20 C.C.R. § 1755[d].) California Environmental Quality Act (CEQA) (Cal. Publ. Res. Code §§ 21,000 et. seq.) similarly allows a lead agency to approve a project with one or more significant effects on the environment if the public agency makes the following findings:

> (1) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report. (Pub. Res. Code § 21081[a][3]; see also 14 C.C.R. § 15043[a].)

(2) [S]pecific overriding economic, legal, social, technological, or other benefits of the project outweigh the significant effects on the environment. (Pub. Res. Code § 21081[b]; see also 14 C.C.R. § 15043[b].)

Courts have upheld overriding considerations based on benefits such as economic growth, increased tax revenues, and increased housing. (See, e.g., *Concerned Citizens of South Central L.A. v. Los Angeles Unified School District* [1994] 24 Cal.App.4th 826, 847 ["the statement of overriding considerations focuses on the larger, more general reasons for approving the project, such as the need to create new jobs, provide housing, generate taxes, and the like"]; *Towards Responsibility in Planning v. City Council* [1988] 200 Cal.App.3d 671, 684-685 [new jobs, stronger tax base, and implementation of city's economic development goals overrode environmental impacts of rezoning several parcels as large single-user industrial sites]; *City of Poway v. City of San Diego* [1984] 155 Cal.App.3d 1037, 1047-1048 [city's growth management policies, shifting development pressures if amended plan were not approved, and need for housing and employment, justified project approval despite impacts]; *Markley v. City Council* [1982] 131 Cal.App.3d 656, 670-671 [conformity to community plan and provision of new housing and new construction jobs were appropriate overriding considerations].) Courts have also upheld overriding considerations based in part on benefits to the environment, but the overriding considerations need not be based on the environment. (See *No Oil, Inc. v. City of Los Angeles* [1987] 196 Cal.App.3d 223.)

2. The Project's Benefits Far Outweigh Its Impacts.

As discussed above, courts have upheld overriding considerations even for projects trading environmental consequences for economic benefits. In this case, the overriding considerations are based primarily on environmental, rather than economic, benefits. Therefore, the Project presents the Commission with the ideal situation of using its override authority to achieve a net environmental benefit, rather than to approve a project with mainly economic benefits at the cost of the environment.

The record for this proceeding contains ample evidence to support both of the findings required for an override under Section 1755[d] of the Commission's regulations. The visual impacts of the Project cannot be mitigated any further, as there is no way to screen the Project from either of the locations where the Final Staff Assessment for the Beacon Solar Energy Project CEC-700-2009-005-FSA (FSA) finds a significant visual impact either from Key Observation Point 2 (KOP) (the U.S. Bureau of Land Management's Jawbone Canyon Off Highway Vehicle Open Area Ridgecrest Office) or from KOP-6 (public ridgeline hiking trail). (Ex. 322 at A5; Ex. 500 at 4.12-30 and 4.12-31.) The facility is simply too large to screen from these viewpoints. (*Id.*) Assuming the Commission agrees with the Staff's conclusion regarding the significance of these impacts, the question then becomes whether the Project's benefits outweigh its significant unmitigable impacts, which can only be answered with a resounding "yes".

The Project would bring the following benefits to both Kern County and the State of California as a whole:

- The Project provides much needed renewable generation to California that will help the state meet its renewable portfolio standards ("RPS"). (See Ex. 322 at A7; Ex. 500 at 1-7 and 6-15; Ex. 505; see also Senate Bill 1078 as amended by Senate Bill 107 and Executive Order S-14-08.)

- Staff has noted the Project's critical environmental role in reducing the adverse impacts of global warming, including impacts to desert ecosystems. (Ex. 505.) The Project will provide a source of very low carbon energy, helping California meet its greenhouse gas ("GHG") reduction requirements established by Assembly Bill 32. (Ex. 1 at 1; Ex. 322 at A7; Ex. 500 at 1-7 and 6-15; Ex. 505.) The Project's GHG performance level is 0.008 metric tons of CO_2 equivalent ("MTCO2e") per megawatt-hour of energy produced. (Ex. 500 at 4.1-76; Ex. 322 at A7.)

- The Project is located on heavily disturbed land. (Ex. 322 at A7; Ex. 505.) The Project site therefore, has relatively low value to biological resources. (Ex. 322 at A7.) The Project's mitigation measures, developed in consultation with the United States Fish and Wildlife Service ("USFWS") and the California Department of Fish and Game ("CDFG"), reflect the significant benefits of selecting this site for development. (Ex. 322 at A7.) The power plant site does not contain habitat for any endangered or threatened species, and no such species will be threatened by the Project's development. (Ex. 322 at A7.)

- The Project will produce solar energy with a highly efficient land use footprint. The FSA calculated a land use efficiency of 5.3 acres per installed megawatt of generation, which is one of the most efficient solar technologies from a land use perspective. (Ex. 500 at 5.3-8 through 5.3-9.)

- The Project will also generate both construction-related and long term operational increases in local expenditures and payrolls, as well as sales tax revenues. (Ex. 500 at 1-7.)

As discussed below in Section II of this brief, Beacon does not believe the Project will cause any significant unmitigated impacts to visual resources. The Project's impacts are especially insignificant in light of the substantial benefits the Project would confer, both on Kern County and the State of California. The Project is a model for solar development in California, and as Staff has made clear in its testimony, the Commission should approve the Project even if it finds a significant unmitigable impact to visual resources.

B. Beacon and Staff Have Satisfied All Information Requirements for the Approval of the Project's Application for Certification.

Throughout this proceeding, CURE has consistently maintained that an exceedingly high level of detail is required in the Project's analysis. Before addressing the individual issues in this proceeding, it is helpful to recall the legal framework behind an environmental document under both CEQA and the Warren-Alquist Act. The CEQA Guidelines require the following level of detail in an environmental impact report (EIR):

> An EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure. (14 CCR §15151.)

The Warren-Alquist Act (California Public Resources Code § 25500 et seq.) provides the general findings required for a final decision on an application. Such a decision must include:

- Specific provisions relating to the manner in which the proposed facility is to be designed, sited, and operated in order to protect environmental quality and assure public health and safety. (Pub. Res. Code § 25523[a].)

- Findings regarding the conformity of the proposed site and related facilities with standards adopted by the commission pursuant to Section 25216.3 and subdivision (d) of Section 25402, with public safety standards and the applicable air and water quality standards, and with other applicable local, regional, state, and federal standards, ordinances, or laws. (Pub. Res. Code § 25523[d][1].)

- The Commission's own regulations, contained in Title 20 of the California Code of Regulations, provide additional findings required for certification of a power plant site. The pertinent findings are: (1) compliance with all applicable LORS (20 C.C.R. § 1752[a]); and (2) if any significant adverse impacts have been identified, a finding that changes or alterations have been incorporated into the project which mitigate or avoid such impacts. (20 C.C.R. § 1755[c].)

The Commission's regulations require an applicant to present sufficient substantial evidence to support the findings and conclusions required for certification of the site and related facility. (20 C.C.R. § 1748[d].) CEQA defines "substantial evidence" as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached." (14 C.C.R. § 15384[a].) In this case, Beacon has more than met this burden, and has presented sufficient substantial evidence to support the findings required for certification in all topic areas.

Once the initial burden of proof has been satisfied, both the Commission's regulations and CEQA in general shift the burden of supporting any additional condition, modification, or other provision relating to the design or operation of a project to the person who proposes it. (20 C.C.R. § 1748[e].) While CURE demands many additional measures to address the Project's impacts, CURE has failed to meet its burden of demonstrating the need for and feasibility of these measures, as discussed below. (See *id.*)

C. The Project Will Be Located on Previously Disturbed Agricultural Land, Minimizing Impacts to Biological Resources.

Beacon spent a great deal of time and effort selecting a site for the Project that would minimize impacts to biological resources. The proposed Project site will be located on previously farmed lands, in an area containing little vegetation and no suitable habitat for special status listed species. (Ex. 129 at 1.) Beacon's experts for Mohave ground squirrel ("MGS") and desert tortoise ("DT"), each of whom has over three decades of experience studying their respective species, both testified that the degraded nature of the Project site is nearly perfect for minimizing impacts to the special status species. (3/22/2010 RT 287:6-22; 319:2-23.)

The total area that would be fenced and subject to disturbance during the construction of the Project is 2,012 acres. (Ex. 500 at 4.2-6.) The power block and solar arrays would occupy approximately 1,266 acres. (*Id*.) Condition of Certification BIO-11 requires the Project owner to arrange for the acquisition and enhancement of 115 acres of habitat suitable for these species (100 acres of which will compensate for impacts at the Project site), thereby fully mitigating impacts to DT and MGS. (Ex. 500 at 4.2-93; see also Ex. 220 at 59.) Potential take of DT and MGS and impacts to these species would be fully mitigated with implementation of Staff's proposed Conditions of Certification BIO-9 through BIO-12. (Ex. 500 at 4.2-1.)

In addition, Condition of Certification BIO-17 requires similar impacts compensation in the form of 20 acres of western burrowing owl ("WBO") habitat and a 6-acre WBO relocation area to mitigate all impacts to WBO. (Ex. 338 at BIO-10 through BIO-12.)

1. Appropriate Biological Surveys Have Been Conducted for All Species, for All Project Components.

The Application for Certification for the Beacon Solar Energy Project (08-AFC-02) (AFC) includes sensitive species surveys covering a 2,317 acre area, which includes the 2,012-acre Project site.[5] (See Ex. 35 [the "2007 Spring Survey"] at 16.) In addition, Beacon extended the special status species surveys to include a one mile buffer area around the Project's boundaries. (Ex. 7 at 12; Ex. 35 at vi.) This additional buffer was included to satisfy the Commission's Draft Recommended Biological Resources Field Survey Guidelines for Large Solar Projects (the "CEC Draft Guidelines"). (Ex. 7 at 9; Ex. 35 at vi.) The surveys were conducted in conformance with all applicable Commission, CDFG and USFWS requirements. (Ex. 7 at 8.) Protocol surveys were conducted for DT and WBO. (Ex. 35 at vi.)

After completion of the initial comprehensive biological resource surveys, three areas were added to the Project in 2008: (1) an approximately 80-acre parcel in the north-central position of the plant site, (2) an approximately 30-ft wide strip of land along the north side of the access road [Beacon purchased and surveyed the 14-acre parcel but only the narrow strip is part of the Project], and (3) the 17.6-mile natural gas pipeline route. (Ex. 87.) In addition, the emergency access route was added to the project in 2009 and extends from the eastern edge of the plant site, extending east to Neuralia Road. (Ex. 171.) These parcels were covered by another spring survey in 2008 (the "2008 Spring Survey") and 2009 ("2009 Emergency Access Road DT and

[5] At the time the survey was conducted, the Project boundaries were still being refined, and therefore a larger area was surveyed to ensure the entire Project site would be included. (Ex. 7 at 7.)

WBO Surveys"). (Ex. 87; Ex. 198; Ex. 199.) Despite the fact that these additional areas are highly disturbed from past agricultural activities, the additional areas were subject to all of the same required biological resource surveys that were conducted at the Project site in the 2007 Spring Survey. (Ex. 7 at 9; Ex. 87, Ex. 198; Ex. 199.)

The surveys demonstrate that the Project site is unsuitable habitat for any listed species, including DT and MGS. (Ex. 35 at 60; 3/22/2010 RT 278:18-25.) It is important to note that in the Project's 24 months of environmental review, not a single environmental group has commented that the biological resources analyses or proposed mitigation measures are in any way inadequate. Only CURE, a labor organization, has made those claims. (3/22/2010 RT 279:1-6.)

Regarding the additional parcels added to the Project site, CURE argues that "surveys less than 100 percent…were less than adequate to establish baseline," and therefore the impact analysis was flawed. (3/22/2010 RT 255:9-21.) CURE is incorrect. The 2008 Spring Survey and 2009 Emergency Access Road DT and WBO Surveys included 100% protocol coverage of all of the additional areas and, as expected, yielded results similar to the 2007 surveys. (Ex. 87, Ex. 198; 199.)

a. *Protocol Desert Tortoise Surveys Are Complete, and Pre-Construction Surveys Will Occur Prior to Construction.*

The Project site was surveyed by USFWS-approved biologists in conformance with both the CEC Draft Guidelines and the USFWS Field Survey Protocol for Any Non-Federal Action That May Occur Within The Range of the Desert Tortoise (1992). (Ex. 7 at 11; Ex. 35 at 20.) The survey revealed no evidence that tortoises currently inhabit the survey area. (Ex. 7 at 20; Ex. 35 at 39.) Furthermore, Dr. Karl concluded that the eastern section of the survey area, the plant site, is not suitable for either maintenance or recovery of the DT population. (*Id*.)

Based on the survey results and the lack of significant vegetation cover, no or very few DTs will require clearance from the plant site or transmission line route. (Ex. 130 at 1.) Any tortoises moved would not be relocated outside of their home range, but instead would simply be moved to another part of their home range adjacent to the Project site. (Ex. 130 at 1.) Condition of Certification BIO-9 also requires pre-construction clearance surveys for DT within all fenced areas. (Ex. 338 at BIO-9.)

b. *Protocol Burrowing Owl Surveys Are Complete, and Pre-Construction Surveys Will Occur Prior to Construction.*

The Project site contains habitat suitable for WBO. (Ex. 500 at 4.2-21.) During the 2007 Spring Surveys (collectively, the "2007 Spring Survey"), five burrows with recent sign were detected within the Project area. Two individual WBO were observed within the Project site boundary, likely representing two pairs of owls occupying areas within the Project boundary. (Ex. 500 at 4.2-21.)

During the 2008 spring surveys for the 80-acre addition to the Project site and the natural gas pipeline corridor (collectively, the "2008 Spring Survey"), two WBO were observed in flight, both outside of the Project site, although one was observed within the 1,000 foot buffer along the

pipeline. (Ex. 87 at 28.) One active owl burrow with owl sign was detected in the 80-acre parcel, one inactive owl burrow with owl sign was found in the buffer to the 14-acre parcel, two inactive burrows were found in the plant site buffer, and the remaining burrows were detected within the gas pipeline buffer. (Ex. 87 at 28.)

It is important to note that the surveys completed as of this date are not the last analysis that will be done regarding WBO. Condition of Certification BIO-17 requires pre-construction surveys for WBO within the Project site and along all linear facilities. (Ex. 338 at BIO-10.) These surveys must be conducted in accordance with CDFG's adopted guidelines (Ex. 608), and the California Burrowing Owl Consortium's Burrowing Owl Survey Protocol and Mitigation Guidelines (1993) (the "CBOC Guidelines," Exhibit 607 in this proceeding). (*Id.*)

CURE claims no protocol surveys have been conducted for WBO, and that such surveys will not be conducted until after the Project is conditionally approved. (Ex. 600 at 10.) This is simply untrue. Beacon conducted surveys for WBO according to the protocol established by both the CBOC Guidelines and the California Department of Fish and Game Staff Report on Burrowing Owl Mitigation (1995) ("CDFG Staff Report," Exhibit 608 in this proceeding). (Ex. 7 at 12; Ex. 35 at vi and 21-22; Ex. 325 at A48.) These surveys included the entire Project site, with the addition of a one-mile buffer in all directions as required by Commission. (Ex. 35 at vi; 20 C.C.R. Div. 2, Chptr. 5, App. B[g][13][B].) Exhibit 325 includes a detailed discussion of the phases involved in these protocol surveys. (See Ex. 325 at A48.) However, Staff noted in the FSA that even if Staff agreed with CURE's assertion that Beacon's reports were inadequate, additional reports or surveys would be pointless because the mitigation measures in Condition of Certification BIO-17 would not change as a result of any new survey information. (Ex. 500 at 4.2-58.) Furthermore, Staff has already assumed presence of WBO on the Project site and along the Project's linears, and the impact avoidance and minimization measures are required in light of this fact. (Ex. 500 at 4.2-58.)

c. *The Project Surveys Reveal the Project Site Lacks Habitat to Sustain a Mohave Ground Squirrel Population.*

Beacon sponsored a field assessment of habitat conditions for MGS in August and October 2007. (Ex. 7 at 12.) This survey was conducted by Dr. Philip Leitner, an expert with 31 years of experience studying the MGS. (3/22/2010 RT 279:17-21.) The results of the assessment demonstrate that the Project site east of State Route 14 (the plant site) lacks the resources to support MGS. (3/22/2010 RT 283:9-11.) As the plant site east of State Route 14 is not a natural community suitable for MGS, no protocol-level surveys were required. (3/22/2010 RT 284:2-8.) The proposed transmission line route located west of State Route 14 was determined to be suitable for MGS and was presumed to be occupied. (Ex. 36, "Mohave Ground Squirrel Habitat Assessment" at 3.) Even though the plant site does not contain habitat suitable to sustain a population of MGS, both Beacon and Staff have considered the possibility that transient individuals could occur at the plant site, resulting in a slight chance of incidental take. (See Ex. 500 at 4.2-35 through 4.2-36; 3/22/2010 RT 287:23-288:21.) To address this possibility, and to compensate for impacts to MGS west of State Route 14, Condition of Certification BIO-11 requires the Project owner to mitigate impacts to MGS by conserving and enhancing 115 acres of land suitable for MGS, as discussed in greater detail below. (Ex. 338 at BIO-3 to BIO-7.)

CURE maintains that a protocol-level survey for MGS was required by the CDFG Mohave Ground Squirrel Survey Guidelines (January 2003) (the "MGS Guidelines"). (See Ex. 632 at 1; 3/22/2010 RT 290:5-11.) However, the MGS Guidelines are clear that such a survey is only required "if the proposed site has potential habitat of this species and the presence of the species on the project site is unknown." (Ex. 603 at 1.) To constitute potential habitat, the land must support desert scrub vegetation as described by Holland, which is not present on the plant site east of State Route 14. (See Ex. 603 at 1; see also 3/22/2010 RT 284:9-25; 295:6-16.) Dr. Leitner's conclusion is well informed – he was involved in the 2003 revision of the MGS Guidelines in his capacity as a member of the technical advisory group that advises CDFG regarding MGS. (3/22/2010 RT 284:25-285:9.) Dr. Leitner testified that he has never seen any indication that the MGS Guidelines would consider the vegetation on the plant site to be native desert scrub requiring a survey. (*Id.*)

d. *CURE's Witness Lacks Qualification to Address Impacts to, and Mitigation For, the Sensitive Species At Issue In This Proceeding.*

Michael Bias sponsored CURE's testimony on the topic of biological resources. Beacon agreed in the interest of time at the evidentiary hearing to "stipulate that he [Dr. Bias] can testify to areas within the expertise as laid out in his résumé." (3/22/2010 RT 253:15-254:2.) Beacon would like to briefly comment on his expertise with regard to the sensitive desert species at issue in this proceeding. Dr. Bias's résumé demonstrates that Dr. Bias has extensive expertise with the salt marsh harvest mouse and California spotted owl. (See Ex. 635.) However, those species are not at issue here, and there is no indication from Dr. Bias's résumé that he has any experience whatsoever with *any* of the three sensitive species (DT, MGS and WBO) at issue in this proceeding. Scott Cashen, who drafted CURE's testimony, apparently has at least some experience with pre-construction burrowing owl surveys, but his résumé similarly lacks any indication that he has any experience whatsoever with either DT or MGS. (Ex. 602 at 4.) In sharp contrast, Beacon's experts on DT, WBO, and MGS each have been studying impacts to, and mitigation for, their specific species for many years. (3/22/2010 RT 279:17-21 and 318:16-18; see also Ex. 272, Ms. Guigliano has not only directly participated in WBO assessments and surveys [Ex. 272 at 10-11] but oversaw the work performed by Lyndon Quon see Ex. 288 and other staff biologists with WBO experience at AECOM.)

Dr. Bias' lack of experience with DT, MGS and WBO is relevant in weighing the testimony as between Beacon's witnesses and Dr. Bias. Courts have held in prior CEQA cases that "[w]hen the evidence on an issue conflicts, the decisionmaker is permitted to give more weight to some of the evidence and to favor the opinions and estimates of some of the experts over the others." (*Association of Irritated Residents v. County of Madera* [5 Dist. 2003] 107 Cal.App.4th 1383 at 1397 [citations omitted].) In evaluating the testimony in this proceeding, it is therefore entirely proper for the Committee to consider the witnesses' relative experience (or lack thereof).

2. <u>The Agencies Have Concurred With the Project's Proposed Mitigation for All Sensitive Species.</u>

During the course of the Project proceedings, Staff consulted with CDFG and USFWS to develop conditions of certification that would avoid or minimize any impacts to biological resources, including special status species. (3/22/2010 RT 349:1-5.) Both CDFG and USFWS

have agreed to the proposed mitigation measures, and Staff concluded that the mitigation measures are sufficient to fully mitigate any impact to listed species. (3/22/2010 RT 355:14-356:3.)

a. *The Project Includes Mitigation Measures to Fully Mitigate Any Impacts to Desert Tortoise.*

Despite the fact that there is no DT habitat on the plant site, Condition of Certification BIO-11 requires Beacon to purchase and preserve in perpetuity 115 acres of DT habitat in an area targeted for DT conservation and recovery, to mitigate and compensate impacts to DT. (3/22/2010 RT 320:12-23; Ex. 338 at BIO-3 to BIO-7.) This mitigation land must be suitable DT habitat, and the Project owner must provide funding for the enhancement and long-term management of the mitigation land. (*Id.*) The land selected for mitigation must be approved by the CPM, in consultation with USFWS and CDFG. (*Id*.) This will compensate for the possibility that transient DT individuals could reach the plant site, and for impacts to DT on the transmission line route west of State Route 14. (3/22/2010 RT 343:17-24.) Therefore, the Project will have a net benefit to DT recovery. (3/22/2010 RT 320:20-25.)

CURE's witness claimed at the evidentiary hearing that an area of 115 acres for MGS and DT mitigation is insufficient because the Project will cause a loss of 429.5 acres of desert scrub. (3/22/2010 RT 258:17-21.) CURE's claim is misinformed, as the record is clear that what little desert scrub exists at the plant site is highly degraded and would not support these species. (See Ex. 7 at 6-7, Ex. 500 at 4.2-50; 3/22/2010 RT 318:24-319:23; 329:16-331:8.)

CURE claims formal consultation with USFWS is required because the surveys revealed tortoise sign in the Project site. (Ex. 600 at 18; see Ex. 35 at 39.) This is incorrect because the presence of some sign does not automatically result in a determination that a specific location is occupied. (Ex. 326 at A10.) No recent or active sign was found at the Project site, and most of the limited sign found during the surveys was over four years old and did not indicate current habitation of the site by DT. (Ex. 326 at A10; 3/22/2010 RT 327:1-329:6.) The two juvenile carcasses found on the Project site were likely carried there from offsite, as they showed signs of raven depredation. (*Id.*; see also Ex. 605 at 7.)

b. *The Project Includes Mitigation Measures to Fully Mitigate Any Impacts to Mohave Ground Squirrel.*

Dr. Leitner testified that even though no MGS are anticipated at the plant site, some individuals could temporarily move through the plant site, resulting in a small possibility of incidental take. (3/22/2010 RT 284:24-288:4-21.) Condition of Certification BIO-11 is intended to address precisely this possibility. This condition requires Beacon to mitigate impacts to MGS by conserving 115 acres of land suitable for MGS (including 100 acres for the plant site). (Ex. 338 at BIO-3 to BIO-7.) The Project owner must also provide funding for the enhancement and long-term management of the mitigation land. (*Id.*) The land selected for mitigation must be approved by the CPM, in consultation with USFWS and CDFG. (*Id*.) The proposed mitigation is more than sufficient to fully compensate for any incidental take that may occur. (3/22/2010 RT 288:22-289:2.)

c. *The Project Includes Mitigation Measures to Fully Mitigate Any Impacts to Western Burrowing Owl.*

The Project's mitigation for impacts to WBO assumes two pairs are present at the Project site. (3/22/2010 RT 344:4-9.) This is based on survey results indicating that only individuals, conservatively assumed to be two pairs, actually inhabit the Project site. (See Ex. 325 at A49; 3/22/2010 RT 324:11-25.) To mitigate impacts to WBO due to relocation, Condition of Certification BIO-17 requires the Project owner to install at least four artificial burrows (or at least two burrows for each owl displaced by the Project) in the 6-acre proposed relocation area immediately north of the Project site. (Ex. 338 at BIO-10.) The design of these burrows will be consistent with CDFG's guidelines. (Ex. 338 at BIO-10.)

In addition to protecting the 6-acre relocation area, Condition of Certification BIO-17 requires the Project owner to acquire 20 acres of suitable WBO habitat, and to provide for the enhancement and long-term mitigation of this land. (Ex. 338 at BIO-11; 3/22/2010 RT 344:4-9.) In the event that the preconstruction surveys locate more WBO at the Project site, a Burrowing Owl Monitoring and Mitigation Plan is required. (Ex. 338 at BIO-10.) This plan will include detailed measures to avoid and minimize impacts to WBO in and near the construction areas, and will be consistent with the CDFG's guidelines. (*Id.*) Furthermore, prior to commencement of construction within the Project site and along all linear facilities, the Project owner will conduct pre-construction surveys in accordance with the CBOC Guidelines. (Ex. 338 at BIO-10; 3/22/2010 RT 344:10-14.)

CURE also argues that the baseline assessment of number of WBO across the Project site is inadequate, because the surveys detected as many as nine individual owls. (Ex. 600 at 10-11; 3/22/2010 RT 255:22-256:7.) As explained at the evidentiary hearing, the three surveys addressing WBO occurred at different times. No more than two individuals were found within the Project site limits in any given year, and there is no reason to assume that the individuals detected in different years during different protocol surveys were independent individuals. (Ex. 325 at A49; 3/22/2010 RT 324:11-25.)

3. <u>The Rosamond Pipeline Alternative Makes Use of Previously Disturbed Rights-of-Way, and Has Been Sufficiently Analyzed and Mitigated.</u>

As discussed in further detail in Section IV.A below, the Project as proposed would use recycled water for its cooling needs. Two potential sources of recycled water are currently under consideration: the Rosamond Community Services District ("RCSD") and California City. Either option would require the construction of a pipeline to convey the recycled water from the treatment facility to the Project.

In the case of the pipeline connection to RCSD, the 40-mile route essentially consists of two segments. The northern 17.6 miles of the route is identical to that analyzed for the previously proposed natural gas pipeline. (Ex. 500 at 4.2-8; 3/22/2010 RT 325:14-326:3.) The Project will no longer require a natural gas pipeline, but since the northern segment of the Rosamond water pipeline would follow the same route, the analysis already done for the natural gas pipeline applies to the water pipeline. (See *id*.)

The southern 23 miles of the Rosamond pipeline is addressed in detail in Appendix A of the FSA. (See Ex. 500, Biological Resources Appendix A.) In sum, all portions of the Rosamond pipeline alternative have been carefully analyzed in full compliance with the law. Because the pipeline would be constructed along existing disturbed rights-of-way, and because the pipeline's construction would be subject to the avoidance and mitigation measures in the Project's Conditions of Certification, construction and operation of the Rosamond pipeline would cause no significant unmitigated impacts.

a. *The Rosamond Pipeline Analysis and Mitigation Is More Than Sufficient to Satisfy the Requirements of CEQA and the Warren-Alquist Act.*

The analysis of the Rosamond pipeline alternative is more than sufficient to support a finding that the Rosamond pipeline will comply with all applicable LORS and will have no significant unmitigated impacts to the environment. As mentioned above, the northern 17.6 miles of the Rosamond water pipeline follows the same route already analyzed for the Project gas pipeline in the 2008 Spring Survey, so this analysis applies to the water pipeline. (Ex. 87 at iv; Ex. 500 at 4.2-8; 3/22/2010 RT 325:14-326:3.) The pipeline would be constructed entirely within the disturbed shoulders of existing roads or within the road bed, with the exception of the last 1.8 miles toward the Project site, where the pipeline is proposed to be installed within an already-disturbed SCE distribution line right-of-way. (Ex. 7 at 9.) The gas pipeline route received 100 percent protocol-level survey coverage for general biological resources, DT, WBO, and special status plants. (Ex. 87 at iv.) The 2008 Spring Survey was conducted according to the same standards used for the Project site in the 2007 Spring Survey, discussed above. (See Ex. 87 at 10-11.) The 2008 Spring Survey concluded that all Project activities associated with the gas pipeline route will occur only in disturbed areas, and thus will have no impact on vegetation or habitat. (Ex. 87 at 28.)

Staff surveyed the southern 23 miles of the pipeline. (See Ex. 500, Biological Resources Appendix A; see also 3/22/2010 RT 356:11-16.) Staff conducted botanical field surveys. Staff also conducted a reconnaissance-level habitat assessment for DT, MGS, and other special status wildlife. (Ex. 500 at 4.2-128.) Staff's analysis assumed presence of DT and MGS and conditions of certification have been included to ensure that potential impacts to the WBO would be adequately mitigated. (3/22/2010 RT 366:15-21; Ex. 338 at BIO-10 to BIO-12.) All areas of the pipeline will be subject to the same avoidance and minimization measures that apply to the areas west of State Route 14 which contain good habitat for these species. (3/22/2010 RT 350:23-351:20.) Staff concluded the southern 23 miles of the Rosamond pipeline will impact a total of 11.2 acres of native plant communities, Mojave scrub, and saltbrush scrub, 11 acres of which provide good to fair DT and MGS habitat. (Ex. 500 at 4.2-74.) In order to mitigate these impacts, Condition of Certification BIO-21 requires the Project owner to preserve and enhance 33.6 acres of land suitable for DT and MGS. (See Ex. 500 at 4.2-117.) As a result, impacts to listed species will be fully mitigated along the entire pipeline route. (3/22/2010 RT 352:4-8.)

The potential direct and indirect construction impacts to vegetation and wildlife along all linear facilities would be reduced to less than significant levels with mitigation measures described in Conditions of Certification BIO-1 through BIO-8 and BIO-21. (Ex. 500 at 4.2-1.) Furthermore, prior to commencing construction on the Rosamond pipeline, Condition of Certification BIO-20

requires the Project owner to conduct pre-construction surveys. (Ex. 500 at 4.2-114; 3/22/2010 RT 344:10-16.) If special-status plant species are found within 50 feet of the Rosamond pipeline alignment, a qualified biologist must prepare a Sensitive Plant Protection Plan to avoid direct and indirect impacts. (Ex. 500 at 4.2-114 through 115.)

CURE argues the mitigation for impacts to WBO is insufficient because it fails to compensate for impacts along the 23 miles of the Rosamond recycled water pipeline. (3/22/2010 RT 255:5-8.) However, all of the minimization and avoidance measures that apply to the Project's linear facilities are extended to the Rosamond pipeline amendment via Condition of Certification BIO-17. This condition requires pre-construction surveys along all linear facilities. (Ex. 332 at BIO-17.) If WBO are detected within 500 feet of any proposed construction activities, the Designated Biologist must prepare a Burrowing Owl Monitoring and Mitigation Plan in consultation with CDFG, USFWS, and Staff. (*Id.*) This plan must include detailed measures to avoid and minimize impacts to WBO in and near construction areas, in conformance with CDFG guidance. (*Id.*) If owls are displaced by the construction of the Rosamond pipeline, additional artificial burrows would also be created in the relocation area per Condition of Certification BIO-17. (*Id.*)

b. *CURE's Concerns Regarding the Rosamond Pipeline Analysis Are Unfounded.*

CURE claims that protocol surveys were not conducted along the natural gas pipeline route (or, for present purposes, the northern 17.6 miles of the Rosamond pipeline route). (Ex. 632 at 8-9.) This is simply not true, as CURE neglects to mention the 2008 Spring Survey. In that survey, the gas pipeline route received 100 percent protocol-level survey coverage for general biological resources, DT, WBO, and special status plants. (Ex. 87 at iv; see also 3/22/2010 RT 321:3-8; 323:3-25, and 325:1-13.)

At the evidentiary hearing, CURE's witness testified that the Rosamond pipeline would impact 4,700 acres, and therefore that the Project's 11 acres of DT and MGS mitigation is insufficient. (3/22/2010 RT 259:21-260:2.) However, CURE's witness is confusing the *area of study* with the area of impact to habitat. Construction of the 40-mile pipeline will impact 11.2 acres of DT and MGS habitat, of which only about 1.84 acres will be permanent disturbance since the pipeline will be buried. (3/22/2010 RT 350:6-351:4 and 373:7-23; see also Ex. 500 at 4.2-74.) Pursuant to Condition of Certification BIO-21, the Project will mitigate for these impacts at a ratio of 3:1, which is consistent with Commission and CDFG mitigation recommendations for impacts to DT and MGS habitat in the region. (Ex. 500 at 4.2-74; 4.2-116 through 4.2-118 [Condition of Certification BIO-21].) The Project will employ the same avoidance and mitigation measures that are in place for the transmission line areas, contained in Conditions of Certification BIO-1 through BIO-8, and BIO-12. (See Ex. 500 at 4.2-74; 4.2-78 through 4.2-100.) (3/22/2010 RT 351:5-20.) These measures were designed for an area where good habitat exists for these species, and therefore are more than adequate to address impacts in an area of degraded habitat such as the rights-of-way along which the recycled water pipelines would be constructed. (*Id.*)

c. *The Potential Alternate Route Through Edwards Air Force Base Has Been Sufficiently Analyzed.*

Within the Rosamond pipeline alternative, there are two potential routes for the southernmost portion of the pipeline. (See Ex. 500, Biological Resources Appendix A – Figure 1 [Vicinity

Map]. The "Western Alternative Route," which travels to the west of Edwards Air Force Base, was studied by Staff, as discussed above in section I.C.3 of this brief. The "Eastern Alternative Route" passes through the far western part of EAFB. Air Force Form 813 has been submitted for the Eastern Alternative Route. (See Ex. 639.) The Air Force uses AF Form 813 to document the need for environmental analysis or for certain categorical exemption determinations for proposed actions. (See 32 C.F.R. § 989.12.) The Form 813 filed for the Eastern Alternative Route notes that the construction of the pipeline would be subject to a categorical exclusion and, with the implementation of the minimization measures contained in Form 813, would require no additional environmental review. (See Ex. 639; see also 32 C.F.R. Part 989, Appendix B [list of categorical exclusions].)

4. The California City Pipeline Alternative Makes Use of Previously Disturbed Rights-of-Way, and Has Been Sufficiently Analyzed and Mitigated.

The bulk of the California City pipeline alternative follows the same path as the natural gas line route discussed above in section I.C.3.a of this brief. (See Ex. 500 at Biological Resources Appendix A – Figure 1, and Ex. 506 [Letter of Intent from California City Regarding Tertiary Water for the Beacon Solar Energy Project (March 22, 2010)].) Therefore, the studies already completed for the natural gas pipeline would apply to the California City water pipeline. The gas pipeline route received 100 percent protocol-level survey coverage for general biological resources, DT, WBO, and special status plants. (Ex. 87 at iv.) The 2008 Spring Survey concluded that all Project activities associated with the gas pipeline route will occur only in developed areas, and thus will have no impact on vegetation or habitat. (Ex. 87 at 28.) The same mitigation measures that will apply to the Project's other linear facilities will also apply to the California City pipeline alternative. (See Ex. 338 at BIO-15 and BIO-17.)

The only section of the California City pipeline alternative that was not included in the Project's previous natural gas pipeline analysis is a short section along Mendiburu Road. (See Ex. 506 [Letter of Intent from California City Regarding Tertiary Water for the Beacon Solar Energy Project (March 22, 2010)] at Appendix B[1].) California City staff has proposed to use existing road rights-of-way in building this section of the pipeline. (Ex. 500 at 4.5-7; see also Ex. 506 [Letter of Intent from California City Regarding Tertiary Water for the Beacon Solar Energy Project (March 22, 2010)] at Appendix B[1].) Given that this stretch of the pipeline would be built in disturbed areas along an existing road, and given the temporary nature of the construction of a buried pipeline, impacts from the Mendiburu Road section of the water pipeline would be less than significant.

5. The Federal ESA Section 10 Incidental Take Coverage Process Is Not Relevant to the Commission's Approval of the Project.

CURE argued at the evidentiary hearing that the FSA fails to make a conclusion regarding the Project's consistency with the federal Endangered Species Act ("ESA") as part of the Project's LORS analysis. (3/22/2010 RT 379:1-25.) This too is incorrect. The Biological Resources section of the FSA contains a section titled "Compliance with LORS," that addresses the federal ESA's incidental take requirements and discusses the potential for a Section 10 take authorization process for the Project. (See Ex. 500 at 4.2-46 and -47.) In accordance with ESA

Section 10, Beacon has chosen to prepare an application for an incidental take permit and a draft Habitat Conservation Plan ("HCP"). (See Ex. 220; Ex. 500 at 4.2-47.) Furthermore, the conditions of certification ensure that the Project's construction can be suspended to prevent the illegal take of an endangered, threatened, or candidate species.[6]

As discussed above, the likelihood of take during Project construction and operation is low. Therefore, it is likely that no violation of the federal ESA would occur even if the Project went forward without federal incidental take coverage. However, even if take were likely to occur and the Project did not have incidental take coverage, courts have made clear that CEQA does not require the Commission to compel the Project to obtain incidental take coverage. (See *Association of Irritated Residents v. County of Madera* [2003] 107 Cal.App.4th 1383, 1397 ["CEQA neither requires a lead agency to reach a legal conclusion regarding 'take' of an endangered species nor compels an agency to demand an applicant to obtain an incidental take permit from another agency"].) Therefore, CURE's concerns regarding incidental take coverage are irrelevant to the AFC proceedings for the Project.

6. CURE Has Not Met Its Burden to Require The Additional Mitigation Measures It Requests.

Throughout this proceeding, CURE has demanded additional mitigation measures to address impacts perceived by CURE. (See, e.g., Ex. 600 and Ex. 632.) The Commission's regulations are clear that once the project applicant has satisfied its initial burden of proof by presenting sufficient substantial evidence to support the findings and conclusions required for certification of the site and related facility, the burden of supporting any additional condition, modification, or other provision relating to the design or operation of a project shifts to the person who proposes it. (20 C.C.R. § 1748[e].)

In this case, as discussed above, Beacon has provided sufficient substantial evidence to support a finding that the Project as proposed will not cause any significant impacts to biological resources. Because the Project's impacts to biological resources will already be fully mitigated, and because CURE has failed to demonstrate any other need for the additional conditions it proposes, CURE has failed to satisfy its burden. Therefore, the additional mitigation measures proposed by CURE are neither necessary nor required.

II. THERE IS SUBSTANTIAL EVIDENCE SUPPORTING A FINDING THAT THE IMPACTS TO VISUAL RESOURCES WILL NOT BE SIGNIFICANT UNDER CEQA.

When the record is reviewed as a whole, it is apparent that there is simply not enough substantial evidence to support a finding that proposed Project's change in aesthetics or contrast (*or brightness)* is a substantial adverse or degrading one, such that it would amount to a significant and *unavoidable* impact under CEQA. While CEQA is to be construed liberally in favor of the

[6] Ex. 500 at 4.2-81 (Condition of Certification BIO-5, granting the Designated Biologist the authority to immediately stop any activity that is not in compliance with the conditions and/or order any reasonable measure to avoid take of an individual of a listed species) and 4.2-99 (Condition of Certification BIO-11, granting the CPM the authority to stop construction to prevent the illegal take of an endangered, threatened, or candidate species).

environment (*Bowman v. City of Berkeley* [2004] 122 Cal.App.4th 572, 593), the law is equally clear that significance determinations (one way or the other) must be supported by substantial evidence in light of the whole record. (Pub. Res. Code § 21082.2; 14 C.C.R. § 15064[f].) The record contains a great amount of substantial evidence, most if it from Mr. Paulson and some from Mr. Hamblin, that the impacts to visual resources should not be considered significant *at this particular site*. The record lacks substantial evidence, however, to conclude that the Project would have a significant, adverse impact on a visual resource.

A. A Finding of a Significant Adverse Visual Impact Must Be Based Upon a Substantial Adverse Change to the Existing Environment.

The function of an EIR under CEQA is to "identify the significant effects on the environment of a project." (Pub. Res. Code § 21002.1[a].) The CEQA Guidelines define the term "significant effect on the environment" as "a substantial, or potentially substantial, *adverse* change in physical conditions . . . ." (*Id.* at § 21151[b] (emphasis added.) Because one of CEQA's stated purposes is "to provide the people of this state with ... enjoyment of aesthetic, natural, scenic, and historic environmental qualities," and therefore aesthetic issues are among those that are properly studied in any environmental review under CEQA. (Pub. Res. Code § 21001[b], see *Bowman, supra*, 122 Cal.App.4th at 584; *Mira Mar Mobile Community v. City of Oceanside* [2004] 119 Cal.App.4th 477, 492.)

An agency must determine whether the project will have a significant impact on a resource based on substantial evidence "in light of the whole record." (Pub. Res. Code § 21082.2.) The record here, taken as a whole, contains substantial evidence supporting a finding that the Project will not have a significant, adverse impact on visual resources. The significance of an environmental impact should be measured in light of the context where it occurs. (*Bowman, supra*, 122 Cal.App.4th at 589.) The Guidelines confirm that "the significance of an activity may vary with the setting. For example, an activity which may not be significant in an urban area may be significant in a rural area." (14 C.C.R. § 15064[b].)

> [A] lead agency has the discretion to determine whether to classify an impact described in an EIR as 'significant,' depending on the nature of the area affected. (CEQA Guidelines § 15064[b]; *National Parks & Conserv. Assn. v. County of Riverside* [1999] 71 Cal. App.4th 1341, 1357 [varying thresholds of significance may apply depending on the nature of the area affected].) In exercising its discretion, a lead agency must necessarily make a policy decision in distinguishing between substantial and insubstantial **adverse** environmental impacts based, in part, on the setting.

(*Mira Mar, supra*, 119 Cal.App.4th at 493 (emphasis added).) While the Beacon Solar Energy Project might be said to have a significant adverse impact on visual resources if placed in a different, undeveloped area of the desert, it cannot be said to have a substantial, adverse impact on visual or aesthetic resources at its proposed location due to the already disturbed nature of the landscape.

B. Neither CEQA nor the Standards Applied in the FSA Compel a Finding of a Significant Adverse Impact.

CEQA Guidelines Appendix G sets forth the initial inquiries lead agencies should make to determine whether a project will have a significant adverse impact on aesthetics. The lead agency should ask whether the project would:

> (a) Have a substantial adverse effect on a scenic vista;
>
> (b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
>
> (c) Substantially degrade the existing visual character or quality of the site and its surroundings; or
>
> (d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. (14 C.C.R. § 15000 et seq. Appendix G ["Appendix G"].)[7]

Other than the suggested inquiries posed in Appendix G, CEQA does not contain or endorse any specific thresholds for determining the significance of impacts to visual resources. Instead, CEQA case law has consistently recognized that consideration and determination of the overall aesthetic impact of a project is by its very nature subjective. (*See Ocean View Estates Homeowners Assn. v. Montecito Water Dist.* [2004] 166 Cal.App.4th 396, 402; *Bowman, supra,* 122 Cal.App.4th at 591 (quoting *Maryland-Nat. Cap. Pk. & Pl. Comm. v. U.S. Postal Svc.* [D.C. Cir. 1973] 487 F.2d 1029, 1038-39 for the proposition that some questions of aesthetics do not seem to lend themselves to the detailed analysis required in an EIR or EIS because "they are not readily translatable into concrete measuring rods"). While the rubric prepared by Staff in the FSA is helpful, it should not in any way be taken as the authoritative or mandatory approach to answering these questions.

Of the suggested inquiries listed in Appendix G, Staff felt that only one, the question of whether the Project would substantially degrade the existing character or quality of the site and its surroundings, compelled a finding of a significant adverse impact. However, neither the analysis in the FSA nor the testimony presented at the evidentiary hearing supports this finding, because there is no substantial evidence that the changes presented by the project will be "substantially degrading" or "adverse."

[7] Although Appendix G, along with the rest of the CEQA Guidelines, is constantly being updated, it is noteworthy that a previous version of Appendix G, at least as of 1994 stated: "A project will normally have a significant effect on the environment if it will . . . (b) Have a *substantial, demonstrable negative* aesthetic effect[.]" *Quail Botanical Gardens Found., Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1604 (emphasis added). Consistent with today's guidance, the focus was on **negative** or **adverse** substantial impacts to visual resources.

1. When Taken in Context, The Project's Visual Impacts Are Not Substantially Degrading or Adverse.

As detailed in the AFC and Mr. Paulson's written and oral testimony, the landscape around and including the Project site is already highly disturbed, and contains strong geometric patterns of development with which the Project would be congruent. (Ex. 19; Ex. 324 at A12, 13, 15, & 16, Slides 3-25.) The existing transfer station and the 7-mile Honda Test Track represent two such developments that already disturb the landscape and draw the eye because of the shape of their disturbance. In addition, the Project site itself, in its existing condition, makes a strong geometric statement on the valley floor and is easily distinguishable from the parcels around it. (*Id.*).

Although the FSA did not make specific mention of context, Staff did refer to the viewshed's "visual absorption capability [which] is the extent to which the complexity of the overall landscape can absorb new elements without changing the overall visual character of the area." (Ex. 500 at 4.12-7.) Given the size and industrial or geometric nature of the existing disturbances, the slides contained in Mr. Paulson's rebuttal testimony (Ex. 324) are substantial evidence that the complexity of the overall landscape in this area of the Fremont Valley has the capability to absorb the Beacon Solar Energy Project without adversely changing the overall visual character of the area. Consequently, it cannot be said that the Project would "substantially degrade the existing visual character or quality of the site or its surroundings" when viewed from either KOP-2 or KOP-6.

In the determination of whether an impact is substantially degrading or adverse, it is also relevant to consider the extent of the impact, in this case, how many people it affects. (Ex. 324 at 2.) The FSA characterizes the hiking trail to KOP-6 to be a "Class 1 hike – least difficult level." (Ex, 500 at 4.12-17). This is a misconception, as the actual location of KOP-6 is on a trail along the ridgeline closest to the Fremont Valley, and can only be reached by a strenuous hike – as stated below, the Chuckwalla Mountain trail is over two miles further west. (Ex. 324 at 5.) It is expected that very few hikers will reach this exact location. (3/22/10 RT 55:13-15.) Nearby trails are used by Off-Road Vehicle (ORV) enthusiasts to a somewhat greater extent, although ORV drivers are generally not as interested as hikers in the views of the Fremont Valley floor. Even with the misconception about the actual location of KOP-6, Staff notes in the FSA regarding KOP-6 that "This number of hikers potentially exposed to a view of the project site is low." (Ex. 500 at 44.12-17.) The number of viewers exposed is even fewer when taking into account that only a small portion of those hikers would be present on the ridgeline on sunny days at the times (an average of a few hours in the evening) when the sun and the mirrors will be in an alignment such that the viewer would see the mirrors reflect the blue sky. (3/22/2010 RT 53:13-23, 54:19-55:1.)

2. A Change or Increase in Contrast, Without More, is Not a Substantial Adverse or Degrading Change.

For both KOP-2 and KOP-6, Staff felt that the degree of contrast between the existing conditions and the proposed project was moderately high or high. (Ex. 500 at 4.12-13 and 4.12-18.) The FSA's analysis fails to mention, however, that the Project site as it exists now already contrasts substantially with other aspects of the desert landscape. (3/22/2010 RT 49:13-20, 50:22-25,

51:1-7, 52:4-10, 52:20-23, 54:4-12; Ex. 324, Slides 11, 17, 20 & 23.) In that respect, the FSA's description of the proposed BSEP site in under the Regional Setting on page 4.12-3 is a bit misleading.[8]

In addition, Staff's testimony, both written and oral, lacks substantial evidence to explain why the perceived change in contrast posed by the Project is nevertheless degrading or adverse. At the evidentiary hearing, Staff's expert witness, Mr. Hamblin, testified that contrast was one of his biggest concerns with this project and solar projects in general:

> And one of them under contrast is brightness. Now, when I'm talking about brightness to the area, and this is why I've identified under--- I highlighted the parabolic trough. I made the statement, the glittering from the parabolic troughs would be seen at various locations. The degree of contrast introduced by the amount of light or brightness that is given off from the surface of the parabolic trough would accentuate the contrast in the surrounding landscape.
>
> . . . .
>
> Now, is there an impact there? Well, under CEQA, yeah, there's some type of impact. Is it significant? I don't know.

(3/22/2010 RT 160:14-24, 161:22-24.)

When asked whether he viewed any change in contrast as a significant impact, Mr. Hamblin ultimately responded:

> Well, contrast concerns the degree to which the proposed project's visual characteristics or elements of form, line, color and texture differ from form, line, color, and texture existing in the landscape.
>
> So if there is a similarity between the design of the project with the form, line, texture within the natural environment, it would be limited contrast.
>
> So I wouldn't be—there would be some contrast, but I wouldn't say it would be significant—I couldn't just rule that it's automatically an impact. A substantial impact. Or substantial degrading, let me say it that way.

(3/22/2010 RT 168:16-169:4.) This admission that a degree of contrast, or even a substantial contrast, is not necessarily a significant adverse impact is consistent with the visual analysis in the AFC. In the AFC, Beacon's visual analyst stated: "From elevated locations at certain times

[8] In that paragraph, the FSA provides the following (and only) description of the existing conditions at the site:

> The proposed BSEP site would occupy approximately 2,012 acres of the Fremont Valley floor. The site is relatively flat with a gentle slope of one to three percent to the northwest. The site is typified by clay and gravelly loamy sand, creosote bush scrub with patches of desert saltbush scrub, desert wash scrub, alfalfa, and ruderal vegetation. The site is essentially undeveloped except for a grouping of abandoned and deteriorating buildings, structures, and mobile homes that served the Fremont Valley Ranch.

(Ex. 500 at 4.12-3.)

of day . . . the facility would contrast substantially with the surrounding environment. At such times, the solar mirrors would be facing the viewer and the solar field visually would resemble a body of water (not necessarily an unpleasant view), because the mirrors would reflect the blue sky. At other times . . . the facility's contrast would be much less." (Ex. 1 at.1-9 to 1-10 .) The FSA also conceded that this temporary "water body" effect might not be unpleasant. "The approximate 1,244 acres of parabolic troughs would have a legible form with high unity which to some viewers at this location may be perceived as interesting and vivid, albeit a human-made sight. From this KOP, the parabolic trough solar collector field during operation would introduce a "glittering effect" similar to a shimmering from a body of water." (Ex. 500 at 4.12-13; see also *id.* at 4.12-18.) Other testimony at the hearings established that even the water-body effect would be apparent only for short periods from certain vantage points (3/22/2010 RT 53:13-23, 54:19-55:1.) and that it would not appear unlike Koehn Lake, which sits to the north and east of the Project site. (*Id.*; 3/22/2010 RT 170:7-12.)

Mr. Hamblin's testimony at the hearing focused on brightness as an aspect of contrast, although he could offer no specific threshold[9] as to what would be considered significant, nor to what degree the project would appear to be "brighter" than the current surface of the land. (3/22/10 RT 16:14- 161:3, 161:22-162:12.) While it is expected that the reflection of the sky in the mirrors would appear brighter than existing landscape for an average of a few hours a day from the elevated KOP-6 and KOP-2 locations, these locations are over two miles from the project site, and the reflection would be diffuse by the time it reached the small number of hikers at that distance, and time of day when the mirror, sun and viewer will be aligned. During all other hours of the days, the desert hues and color of the backs of the arrays would be absorbed into the landscape. (3/22/10 RT 54:22- 55:5, 56:12-15.)

Moreover, as noted in the AFC and in Mr. Paulson's written rebuttal testimony, for certain viewers, the solar field and its occasional lake-like appearance will be positive and visually-interesting, in part because of the environmentally-positive associations of a solar power project. (Ex. 19 at 5.15-11; Ex. 324 at A15.)

C. The FSA Bases its Finding of a Significant Adverse Visual Impact on a Methodology That Does Not Show a Substantially Degrading Effect.

The FSA considered these questions from Appendix G when evaluating the Project's impacts to visual resources. (See Ex. 500 at 4.12-1.) As to the first question, Staff concluded that the project would not have a substantial adverse effect on a scenic vista, noting that the term "scenic vista," while not defined in CEQA, is best understood to mean a view through or between intervening objects of exceptional scenic quality or significance. (*Id.* at 4.12-4.) This would include public views to broadly-recognized human-made or natural scenic features of unusual importance, such as the Golden Gate Bridge in San Francisco. (*Id.*) Staff concluded that "there is no public view to a definable scenic feature of concern in the northern Fremont Valley," nor

[9] Appendix VR-1 of the FSA provides some discussion of color as an aspect of contrast, but does not discuss brightness. (Ex. 500 at 4.12-45 to 4.12-49.) Further, the selection of whether these changes are considered low, moderate or high appears to be completely subjective.

any other type of recognized scenic visa, "that the proposed project would substantially adversely affect." (*Id.*)

With respect to the second inquiry, Staff concluded that the Project would not substantially damage scenic resources. Scenic resources include features such as a unique water feature; a unique physical geological terrain feature; a tree having a unique visual/historical importance to a community, a historic building, or a designated scenic highway or corridor. (*Id.* at 4.12-5.) Because no such resources are present on or near the site proposed for the Project, the Project would not substantially damage any scenic resources. (*Id.* at 4.12-6.)

As to the fourth inquiry, whether the Project would create a new source of substantial light or glare that would adversely affect day or nighttime views in the area, Staff acknowledged that the Project had the potential to introduce light into the nighttime views in the area, but that this impact would be less than significant if the recommended mitigation and design measures were implemented. Staff further concluded that the potential glare from the spilled reflected rays from the parabolic trough solar collectors during normal operations would be "infrequent in the number of occurrences and short in duration of time [thus] they would not represent a substantial new source of glare in the area." (*Id.* at 4.12-24.)

It was only as to the third of the Appendix G questions—would the Project substantially degrade the existing visual character or quality of the site and its surroundings—that Staff answered in the affirmative, finding that the Project "would introduce an unmitigable significant adverse impact to the existing visual character or quality of the site and surroundings" from at least one Key Observation Point (KOP). (See *id.* at 4.12-1.)

During the AFC process, Beacon's visual resources consultant (Mr. Paulson) worked with Staff (Mr. Hamblin) as well as a Red Rock Canyon State Park representative to select eight KOPs representative of a variety of viewsheds around the project site; six of these KOPs were ultimately utilized in the analysis and two were discarded as too far away from the Project site to be of consequence. (*Id.* at 4.12-9.) The FSA considered the effects from each KOP using eight factors: visual quality, viewer concern, visibility, number of viewers, duration of view, contrast, dominance, and view blockage. (*Id.* at 4.12-8.) The first five factors are indicative of "overall visual sensitivity," and the last three comprise "overall visual change," as indicated by Staff's diagram on page 4.12-10 of the FSA. Together, overall visual sensitivity and overall visual change comprise the visual impact significance used by Staff. Using these criteria, Staff concluded that the impacts to visual resources were significant from KOP-6, and potentially significant from KOP-2.

1. KOP-6

KOP-6 is identified in the FSA as the view from the "Chuckwalla Mountain Hiking Trail Looking East" (*id.* at 4.12-9), but this is a bit of a misnomer, since KOP-6 is actually located about two miles east of Chuckwalla Mountain. (Ex. 324 at A10.) Using the eight factors, Staff assessed the visual quality of the view from KOP-6 to be moderately high, viewer concern to be moderately high, visibility and view duration to be potentially high, and number of viewers to be low. Collectively then, Staff placed the "overall visual sensitivity" as moderately high. With respect to the remaining categories, Staff assessed the degree of contrast posed by the Project to be moderately high, dominance to be moderately high, and view blockage to be low. Taken

together, this meant that the overall visual change would be moderate. Staff concluded: "When considering the moderately high overall visual sensitivity and the moderate to moderately high overall visual change, the introduction of the project's publicly visible structures would introduce a *substantial degrading* to [sic] the existing visual character or quality of the site and its surroundings at this KOP" because structures and the glittering from the parabolic troughs could be seen from various points along the trail and/or other elevated points above the valley floor. (Ex. 500 at 4.12-18.)

At the evidentiary hearing, however, as well as in his written testimony, Beacon's expert witness[10] disagreed with all of these conclusions. Mr. Paulson testified that, in his opinion, all of the visual sensitivity factors except visibility were in the low range for this KOP (out of a possible low, moderate, and high), and all three of the visual change factors were also in the low range, due to the existing disturbance of the site and the surrounding landscape. (3/22/2010 RT 55:16- 56:1.)

2. KOP-2

KOP-2 is in the parking lot of the U.S. Bureau of Land Management's Jawbone Canyon OHV Open Area Ridgecrest Field Office, also referred to in the AFC as the Jawbone Canyon Visitor's Center. (Ex. 500 at 4.12-12; Ex. 19 at 5.15-11.) Applying the same criteria from Visual Resources Diagram 1 in the FSA, Staff estimated the visual quality of KOP-2 to be moderate, viewer concern to be low to moderate, and overall viewer exposure (comprised of visibility, number of viewers, and duration of view) to be moderately high. (Ex. 500 at 4.12-12 to 4.12-13.) Aggregating these factors, Staff determined that overall visual sensitivity was also moderately high at this KOP. (*Id.* at 4.12-13.) With respect to the three factors comprising visual change, Staff estimated that contrast would be high, dominance would be moderate, and there would be no view blockage. Aggregating these factors, overall visual change was estimated to be moderate at KOP-2. The FSA concluded: "When considering the moderately high overall visual sensitivity and the moderate overall visual change, the introduction of the project's publicly visible structures *may* substantially degrade the existing visual character or quality of the site and its surroundings." (*Id.* [emphasis added].) Staff was unsure whether the mitigation proposed by Beacon would be effective in mitigating impacts at this KOP. (Ex. 500 at 4.12-14.)

Beacon's expert, Mr. Paulson, disagreed that there would be a significant adverse impact to visual resources as judged from KOP-2. (3/22/2010 RT 55:15- 56:1; Ex. 324 at A13.) Mr. Paulson testified that none of the factors for this KOP should be out of the low range, other than visibility. (3/22/2010 RT 55:15-56:1.) As stated in his written rebuttal testimony, he based these opinions on a comparison of the existing condition surrounding this KOP, which contains

[10] During the evidentiary hearing, it was agreed for the sake of time to forego a recitation of the qualifications of Beacon's visual resources witness, Mr. Paulson, but we would like to draw your attention to his qualifications. (3/22/10 RT 45:14-46:17.) Mr. Paulson's resume is provided as Ex. 290. He has a Masters of Landscape Architecture from Harvard University and has 36 years of experience in assessing impacts to visual resources from a variety of different developments. Beside his current employment with AECOM, he also is a Professor of Landscape Architecture and Environmental Planning at Colorado State University, where he founded and is the lead of their visual resources program. As cited above for biological resources (Section I.C.1.d), decision makers can apply more weight to some evidence and favor the opinion of some experts over others based on relative expertise.

multiple disturbances, with the proposed Beacon Solar Energy Project. As Mr. Paulson noted, "The scene surrounding KOP-2 has not been natural for many decades." (Ex. 324 at A13.)

In short, despite the thoroughness and comprehensiveness of the methodology used in the FSA, the conclusions that certain visual aspects of the Project such as contrast are high or moderately high do not demonstrate that these changes are also *adverse* or *substantially degrading* under the CEQA criteria. As noted by Mr. Hamblin at the evidentiary hearing, the criteria developed by Staff was developed to analyze visual impacts from traditional power plants, and their utility when applied to solar projects is somewhat of an imperfect fit. (*See* RT 173:15-16 (referring to the visual staff as having to take "some shots in the dark within our professional expertise").) While Mr. Hamblin testified that Staff is currently taking steps to update the visual impacts assessment methodology, he appropriately acknowledged that this Committee must make its determinations for this site based on the record and KOP analysis for this proceeding. (RT 173:1-5, 179:19- 176: 3; *c.f.* RT 174:14-15 ("we don't have anything definitive to give you at this time").). In the absence of definitive criteria or testimony from Staff, and given the contrary conclusions reached by Mr. Paulson applying the established CEQA Appendix G criteria, there is simply not substantial evidence for the Committee to find at this time that this particular Project, sited at this location, will be a significant and unavoidable visual impact.

III. THE ENERGY COMMISSION CANNOT GRANT KERN COUNTY'S REQUEST FOR A CONDITION OF CERTIFICATION IMPOSING PUBLIC SERVICES IMPACTS FEES ON THE PROJECT.

On January 15, 2010, Kern County ("the County") provided a letter to the Commission, via Project Manager Eric Solorio, stating the County's opinion that there was a deficiency in the public services analysis for the Project. (3/22/2010 RT 384:15-18.) The County claims, based on their Capital Improvement Plan and other recent studies, that the property taxes paid to the County for the Project and its lands will not cover the costs of the public services and facilities necessary to service the Project over its anticipated 30 year life. (3/22/2010 RT 384:19-386:1.) Therefore, during the public comment period at evidentiary hearing, as well in letters dated January 15, 2010 and March 22, 2010, Kern County requested that the Commission impose a Condition of Certification on the Project that would require the Beacon to pay any annual public services mitigation fee to the County not to exceed $1,060,439 per year. (3/22/2010 RT 386:2-11.) The Committee should respectfully decline Kern County's request because, as discussed further below, such a Condition of Certification would violate both state and federal law.

A. State and Federal Law Requires a Reasonable Nexus Exist Between the Fees That Are Imposed as a Condition of Development and the Actual Cost of the Anticipated Impact.

The federal and state constitutions, as well as California's Mitigation Fee Act, codified at Government Code §§ 66000 *et seq.*, require a factually-sustainable proportionality (*i.e.*, a "nexus" or "reasonable relationship") between fees imposed as a condition of development and the impacts to be addressed through the fees.

The imposition of impact fees, and the relationship of the fee to the impact, was the subject of a seminal California inverse condemnation case, *Ehrlich v. Culver City* (1996) 12 Cal.4th 854. In *Ehrlich*, the developer contested a fee imposed as a condition of development and governed by

the version of the Mitigation Fee Act in place at that time. Just prior to *Ehrlich*, the U.S. Supreme Court had held that a federal Fifth Amendment taking occurred where the government demanded a dedication of property as a condition of development, unless the dedication was "roughly proportional" to the impact caused by the development. (*Dolan v. City of Tigard* [1994] 512 U.S. 374.) In deciding *Ehrlich*, the California Supreme Court held that this federal "rough proportionality" standard also applies to local government exaction of a fee as a condition of development. 12 Cal.4th at 881. In so holding, the Court confirmed that the required proportionality must be *demonstrated* by "some sort of *individualized* determination," *i.e.*, the local government must demonstrate "a factually-sustainable proportionality between the effects of a proposed land use and a given exaction . . ." *Id.* at 880-81 (emphasis added). A "requirement that local government demonstrate a factually sustainable proportionality between effects of proposed land use and a given exaction helps to ensure that land use condition at issue is more than theoretically or even plausibly related to legitimate regulatory ends." *Id.* at 880.

Apparently in response to the U.S. Supreme Court's holding in *Dolan* and the California Supreme Court's holding in *Elrich*, the California legislature substantially amended the Mitigation Fee Act in 1996. The amendments to the Mitigation Fee Act placed limits upon the use of development fees by requiring a nexus between the services required by a specific development and imposition of a fee to fund those services. Specifically, the Mitigation Fee Act puts the burden on the local government imposing the fee to identify: (1) the purpose of the fee; (2) the use to which the fee will be put; and (3) a reasonable relationship between (a) the fee's use and the type of development project on which the fee is imposed; and (b) the need for the facility and type of development project on which the fee is imposed. (Gov. Code § 66001[a].) Government Code section 66005 reiterates that when an exaction fee is imposed, it should not exceed the estimated reasonable cost of providing the service or facility for which the fee or exaction is imposed, and that it was the Legislature's intent in enacting these amendments to codify existing constitutional and decisional law on the subject.

In order to meet the constitutional and statutory nexus requirement, a local agency must have strong factual support for the fee. (*See Bixel Assoc. v. City of Los Angeles* [1989] 216 Cal.App.3d 1208.) Unfortunately, the studies and calculations provided by Kern County to date fall short of meeting that requirement.

B. Kern County's Request for $30 Million is Unsupported by Kern County's Report and is Not a Reasonable, Individualized Estimate of the Service Needs of the Project.

As best can be ascertained by the letters and studies provided by Kern County to date, Kern County has calculated the requested annual fee based on the fact that it considers the BSEP to be an industrial facility. Industrial facility fees, according to the May 2009 Kern County Impact Fee Report ("Impact Fee Report", submitted with the County's January 15, 2010 letter), are based upon an assumed employment density of 1.67 workers per 1,000 square feet. (Impact Fee Report at 14.) It should be self-evident, however, that such an assumption is clearly unfounded for a project the size and nature of the BSEP. Applying that calculation even to just 1,226 of the Project's acreage would result in a presumption of 89,186 employees. Beacon's AFC, by contrast, shows an average of 477 employees on-site per day over the entire 25-month construction period, with a peak month of just 836 workers. (Ex. 15 at 5.11-14.). Following

construction, the Project is expected to employ a total of 66 workers during operation. (*Id.* At 5.11-26.) Kern County's calculation of a public services fee based on pure square footage, and that implicitly assumes the presence of 89,186 workers, and that utilizes none of the project-specific data set forth in the AFC, is unreasonable and bears no rational nexus to the estimated reasonable cost of providing public services to the Project.

Under the Commission's own siting regulations, the proponent of any additional condition, modification, or other provision relating to the manner in which the proposed facility should be designed, sited, and operated in order to protect environmental quality and ensure public health and safety shall have the burden of making a reasonable showing to support the need for and feasibility of the condition, modification, or provision. (20 C.C.R. § 1748[e].) The County has not met that burden, nor its independent burden under the Government Code, to justify the imposition of a fee in any amount at this time.

There is no need for the Committee to craft a Condition of Certification to effectuate the fee, and were the Committee to do so at this time, the condition would surely violate federal and state law for the reasons listed above.

IV. STAFF AND OTHER AGENCIES HAVE CONDUCTED 24 MONTHS OF THOROUGH ANALYSIS OF THE PROJECT AND PRODUCED PROJECT MODIFICATIONS TO ENSURE THE PROJECT WILL NOT CAUSE ANY SIGNIFICANT ADVERSE IMPACTS.

On June 19, 2009 Beacon modified the Project to respond to comments from Staff, CDFG, and USFWS and contained in the Commission Staff's Preliminary Staff Assessment as well as within Commission Staff's Status Report #8. (Ex. 154 at 1-1.) These modifications were included in Beacon's filing entitled Project Design Refinements and included in the record at Exhibits 154 through 209. The Project Design Refinements included: revised design of the rerouted Pine Tree Creek Wash with associated hydrological and biological mitigation, addition of a partial zero liquid discharge system ("Partial ZLD") and reduced evaporation pond size, incorporation of storm water retention facilities, addition of a secondary emergency access road, and revised Project layout to accommodate these design changes. (Ex. 155.)

In addition, Beacon conducted extensive cultural resource evaluations including investigations and data recovery. (See Ex. 107.) This investigation provided staff with the information needed to characterize the resources and support a plan to address impacts to these resources from construction and operation of the Project.

Finally and at significant additional cost, Beacon has agreed to use recycled water from either California City or Rosamond Community Services District ("Rosamond") for power plant cooling. (See Ex. 337.)

The analyses of the modified Project as provided by Beacon, reviewed and described by Commission Staff in the Final Staff Assessment, and presented in the evidentiary hearings on March 22, 2010 clearly provide sufficient evidence for this Committee and ultimately the Commission to find this Project is in compliance with water quality standards, applicable local, regional, state and federal standards, ordinances, regulations or laws and includes modifications and mitigation measures to protect environmental quality and assure the safe and reliable

operation of this Project. (20 C.C.R. § 1752.) Beacon notes the California Environmental Quality Act (Cal. Publ. Res. Code §§ 21000 et seq.) does not require every study be conducted when producing an environmental impact report ("EIR") but instead requires a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of the environmental consequences. The evaluation need not be exhaustive and disagreement among experts does not make an EIR inadequate. (14 C.C.R. § 15151.)

A. Switching to Recycled Water for Cooling and adding a Partial Zero Liquid Discharge System Significantly Reduces Groundwater Use.

Commission Staff strongly encouraged and as demonstrated above convinced Beacon to make two changes to reduce the amount of groundwater used by the Project. These changes are the addition of a Partial ZLD system and an agreement to use recycled water from either California City or Rosamond. These two changes reduced the operational groundwater use from an estimated annual average use of 1,599 acre-feet per year (afy) to a maximum of 200 afy. (Ex. 2 at 2-15; Ex. 337 at 1.)

Beacon notes Commission Staff did not find a significant adverse impact to groundwater resources after mitigation from Beacon's initial proposal to use groundwater to serve all Project water needs. (Ex. 500 at 1-6.)

1. Beacon will Employ a Zero Liquid Discharge System that Reduces Water Use and Reduces Evaporation Pond Size.

As originally proposed, the Project would have used three double-lined evaporation ponds with a nominal surface area of 8.3 acres each for a total surface area of 25 acres. (Ex. 2 at 2-19.) During the course of the proceeding Beacon expanded the evaporation ponds to have a combined surface area of 40 acres. (Ex. 120 at 7; Ex. 500 at 4.9-13.) Staff expressed concerns that wildlife would be attracted to the ponds. Staff's concerns about wildlife attraction were also expressed by CDFG and the USFWS. (Ex. 500 at 4.2-21 to 4.2-22.) Based upon those concerns, Beacon modified the wastewater disposal system to include a Partial ZLD system. (Ex. 157 at 1.) This system will concentrate the wastewater and allow some of the treated water to be reused at the facility, while the remainder of the wastewater will be concentrated into a smaller volume and disposed of into three evaporation ponds with a combined surface area of 6 acres. (Ex. 157 at 2.) The use of a Partial ZLD system will reduce the Project's groundwater use by up to 200 afy, and will help ensure that the Project's water use during operations does not cause any significant unmitigated impacts to water resources. (Ex. 2 at 2-15; Ex. 157 at 1.)

2. The Project's Construction Water Use Will Not Create a Significant Impact to Groundwater Resources, and Therefore, Further Analysis of the Project's Construction Water Use Is Unnecessary.

As evaluated by Staff, the Project proposes to use a highly efficient combination of groundwater for construction and non-cooling purposes, and recycled water during operations to increase the efficiency of the solar thermal generator. For construction, the Project will use groundwater from water wells on the Project site to a maximum of 8,086 afy. (Ex. 335 at 2.) For operational supply, the Project will use site groundwater for non-cooling needs (up to a maximum of 200

afy). For cooling needs, the Project will use recycled water supplied from one of two options: either the Rosamond or California City. (*Id.*) As discussed below, the Project's water use will not cause any significant impacts to water resources. (Ex. 500 at 4.9-62.)

Despite the highly efficient use of water contemplated by the Project, CURE is still not satisfied with the Project's water use during construction. CURE argues a non-freshwater source should be used for construction. (Ex. 616 at 4.) However, CEQA does not require mitigation for impacts which are not found to be significant. (14 C.C.R. § 15126.4[a][3].) Given this legal background, CURE's arguments fail for two fundamental reasons: (1) Beacon and Staff have provided sufficient substantial evidence to support a finding that the Project as proposed will have no significant impacts to water resources, and therefore the use of recycled water during construction is not necessary; and (2) CURE has failed to present evidence to rebut the evidence presented by Beacon and Staff.

a. *Burden of Proof*

The Commission's regulations are clear as to the requirements for certification of a facility. First, "the applicant shall have the burden of presenting sufficient substantial evidence to support the findings and conclusions required for certification of the site and related facility." (20 C.C.R. § 1748.) Once the initial burden of proof has been satisfied, both the Commission's regulations and CEQA in general shift the burden of supporting any additional condition, modification, or other provision relating to the design or operation of a project to the person who proposes it:

> The proponent of any additional condition, modification, or other provision relating to the manner in which the proposed facility should be designed, sited, and operated in order to protect environmental quality and ensure public health and safety shall have the burden of making a reasonable showing to support the need for and feasibility of the condition, modification, or provision. (20 C.C.R § 1748[e].)

As discussed below, Beacon and Staff have both presented sufficient substantial evidence to support a finding that using groundwater for construction will not cause a significant impact to water resources as well as the originally proposed use of groundwater for both construction and operation. (See 20 C.C.R. § 1748[d].) Once this burden has been met, the burden of supporting any additional condition, modification, or other provision relating to the design or operation of the Project shifts to CURE. (20 C.C.R § 1748[e].) Because CURE has not provided sufficient information to meet this burden, no further analysis is required from Beacon.

b. *Beacon and Staff Have Provided Substantial Evidence Demonstrating the Project Will Not Cause Any Significant Impacts to Water Resources.*

Beacon and Staff have thoroughly analyzed the Project's impacts to water resources over the past 24 months. This analysis reveals that groundwater levels in both the basin and in the vicinity of the Project site are increasing and will continue to increase even with the Project's construction water pumping. (Ex. 335 at A10.) This is true even assuming the maximum construction water use of 8,086 afy assumed in the FSA, and assuming that all of this water would be drawn from the wells over a 5-month period even though construction is expected to take 25 months. (Ex.

335 at page 2 and at A.M3.) Therefore, this analysis was conducted with the most conservative assumptions.

Staff also concluded that groundwater modeling indicates the Project's construction water use will create no long-term impacts to water supply or significantly impact neighboring wells. (3/22/2010 RT 104:18-105:5.) The groundwater well monitoring program and conditions of certification will track site groundwater conditions, and provide measures to mitigate groundwater impacts to neighboring wells should impacts to those wells develop. (3/22/2010 RT 103:13-104:8 and 104:24-105:5; see also Ex. 337.) In fact, even if the Project used groundwater for all construction and operation needs (including cooling), Beacon and Staff found that the Project would not cause any significant unmitigated environmental impacts to water resources. (Ex. 21 at 29-33; Ex. 500 at 1-6.) Staff evaluated the use of recycled wastewater as an alternative to suing groundwater for power plant cooling due to Staff's concerns about compliance with laws and policies. (Ex. 500 at 4.9-57 to 58.)

The Project has two potential sources of recycled water. The first source is from Rosamond. The recycled water produced by Rosamond's existing facility is currently not put to any active use, and is left to evaporate. (See Ex. 169; see also Ex. 500 at 6-10.) Therefore, if this alternative is selected as the Project's water source, the Project will use water that otherwise would have simply been left to evaporate as an effective means of increasing the Project's efficiency. The second potential source of recycled water is California City. If this alternative is selected, the Project will also confer substantial benefits on the local community by helping to bring almost 2,500 septic tanks onto a citywide sewer system. (3/22/2010 RT 134:11-135:3.)

Regardless of which recycled water alternative is ultimately selected, the Project would re-use wastewater to increase the efficiency of a solar power plant – one of the first utility-scale solar power project since the development of the SEGS facilities in the 1980s. Beacon and Staff have therefore adopted mitigation measures above and beyond those required to reduce the environmental impact to less than significant and after extensive analysis have developed a solution to the Project's water use that will strongly benefit the local community and water resources. Because mitigation measures are not required for effects which are not found to be significant, no additional mitigation measures are necessary. (14 C.C.R. § 15126.4[a][3].)

c. *CURE Has Failed to Make a Reasonable Showing to Support the Need For, and Feasibility Of, Use of Recycled Water During Construction.*

CURE argues the Project should use recycled water for its construction water needs. (Ex. 616 at 4.) As discussed above, Beacon has already presented sufficient substantial evidence to support a finding that the Project's water use during construction will not cause any significant impacts to water resources, and therefore, no additional mitigation measures are required. (See 14 C.C.R. § 15126.4[a][3].) Once Beacon has satisfied this burden, the burden shifts to the party requesting the additional condition (i.e., CURE) to prove the need for, and feasibility of, using recycled water for construction water needs. (20 C.C.R. § 1748[e].)

CURE has submitted no evidence to rebut the showing made by Beacon and Staff that the Project as proposed complies with all applicable LORS and will have no significant adverse impacts to water resources. Therefore, CURE has failed to satisfy its burden of proof with

regard to requiring use of recycled water during construction. CURE cites no legal authority that would require the use of recycled water during construction, because no such authority exists.

CURE is essentially creating its own perceived deficiencies in the Project's design which have no basis in any law or standard, and demanding costly and time-intensive mitigation measures without making the effort to demonstrate that these measures are either required or feasible. CURE has noted no evidence supporting a finding of a significant impact, nor any violation of any applicable law, ordinance, regulation, or standard. CURE cites no authority whatsoever other than vague CEQA principles for its objections. This lack of meaningful effort and analysis on the part of CURE demonstrates the shallowness of its claims. CURE is a highly sophisticated intervenor, and is well acquainted with the Commission's application process. CURE must be held to the standard imposed by the Commission's regulations, which requires it to prove the need for, and feasibility of, the conditions it requests.

d. *There Are Insufficient Quantities of Recycled Water to Supply Construction Water Needs and Such Supply Would Not be Available in Time for the Initial Large Water Supply Needs for the Project.*

The record contains a great deal of evidence demonstrating that the use of recycled water during construction is *not* feasible, and would not reduce any significant impacts. CURE's argument in favor of using recycled water for construction assumes Beacon will have access to 1,792 afy of recycled water during the construction phase. (Ex. 616 at 4.) However, CURE has failed to demonstrate that a delivery system will be in place by the time Project construction commences. In fact, no such system would be available at the start of construction. (3/22/2010 RT 102:2-4.) The timing is further complicated by the uneven use of water during construction with the majority of grading and hence water use occurring in the initial five months of construction. (Ex. 21 at 28.) Trucking recycled water to the Project is possible, but it would be inefficient and would only potentially contribute 1.4 to 3.4 percent of the Project's construction water needs. (3/22/2010 RT 102:9-22.) This would satisfy only an insignificant amount of the Project's construction water needs. (3/22/2010 RT 102:20-22.) Furthermore, trucking of water to the Project site has the potential to create additional impacts of its own, especially in the areas of air quality and traffic.

Furthermore, CURE has failed to submit any evidence demonstrating that the recycled water plant upgrades will be complete by the time construction commences. In fact, the record reflects that the expansions will not be complete for two years in the case of Rosamond, or five years in the case of California City. (3/22/2010 RT 145:11-16; 148:17-150:8.) Even assuming a pipeline could be built before construction, only approximately 500 acre feet would likely be available, mainly over six months during winter. (3/22/2010 RT 148:12-16.) Also, given that much of the Project's construction water use involves spraying water on disturbed soil to suppress dust, Beacon would need to file a Report of Waste Discharge and obtain Waste Discharge Requirements from Lahontan Regional Water Quality Control Board. (See Ex. 335 at A.M4.) The record therefore reflects that there are significant obstacles to using recycled water for the Project's construction water needs, both practical and procedural.

3. The Direct Impacts From the Recycled Water Pipelines Have Been Analyzed.

Between the analyses conducted by Staff and Beacon, direct impacts from the Rosamond pipeline alternative and the California City pipeline alternative have been addressed.

a. *Impacts From the Rosamond Pipeline Alternative Have Been Fully Addressed.*

As discussed in greater detail above, the Rosamond recycled water pipeline alternative has been fully analyzed in accordance with CEQA and the Warren-Alquist Act. Appendix A to the FSA incorporates the analysis for the northern 17.6 miles of the pipeline, conducted as part of the AFC for the route originally intended for a gas pipeline. (3/22/2010 RT 365:4-13; Ex. 7 at 9; Ex. 500 at 4.2-8.) The AFC analysis is based on Ex. 87 (the 2008 Spring Survey Report), which contains the results of the survey of the gas pipeline.

The southern 23 miles of the Rosamond pipeline alternative is addressed in Appendix A to the Biological Resources section of the FSA. (Ex. 500, Biological Resources Appendix A; 3/22/2010 RT 356:11-16.) Staff conducted botanical field surveys for this section of the pipeline. (Ex. 500 at 4.2-128 and 129.) Staff also conducted a habitat assessment for DT, MGS, and other special status wildlife. (Ex. 500 at 4.2-128.) Staff's analysis assumed presence of DT and MGS and drafted Conditions of Certification to ensure that potential impacts to WBOs would be adequately mitigated. (3/22/2010 RT 366:15-21; Ex. 338 at BIO-10 to BIO-12.)

b. *Impacts From the California City Pipeline Alternative Have Been Fully Addressed.*

The bulk of the California City pipeline alternative follows the same path as the natural gas line route analyzed as discussed above in section I.C.4 of this brief. (See Ex. 500 at Biological Resources Appendix A – Figure 1, and Ex. 506 [Letter of Intent from California City Regarding Tertiary Water for the Beacon Solar Energy Project (March 22, 2010)].) As discussed above, this route has been analyzed in full conformance with the law. The gas pipeline route received 100 percent protocol-level survey coverage for general biological resources, DT, WBO, and special status plants. (Ex. 87 at iv.) The 2008 Spring Survey concluded that all Project activities associated with the gas pipeline route will occur only in developed areas, and thus will have no impact on vegetation or habitat. (Ex. 87 at 28.)

4. The Cumulative Impact Analysis Properly Excluded the Expansion of the Wastewater Treatment Facilities.

The Committee has requested clarification on the cumulative impacts of the California City and Rosamond recycled water supply alternatives. (Electronic Mail Message from Kenneth Celli to the Parties [March 30, 2010].) Although the CEQA Guidelines require an EIR to include a reasonable analysis of the relevant cumulative impacts (14 C.C.R. 15130[b][5]), at least one court has held that a certified regulatory program is not required to perform

> an "analysis" as such, or have made its analysis available as part of an EIR, for public review and comment, but only that [the agency] have looked for and in

> some reasonable manner assessed potential cumulative environmental effects, and that it have given sufficient consideration to any such effect it should reasonably have considered significant. (*Laupheimer v. State* [1988] 200 Cal.App.3d 440, 466.)

The Commission's regulations require an Application for Certification to address "the expected direct, indirect, and cumulative impacts due to the construction, operation, and maintenance of the project…." (Section [g][1] of Appendix B to the Title 20 of the California Code of Regulations.) Therefore, the Commission must analyze cumulative impacts, which it did under each resource area in the FSA. (See Ex. 500 at 4.9-55 through 4.9-57.)

In this case, the expansions of the wastewater treatment facilities were not addressed because these facilities are beyond the geographic scope of the Project's cumulative impacts analysis. The geographic scope of a project's impact analysis is a matter left to the discretion of the lead agency. (See *City of Long Beach v. Los Angeles Unified Sch. Dist.* [2009] 176 Cal.App.4th 889, 907-908.) The courts have noted that the selection of a geographic scope involves some sort of balance by ensuring the area is not expansive to the point of diluting the proposed project's impacts, but also not so restrictive as to fail to detect impacts.

The Project's cumulative impact analysis generally considers other projects up to six miles from the Project site, depending on the resource area. (See Ex. 500 at 4.1-34, 4.5-9, 4.12-9.) By contrast, the Rosamond water treatment facility is over 30 miles from the Project site, and the California City facility is over 10 miles away. (Ex. 500 at 4.1-13; Ex. 506 at Appendix B.) These facilities are simply too far away to produce any cumulatively considerable impact, especially given the Project's relatively low environmental impacts in most resource areas. Therefore, the Project's analysis need not discuss those facilities in its cumulative impacts analysis.

5. <u>Direct Impacts From the Expansion of the Wastewater Treatment Facilities Will Be Fully Addressed During the CEQA Review For Those Projects, and Need Not Be Analyzed During the Project's AFC Process.</u>

Courts have held that direct impacts from a sewer expansion project must be addressed where the sewer expansion is a required element of a development project. (See *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* [1994] 27 Cal.App.4th 713, 731.) However, the Commission is <u>not</u> required, under either CEQA or its own regulations, to address impacts from a wastewater treatment facility expansion which would have occurred regardless of the Project, and which is subject to its own full environmental review. (See, e.g., *Towards Responsibility In Planning v. San Jose City Council* [6 Dist. 1988] 200 Cal.App.3d 671.) The record makes clear that the wastewater treatment facility expansion projects at both Rosamond and California City are moving forward regardless of the Beacon project, as discussed below. The expansion projects will be subject to full CEQA review by the lead agencies that will approve those projects. (See Cal. Pub. Resources Code § 21080[a] [CEQA applies to "discretionary projects proposed to be carried out or approved by public agencies"].) Therefore, the impacts

from the expansion of the wastewater treatment facilities need not be analyzed in the Project's AFC proceedings.

a. *The Rosamond Wastewater Treatment Facility Expansion Is Already In Progress and Will Occur Regardless of Whether the Project Purchases the Recycled Water It Produces.*

Rosamond's facility currently generates approximately 1.6 million gallons per day (mgd) of non-Title 22 quality wastewater, which is currently left to evaporate. (See Ex. 169 and Ex. 500 at 6-10.) A project is currently nearing completion to convert 0.5 mgd of this flow to Title 22 quality tertiary treated reclaimed water. (3/22/2010 RT 137:17-19.) There are tentative plans to expand the facility to produce only Title 22 water by the end of 2011. (Ex. 169.) The upgrade to process 1.3 mgd of wastewater and convert it to tertiary treated recycled water (discussed at 3/22/2010 RT 145:6-9) will occur regardless of whether Rosamond signs an agreement with the Project, since Rosamond has other potential customers (including other solar projects and a mining operation) that have expressed interest in Rosamond's recycled water. (3/22/2010 RT 137:20-24; 141:7-13.) Rosamond has already begun to discuss this project with the Lahontan Regional Water Quality Control Board. (3/22/2010 RT 151:2-4.) Rosamond also has agreements with other water districts in the Antelope Valley for purchase and exchange of reclaimed water, up to as much as 13 mgd. (Ex. 169.) A total of 3.3 mgd of water is considered by Rosamond to be readily available for commitment in the near term. (Ex.169.) Therefore, Rosamond has many other users and arrangements driving its expansion, which will occur regardless of whether the Project purchases its recycled water.

b. *The California City Wastewater Treatment Facility Expansion Is Already In Progress and Will Occur Regardless of Whether the Project Purchases the Recycled Water It Produces.*

California City has long contemplated an expansion of its wastewater network and treatment facility, and like Rosamond is already in the process of expanding. California City's representative stated at the evidentiary hearing that the City has already issued a request for proposals for the upgrade. (3/22/2010 RT 151:6-8.) The City is proposing a transmission main and a wastewater treatment plant expansion from the current 1.5 mgd to 3 mgd. (3/22/2010 RT 134:6-14.) The City is also proposing a sewer main expansion which would bring nearly 2,500 additional septic tanks online to the sewer system. (*Id*.)

Additionally, Staff noted in the FSA that if the Project uses water from Rosamond as opposed to California City, California City would have the flexibility to use their reclaimed water for other beneficial purposes in the basin while allowing the Project to make use of Rosamond's tertiary-treated water that is otherwise being evaporated. (Ex. 500 at 6-11.) California City's representative testified at the evidentiary hearing that if Beacon does not use the water from the upgrade, California City will use it for irrigation within the city. (3/22/2010 RT 151:12-15.) This demonstrates that California City's proposed treatment plant expansion is not being driven by the Project, and would be put to other use even if the Project does not use its water.

California City is a preplanned community that is currently unable to build out to the full extent of the existing plans due to restrictions from a 1989 Letter of Intent executed pursuant to federal law. (3/22/2010 RT 136:6-15.) These restrictions are due to the city's septic system, which can

only support a certain density of development without creating a groundwater problem. (3/22/2010 RT 136:16-21.) Because the lack of a city sewer system limits the City's development density, the City's representative testified that the restrictions in the Letter of Intent effectively prevent California City from complying with certain greenhouse gas planning requirements. (3/22/2010 RT 139:4-10.) According to California City's representative, California City is already required to make the changes and upgrades to the sewer system and treatment facility regardless of whether the Project purchases its recycled water. (3/22/2010 RT 138:1-8.)

B. The Project's Rerouted Wash Has Been Significantly Redesigned to Address Concerns Expressed by the California Department of Fish and Game and Staff.

Throughout the Project proceedings, Beacon has carefully considered the impacts from the rerouting of the existing wash, and has worked with CDFG and Staff to address environmental concerns. Beacon's original design contemplated a trapezoidal channel approximately 14,000 feet long. (Ex. 21 at 27; Ex. 500 at 4.2-7.) However, both CDFG and Staff expressed concerns with the initial design of the rerouted wash and its ability to adequately manage flood flows. (Ex. 500 at 4.2-7.) As discussed below, Beacon has re-designed the rerouted wash to address the concerns expressed by CDFG and Staff, and to ensure the rerouted wash will cause no significant unmitigated environmental impacts.

1. Impacts From the Project's Rerouting of Pine Tree Creek and Another Ephemeral Desert Wash Will Be Less Than Significant.

The Project involves the re-routing of Pine Tree Creek and another ephemeral desert wash. (Ex. 500 at 4.2-1.) As discussed above, Beacon carefully chose the site to avoid impacts to biological resources. The wash is disturbed by past agricultural activities, and therefore offers only highly degraded, sparse vegetation. (Ex. 217 at 2; Ex. 500 at 4.2-1.) The wash does not have the potential to serve as a wildlife movement corridor, as it has been previously disturbed for agriculture and it contains limited vegetation separated by long barren stretches. (Ex. 7 at 23.) Additionally, a somewhat degraded chicken-wire fence currently surrounds most of the plant site, impeding wildlife movement through the site. (Ex. 7 at 23.)

Nevertheless, the wash contains natural processes that support recruitment of native desert wash vegetation and provides limited wildlife habitat. The rerouting of the wash would result in the loss of approximately 60 acres of desert wash scrub habitat and 16.0 acres of jurisdictional waters of the state. (Ex. 500 at 4.2-1.) The desert washes would be replaced with a rerouted channel to the south and east of the Project site.

In response to Staff concerns regarding flood flows, Beacon conducted a detailed, FEMA-compliant hydrology and hydraulics analysis, as well as a sediment transport study, which were used to redesign the rerouted wash. (Ex. 156.) Beacon developed a new design that incorporates eleven drop structures to control water flow speed and to maximize habitat potential between the drop structures. (Ex. 194 at 2; Ex. 195 at 2; Ex. 500 at 4.2-7.) This channel would replicate in part the hydrological and biological functions and processes of the wash displaced by the Project, thereby mitigating impacts to the wash onsite to the extent feasible. (Ex. 194 at 2; Ex. 195 at 2; Ex. 217 at 2-3; Ex. 500 at 4.2-1.) The goal of these revisions was to create a drainage system

with biological functions and values equal to or greater than the existing desert wash. (Ex. 195 at 3; Ex. 217 at 2.) The Project's Mitigation Plan includes mitigation at a 1:1 ratio for all permanent Project impacts to unvegetated waters of the state, and a 2:1 replacement ratio for permanent Project impacts to an ephemeral wash vegetated with southern alluvial fan scrub. (Ex. 195 at 1; Ex. 500 at 4.9-167.)

In addition to the design measures discussed above, Condition of Certification BIO-18 will mitigate impacts to the 16 acres of state waters and loss of the hydrological and biological functions of desert washes at the Project site. (Ex. 500 at 4.2-2.) This condition will also satisfy requirements of CDFG's Lake and Streambed Alteration Agreement Program pursuant to Section 1600 et seq. of the California Fish and Game Code. (Ex. 500 at 4.2-2.) Both CDFG and USFWS support the analysis and mitigation in the FSA and in the revised conditions of certification contained in Exhibit 338. (3/22/2010 RT 355:14-356:3.)

2. CEQA Allows the Mitigation of Impacts Via Enforceable Performance Standards.

The Committee has requested the parties to address the adequacy of the performance standards referenced in Conditions of Certification SOIL & WATER-9 through SOIL & WATER-17. (Electronic Mail Message from Kenneth Celli to the Parties [March 30, 2010].)

The CEQA Guidelines provide that "[f]ormulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specific way." (14 C.C.R. § 15126.4[a][1][B].) If it is not practical to define the specifics of a mitigation measure when the EIR is prepared, agencies may defer formulation of the specifics of a mitigation measure pending further study, provided that the mitigation measure describes the options that will be considered and identifies performance standards. (See *San Joaquin Raptor Rescue Center v. County of Merced* [2007] 149 Cal.App.4th 645, 649.)

3. Kern County's Division Four Development Standards Are Adequate and Enforceable.

The performance standards referenced in Conditions of Certification SOIL & WATER-9 through SOIL & WATER-17 are contained in Division Four of Kern County's New Development Standards (the "Standards"). The Standards are used for all development within Kern County occurring outside of incorporated cities. (See Standards, General Introduction at 1.) The Standards are designed for use in conjunction with conditions of approval for a specific development, among other uses. (Standards, General Introduction at 1.) The express purpose of the standards is to ensure "that waters generated by storms, springs, or other sources be mitigated so as to provide reasonable levels of protection for life and property, and the maintenance of necessary access to property or passage of the traveling public on the public highways." (Standards, Division Four, § 401-1.01.) The standards are based on either the 100 year storm or

the 10 year storm, depending on whether the purpose of the standard is to protect life and property and the maintenance of emergency vehicle access.[11]

Because the Standards are well established to apply broadly to all new development within Kern County, and are created for the express purpose of mitigating water flows so as to provide reasonable levels of protection for life and property, the Standards are adequate to serve as design standards for Conditions of Certification SOIL & WATER-9 through -17. The Standards are fully enforceable against Beacon via these conditions of certification, and therefore the use of these standards fully satisfies the requirements of CEQA.

V. THE PROJECT WILL USE PROVEN AND IMPROVED HEAT TRANSFER TECHNOLOGY.

Beacon will employ solar trough technology similar to but with improvements based upon over 20 years of operating history at the existing Solar Electric Generating System (SEGS) facilities. Solar trough technology uses a fluid heated by the troughs to carry the heat to the power block. Although using a fluid in pipes is not new, the piping and system design has been improved based upon the experience gained in operation of the SEGS facilities. Because Staff, Beacon and the local agencies have experience using this technology they also have been able to identify and require the preparation of required plans that need to be in place to minimize the impacts from this system and address any spills.

A. The Commission, Local Agencies, and NextEra Energy Resources LLC Have Experience With Using Therminol VP-1® HTF at the Solar Electric Generating System Facilities at Harper Lake and Kramer Junction.

CURE has submitted both written and oral testimony in this proceeding regarding CURE's fears associated with the Project's use of Therminol (VP-1 or equivalent) heat transfer fluid (HTF). (Ex. 612 at 1-9; Ex. 3/22/2010 RT 437:1-452:25.) While CURE is correct that these types of HTF can pose a threat to health and the environment if not managed properly, CURE's efforts to portray the proposed HTF as a foreboding and unknown hazardous substance are unfounded. Real-world experience has proven the efficacy of Therminol VP-1 HTF as a safe heat transfer medium and has provided a great deal of progress in how to handle it. CURE's dire concerns regarding the Project's use of HTF are unfounded for several reasons. Therminol VP-1 HTF is a proven commodity that has seen over 20 years of service in the nearby SEGS projects. (See Ex. 500 at 4.13-10; 3/22/2010 RT 468:19-469:6.) Also, the Project will be able to take advantage of over 20 years of new technological developments and experiences from the SEGS facilities, especially given that the SEGS facilities are owned by the same parent company. Furthermore, the Commission is familiar with the use of Therminol VP-1 HTF at solar facilities, and indeed it has approved and continues to monitor several projects which have been using this HTF since

[11] The standards for the protection of life and property, and the maintenance of emergency vehicle access are based upon the Capital Storm Design Discharge (CSDD), which is defined by the Standards as "that flow determined based upon a precipitation event having a one percent probability of being equaled or exceeded in any given year, commonly referred to as the 100 year storm." (Standards, Division Four, §§ 401-1.03 and 402-1.04.) The standards related to property access and passage on public highways, and local drainage facility design are based on the Intermediate Storm Design Discharge (ISDD), or the ten year storm. (See *id.*)

the 1980s. In fact, CURE submitted as one of its exhibits a letter from FPL Energy to the regional water quality control board regarding an HTF spill at the SEGS III facility, which describes in detail the procedure used to respond to the spill. (See Ex. 629.)

Despite CURE's efforts to characterize the Project's use of HTF as a ticking time bomb, in reality the record reflects that the Project is using a proven technology enhanced by technological advances over the years and over two decades of firsthand experience at the SEGS facilities.

B. The Final Staff Assessment has analyzed and included safeguards for the use and potential spills of heat transfer fluid

1. The Level of Detail Demanded by CURE Is Not Required.

CURE's complaints about the Project's environmental analysis ask for such an extreme level of detail that it is helpful to recall the standards of adequacy that apply to an EIR under CEQA. Although the Commission analyzes projects under its own certified regulatory program pursuant to section 15251(j) of Title 14 of the California Code of Regulations, this program is a CEQA-equivalent process and similar standards of legal sufficiency apply. (See 14 C.C.R. § 15250.) The applicable standard is as follows:

> An EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure. (14 C.C.R. 15151.)

While CURE has complained in this proceeding *ad minutiae* that the Project's analysis regarding HTF lacks specific details, courts have made clear that CEQA does not require every last detail of a project's mitigation measures to be included in the environmental document for the project. This includes information regarding a project's mitigation measures. The CEQA Guidelines provide that "[f]ormulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way." (14 C.C.R. § 15126.4[a][1][b].) When a public agency has evaluated the potentially significant impacts of a project and has identified measures that will mitigate those impacts, the agency does not have to commit to any particular mitigation measure in the EIR, so long as it commits to mitigating the significant impacts of the project. Moreover, "the details of exactly how mitigation will be achieved under the identified measures can be deferred pending completion of a future study." (*California Native Plant Society*, 172 Cal.App.4th at 621.) "[T]he fact the entire extent and precise detail of the mitigation that may be required is not known does not undermine the final EIR's conclusion that the impact can in fact be successfully mitigated." (*Riverwatch v. County of San Diego* [4 Dist. 1999] 76 Cal.App.4th 1428, 1447.) Some specific details regarding the mitigation of impacts from the Project's use of HTF will be left to the various plans required

for the Project. This is fully permissible under CEQA, and in no way suggests any inadequacy in the Project's environmental analysis.

2. CEQA Does Not Require Evaluation of Unlikely, "Worst-Case" Scenarios.

CURE claims that based on past occurrences at the SEGS facilities, large spills "on the order of tens of thousands of gallons…would likely occur at BEEPS." (Ex. 625 at 3.) While CURE assumes the same likelihood for spills at the Project as for the SEGS facilities, the record does not support such an assumption. The Project will be constructed over two decades after the SEGS projects were built, and during this period system monitoring and control technologies have advanced significantly. The Project will take advantage of the 20 years of lessons learned from the SEGS facilities regarding prevention of, and response to, HTF spills. (Ex. 332 at A10.) Therefore, the disaster scenarios contemplated by CURE are highly unlikely.

CEQA does not require an EIR/AFC to evaluate a "worst-case" scenario when the scenario is not reasonably foreseeable and therefore speculative. (See 14 C.C.R. §15064[d]; see also 20 C.C.R. § 1704, Appendix B [requiring an AFC to discuss "the *expected* direct, indirect, and cumulative impacts due to construction, operation, and maintenance of the project"].) The purpose of an EIR is to provide public agencies and the public in general with detailed information about the effect which a proposed project is *likely* to have on the environment. (Cal. Pub. Res. Code § 21061 [italics added].) In addition, the CEQA Guidelines provide that "[i]f a Lead Agency finds that a particular impact is *too speculative* for evaluation, the agency should note its conclusion and terminate discussion of the impact." (14 C.C.R. § 15145 [italics added].) Case law reaffirms that CEQA does not require evaluation of a worst case scenario.[12] As discussed above, CURE's concerns about spills of HTF on the magnitude of tens of thousands of gallons are based on assumptions not supported by the record. Therefore, CURE's concerns require no further analysis.

Furthermore, the FSA sufficiently addresses the more serious hazards posed by the Project's use of HTF, and demonstrates that spills on the magnitude of those at the SEGS facilities are unlikely. (See Ex. 500 at 4.4-8.) Staff analyzed past leaks, spills, and fires involving HTF, finding that "the placement of additional isolation valves in the HTF pipe loops throughout the solar array would add significantly to the safety and operational integrity of the entire system by allowing a loop to be closed if a leak develops in a ball joint, flex-hose, or pipe, instead of closing off the entire HTF system and shutting down the plant." (Ex. 500 at 4.4-8; see also Ex. 332 at 3.) Staff also notes that tank and piping codes are continually improving, and therefore systems designed to current codes should generally have better results than previously-constructed systems. (Ex. 500 at 4.4-13.) Condition of Certification AQ-28 requires that pressure sensing equipment must be installed which is capable of sensing a major rupture or spill of HTF. (See FSA at 4.1-54.) Therefore, CURE's characterization of the Project as having the same vulnerabilities as the SEGS projects is simply inaccurate.

[12] See, e.g., *Napa Citizens For Honest Government v. Napa County Board of Supervisors* [2001] 91 Cal. App. 4th 342, 373 (holding that an EIR is not required to engage in speculation in order to analyze a worst case scenario); see also *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal. App. 3d 692, 739 ("CEQA does not require discussion in an EIR of future developments which are unspecified and uncertain. Such an analysis would be based upon speculation about future environmental impact.")

3. The Plans Required for the Project Will Address Potential Spills and Cleanup Efforts.

CURE claims that the analysis for the Project fails to analyze the impact of a large spill of HTF. (Ex. 625 at 5-6.) This is simply not true. Staff explains in the FSA that it reviewed the accident history at SEGS facilities 8 and 9, and concluded that the Project's new control mechanisms will greatly reduce the likelihood of such a spill. (Ex. 500 at 4.4-8.) For example, Condition of Certification HAZ-7 requires the project owner to place an adequate number of isolation valves in the HTF pipe loops so as to be able to isolate a solar panel loop in the event of a leak of fluid. (See Ex. 500 at 4.4-18.)

While the Project is very unlikely to encounter spills on the magnitude of the larger past spills at the SEGS facilities, the Project will include mitigation measures to prevent large spills, and to respond to them in the unlikely event they do occur. Per Condition of Certification HAZ-2, the Project will also develop and implement a Hazardous Materials Business Plan (HMBP). (See 19 C.C.R. § 2729 et seq.) This plan includes a hazardous materials inventory, emergency response plans and procedures, and training program information. (19 C.C.R. § 2729[a].) With regard to the emergency response plans, the HMBP must include procedures for the immediate notification of local emergency response personnel, the administering agency and the State Office of Emergency Services, as well as persons within the facility who are necessary to respond to an incident. (19 C.C.R. § 2731[a].) It must also include procedures for identification of local emergency medical assistance for potential accident scenarios; procedures for mitigation, prevention, or abatement of hazards to persons, property or the environment; procedures for immediate notification and evacuation of the facility; and identification of areas of the facility requiring immediate inspection or isolation because of their vulnerability to earthquake-related ground motion. (19 C.C.R. § 2731[b]-[e].) With regard to the training program, the HMBP will include procedures for coordination with local emergency response organizations and use of emergency response equipment and supplies under the control of the handler (including the vacuum truck). (See 19 C.C.R. § 2732.)

The Project will also implement a Spill Prevention, Control, and Countermeasure Plan (SPCC Plan), which will include procedures for any unforeseen large HTF spills. (See Ex. 332 at 3; see also Ex. 500 at 4.9-174.) This plan requires a clear description of the physical layout of the facility, including a facility diagram marking the location and contents of each container, transfer stations, and connecting pipes. (40 C.F.R. § 112.7[a][3].) The SPCC Plan must include discharge prevention measures, including procedures for handling of the materials. (40 C.F.R. § 112.7[a][3][ii].) It must also include countermeasures for discharge discovery, response, and cleanup (both those within the facility's capability and those requiring contractor assistance). (40 C.F.R. § 112.7[a][3][iv].) The SPCC Plan will also include detailed contact information for the facility response coordinator, National Response Center, cleanup contractors with whom the Project has agreements for response, and all appropriate Federal, State, and local agencies which must be contacted in case of a discharge. (40 C.F.R. § 112.7[a][3][vi].) The SPCC Plan also will include detailed information and procedures enabling a person reporting a discharge to accurately describe the exact location of the facility, the type and quantity of material discharged, the cause of the discharge and anticipated effects of the discharge, mitigation actions for the discharge, and other information. (40 C.F.R. § 112.7[a][4].) The plan will include discussion of specific methods of disposal of recovered material in accordance with applicable legal

requirements. (40 C.F.R. § 112.7[a][3][v] and [vi].) Additionally, the SPCC Plan will include provisions for inspections, tests, records, and training. (See 40 C.F.R. § 112.7[e] and [f].) The various plans that will be developed for the Project will ensure the Project is well prepared for any HTF spill, and well equipped to handle any necessary cleanup.

4. The Project Includes Adequate Plans for Groundwater Monitoring at the Land Treatment Unit and Evaporation Ponds.

CURE claims the Project's analysis lacks adequate plans for groundwater monitoring at the Land Treatment Unit and at the evaporation ponds. (Ex. 625 at 3.) The FSA includes an entire appendix detailing the groundwater monitoring program for the three surface impoundments and the Land Treatment Unit (LTU). (See FSA at Soil and Water Resources Appendix H.) This appendix includes measures to ensure the HTF does not migrate past the five-foot vertical treatment zone underlying the LTU. (Ex. 500 at 4.9-210.) These measures include an annual sampling program checking for the presence of HTF one foot below the LTU's five foot vertical treatment zone. (Ex. 500 at 5.9-210.) Four soil samples will be taken from each quadrant of the LTU. If the results of any sample indicate the presence of HTF, then the FSA includes measures requiring deeper sampling to establish the extent of the HTF migration. (*Id.*)

The Project also includes several preventative measures to ensure contaminants from the LTU and evaporation ponds do not reach the groundwater. The LTU will be designed to a depth of five feet, and will include a base of two feet of compacted, low permeability, lime-treated material. (Ex. 160; Ex. 500 at 4.9-173.) The lime treated layer of this base will be compacted to a minimum of 95% of the maximum dry density, and will have low permeability. (*Id.*) Because all soil characterized as hazardous will be removed from the site, the LTU will sufficiently isolate HTF-contaminated soils from groundwater, and no additional liner system is needed in the LTU. (Ex. 500 at 4.9-173.)

Additionally, the physical properties of HTF make groundwater contamination unlikely. Because HTF thickens when it cools to ambient temperatures, its environmental mobility (and therefore its ability to migrate into groundwater resources) is reduced. (Ex. 500 at 4.4-13 through 4.4-14; 3/22/2010 RT 467:23-468:13.) HTF spills typically spread laterally on the ground surface and soak down to a relatively shallow depth. (Ex. 500 at 4.13-9.) The depth to groundwater below the site ranges from approximately 276 to 284 feet below the surface, well below the evaporation ponds and LTU. (See Ex. 203 at 31.)

Per Condition of Certification SOIL & WATER-3, the facility will be required to develop a Storm Water Pollution Prevention Plan (SWPPP) under the State Water Resources Control Board's Storm Water General Permit. The SWPPP ensures the facility is designed to prevent the release or discharge of HTF and other hazardous materials. (See Ex. 172 at § 4.1.4.2.) The Project will also prepare a SPCC Plan, which will eliminate any significant potential for groundwater contamination in the event of an accidental release. (Ex. 500 at 4.4-14.) This plan is discussed in further detail below.

5. The Project's Analysis Fully Addresses the Removal of Spilled Heat Transfer Fluid Lying Atop the Ground Surface.

CURE is concerned that the Project's analysis does not specify how spilled material piled atop the ground surface will be removed. (Ex. 625 at 5-6.) At the evidentiary hearing, Beacon's witness explained that spilled material piled atop the ground will be removed by a vacuum truck. (3/22/2010 RT 479:18-481:10.) This is standard industry practice, and Attachment 3 to CURE's own rebuttal testimony provides a clear summary of how the vacuum removal of HTF fits into the spill response process. That case involved an HTF spill at the SEGS III facility. Once the release was secured, the project operators began recovering the free-standing HTF, using a vacuum truck and portable evacuation trailers to skim the HTF off the ground. (Ex. 629 at 2.) The process for removing spilled HTF from the ground surface is not complex, and the Project will be fully capable of handling this aspect of spill response.

The plans addressing the Project's hazardous materials and waste will also address CURE's concern regarding removal of spilled material. For example, the SPCC Plan will include detailed information regarding discharge prevention measures, including procedures for routine handling of products; discharge or drainage controls; countermeasures for discharge discovery, response, and cleanup; and methods of disposal of recovered materials in accordance with applicable legal requirements. (40 C.F.R. § 112.7[a][3][ii]-[v].) The SPCC Plan will also include detailed contact information for the facility response coordinator, National Response Center, cleanup contractors with whom the Project has agreements for response, and all appropriate Federal, State, and local agencies which must be contacted in case of a discharge. (40 C.F.R. § 112.7[a][3][vi].)

6. The Project's Analysis Fully Addresses the Onsite Treatment and Offsite Disposal of Contaminated Material.

CURE complains that "BSEP does not include provisions for a filtration facility and therefore does not include any design specifications or treatment technologies for the removal of soil and water from the free-standing HTF." (Ex. 625 at 6.) As explained at the evidentiary hearing, the vacuum truck will include a filter to separate the free-standing HTF from the soil, and that no HTF filtration facility is to be installed as part of the Project. (3/22/2010 RT 475:1-23.)

Next, CURE argues the Project's analysis lacks information regarding handling of HTF contaminated soils. (Ex. 625 at 6.) The FSA (including the conditions of certification for the project), the June 2009 ROWD, and the Project Design Refinements all provide information regarding the procedure for removing contaminated soils from the Facility and temporarily staging the soils within the Land Treatment Unit for hazardous waste testing. (See Ex. 160; Ex. 203 at 8-9 and 58-60; and Ex. 500 at 4.3-17, 4.3-18, and 4.9-210-213.) HTF-contaminated soils will be moved to the Land Treatment Unit. (Ex. 175; see also Ex. 500 at 4.9-10.) HTF impacted soils will be classified as hazardous or non-hazardous when initially moved to the staging area. (*Id.*) Condition of Certification WASTE-7 requires any material classified as a hazardous waste[13] to be removed from site and disposed at a Class I landfill in accordance with the

[13] Based on past experience with a similar waste stream at the Kramer Junction SEGS facility, it is anticipated that soil containing 10,000 mg/kg or more HTF will be managed as hazardous waste, and that soil containing less than this concentration of HTF will be non-hazardous waste and can be treated at the site. (See Ex. 160.)

requirements of Section 25203 of the California Health and Safety Code. (*Id.*; Ex. 10 at 13 [Table 5.16-6]; Ex. 500 at 4.13-17.) No HTF-impacted soils characterized as hazardous waste will be disposed or treated on-site. (*Id.*) Every batch of HTF-contaminated soil discharged into the LTU must be accompanied by a report indicating the volume discharged, the sampling method, and the laboratory analytical reports. (Ex. 500 at 4.9-210.)

If the soil is contaminated with HTF at a concentration of less than 10,000 mg/kg (which is nonhazardous under RCRA), such non-hazardous contaminated soils must be treated onsite in the LTU, and eventually disposed to a waste management facility. (Ex. 10 at 13 [Table 5.16-6]; see also Ex. 500 at 4.3-17 and -18 [Condition of Certification WASTE-7].) After treatment, the HTF-contaminated soil may be reused at the facility in accordance with the Waste Discharge Requirements. (Ex. 500 at 4.9-211.)

Additionally, the Operation Waste Management Plan required by Condition of Certification WASTE-6 will contain detailed information regarding all operation and maintenance waste streams, management methods to be used for each waste stream, and a detailed description of how facility wastes will be managed. (See Ex. 500 at 4.3-17.)

7. CURE Has Not Met Its Burden In Requesting Additional Design Measures to Address HTF Spills.

As discussed above in Section 2 of this brief, once the initial burden of proof has been satisfied, both the Commission's regulations and CEQA in general shift the burden of supporting any additional condition, modification, or other provision relating to the design or operation of a project to the person who proposes it. (20 C.C.R. § 1748[e].) CURE complains that the FSA "fails to evaluate double walled piping, containment of spills, and other technologies that would be feasible to control or contain spills of HTF." (Ex. 625 at 7 and 9.) However, CURE has not met its burden of proving these additional conditions are necessary, as required by section 1748(e) of the Commission's regulations.

History has shown that spills do not occur from broken pipes, but rather at the valves, flanges and collector loops. (See Ex. 332 at A8.) As discussed in Beacon's rebuttal testimony, the large bore piping areas in the main header and east-west laterals pose little spill risk due to the location and design of those headers. (Ex. 332 at A8.) In over 20 years of the operation of the SEGS project, there has never been a significant HTF spill resulting from a failure or damage to the HTF header piping. (*Id.*) As the SEGS facility has proven, an HTF spill is most likely at a mechanical connection such as valves and flanges or the solar collector loops. (*Id.*) The spill reports CURE included as Attachment 2 to its testimony only serve to confirm this fact; not a single spill resulted from a structural failure of the pipe itself. (See Ex. 615; 3/22/2010 RT 463:13-18.)

The proposed solar field will be laid out in sections, containing 4 to 10 sections that can be isolated in the event of a leak or fire. (Ex. 2 at 10; Ex. 332 at A7.) Each collector loop will contain approximately 630 gallons of HTF that can be isolated using loop isolation valves. (Ex. 332 at A7.) The sectional isolation valves will be located to control the maximum volume of

HTF leakage in the event of pipe failure. (Ex. 2 at 10.) Condition of Certification HAZ-7[14] requires the project to include a sufficient number of isolation valves that can be either manually or remotely activated. (Ex. 500 at 4.4-8.) Staff noted that shaking and fault rupture could occur without causing large scale leaking. (Ex. 500 at 4.4-13.) Furthermore, because tank and piping codes are continually improving, systems designed to current codes should have better results than previously surveyed systems. (Ex. 500 at 4.4-13.)

These measures are sufficient in themselves to ensure HTF spills will not result in any significant environmental impacts, and the additional analysis requested by CURE is unnecessary. Because CURE has made no showing that the additional measures it suggests are necessary, these measures are not required and need not be analyzed further.

VI. LOS ANGELES DEPARTMENT OF WATER AND POWER'S ANALYSIS CORRECTLY IDENTIFIES POTENTIAL UPGRADES AND COSTS TO INTERCONNECT BEACON TO THEIR TRANSMISSION SYSTEM

The Committee and ultimately the Commission needs to consider whether the electrical interconnection of the Project will assure safe and reliable operation of the facility, compliance with LORS and protection of environmental quality. (20 C.C.R. § 1752.). The evidence presented by Beacon as well as the FSA clearly demonstrate the Project can be connected to the transmission system in a safe and reliable manner in compliance with LORS and that the potential environmental impacts of the interconnection have been identified and mitigated.

Nonetheless, CURE's witness Mr. David Marcus expressed concerns about whether the System Impact Study (SIS) correctly identified the amount of transmission capability available without system upgrades and whether the Project would reduce the Los Angeles Department of Water and Power's (LADWP) operational flexibility. (Ex. 616 at 1-3.) He further recommends a revision to Condition of Certification TSE-5 to require the interconnection agreement prior to construction. (Ex. 616 at 3.) As explained below, Mr. Marcus' concerns have been assessed and addressed in the SIS making his requested revisions to TSE-5 unnecessary and unwarranted.

A. Project Impacts, Potential Upgrades and Interconnection Requirements Were Identified in LADWP's System Impact Study.

The Project will interconnect to LADWP's Inyo-Barren Ridge 230 kilovolt (kV) transmission line. (Ex. 2 at 2-29.) Because the Project will interconnect with LADWP's transmission system and LADWP is also a balancing authority, LADWP completed a SIS for this Project on July 31, 2008. (Ex. 76, Att. DR-50.) Beacon originally proposed two alternative interconnection points but after purchasing additional property was able to eliminate the alternative interconnection point and proceed with Option 1 that is identified as the primary point of interconnection in the SIS. (Ex. 2 at 29; Ex. 165 at 1; Ex. 76, Att. DR-50 at 4.) The SIS properly identified the types of equipment needed to interconnect the Project to LADWP's transmission system and potential

[14] Condition of Certification HAZ-7 reads in full: "The project owner shall place an adequate number of isolation valves in the Heat transfer Fluid (HTF) pipe loops so as to be able to isolate a solar panel loop in the event of a leak of fluid. These valves shall be actuated manually and remotely. The engineering design drawings showing the number, location, and type of isolation valves shall be provided to the CPM for review and approval prior to the commencement of the solar array construction."

upgrades beyond the first point of interconnection. The SIS evaluated the impacts of interconnecting the Project to **both** the existing transmission system as well as to the planned transmission system including the Barren Ridge Renewable Transmission Project (BRRTP). (Ex. 76, Att. DR-50 at 4 & 6 [emphasis added].) LADWP has proposed BRRTP to interconnect renewable facilities to LADWP's system regardless of whether Beacon is approved. (*Id.* at 4.) LADWP plans to complete BRRTP in stages beginning with the new 230kV line in 2011, reconductoring between Barren Ridge and Rinaldi in 2012, and construction of a new switching station in 2013. (*Id.* at 5.) The SIS evaluated the Project and its impacts using the Western Electricity Coordinating Counsel (WECC)/North American Electric Reliability Corporation (NERC) reliability criteria. (*Id.* at 6.)

The SIS did not find thermal overloads under normal (N-0) conditions and no special protection scheme (SPS) are required under those conditions. The SIS specifically finds "Steady-state analysis of both *primary* and *alternate POI cases* reveals no thermal overload in the **Pre- and Post-BRRTP system".**[15] We note that contingencies and special protection schemes are required for contingency situations which are sometimes referred to in the SIS as "transient" conditions.

The SIS identified the equipment needed at the Barren Ridge Switching Station. (*Id.* at 11-12.) The SIS concluded with the following:

> Based on the provided BSP models and with the assumption for maximum steady generation at BSP, no adverse system impacts were found with the BSP interconnection at Barren Ridge SS in terms of transient and post-transient stability for the **primary POI**. System performance meets all the applicable NERC/WECC reliability standards under normal, (N-1) and (N-2) contingency conditions with the <u>proposed SPS</u> [special protection scheme] for the **primary POI**.
>
> BSP interconnection increases both three-phase and single-phase duties at several stations along the Inyo-Rinaldi line. These increased duties do not exceed the planned interrupting duty of 15kA of all Barren Ridge SS [switching station] circuit breakers.

(*Id*. at 19 [emphasis original].) No additional upgrades are identified in the SIS that need to be evaluated for potential environmental impacts.

B. <u>Employment of a Special Protection Scheme Will Address Potential Overloads Prior to Construction of BRRTP.</u>

Mr. Marcus challenges the conclusions contained in the SIS that no further downstream upgrades are needed to interconnect the Project prior to BRRTP by reference to information on LADWP's website. (Ex. 616 at 1; Ex. 619 at 2.) First, the referenced section of their website is a general

[15] Under "Power Flow Analysis" for heavy summer conditions the sentence goes on to read "except for the loss of both Rinaldi-Tarzana lines" which is a contingency or N-1 or 2 condition. The same conclusion is reached under the light autumn conditions, "No steady-state violations and no thermal overloads were found for all contingencies in the **Pre- and Post-BRRTP system**". *Id*. at 10 (emphasis original).

description of the BRRTP whereas the SIS is a study conducted under WECC/NERC guidelines and reliability requirements that looks specifically at the line transfer capability for this Project in light of the other proposed projects. (Ex. 76, Att. DR 50 at 6.) Thus, the SIS is a more precise evaluation. Second, LADWP recently added Dynamic Rating Equipment that will allow LADWP to upgrade the rating of the Barren Ridge-Rinaldi 230 kV line from 459 MVA to 530 MVA, expanding the line capacity by approximately 70 MVA or almost 70 MW.[16] (Ex. 638 at 1.) LADWP expects obtain the new rating based upon the dynamic rating equipment by November 2010, well prior to the Project entering commercial operation. (Ex. 638 at 1.) Beacon proposes to construct the Project in 25 months beginning in approximately December 2010 with some biological and potentially cultural resources work beginning prior to December 2010. (Ex. 2 at 2-27.) The AFC projected a commercial operation date of third quarter 2011 based upon starting construction in the third quarter of 2009 that obviously, has not occurred. (See Ex. 2 at 2-28.) Thus, the Project would not enter commercial operation until at the earliest the end of 2012 and more likely in the second quarter of 2013 to accommodate the cultural resources mitigation leaving only a short period of time between commercial operation and completion of the BRRTP. (Ex. 76, Att. DR-50 at 5; Ex. 339.)

In order to address overload conditions prior to completing BRRTP caused by an outage along the transmission line that would carry energy from the Project to the Los Angeles area, Barren Ridge – Rinaldi, LADWP would require a special protection scheme (SPS) for the Project. (*Id.* at 7 & 19.) LADWP confirmed the initial conclusions in the SIS that a remedial action scheme (RAS), referred to in the SIS as a SPS, would be needed to mitigate possible overload of the Barren Ridge-Rinaldi 230 kV Line prior to the construction of BRRTP. (Ex. 638 at 1.) Please note that after completion of the BRRTP there will be a second transmission line between the Barren Ridge Switching Station and the new Haskell Switching Station (Ex. 76, Att. DR-50 at 5.) Finally, using an SPS or RAS is "an operating tool that is **commonly used** by transmission owners to provide operational flexibility." (Ex. 334 at 2 [emphasis added].)

1. <u>LADWP Recently Expanded the Transmission Capability of the Barren Ridge-Rinaldi Transmission Line</u>

Mr. Marcus expressed a concern about the ability of the transmission system to accommodate Project generation prior to completion of BRRTP. (Ex. 616 at 2-3.) As stated above, LADWP has installed dynamic rating equipment to increase the rating of the Barren Ridge-Rinaldi transmission line prior to completion of BRRTP. Thus, LADWP has addressed Mr. Marcus' concerns about the transmission line capacity. In addition, using an SPS to address overloads prior to completion of BRRTP is not unusual or something that should be considered a detriment to this Project or a reason not to grant it a license. As noted by Mr. McCloud, even if LADWP needs to use the SPS to reduce generation, LADWP is getting an additional 180 MW of renewable generation to meet LADWP's daily peak. (Ex. 334 at 2.)

[16] MVA ratings are not directly equivalent to the ability of a transmission line to handle installed MW due to the need to include power factor in the equation. Since this calculation is a comparison between to MVA ratings, power factor has a reduced impact on the direct correlation between MVA and MW rating of the transmission line.

2. LADWP Used Reasonably Conservative Assumptions in the SIS.

The SIS clearly identifies the expected generation profiles used to evaluate the interconnection of intermittent renewable resources. Figure 3 of the SIS clearly shows the maximum generation profiles for Pine Tree and Wind #2 (a second as yet unidentified wind generation project) generation profiles over a 24 hour period plotted with the expected maximum generation from the Project over the same 24 hour period.

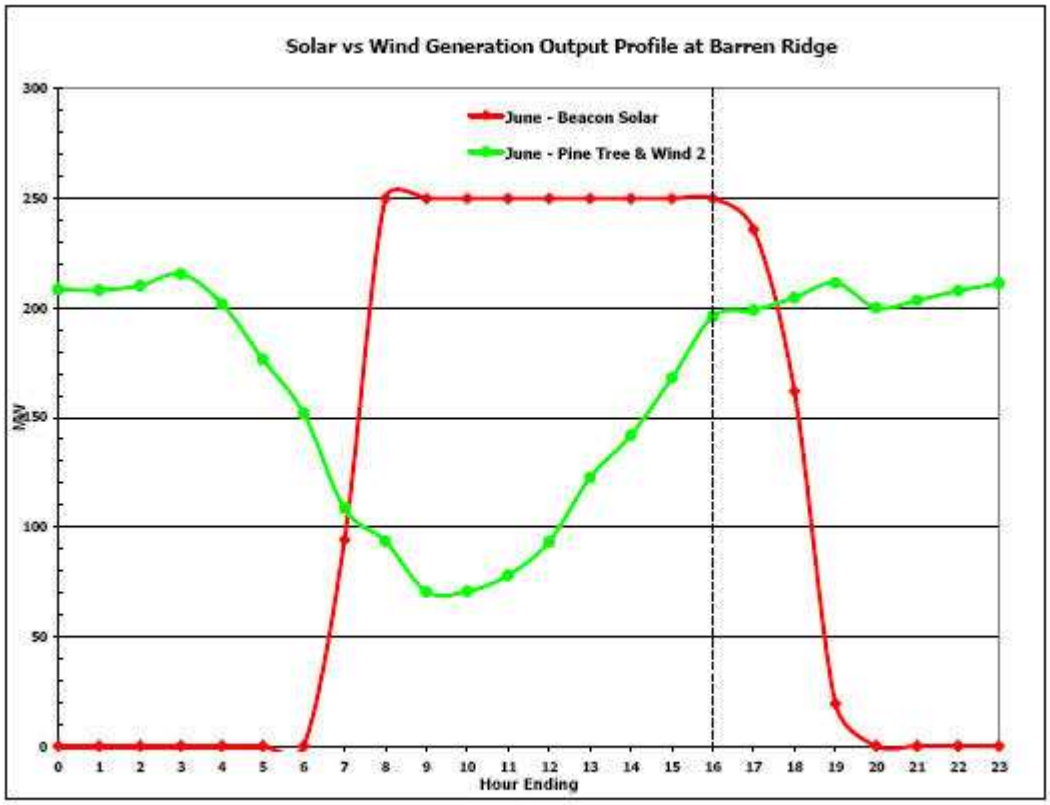

Figure 3. Maximum Solar and Wind Generation Output Profile

(*Id.* at 6.) This figure clearly shows the different times maximum output is expected from Pine Tree and Wind #2 as well as the maximum output expected from the Project.

The SIS used reasonable conservative assumptions for generation from the intermittent renewable resources when evaluating the interconnection request from Beacon. (*See* Ex. 76, Att. DR-50 at 6 & 13, Table 2.) Mr. Marcus is concerned that the maximum wind generation used in the SIS of 190 MW at 1600 hours (4 pm) is below maximum capacity of those wind resources of approximately 220 MW, we note that Beacon is assumed to be operating at 240 MW at this same time. Given the intermittent nature of both resources Beacon believes the use of the reasonable high generation case is appropriate. (As stated by Mr. McCloud, "If the wind is not blowing or at a low speed there may be no curtailment of wind generation." Ex. 334 at 2.)

Staff testified that they support an evaluation based upon a reasonable expected high generation case. Even though the SIS does not find thermal overloads or a need for an SPS under normal conditions. (Ex. 76, Att. DR-50 at 10.) Staff would support using an SPS for normal conditions in this instance based upon the types of resources connected to this transmission line.

> In this case for these lines we're talking about essentially three types of generators on the line. You've got a wind generator, a solar generator and then LA has some hydroelectric generation.
>
> The rare condition where the line would be overloaded under normal conditions would be when the wind and the solar were operating together at pretty much their maximum output. And that doesn't happen very often.
>
> To basically back down some generation under that condition isn't sort of an outrageous idea. And LA proposed in some cases that they would back down the hydroelectric generation under that condition. Partly I'm inferring that from one of the SPSs that shows up in the system impact study.
>
> That's a pretty reasonable solution to this because the hydroelectric can often be stored. On the rare chance that the wind and the solar are generating at the same time, you just have them for the moment that the wind is blowing and the sun is shining. They may not be doing that tomorrow and you may be able to get -- you may save the hydro event for another hour, another day, another week. You can't really save the sun or the wind.
>
> So I'm not -- I guess that's my comment on the David Marcus testimony. It's pretty reasonable that you would back down something and that you would try and build a transmission system that operated under most of the time, under most conditions.
>
> And, you know, if you actually built the transmission system so that it could take all the wind and all the solar and all the hydro, you'd be almost over-building the system because you don't have all three of those together very often.

(3/22/2010 RT 209:6-210:18.)

3. The SPS Will Enhance LADWP's Operational Flexibility.

Finally, Mr. Marcus expresses a concern about the Project restricting LADWP's operational flexibility. (Ex. 616 at 2-3.) We again refer to the requirement that LADWP conduct their SIS analyses consistent with the WECC/NERC requirements for reliability. (Ex. 76, Att. DR-50 at 6.) We also find it highly unlikely that LADWP would produce a SIS that would restrict their ability to operate their own transmission system. (Ex. 334 at 3.) In fact, "an SPS is an operating

tool that is commonly used by transmission owners to provide operational flexibility." (Ex. 334 at 2.)

Therefore, although an SPS or RAS will be required for the Project prior to the completion of the BRRTP, it will not restrict LADWP's operational flexibility. Based upon the timing of commercial operation of Beacon and completion of BRRTP there will most likely be only a short period of time when an SPS will be required for Beacon. In addition, an SPS will only be needed if Beacon and both wind generation projects are operating at a reasonable maximum generation level.

C. CURE Has Not Met Its Burden to Require Changes to Condition of Certification TSE-5.

As demonstrated above, the interconnection requirements for the Project are reasonable. Using an SPS for this Project prior to completion of BRRTP is a common requirement and makes sense when a transmission project, the BRRTP, is being proposed regardless of whether this Project goes forward and is currently in environmental review. (Ex. 619.) Mr. Marcus requests a signed interconnection agreement be required prior to project construction. (Ex. 616 at 3.) This requirement is inconsistent with recent Commission decisions where the typical requirement is to provide a signed interconnection agreement prior to construction of the transmission upgrades. (3/22/2010 RT 216:16-24; *See* the Final Commission Decision for the Avenal Energy Project [08-AFC-01] at 87-89, Dec. 2009, CEC-800-2009-006-CMF; *See* the Final Commission Decision for the GWF Tracy Combined Cycle Power Plant Project [08-AFC-07] at 79-81, March 2010, CEC-800-2010-002-CMF) CURE has the burden to demonstrate the need for this modification to condition of certification TSE-5.

> The proponent of any additional condition, modification, or other provision relating to the manner in which the proposed facility should be designed, sited, and operated in order to protect environmental quality and ensure public health and safety shall have the burden of making a reasonable showing to support the need for and feasibility of the condition, modification, or provision. (20 Cal. Code of Regs. 1748[e].)

Given the reasonable and common use of an SPS especially when it applies to intermittent renewable resources, the rating change on the Barren Ridge-Rinaldi transmission line due to the dynamic rating equipment, and the BRRTP, the SIS correctly identifies the requirements for interconnection of the Project to LADWP's transmission system. No additional requirements need to be identified or addressed or are expected to be included in an interconnection agreement. Therefore, requiring an interconnection agreement prior to construction of the Project would provide no benefit.

CURE claims there is uncertainty regarding deliverability of the output from the Project. (Ex. 616 at 3.) The SIS identifies the need for an SPS prior to BRRTP. (Ex. 76, Att DR-50 at 7 and 19.) LADWP confirmed recently the need for an SPS or RAS prior to construction of BRRTP. (Ex 638 at 1.) Mr. Marcus does not question the ability of the transmission system to handle the Project output once BRRTP is completed. (Ex. 616 at 2-3.) Therefore, Beacon does not believe there is uncertainty regarding delivery of the Project's output prior to or following the construction of BRRTP. Therefore, CURE has not demonstrated the need for this additional

condition. Furthermore, since Beacon is pursuing American Recovery and Reinvestment Act funding for this Project, no unnecessary barriers should be required prior to construction. CURE has not demonstrated the need to provide a signed interconnection agreement or provided any testimony on the feasibility of completing the interconnection agreement prior to initiating construction of the Project. (*See* Ex. 616 at 1-3 and 3/22/2010 RT 192:7-207:6.)

VII. CONCLUSION

If approved, the Beacon Solar Energy Project (BSEP) will stand as a model for solar development in the California desert. The Project will provide California with overwhelming benefits, including a reliable source of much needed renewable energy that is based on proven technology, and that will help the State meet its renewable energy portfolio standards while reducing impacts to climate change from energy consumption. Locally, the Project will bring a significant number of construction-related and long term operational jobs to a depressed region and increase local consumer-goods expenditures and payrolls, as well as providing sales tax revenues. While Beacon does not believe that the Project will have any significant, unmitigable adverse impacts on the environment, as shown by the extensive environmental review the Project has undergone, to the extent that the Commission disagrees, the Project's benefits clearly outweigh any environmental impacts it could have.

The Project has the nearly uniform support of the local citizens and surrounding communities, and has not been opposed by a single environmental group. Perhaps most importantly, the Project will be located on previously disturbed agricultural land, and will have a minimal impact on biological resources. In fact, experts have opined that, when the compensatory mitigation measures Beacon has agreed to implement are taken into account, the Project will have a *net benefit* to desert species and ecology. The responsible regulatory agencies have concurred with the Project's proposed mitigation for special-status species and other impacts, and have no opposition to the Project's development.

As set forth in detail above, Beacon and Staff have satisfied all statutory and regulatory requirements for the approval of the Project's Application for Certification. Staff and other agencies have conducted 24 months of thorough analysis of the Project and, where appropriate, have recommended and obtained project modifications to ensure the Project will not cause any significant adverse impacts. Each modification has been studied and evaluated in its own right to a degree that more than satisfies the requirements of CEQA and the Warren-Alquist Act. Although Staff still has some concerns that the Project could have an adverse, unmitigable impact to visual resources in the area, Beacon believes that there is substantial evidence in light of the whole record that, because of the already-disturbed nature of the Project site and its proximity to existing industrial development, any visual impacts will not be of a significant or substantially degrading nature, as those terms are defined under CEQA.

The sole intervener in this proceeding is the California Unions for Reliable Energy (CURE). Throughout the Commission's review process, CURE has consistently maintained that an exceedingly high level of detail is required in the Project's analysis, but this claim has been and continues to be rife with hidden motive and lacking in legal support. In short, CURE has not met its burden to require the additional mitigation measures it requests, and its claims of insufficient analysis under CEQA are not supported by the evidence.

In sum, Beacon respectfully requests that the Commission approve the Application for Certification of the Beacon Solar Energy Project, as modified by Staff and agreed to by Beacon during this siting process. California desperately needs a utility-scale solar project that is sited and designed in an environmentally-responsible manner, and that enjoys the support of all facets of the industrial and environmental community. Licensing the Beacon Solar Energy Project shows that such a result is indeed possible, and for this reason alone, disapproval of this Project would be a disservice to the people of California.

Respectfully Submitted,

/s/

Jane E. Luckhardt

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

APPLICATION FOR CERTIFICATION FOR THE BEACON SOLAR ENERGY PROJECT	DOCKET NO. 08-AFC-2

PROOF OF SERVICE
(Revised 2/8/10)

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Declaration of Service

I, Lois Navarrot, declare that on April 19, 2010, I served and filed copies of the attached **Beacon Solar LLC's Opening Brief in Support of the Application for Certification for the Beacon Solar Energy Project.** The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: www.energy.ca.gov/sitingcases/beacon. The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service List) and to the Commission's Docket Unit, in the following manner:

(check all that apply)

For Service to All Other Parties

__X__ sent electronically to all email addresses on the Proof of Service list;

__X__ by personal delivery or by depositing in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service List above to those addresses **NOT** marked "email preferred."

AND

For Filing with the Energy Commission

__X__ sending an original paper copy and one electronic copy, mailed and e-mailed respectively, to the address below **(preferred method)**;

OR

_____ depositing in the mail an original and 12 paper copies as follow:

California Energy Commission
Attn: Docket No. 08-AFC-2
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.

/s/
Lois Navarrot