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Mr. Christopher Meyer
Project Manager
Attn: Docket No. 08-AFC-5
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Imperial Valley Solar (formerly Solar Two) (08-AFC-5)
Applicant's Submittal of Post-Hearing Brief

Dear Mr. Meyer:

On behalf of Imperial Valley Solar (formerly Solar Two), LLC, URS Corporation Americas (URS) hereby submits the Applicant's Post-Hearing Brief.

I certify under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge. I also certify that I am authorized to submit on behalf of Imperial Valley Solar, LLC.

Sincerely,

Angela Leiba
Project Manager

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STATE OF CALIFORNIA
Energy Resources Conservation
and Development Commission

In the Matter of: Application for Certification of the Imperial Valley Solar Project	))))	**Docket No. 08-AFC-5**

APPLICANT IMPERIAL VALLEY SOLAR'S POST-HEARING BRIEF

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I. INTRODUCTION AND SUMMARY.

Imperial Valley Solar, LLC ("IVS") filed an Application for Certification with the California Energy Commission for the Imperial Valley Solar Project to be located in Imperial County, California. As CEC Staff has noted in its own written comments, the solar project "will help California meet its renewable portfolio standard" and "will provide critical environmental benefits by helping the state reduce its greenhouse gas emissions." Staff's Comments Regarding A Possible Energy Commission Finding of Overriding Considerations, Imperial Valley Solar Project (08-AFC-5)[1], July 27, 2010, at 1. The CEC Staff also correctly pointed out the appropriateness of the site selected for the project by noting that the site of the Project is "adjacent to, and in the vicinity of existing and planned development, including major transmission lines and other proposed renewable energy projects. *Id.* at 2.

IVS has carefully refined the Project both before and during the permitting process in response to input from the Commission, state and federal agencies, and the public to avoid or reduce environmental impacts. Those refinements have included reducing the project's size by over 1,000 acres, substantially avoiding important wetland and biological resources, and creating Environmentally Sensitive Areas to avoid cultural resources. Ex. 133 (Imperial Valley Solar Project Changes) at 1–2. The resulting 709 megawatt project (the "Project" or the "IVS Project") is the Least Environmentally Damaging Practical Alternative (LEDPA) and fulfills the state's mandate to produce renewable energy in a manner and on a site that avoids significant environmental impacts and mitigates unavoidable impacts to the maximum extent possible.

The Commission has exclusive authority to approve thermal power plants in California in excess of 50 megawatts. Pub. Res. Code §§ 25500 *et seq.* This authority obligates the Commission to investigate and determine whether a proposed project will be safe and reliable, will meet all applicable laws, ordinances, rules and regulations (LORS),

[1] Citations to documents without exhibit number may be found in docket 08-AFC-5 by date.

and will be constructed and operated in an environmentally acceptable manner. 20 Cal. Code Regs. § 1741. If the Commission determines that a project would result in non-compliance with an applicable LORS, or would cause a significant environmental impact that cannot be mitigated, the Commission may still approve the plant if it determines that the project is required for public convenience and necessity. Pub. Res. Code § 25525. As demonstrated below, the IVS Project complies with most applicable LORS, will be operated in a safe and reliable manner, and will result in few unmitigated significant adverse environmental impacts. Given the significant public benefits the Project will provide, there is ample evidence in the record to support an override by the Commission for the limited LORS non-compliance and the few significant unavoidable impacts associated with the Project.

Following evidentiary hearings on the Project on July 26-27, 2010, Commission Staff, IVS, and Interveners agreed to brief certain issues related to Project reliability; Commission approval of the LEDPA; water supply and related impacts; the timing and scope of biological mitigation; proposed revisions to conditions of certification; and the Commission's proposed override of LORS and certain unavoidable impacts.

This brief sets forth IVS' position on the various post-hearing issues. It also requests that the Commission conclude:

- There is substantial evidence supporting the reliability of the Project.
- Approval of the Least Environmentally Damaging Practicable Alternative (LEDPA) is appropriate.
- The Project has a reliable water supply.
- Biological mitigation should be carefully tailored to Project impacts:
    - The amount of compensatory mitigation required must reflect the quality and functionality of lands impacted by the Project.
    - Requiring separate long-term management funding for lands to be managed by BLM is duplicative, disproportionate to the Project's impacts, and not in compliance with CEQA.
    - On-site mitigation for impacts to special status plants would be neither feasible nor effective and should be replaced with off-site mitigation.
    - IVS' compensatory biological mitigation obligations should be phased to better correspond to when impacts are expected to occur and to reflect financial feasibility.
- The Project's benefits amply support an override of both the few LORS conformance issues and significant and unavoidable impacts.

These conclusions require modification of the Conditions of Certification as proposed by IVS in Exhibits 122 and 133-139. IVS respectfully requests that the Commission override LORS and significant unavoidable impacts and grant certification of the 709 MW Least Environmentally Practicable Alternative (LEDPA) subject to Conditions of Certification. IVS requests that the Conditions of Certification reflect the modifications in Attachment A, which were agreed upon by Staff and IVS, as well as the modifications requested by IVS as to SOIL&WATER-2 and -9 (Ex. 122), SOIL&WATER-7 (Ex. 138), BIO-10 (Ex. 135), BIO-17 (Ex. 136), and BIO-19 (Ex. 137).

II. THERE IS SUBSTANTIAL EVIDENCE SUPPORTING THE RELIABILITY OF THE PROJECT.

The Project will use SunCatcher technology, which has been extensively tested at Sandia National Laboratory and the McLaren test facilities and has demonstrated its reliability at Tessera Solar's Maricopa Solar facility. Maricopa Solar, located outside of Phoenix, uses the SunCatcher technology in full commercial operation and has been operating smoothly at high availability – 96.1 percent overall. This success together with other research and development and testing efforts ensures the Project's reliability in providing electricity to the grid.

The Commission must determine whether the Project will be designed, sited, and operated to ensure safe and reliable operation. Pub. Res. Code § 25520(b); Cal. Code Regs., tit. 20 § 1752(b)(2). To ensure adequate system reliability, the Commission examines whether individual power plants will be built and operated to the traditional level of reliability reflected in the power generation industry. Where a power plant compares favorably to industry norms, it is not likely to degrade the overall reliability of the electric system it serves. The SunCatcher technology meets this standard and there is substantial evidence in the record supporting the Project's reliability.

A. The SunCatcher Technology Has Demonstrated Its Reliability.

The SunCatcher technology consists of a large mirrored dish, a Stirling engine, and a small electrical generator. Ex. 145 (Prepared Testimony of Waymon Votaw, July 27, 2010 (hereafter "Votaw Prepared Testimony") at 1. The system is designed to automatically track the sun and collect and concentrate solar energy onto a receiver that generates grid-quality electricity. Ex. 1 (Application for Certification, SES Solar Two, LLC, June 30, 2008 (hereinafter "Application for Certification") at 3-11. Stirling engines are not a new technology; they were invented in 1816 and are used today in submarines and auxiliary power generators, among other applications. Ex. 145 (Votaw Prepared Testimony) at 1.

The SunCatcher technology itself has been developed over many years, has more than 20 years of recorded operating history, and has been tested under a broad range of conditions at Sandia National Laboratory. *Id.* at 2; Ex. 1 (Application for Certification) at B-4. McDonnell Douglas first deployed field prototypes in 1984. Ex. 145 (Votaw Prepared Testimony) at 2. From 2004 to 2006, the SunCatcher technology was

installed at Sandia National Laboratory, where it has since been subjected to over 30,000 aggregate on-sun hours of tests under all types of conditions. Ex. 145 (Votaw Prepared Testimony) at 2. Substantial operating data was collected from these tests. *Id.*; Transcript, Votaw Testimony, May 24, 2010, at 185. Tessera Solar repeatedly adjusted and refined the technology based on the Sandia results to improve its efficiency, reliability, and commercial applicability and to develop a new generation of SunCatchers. Ex. 145 (Votaw Prepared Testimony) at 2.

The Maricopa Solar facility put the refined SunCatcher technology into commercial operation and has demonstrated its ability to provide reliable power. Tessera Solar built Maricopa Solar in part to help demonstrate its ability to scale up the SunCatcher technology for use in a utility-scale application. *Id.* The plant uses 60 SunCatchers capable of generating 1.5 MW of power, arranged in the same "building block" configuration proposed for the Project. *Id.* Maricopa Solar entered into full commercial operation on March 15, 2010, and since has been operating "very well," as its asset manager testified, with the SunCatchers accumulating over 80,000 on-sun hours. *Id.* at 3-5.

The Maricopa Solar project's reliability is evidenced by its overall availability of 96.1 percent and capacity factor of 27.8 percent from March 16, 2010, through July 14, 2010. *Id.* at 3. The last reported update before live testimony on July 27, 2010, demonstrated SunCatcher availability of 97.5 percent, indicating that availability is increasing over time. Transcript, Votaw Testimony, July 27, 2010, at 424. Within the first ten days of the facility's operation, certain issues contributed to lost availability, including minor design modifications required for the centralized hydrogen system and quality control improvements necessary in manufacturing the SunCatcher dish drive. These problems have been resolved. Ex. 145 (Votaw Prepared Testimony) at 3.

The success of the Maricopa Solar plant informs IVS' expectation of availability for the Project. IVS assumes 98 percent availability for the Project – an assumption generally validated by operational experience at Maricopa Solar. Transcript, Votaw Testimony, July 27, 2010, at 426-27. IVS can directly apply the lessons it learns from Maricopa Solar to the construction, operation, and maintenance of the Project, given that Maricopa Solar represents the basic building blocks of a larger solar facility. The Project also will have two added advantages over Maricopa Solar with respect to reliability: it will have a larger inventory of spare power conversion units and other parts, and SunCatcher components will be produced using high volume manufacturing techniques that allow for increased equipment quality. For these reasons, IVS expects the Project to have a similar or better reliability performance than Maricopa Solar.

B. Further Demonstration Projects Are Unnecessary, Given Maricopa Solar's Success And The Modularity Of The Technology.

The SunCatcher technology does not require further testing or demonstration before the Commission can approve a large-scale project using the technology. The manner in which SunCatchers are grouped negates any need for further demonstration projects beyond the successful 1.5 MW facility at Maricopa Solar.

Dr. Barry L. Butler, an independent expert in concentrating solar technology, testified in 2007 before the Public Utilities Commission that the Stirling solar technology "holds much promise," but should be demonstrated at the 1 MW, 10MW, and 100 MW levels before large-scale commercial plants begin operations. Ex. 504 (Phase I Direct Testimony of Dr. Barry Butler on Behalf of Conservation Groups, California Public Utilities Commission, App. No. 06-08-010, June 1, 2007) (hereinafter "Butler Testimony") at 6-7. We agree with Dr. Butler's conclusion regarding the promise of this technology, but disagree with the conclusion that additional testing is needed. First, Dr. Butler was describing a competitor's equipment in his testimony. *See id.* at 3. Second, his testimony ignores the distinctive, modular nature of the SunCatcher technology and the resulting scalability that distinguishes it.[2] The SunCatcher technology is designed to be used in 1.5 MW modular groups of 60 SolarCatchers each. Transcript, Votaw Testimony, May 24, 2010, at 189. The Project aggregates multiple "building blocks" of this size. *Id*; Ex. 145 (Votaw Prepared Testimony) at 2. As one of IVS' experts testified, there is no reason whatsoever to conclude that if one 60-unit block (like Maricopa Solar) worked well, multiple 60-unit blocks (like the Project) will not work equally well. Transcript, Votaw Testimony, May 24, 2010, at 189. Thus, the excellent reliability record of Maricopa Solar supports the conclusion that no further demonstration projects are necessary.

Dr. Butler also testified about equipment failures that were present in early prototype stages of a *competitor's* concentrating solar technology and stated that the Mean Time Between Failures (MTBF) for this competing technology was approximately 40 hours. Ex. 504 (Butler Testimony) at 3-4. There is no basis for concluding that the Project would have an unacceptably low MTBF rate. Maricopa Solar has not been in operation long enough to allow the MTBF to be calculated. *See* Transcript, Votaw Testimony, July 27, 2010, at 437-38; Transcript, Votaw Testimony, May 24, 2010, at 180-81. However, Tessera Solar is conducting an extensive program to validate and ensure that the equipment at Maricopa Solar, the same type that will be used at the Project, will perform reliably, as designed. *See* Transcript, Votaw Testimony, May 24, 2010, at 185-86. This validation program involves testing, through either cyclical or continuous operation testing, the various failure modes for most of the components that are at risk, such as heater heads, seals, and other primary components. *Id.* at 186. The program has shown that the equipment performs to expectations on reliability; enhanced testing has further validated the reliability of components. Transcript, Votaw Testimony, July 27, 2010, at 426–27. With regard to maintaining the equipment, Maricopa Solar's asset manager Waymon Votaw testified, "The maintenance systems, the supervised computerized maintenance management system at Maricopa will be the same that we roll into the large facilities, so it serves as the commercial proving ground for the processes, the capabilities, and the tools and systems that we will roll out in the large-

[2] Notably, the competitor's technology about which Dr. Butler was testifying was not selected by SDG&E or SCE for power purchase agreements. Ex. 145 (Votaw Prepared Testimony) at 5.

scale facilities." Transcript, Votaw Testimony, May 24, 2010, at 190. The results at Maricopa Solar have also validated management's assumptions about equipment maintenance for large-scale facilities based on the same technology. *Id.* at 189.

Given the extensive testing at Sandia, the strong performance of the Maricopa Solar plant, and the distinctive modularity and scalability of the SunCatcher technology, the evidence before the Commission resoundingly supports the conclusion that the Project will be reliable.

III. THE COMMISSION SHOULD APPROVE THE CORPS-IDENTIFIED LEAST ENVIRONMENTALLY DAMAGING PRACTICABLE ALTERNATIVE FOR THE PROJECT.

All three agencies with primary responsibility for approving or disapproving the IVS project – the CEC, BLM, and the Corps of Engineers – have faced the same fundamental question: What is the best achievable balance between renewable energy production and environmental impacts? The Corps, which has actively pursued this question with IVS and other agencies from the beginning, has now provided its answer in its preliminary Least Environmentally Damaging Practicable Alternative. The Corps believes, the BLM believes, and CEC Staff has suggested, that this LEDPA represents the best achievable balance. All of the agencies clearly agree that the LEDPA represents a great environmental improvement on the 750-MW proposed project. The evidence also shows – as CEC Staff predicted in the SSA – that the LEDPA is similar in environmental impact to the hypothetical (and impracticable) Drainage Avoidance Alternative #1. Although the LEDPA is not specifically analyzed in the SSA, it is well within the range of other alternatives analyzed. Therefore, the Commission both can and should approve the LEDPA as a reduced version of the 750-MW proposed project.

A. When Energy Production Is Balanced With Environmental Impacts, The LEDPA Is Superior To The 750-MW Proposed Project, Drainage Avoidance Alternative #1, And All Other Alternatives Studied.

From IVS' perspective, the LEDPA represents the third generation of the IVS Project. As a result of discussions with BLM regarding suitable sites for utility-scale renewable power generation using its SunCatcher technology, IVS identified a 900-MW project on approximately 7,600 acres of land. Ex. 129 (Army Corps of Engineers Draft 404(b)(1) Alternatives Analysis for the Imperial Valley Solar Project (aka Solar II) July 16, 2010, (hereinafter "Army Corps Alternatives Analysis") at 22. The 7,600-acre site was chosen because it met the Project's logistical requirements, and was viewed by the BLM as an appropriate place to locate a large scale solar facility. Transcript, Van Patten Testimony, May 24, 2010, at 35.

However, early environmental review revealed that by excluding the easternmost 1,100 acres, the project would avoid impacts to many significant cultural resources, many acres of waters of the U.S., and 1,100 acres of Flat-Tailed Horned Lizard habitat. Ex.

129 (Army Corps Alternatives Analysis) at 23. To achieve these reductions in impacts, IVS decided to pursue a smaller 750-MW project on approximately 6,500 acres.

Because all parties recognized that the 750-MW project still would cause significant impacts to waters of the U.S., the Corps requested, and the BLM and CEC agreed to provide, environmental analysis of two hypothetical "drainage avoidance" alternatives. The first of these, Drainage Avoidance Alternative #1, would eliminate SunCatchers from all the primary drainages found on the proposed project site. Ex. 302, (Supplemental Staff Assessment, July 7, 2010) (hereinafter "SSA") at B.2-15. Drainage Avoidance Alternative #2 would eliminate the easternmost and westernmost areas of the proposed project site where the largest drainage complexes are located. Ex. 302 (SSA) at B.2-16. When it determined that these drainage avoidance alternatives should be studied, the Corps did not pretend to have considered their feasibility or the extent to which these alternatives would benefit natural resources other than the drainages themselves. Rather, these were un-engineered, un-studied alternatives expressly "designed to test" practicability. Ex. 129 (Army Corps Alternatives Analysis) at 26. When the Corps, IVS, USFWS, USEPA, and other agencies studied the alternatives, they concluded that the LEDPA was a 709-MW project that focused on eliminating SunCatchers from the highest-flow streams on the proposed project site.

1. The LEDPA Compared To The 750-MW Proposed Project.

The Corps' section 404(b)(1) Alternatives Analysis considered six off-site and six on-site alternatives, using siting, environmental, cost and logistics criteria. Ex. 129 at 8-9, 13-18; Ex. 143 (Prepared Testimony of Mike Fitzgerald, July 27, 2010) (hereinafter "Fitzgerald Prepared Testimony") at 2–3. Unlike the Corps' early identification of potential alternatives, this process was supported by more detailed investigation and analysis. This analysis identified the LEDPA as the "Modified Project to Avoid the Highest Flow Resources Alternative." This alternative includes many changes that reduce environmental impacts compared to the 750-MW proposed project. Ex. 129 (Army Corps Alternatives Analysis) at, at 23–26; Ex. 143 (Fitzgerald Prepared Testimony) at 4–5. A few key comparisons are:

- The LEDPA reduces permanent impacts to waters of the U.S. from 177.4 acres to 38.2 acres.

- By eliminating 1,163 SunCatchers, the LEDPA eliminates SunCatchers in ephemeral main-stream stems H, I, K and C, a majority of stream G, and the upper half of stream E.

- Another 228 SunCatchers are removed from 200-foot corridors in northern sections of ephemeral main-stem streams E and G. Combined with the complete avoidance of streams south of the transmission corridor, these corridors provide unobstructed hydrologic and sediment transport, and clear travel routes for flat-tailed horned lizard, across the project area.

- The LEDPA's substantial reductions in the number and width of roadways, and relocation of the Main Services Complex, contribute to its reduction in permanent impacts to waters of the U.S. Ex. 129 (Army Crops Alternatives Analysis) at 23-26; Ex. 143 (Fitzgerald Prepared Testimony) at 4–5.

There is no dispute that the LEDPA represents a substantial environmental improvement over the 750-MW proposed project although it does slightly reduce the project's energy production and contribution to the state's RPS and greenhouse gas emission reduction goals.

2. The LEDPA Compared To Drainage Avoidance Alternative #1.

In the SSA, Staff expresses the belief that the final LEDPA will be similar to Drainage Avoidance Alternative #1 and the hope that the LEDPA's environmental impacts will also be similar to those of Drainage Avoidance Alternative #1. Ex. 302 (SSA) at ES-2, ES-26. The preliminary LEDPA identified by the Corps on July 16, 2010 more than justifies Staff's belief. In fact, in key respects – even before taking practicability into account – the LEDPA is environmentally superior to Drainage Avoidance Alternative #1 as envisioned by Staff.

The SSA analyzes Drainage Avoidance Alternative #1 without the benefit of the engineering and practicability effort used by the Corps' in their section 404(b)(1) Alternatives Analysis. As a result, the alternative as described in the SSA does not match the Corps' description of the same alternative in the Army Corps Alternatives Analysis. Most importantly the SSA assumes that Drainage Avoidance Alternative #1 would generate 632 MW of electricity and cause permanent impacts to 48 acres of waters of the U.S. Ex. 302 (SSA) at ES-26. As noted above, the LEDPA would cause permanent impacts to only 38.2 acres of waters of the U.S. and generate 12% more electricity. Thus if the LEDPA is compared to Staff's version of Drainage Avoidance Alternative #1 in terms of impacts to waters of the U.S., the LEDPA is not only similar to that alternative; it is the environmentally superior of the two both in terms of site specific impacts and electricity system-wide greenhouse gas emission reductions.

In terms of biology, the reason Staff chose Drainage Avoidance Alternative #1 as the preferred alternative over the 750-MW proposed project was its avoidance of wash C and wash G. Transcript Nishida Testimony, July 27, 2010, at 220:3-221:21. There was no other significant difference between Alternative #1 and the 750-MW proposed project in terms of biology. *Id*. at 221-17-12. The LEDPA "avoids the entirety of washes I, H, K, and C and avoids all of washes E and G southwest of the transmission line corridor as well as providing a 200 foot wide flow corridor in washes E and G northeast of the transmission line corridor." Ex. 129 (Army Corps Alternatives Analysis) at 23. The LEDPA and Drainage Avoidance Alternative #1 are equivalent with respect to the movement corridors in wash C and G identified as important by Staff. Transcript, Fitzgerald Testimony, July 27, 2010, at 363-364.

The SSA identifies a third important environmental distinction between Drainage Avoidance Alternative #1 and the 750-MW proposed project. The SSA asserts that Drainage Avoidance Alternative #1 would avoid the significant erosion impacts of the 750-MW proposed project. Ex. 302 (SSA) C-7-65. The evidence shows, however, that with recommended changes such as elimination of sedimentation basins, the 750-MW project would not cause significant impacts. Ex. 143 (Fitzgerald Prepared Testimony) Answer 14. Moreover, the 709-MW LEDPA both incorporates these recommended changes and avoids the highest-flow drainages. Ex. 129 (Army Corps Alternatives Analysis). Accordingly, the LEDPA achieves the same erosion benefits as the SSA attributes to Drainage Avoidance Alternative #1.

The Corps Alternatives Analysis, based on more detailed information, describes Drainage Avoidance Alternative #1 differently than the SSA does. The Corps analysis showed that Drainage Avoidance Alternative #1 would allow for a maximum output of 606 MW rather than 632 MW. Ex. 129 (Army Corps Alternatives Analysis) at 35. However, the Corps simultaneously acknowledged that this analysis does not take into account the applicant's engineering logistical constraints, and that the loss of individual SunCatchers can, in turn, lead to the loss of entire 60 unit groups. *Id*. at 36. Thus, whereas the cost per megawatt renders Drainage Avoidance Alternative #1 not economically feasible at 606 MW, the Corps noted that the actual output would be even less. *Id*. at 36; Ex. 143 (Fitzgerald Prepared Testimony) at 4. This necessarily means that Drainage Avoidance Alternative #1 is not a feasible alternative under CEQA.

Thus even if Drainage Avoidance Alternative #1 were practicable, the applicant submits that any environmental benefit of that alternative compared to the LEDPA would not be worth the loss of 103 MW of clean renewable energy.

3. The LEDPA Compares Favorably To Other Alternatives Analyzed In The SSA And The Corps 404(b)(1) Analysis.

Although the SSA focuses on Drainage Avoidance Alternative #1, the LEDPA also compares favorably to the other alternatives that received detailed analysis in the SSA and the 404(b)(1) Alternatives Analysis. The SSA analyzes in detail seven "action" alternatives including the 750-MW proposed project. The 404(b)(1) analysis includes all of these alternatives and five more. Ex. 129 (Army Corps Alternatives Analysis). Both CEC Staff and the Corps analyzed, in addition to the 750-MW proposed project and Drainage Avoidance Alternative #1: a 300-MW Alternative (Proposed Project Phase I only); Drainage Avoidance Alternative #2; the Mesquite Lake Alternative; the Agricultural Lands Alternative; and the South of Highway 98 Alternative. Ex. 302 (SSA) § B.2; Ex. 129 (Army Corps Alternatives Analysis). None of these alternatives can be considered superior to the 709-MW LEDPA:

- The 300-MW Alternative would reduce site specific environmental impacts, but fails the cost practicability criterion because it would increase cost per kilowatt by $250 over the 750-MW proposed project and $200 over the LEDPA. Impacts to waters of the U.S. would be reduced, but

would remain at 27 acres of permanent impacts, Ex. 129 (Army Corps Alternatives Analysis) at 34, and this alternative would provide substantially lesser benefits to renewable energy, greenhouse gas reduction, and job creation objectives.

- Drainage Avoidance Alternative #2 would provide 438 MW of electricity at the same cost per kilowatt as the 300 MW Alternative, also failing the cost practicability criterion. Site specific environmental impacts would be reduced, but permanent impacts to waters of the U.S. would remain at 31.9 acres, Ex. 129 (Army Corps Alternatives Analysis) at 37, and this alternative would provide substantially lesser benefits to renewable energy, greenhouse gas reduction, and job creation objectives. Thirty eight percent of the Project's power generation would also be lost.

- The off-site Mesquite Lake Alternative, comprising disturbed industrial land, does not meet siting criteria because it is not available for purchase and development within a reasonable timeframe due to a large number of parcels and individual landowners. In addition, the parcel supports approximately 716 acres of wetlands, so this alternative would likely result in greater impacts to waters of the U.S. than would the 750-MW proposed project. Additionally, the adequate resources affected on this site would be wetlands which are considered special aquatic sites, meriting additional protections under the Clean Water Act (the LEDPA does not impact any wetlands). Ex. 129 (Army Corps Alternatives Analysis) at 11-12.

- The off-site Agricultural Lands Alternative could provide approximately 473 MW on 4,103 acres, but comprises seven different land parcels spread across a 100-square-mile area. The result is that this alternative would not meet cost or logistics criteria. *Id*. at 20-21.

- The off-site South of Highway 98 Alternative could provide approximately 672 MW on approximately 5,833 acres, but includes approximately 291 acres of wetlands that probably could not be avoided, and therefore was not evaluated for practicability. *Id*. at 12.

B. The LEDPA Mitigates Impacts To The Maximum Extent Feasible.

The Corps 404(b)(1) Alternatives Analysis provides extensive mitigation measures for key environmental impacts of the LEDPA. With respect to impacts to waters of the U.S., at the request of the Corps, Transcript of Mike Fitzgerald Testimony, July 27, 2010, at 368, the applicant contacted California State Parks to explore restoration of Carrizo Creek and marsh within the Anza Borrego Desert State Park. Following major storms in the 1960s, the stream and marsh became overrun with tamarisk, which severely inhibits the habitat value of the creek and marsh and has led Peninsular Bighorned Sheep, which once frequented the area, to avoid it. *Id.* at 370–71. The applicant is preparing an enhancement and rehabilitation plan in accordance with the

Corps/EPA Final Mitigation Rule that will remove tamarisk and rehabilitate the creek and marsh at a ratio of about 3:1 to 5:1 (mitigation acreage:impact acreage). Ex. 129 (Army Corps Alternatives Analysis) at 93–94.

The applicant will also be required to preserve approximately 6,527 acres of creosote bush shrubland to mitigate impacts to flat-tailed horned lizard. *Id*. at 94.

Other mitigation measures are identified in the SSA and the BLM FEIS, and are referred to by the Army Corps Alternatives Analysis. As discussed further below in Sections V and VI, IVS has agreed to the vast majority of these measures and has requested revisions to certain of them to ensure mitigation is well tailored to the identified impacts. *See* Exs. 122, 134-139.

C. CEQA Permits Approval Of A Reduced Project That Reduces Impacts Even If It Was Not Identified As An Alternative.

Interveners have argued that because the LEDPA is not analyzed in the SSA, the Commission cannot approve it until more analysis is completed. However, the LEDPA is within the range of alternatives analyzed in the SSA. Ex. 302 (SSA) at B.2-2. Moreover, the Commission is free to approve a project smaller than that described as the proposed project in the SSA, regardless of whether the smaller version was identified as a project alternative. "'The action approved need not be a blanket approval of the entire project initially described in the EIR. If that were the case, the informational value of the document would be sacrificed. Decisionmakers should have the flexibility to implement that portion of the project which satisfies their environmental concerns.'" *Sierra Club v. City of Orange*, 163 Cal. App. 4th 523, 533 (2008) (quoting *Dusek v. City of Anaheim*, 173 Cal. App. 3d 1029, 1041 (1985)) (upholding project approval against claim that the project's boundaries had not been described in the EIR).

Under CEQA, the proper question is not whether the project as approved matches either the proposed project described in the SSA or a previously identified project alternative. Instead, where there is a discrepancy between the original project description and the project approved, the question is whether the CEQA document aired the key environmental issues. In *Dusek,* for example, the court held that the key environmental issue – the demolition of a historic hotel – was the focal point of the EIR. 173 Cal. App. 3d at 1041. Therefore, although the project the redevelopment agency approved did not match the full scope of what its EIR analyzed, "the Agency action did not draw the infamous 'red herring across the path of public input'" and therefore did not "'stultify the objectives of the reporting process.'" *Id.*

Similarly here, the key environmental issues have been extensively aired in the SA/DEIS, the SSA, and the hearings. Impacts to the ephemeral drainages on the proposed project site, and to the species that use them, have been, along with cultural resources, the key issues addressed by the SA/DEIS and the SSA from the beginning. The possibility that the proposed project might not be able to meet Clean Water Act section 404(b)(1) permitting standards was a major concern expressed in the SA/DEIS, both from an environmental and a LORS perspective. As in *Dusek,* it cannot be argued

that Commission approval of the LEDPA would mean that the SA/DEIS or SSA drew a red herring across the path of public input. As staff has suggested, the LEDPA, like the 750-MW proposed project and all other alternatives studied, is focused on the same key issues as the SA/DEIS and SSA.

D. The Warren-Alquist Act Permits Approval Of The LEDPA.

The Warren-Alquist Act requires the Commission to consider the entire record in determining whether to certify a power facility. Cal. Code Pub. Res. § 25525. The Commission's consideration must include "the impacts of the facility on the environment, consumer benefits, and electric system reliability." *Id.* The Act demands that the Commission consider all relevant evidence in the record to decide the best balance of consumer benefits, electric system reliability, and environmental impacts. Nothing in the Act suggests that the Commission should, or could, curtail its consideration because a particular alternative is not analyzed in the SSA.

IV. THE IVS PROJECT HAS A RELIABLE WATER SUPPLY.

The evidence shows that the IVS Project's preferred water supply—recycled water from the Seeley Wastewater Treatment Plant—is reliable, and that a reliable backup water supply is available until recycled water from Seeley begins to flow.

The Commission's policy on power plant water use requires that use of fresh water be minimized; it also encourages the use of recycled water. Cal. Energy Comm'n, 2003 Integrated Energy Policy Report, at 39-40 (December 2003), *available at* http://www.energy.ca.gov/reports/100-03-019F.PDF.[3] The IVS Project implements both of these directives. One of the most important benefits of the SunCatcher technology is that it reduces water demand drastically below that required for more conventional electricity-generating projects and other solar technologies. The SunCatcher technology does not use any water for cooling or process steam. Ex. 302 (SSA) at B.1.3-51, C.7-13; *see* Ex. 145 (Votaw Prepared Testimony) at 3. During operation, the technology uses water only for washing of mirrors. The IVS Project will use only up to 33 acre-feet per year (AFY) of water for all purposes during operations, and it will need 51 AFY of water during construction. Ex. 116 (Prepared Testimony of Matt Moore, May 10, 2010) at 9 (hereafter "Moore Prepared Testimony"). Thus the water demand per kilowatt, as well as the total water demand, is very low for the IVS Project compared to other power plants.

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[3] *See* Response of Commission Staff to Committee Order Granting Genesis Solar, LLC Motion for Scoping Order, Hearing, and Order Scheduling Time for Filing Briefs, Docket No. 09-AFC-8 (Jan. 19, 2010) at 2-3 (explaining that the 2003 IEPR provides the Commission's only policy guidance on the use of inland waters for power plant cooling).

In addition to having very low water needs, the IVS Project will meet those needs using recycled water. IVS has agreed to fund needed upgrades to the Seeley Wastewater Treatment Plant (WWTP) operated by the Seeley County Water District. The District has been charged with violating water quality standards, and must upgrade its plant to assure no further violations occur. Ex. 127 (Letter from David Dale July 19, 2010). IVS is funding the upgrades to produce water that meets Title 22 standards for unrestricted use for nonpotable water. *Id.*; Transcript, Van Patten Testimony, July 26, 2010, at 138. IVS anticipates that recycled water will be available from Seeley to supply both the construction and operational demands of the IVS Project. *Id.* at 119. However, if the recycled water is not available when construction activities are scheduled to begin, then the IVS Project proposes to use groundwater from the Dan Boyer Water Company well as a temporary, back-up supply. Ex. 116 (Prepared Testimony of Marc Van Patten, March 15, 2010) at 4.

A. The Seeley WWTP Supply Is Reliable.

Because an EIR is required for the Seeley upgrade, the SSA appears to assume that the Seeley water supply might not be permitted and constructed, and treats the backup water supply from Boyer as if it were the IVS Project's primary water supply. Ex. 302 (SSA) at C.7-31, C.7-5. This is incorrect. The Seeley County Water District *must* construct upgrades to its WWTP to respond to a notice of water quality violation from the Regional Water Quality Control Board, and to help ensure no future violations of water quality standards. Mr. David Dale, Contract Engineer for the Seeley County Water District, has confirmed that the District needs to pursue the upgrades of its WWTP regardless of whether the IVS Project is approved. Ex. 127 (Letter from David Dale, Seeley County Water District, July 19, 2010). The District is preparing its EIR to determine exactly how and when upgrades will be implemented. Ex. 14 (Applicant's Supplement to AFC, Appendix H, "Seeley Environmental Review Update" May 10, 2010 (hereafter "May Supplement) at 1-1; Transcript, Van Patten Testimony, July 26, 2010, at 95. *See Laurel Heights Improvement Ass'n v. Regents of the Univ. of Calif*., 47 Cal.3d 376, 416 (1988) (holding that the lack of detailed promises to deploy measures to control carcinogen emissions were not required because "[c]ompliance [with the law] can be reasonably presumed").

The record of these proceedings includes voluminous evidence about the impacts of using recycled water from Seeley to serve the Project. This evidence includes analysis of the impacts of upgrading the Seeley WWTP to treat to tertiary standards, and use of a sufficient amount of recycled water to serve the construction and operational demands of the Project. The evidence includes construction impacts, the additional vehicle trips that are projected, transportation of the chemicals used to treat the wastewater, and sludge disposal. The analyses presented also address the reduction of some of the effluent flows in the drainage ditch located immediately northwest of the Seeley property, which then discharges to New River. Biological surveys that were promised have been completed, and additional surveys are being required to confirm the initial conclusions. Ex. 14 (May Supplement) at 2.6-13; Transcript, Mock Testimony, May 10, 2010, at 14. Nonetheless, IVS proposes additional surveys and studies later, to confirm

the conclusions of the initial studies. IVS has also proposed a matrix detailing what mitigation would be implemented depending on which of the detailed, possible survey outcomes occur. Ex. 14 (May Supplement) Appendix H, Table 2.6.4. For example, if Yuma Clapper Rail is unexpectedly encountered in the unnamed drainage, offsetting habitat restoration or creation elsewhere will be required. *Id.* at 2.6-29. Accordingly, there is sufficient information for the CEC to reach conclusions about the impacts of the primary water supply for the IVS Project.

The Seeley WWTP currently discharges treated wastewater into an unnamed ditch, which is near a wetland. The SSA suggests that the Seeley upgrade project might not be constructed because diversion of some of Seeley's effluent to the IVS project might be found to cause significant environmental impacts to the wetland. EX. 302 (SSA) at C.7-30. The evidence shows, however, that the IVS Project's demands would be unlikely to severely lessen or stop the Seeley flow. Ex. 130 (Prepared Testimony of Marc Van Patten, July 20, 2010 (hereafter Van Patten Prepared Testimony) at 2. The plant has the capacity, and is permitted, to treat up to 250,000 gpd (280 AFY), and currently discharges 134 AFY to 168 AFY. *Id*. The Project will only use 33 to 51 AFY.[4]

Second, there is little, if any, evidence of significant impacts. CURE assumed that the wetland would be deprived of water if the WWTP diverted 33 AFY to 50 AFY to the IVS Project. As the SSA notes, this issue is currently being studied for the Seeley EIR, which may conclude that impacts are less than significant or that they could be reduced to a level less than significant through implementation of mitigation measures such as providing restoration and compensation for affected jurisdictional areas. Ex. 302 (SSA) at C.7-30.

Finally, even if the District's upgrade project were to create significant biological impacts, that would not make the upgrade project uncertain. The SSA opines that "formal consultation with U.S. Fish and Wildlife Service under Section 7 of the federal Endangered Species Act would need to be reinitiated," Ex. 302 (SSA) at C.7-30. Additional consultation, were it to be necessary, may affect the timing of the Seeley upgrades but is not likely to affect the ultimate approval and development of the Seeley upgrades.

Recycled water from the Seeley WWTP is, accordingly, reasonably certain to be available in the near term.

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[4] It should be noted that discharge from Seeley may increase. If growth occurs in the Seeley service area, leading to an increase in influent to the Seeley WWTP, Seeley will be able to provide additional effluent to the ditch, because it has capacity to treat more influent than it currently receives. Ex. 130 (Van Patten Prepared Testimony) at 2.

B. The Boyer Well Can Also Supply The Project.

Until recycled water is available from the Seeley WWTP, the project will use groundwater from the Dan Boyer well in Ocotillo, California. Ex. 130 (Van Patten Prepared Testimony) at 2.

1. The Boyer Well Is A Reliable Supply.

The Boyer well has been pumping and supplying construction and industrial uses for decades. Business records for the Boyer Well indicate that it pre-dates the County's well regulations. The County allows older wells to continue pumping without complying with its well regulations, but only if the well owner can prove prior pumping and only to the extent the well owner establishes the amounts that were historically pumped. The County has registered the Boyer well as a pre-existing well subject to conditions, including one requiring that no more than 40 AFY be pumped from the well.[5] The County has thus established that the Boyer well has pumped 40 AFY and may continue to pump 40 AFY. Ex. 130 (Van Patten Prepared Testimony) at 3, Answer 9. Ex. 125 (letter from Jim Minnick, Imperial County Planning Department) July 14, 2010; Ex. 32 (Applicant's Supplement to AFC), Appendix D, Groundwater Evaluation Report/Dan Boyer Water Company Well, May 10, 2010, at 2-1.

2. Domestic Uses Of The Boyer Well Comprise 0.5 AFY At Most, Leaving 39.5 AFY For The IVS Project.

The SSA assumes that domestic users who rely on the Boyer well for their indoor water use consume 6 AFY of the well's water. Therefore, the SSA concludes that if adverse effects to residential users are to be avoided – as the County, CEC Staff, and IVS agree they should be – then only 34 AFY will be available for the IVS project. Ex. 302 (SSA) at C.7-40. But the SSA's assumption is not based on evidence. The SSA simply speculates:

> Prior to 2000, February water sales were fairly constant and averaged 0.15 acre-feet per month. Assuming construction and dust suppression water use are minimal during the winter, the February water sales likely represent hard or fixed indoor residential demand for water, and if applied over the entire year suggests residential indoor water use is almost 2 acre-feet per year. Total water sales in 1993 were 2.9 acre-feet, and may indicate commercial water use was minimal that year and annual residential demand was approximately 3 acre-feet per year. Staff is unable to

[5] The Boyer well has satisfied all the conditions of the well registration. Ex. 125 (letter from Jim Minnick, Imperial County Planning Department) July 14, 2010.

> confirm water sales form the Dan Boyer Water company for fixed residential water use, and therefore conservatively assumed residential water use supported by this well is 6 acre-feet per year.

Id. The SSA does not explain why it: 1) assumes construction and dust suppression water use are minimal during the winter; 2) assumes residential "indoor" demand is fixed throughout the year despite seasonal travel to the Imperial Valley; 3) assumes the 2.9 acre-feet of sales in 1993 would "indicate commercial water use was minimal that year and annual residential demand was approximately 3 acre-feet per year"; 4) takes the unsupported residential demand of 3 AFY and then doubles it. *Id.*

In fact, the evidence is that domestic users take at most 0.5 AFY from the Boyer well, leaving 39.5 AFY out of the well's 40 AFY production limit available to IVS. Ex. 126 (Declaration of Dan Boyer) July 21, 2010. As Mr. Boyer explained in further detail, the residential users of Boyer well water drive to the well, fill up plastic jugs, record their withdrawals in a notebook, pay two cents per gallon, and drive away. They are primarily seasonal visitors who camp in the desert. Transcript Boyer Testimony, July 26, 2010, at 176–78. Mr. Boyer's conclusion that these users take no more than 0.5 AFY is uncontroverted by any other evidence and the SSA's conclusion to the contrary is sheer speculation. The evidence shows that when domestic uses of Boyer well water are protected, 39.5 AFY remain available for the IVS project.

3. 39.5 AFY From The Boyer Well Will Be Sufficient To Supply The IVS Project.

The operational needs of the IVS Project are projected to be 33 AFY, and pumping 33 AFY would be well under the 39.5 AFY available from the Boyer well.

Construction is projected to require an average of 51 AFY. This estimate is, however, based upon a six-day work week. Ex. 130 (Van Patten Prepared Testimony) at 3. If the IVS Project is required to use the Boyer Well rather than recycled water, IVS would adjust the construction schedule as necessary to ensure that construction activities do not use more water than the amount allotted by the Boyer Well's County well registration and the CEC's condition of certification. *Id.* There are no aspects of construction that would make it impossible to construct the project using only 39.5 AFY. *Id.*

4. Pumping From The Boyer Well Will Not Cause Significant Impacts.

The SSA asserts that the IVS Project's use of Boyer well water for all of the construction and operation life of the Project will cause a significant unavoidable impact to the Coyote-Ocotillo Groundwater Basin. Ex. 302 (SSA) at C.7-41–C.7-44. Studies have confirmed that the well is sufficient to supply the Project without materially harming the basin. In fact, the SSA studied the impacts of using the well not only for the initial

startup before the Seeley upgrades were complete, but for the entire 40-year life of the Project. It found that as a result of pumping for a total of 40 years:

- there would be no significant adverse impacts to other wells in the basin, any springs, or any phreatophytic vegetation;

- there would no significant water quality impacts;

- though CEC staff found that a minor lowering of the groundwater table over the 40-year life of the project constituted a significant impact, it described this impact as a "decline in the water table [that] is fairly small (less than 6 feet) and the basin will not experience significant dewatering." EX. 302, SSA, at C.7-52–C.7-54.

The evidence shows that the groundwater impact would actually be less than significant. According to its well registration, Imperial County has already determined that the Boyer Well has historically pumped 40 AFY and that it is therefore entitled to continue pumping 40 AFY. Ex. 125; Ex. 130, at 3. Further, Mr. Boyer has declared that if he does not sell the water to IVS, he will sell it to others. Ex. 126 (Boyer Declaration). These factors indicate that the well will be pumped at 40 AFY in the future regardless of the IVS Project, and that the County has acknowledged this fact and accounted for it in its groundwater regulatory scheme. Ex. 125. In addition, even if the Boyer Well were pumped for the lifetime of the Project (40 years), the total extraction would be approximately 1,600 AF, which is only 0.1 percent of the basin storage. Accordingly, there is no basis on which to conclude that there would be a significant adverse impact on basin water levels. Ex. 140 (Prepared Rebuttal Testimony of Robert F. Scott), July 21, 2010, at 1.

Moreover, if the basin is already in overdraft and experiencing a gradual decline in water levels as the SSA concludes, then the only pertinent question would be whether the IVS Project's additional pumping would accelerate the eventual dewatering of the basin. Mr. Scott testified that the basin would not be dewatered for hundreds if not thousands of years, and that the date does not change regardless whether the Boyer well is pumped in amounts sufficient to supply the IVS Project temporarily for up to three years, or even for its 40-year projected life. *Id.*

Finally, as set forth in the materials and data submitted with IVS' May 2010 Supplement to the AFC, the Dan Boyer well has operated in the basin for at least 50 years with no adverse effects to water quality. *Id.* The water quality tests indicate that the quality today is the same as it was decades ago. *Id.*, at 1–2; *see also* Supplement to the Imperial Valley Solar Application for Certification, Appendix D, "Groundwater Evaluation Report", May 5, 2010. This indicates that the pumping from the well – which has reached more than 100 AFY in the past – has not been sufficient to draw poorer water quality water upwards to the aquifer from which the well pumps. Water quality has not deteriorated as a result of pumping, despite decades of pumping, sometimes at high volumes.

Thus, whether viewed in terms of the volume of the aquifer or its quality, the impact of the Project's use of Boyer well water will be less than significant.

5. The Boyer Well Already Has An Export Permit.

The SSA noted that 4% of the Project site does not overly the basin from which the Boyer Well draws water. It raised the question whether the Boyer Well could serve the Project given a County ordinance requiring an export permit for use of water outside the basin. EX. 302, SSA, at C.7-3, C.7-40. It is not at all clear that the County would require an export permit when more than 95% of the Project site lies over the same basin as the well. Regardless, the Boyer Well is already permitted by the County to export water.

Ex. 125 (Letter from Jim Minnick, Imperial County Planning Department, and enclosed Boyer well registration) July 14, 2010, at 2 (Condition T-2 registering "groundwater extraction & exportation").

6. IVS' Requested Revisions To Conditions For Boyer Well Water Should Be Adopted.

IVS has requested revisions to proposed Conditions of Certification SOIL&WATER-2 and SOIL&WATER-9 to implement use of water from the Boyer well. Ex. 122, Applicant's Requested Changes to Conditions, July 20, 2010 at 10-12. The Commission should adopt these revisions.

V. BIOLOGICAL MITIGATION SHOULD BE TAILORED TO PROJECT IMPACTS.

IVS has no argument with appropriately mitigating impacts resulting from the IVS Project. But while CEQA requires the Commission to impose feasible, effective mitigation measures to reduce or avoid significant impacts, it also requires that mitigation be proportional to the impacts the Project will generate. *Environmental Council of Sacramento v. City of Sacramento,* 142 Cal. App. 4th 1018, 1040 (2006) ("Mitigation measures must be roughly proportional to the impacts caused by the project."); *see* 14 CCR §§ 15126.4, Cal. Code Regs. 14 § 15126.4(4) (citing *Nollan v. California Coastal Commission,* 483 U.S. 825 (1987) and *Dolan v. City of Tigard,* 512 U.S. 374 (1994)).

The CEQA Guidelines expressly provide that

> "[m]itigation measures must be consistent with all applicable constitutional requirements, including the following: (A) There must be an essential nexus (i.e. connection) between the mitigation measure and a legitimate governmental interest. *Nollan v. California Coastal Commission,* 483 U.S. 825 (1987); and (B) The mitigation measure must be "roughly proportional" to the impacts of the project. *Dolan v. City of Tigard,* 512 U.S. 374 (1994). Where

> the mitigation measure is an ad hoc exaction, it must be "roughly proportional" to the impacts of the project. *Ehrlich v. City of Culver City,* 12 Cal.4th 854 (1996)."

Cal. Code Regs. 14 § 15126.4(a)(4); *see also* Cal. Code Regs. 14 § 15041(a).

Costs of compensatory mitigation as proposed by Staff and as reflected in the SSA are not reasonable. They require modification to be proportionate to impacts. Ex. 132 (Gallagher Prepared Testimony) at 2-3, 8-10.

There was further examination of actual costs at the recent workshop with Staff and other agencies. IVS is optimistic that revised compensatory mitigation amounts will be more reasonable and in line with its mitigation proposal.

To ensure proportionality between required mitigation and Project impacts, the Commission must take account of the quality and functionality of resources that are being impacted by the Project and must avoid duplicative or ineffective mitigation. It also must phase mitigation payments to better correspond to the timing of impacts and avoid imposing duplicative and disproportionate payments for long-term maintenance.

A. The Amount of Compensatory Mitigation Required Must Reflect the Quality and Functionality of Lands Impacted By the Project.

Just as the existing condition of resources – the environmental baseline – is relevant in evaluating the significance of impacts under CEQA, so too must it be considered when determining the proper scope of mitigation under CEQA. *County of Amador v. El Dorado County Water Agency,* 76 Cal.App.4th 931, 954 (1999) ("analysis of impacts, mitigation measures and project alternatives" are impossible without considering baseline). Therefore, in determining the amount of compensatory mitigation for biological impacts, the Commission must account for the quality and functionality of the habitat or resource that will be impacted by the Project. *Environmental Council of Sacramento,* 142 Cal. App. 4th at 1040.

To properly address impacts to Peninsular Bighorn Sheep and waters of United States, IVS proposes modifications to Condition of Certification BIO-17 so that required mitigation will reflect the functionality of the foraging lands and waters of the United States being impacted, as required by CEQA.

1. Bighorn Sheep Mitigation Proposed By IVS Will Fully Address Impacts and Is Supported By Both the Corps and USFWS.

Staff proposes requiring compensation for the loss of 881 acres of ephemeral wash foraging habitat for the Peninsular Bighorn Sheep. EX. 302, SSA, at C.2-184 (BIO-17). However, this number is erroneously based on the full number of jurisdictional acres of waters of the Untied States within the entire Project site. Transcript Fitzgerald Testimony, July 27, 2010 at 371–72. Expert biological testimony confirmed that the

functionality of the impacted lands to the Bighorn Sheep – the actual amount of foraging area available – is far, far less than 100%. Transcript, Mock Testimony, July 27, 2010 at 54–55 (hereinafter "Mock July Hearing Testimony"). Based on his evaluation of data relating to habitat value, Dr. Mock concluded only 28% of the area within washes that will be impacted includes foraging cover; thus, a 28% factor should be applied in calculating the required mitigation. *Id.* at 54–55; *see also* Transcript, Fitzgerald Testimony, July 27, 2010, at 371-372. Applying this 28% factor to the acreage that will be impacted by the Project results in an obligation to provide 237 acres of compensatory mitigation for the Peninsular Bighorn Sheep. Ex. 142 (Mock Prepared Testimony), at 6–7; *see also* Transcript, Fitzgerald Testimony, July 27, 2010, at 371–373.

As described above in section III.B, the Project – and the LEDPA – would fulfill this compensatory mitigation requirement by restoring and enhancing at least 237 acres of Carrizo Creek – habitat that was once extensively used by the bighorn sheep but has since become unsuitable due to invasive tamarisk trees. Mock July Hearing Testimony, at 55–56; Ex. 136 (Waters of the U.S. and Peninsular Bighorn Sheep Foraging Habitat Impact Minimization and Compensation Measures; modifications to BIO-17 proposed by the Applicant). It was the Corps – not IVS – that evaluated sites in the Imperial Valley and identified Carrizo Creek as an "enhancement project they thought would meet the objectives of mitigating impacts" of the Project upon both Bighorn Sheep and waters of the U.S. Transcript, Fitzgerald Testimony, July 27, 2010, at 368. Substantial evidence supports the conclusion that this will suitably mitigate for the Project's impacts to Peninsular Bighorn Sheep. Transcript, Mock Testimony, July 27, 2010, at 55–56; *see also* Transcript Fitzgerald Testimony, July 27, 2010, at 371–373.

2. Aquatic Resources Mitigation Proposed By IVS Will Fully Mitigate Impacts and Is Supported by Both the Corps and USFWS.

As described above in section III.A.3, the reduced-size 709 MW LEDPA removes SunCatchers from many areas, including ephemeral washes, and thereby reduces permanent impacts to waters of the Unites States to 38.2 acres of permanent impacts and 14 acres of temporary impacts.

Through its restoration and enhancement of 237 acres Carrizo Creek, IVS will provide mitigation lands in excess of five acres for every one acre of waters of the U.S. impacted by the Project. Ex. 136 (Waters of the U.S. and Peninsular Bighorn Sheep Foraging Habitat Impact Minimization and Compensation Measures; modifications to BIO-17 proposed by the Applicant). This is in excess of what the Corps requires for mitigation of impacts to the United States. Transcript, Fitzgerald Testimony, July 27, 2010, at 373 (noting that the Corps will take account of functionality in determining mitigation, which could result in a 4:1 requirement or a 5:1 requirement). Thus, the mitigation proposed in BIO-17, as modified by IVS, will fully mitigate for impacts to waters of the United States. *Id.* Nothing more is required under CEQA.

B. Requiring Separate Long-Term Management Funding For Lands To Be Managed By BLM Is Duplicative, Disproportionate to Project Impacts, and Not In Compliance With CEQA.

The SSA concludes – and IVS agrees – that the Project requires compensatory mitigation in the amount of 6,619.9 acres to fully mitigate for impacts to the Flat-Tailed Horned Lizard (FTHL) habitat. EX. 302, SSA, at C2-186–C.2-177 (BIO-10). This calculation of compensatory mitigation is based on the requirements of 1:1 mitigation for all 6,063.1 acres of land that will be impacted outside of the FTHL Management Area and 6:1 mitigation for the 92.6 acres of transmission line area that will extend through the FTHL Management Area. *Id.* These ratios are based directly on the Rangewide Management Strategy developed jointly by BLM, the California Department of Fish & Game, the U.S. Fish & Wildlife Service, and the U.S. Navy. Transcript, Mock Testimony July 27, 2010, at 47–48. Thus, there is consensus among all relevant agencies that the amount of land identified as compensatory mitigation in BIO-10 will fully mitigate impacts to the FTHL under CEQA. *Id*.

Moreover, the lands to be acquired to compensate for impacts to FTHL habitat have been prioritized for conservation specifically for the FTHL and are the areas of highest benefit for the species. *Id*. at 50 The lands to be acquired for such mitigation are private inholdings within lands owned and managed by BLM. *Id*. at 51. Once acquired, BLM will likewise own and manage the mitigation lands. These lands will be managed consistent with the rest of BLM holdings; such management is appropriate to ensure protection of the mitigation values of the land for the Flat-Tailed Horned Lizard. *Id*. at 51. This is all that CEQA requires.

BLM has identified the amount of compensatory mitigation required for it to acquire and manage these lands so as to fully mitigate the FTHL impacts. Ex. 123 (Letter of Daniel Steward, December 7, 2009) (calculating the total Flat-Tailed Horned Lizard Compensation costs, including the costs for clean up and restoration of the land, to be $5,786,376).[6] BLM made this calculation with the benefit of having participated in the formulation of the Rangewide Management Plan for the FTHL, which describes the preferred methods for mitigation of the species. *Id*.

The FTHL mitigation lands will be acquired and owned by BLM and BIO-10 includes BLM's costs in accepting these lands. Ex. 123; Transcript, Fesnock Testimony, July 27, 2010, at 145. BLM Staff has stated that BLM does not require the long-term management fee to manage mitigation lands in order to meet BLM management requirements. The Project site, where impacts will occur, is currently managed by BLM consistent with these management requirements. At the Commission's hearing on July 27, 2010, Amy Fesnock, an endangered species specialist for BLM, explained:

> [H]istorically BLM, through its land use plan prophesies,

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[6] With certain adjustments, IVS agrees that this figure is now $7,668,054.59

> [has] identified to the public that what we ask for is the cost of the land and the cost of acquiring those lands, but that we have not asked for long-term management funds presumably because we're the federal government and we theoretically have the funds required to manage the lands that we would then be purchasing as inholdings within other lands identified as BLM-administered lands.

Id. at 141.

Although BLM has indicated that separate long-term management funding is not required, Staff proposed for the first time in the SSA that an additional fee of $4,580,970.80 ($692 per acre) for "long term management" be added to Condition of Certification BIO-10. This fee is duplicative, disproportionate to impacts, and cannot be properly required under CEQA.

In explaining the fee, Ms. Fesnock noted: "We are a land management agency, and we work under the assumption that we have sufficient funds to manage the lands that we own. But the state would have asked for the fee." *Id.* at 152. Thus, Ms. Fesnock explained that the resulting fee was a combination, or "nesting," of state and federal requirements. Staff concurred with Ms. Fesnock's explanation, stating that the fee is required by CEQA where there are impacts on a species protected under the federal Endangered Species Act. Transcript, York Testimony, July 27, 2010, at 170. Staff stated that the applicability of the management fee would not be affected if the land is held by a federal agency that is mandated to manage the land and was justified because it had been applied "historically." *Id.* at 168–70.

This conclusion is based on a faulty legal assumption. There is *no requirement* under CEQA – neither a statutory provision, nor a regulation, nor a case – that requires long-term management funding whenever there are impacts to species protected by the federal Endangered Species Act.[7] Instead, the requirement under CEQA is simply that project impacts be mitigated where it is feasible to do so and that mitigation be proportionate to impacts. Cal. Pub. Res. Code §§ 21002, 21081. Mitigation that is

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[7] The California Endangered Species Act is not relevant here, as no state-listed species are at issue. The Flat Tailed Horned Lizard is not state or federally listed, although it is being considered for listing under the federal Endangered Species Act. BIO-10, as currently proposed by Staff, is drafted to impose mitigation requirements for impacts to Flat Tail Horned Lizards, Burrowing Owls, American Badgers, Golden Eagles, and Desert Kit Fox, none of which are listed species. IVS has not detected any Burrowing Owls, active owl burrows, American Badgers, or Golden Eagles on the current project site. Transcript, Mock Testimony July 27, 1020, at 58, 72; Ex. 142 (Mock Rebuttal Testimony) at 5–7. Mitigation measures already address impacts to these species. *Id.* at 8. The Desert Kit Fox occurs onsite, but the Desert Kit Fox is not a special status species and no habitat mitigation should be required.

imposed under other circumstances – for example, in instances where BLM would not be acquiring the mitigation property – is not relevant to all projects, and should not be imposed where it is not required. *Environmental Council of Sacramento v. City of Sacramento*, 142 Cal. App. 4th 1018, 1041 (2006); Cal. Code Regs. 14 § 15126.4(a)(3). And funding requirements are only relevant insofar as they are relevant to the question of whether significant impacts will be mitigated. *See Santa Clarita Org. for Planning the Env't v County of Los Angeles*, 157 Cal. App. 4th 149, 460-61 (2007).

Here, the record supports the conclusion that BLM will own the mitigation lands and will manage them consistent with the management practices that BLM currently employs at the Project site. Therefore, BLM management of mitigation lands will fully mitigate impacts without separate long-term management funding. Thus, the $4,580,970.80 fee cannot properly be imposed under CEQA.

C. On-Site Mitigation For Impacts to Special Status Plants Would Be Neither Feasible Nor Effective And Should Be Replaced With Off-Site Mitigation.

Staff and IVS agree that mitigation for special status plants – Condition of Certification BIO-19 – should include botanical surveys to be conducted during the fall of 2010; development of a special status plan species protection plan; and compensatory off-site mitigation. Ex. 302, SSA, at C.2-192 (Condition of Certification BIO-19); Ex. 137 (Applicant's Modifications to "Special Status Plant Impact Avoidance, Minimization & Compensation Condition of Certification BIO-19").

However, between release of the SA and release of the SSA, Staff modified Condition of Certification BIO-19 to require on-site mitigation and site design modifications rather than reliance on off-site mitigation. Ex. 300, SA/DEIS, at C.2-97–C.2-98 (Condition of Certification BIO-19); Ex. 302 (SSA C.2-194.) The on-site mitigation proposal included for the first time in the SSA would require complete redesign of the Project and would make it infeasible. (Gallagher Prepared Testimony at 3, July 21, 2010) There is consensus among IVS' and Intervenor CURE's biologists – Dr. Patrick Mock and Scott Cashen, respectively – that on-site mitigation for special status plant species would not be effective.

Dr. Mock testified as follows regarding proposed on-site mitigation pursuant to BIO-19:

> These measures are designed to mitigate impacts to special status plant species, however, **I believe that they will not be effective**. This is primarily because this mitigation measure, as rewritten since the issuance of the SA/DEIS, focuses on avoidance and preservation of special status plant species on site, rather than providing for offsite compensatory mitigation. It is important to understand that the special status plant species found on the project site almost entirely constitute small, relatively isolated populations of moderately sensitive CNPS List 2 species. As

> was previously described in testimony before this Committee, **preservation of small clusters of individual plants offers little or no longterm protection** to the plant species as these isolated plants do not represent a sustainable population. **The plant resource will not substantially benefit using this approach.**

(Rebuttal Testimony of Dr. Mock, July 21, 2010, at 44 of Applicants' Submittal of Rebuttal Testimony.) (emphasis added).

Scott Cashen, CURE's expert, agrees. Mr. Cashen testifies:

> The ecological requirements of most plant species are poorly understood. However, scientific knowledge supports the inference that a project of this size (i.e., approximately 6,156 acres) will disrupt the ecological processes (e.g., seed dispersal, pollination, and gene flow) that may be necessary to maintain viable populations. The SSA lists several indirect impacts from the Project that Staff anticipates will affect special-status plants. I cannot envision a scenario in which a buffer of 10 feet would be likely to protect a plant from these Project impacts.

Ex. 499-k, (Scott Cashen Prepared Testimony, July 21, 2010) at 9. Mr. Cashen also notes that "The Energy Commission Staff that evaluated the Ivanpah Solar Electric Project derived a similar verdict," concluding that on-site mitigation was not feasible. *Id.* at 10.

Substantial evidence does not support the conclusion that on-site avoidance for special status plants constitutes mitigation under the circumstances. Thus, on-site mitigation cannot be required under CEQA. *See Goleta Union School Dist. v. Regents of University of California,* 37 Cal. App. 4th 1025, 1033-34 (1995) (CEQA does not require an agency to mitigate an impact in a particular manner); 14 CCR § 15370(e) ("replacing or providing substitute resources or environments" constitutes mitigation); *Gray v. County of Madera,* 167 Cal. App. 4th 1099, 1117 (2008) (invalidating EIR based on mitigation measures not supported by substantial evidence).

The off-site compensatory mitigation proposed by IVS will, unlike the on-site proposal, effectively mitigate the Project impacts to a less than significant level. As Dr. Mock testified, "consistent with a basic tenet of conservation biology, . . . conserving viable populations within large tracts of conserved landscapes is the best way to benefit rare plant resources." Ex. 142 (Patrick Mock Prepared Testimony, July 21, 2010) at 8. To meet this goal, Condition of Certification BIO-19 should be modified to require that IVS demonstrate that the FTHL mitigation lands to be provided pursuant to BIO-10 also support populations of rare plant species impacted by the Project. *Id.* These measures will ensure that the target species are protected and maintained and that impacts are reduced to a less than significant level under CEQA. *Id.*

D. IVS' Compensatory Mitigation Obligations Should Be Phased to Better Reflect When Impacts Are Expected To Occur.

IVS requests that the Commission's mitigation program include milestones so that the compensatory mitigation payments for biological impacts be paid in advance of – but in proportion to – impacts from development of the Project as they occur. This approach preserves the feasibility of the Project and is most consistent with CEQA's and the U.S. Constitution's requirements for proportionality between mitigation and impacts. Moreover, such phased mitigation has been expressly endorsed by the Commission in other recent proceedings.

1. Mitigation Must Be Phased To Ensure It Remains Feasible.

Only feasible mitigation can properly be required under CEQA. Pub. Res. Code § 21002.1(b). "Feasible," under CEQA, is defined as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." Pub. Res. Code § 21061.1; 14 Cal. Code Regs. § 15364; *see also* 20 Cal. Code Regs. § 1723.5(d) (mitigation proposed should be "available to the applicant"). Mitigation that renders the entire project economically infeasible is by definition itself infeasible under CEQA. *See Foundation for San Francisco's Architectural Heritage v. City and County of San Francisco*, 106 Cal. App. 3d 893, 912-13 (1980) (mitigation proposals that render the project economically infeasible are not required).

Most of Staff's proposed mitigation conditions – particularly in-lieu compensatory biological mitigation – require IVS to provide financial guarantees in the full amount of mitigation even before ground-disturbing activities commence. For example, condition of certification BIO-10 provides:

> The project owner shall provide financial assurances . . . to guarantee that an adequate level of funding is available to implement any of the mitigation measures required by this condition that are not completed prior to the start of ground-disturbing project activities. Financial assurances shall be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security . . . .

Ex. 302 (SSA, Condition BIO-10(3)(h)) at C.2-174.

For BIO-10 alone, the security required by the condition amounts to $12, 249,016.39. E. 303 (Staff's Rebuttal Testimony and Errata) at 10. When combined with security proposed for BIO-17, Staff's proposal would require IVS to pay $13,894,399.00 before

any Project activity begins, and this does not include the fees yet to be calculated under BIO-19.[8]

It is not feasible to provide financial guarantees of this magnitude prior to construction. Sean Gallagher testified for IVS that the mitigation funding required of this and other large solar projects "is very large in comparison to a fossil-fueled plant." Ex. 132 (Gallagher Prepared Testimony) at 9. IVS is seeking a Treasury grant under the American Recovery and Reinvestment Act of 2009 and loan guarantees through the Department of Energy's (DOE) Loan Guarantee Program. The DOE's program is critical to the Project, as commercial financial markets largely have been closed to new and innovative technologies like the IVS' since the financial crisis began in late 2008. To qualify for the Treasury grant, construction must commence this year. Yet, as Mr. Gallagher testified, "[d]elays in the Loan Guarantee process . . . are creating the potential that the Loan Guarantee process will not be complete, and the project will not have reached financial close until the first quarter of 2011 at the earliest." *Id.* The combination of the rapidly-approaching Treasury grant deadline and delayed loan guarantee schedule will place IVS in a financial squeeze late this year, as it will be forced to rely on sponsor equity alone to begin construction and fund any mitigation costs. As Mr. Gallagher noted: "While Tessera Solar has sufficient equity to initiate construction and provide part of the mitigation funding, on its own, it does not have sufficient funds to begin construction and fund the entirety of the mitigation costs until project financing is completed." *Id.*

At the same time it protects the Project's feasibility, phased mitigation comes at no environmental cost. The Project will be constructed in two phases, and impacts associated with the second phase will not occur until construction begins on this phase. *See id.* Moreover, construction plans before financial close call for disturbing only 200 to 300 acres, less than five percent of the Project site. *Id.* at 10.[9]

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[8] While BIO-10 authorizes security in the form of a letter of credit, for a company the size of Tessera Solar – the financial backer of IVS – a "letter of credit is equivalent to cash because it must be secured by 100% cash." Ex. 132 (Sean Gallagher Prepared Testimony) July 20, 2010) at 9.

[9] At the August 10, 2010 workshop with the agencies and parties on biological mitigation, IVS refined its phasing proposal for all compensatory mitigation funds to reflect more specific amounts of land disturbance. Phase 1a of the project would commence on issuance of the CEC permit and correspond to disturbance of 200-300 acres of land. Phase 1b would commence at the end of financial closing, expected in January or February 2011, and would correspond to disturbance of an additional approximately 2,350 acres for a total of 300 MW. Phase 2 would correspond with the start of construction of the final 450 MW on site and approximately 3,500 acres of land disturbance. Mitigation funding and security would be based on the acres disturbed and appropriate costs for land acquisition, enhancement, and long-term management. The funding and security associated with Phases 1b and 2 would include a "true-up" to

(Footnote Continued on Next Page.)

During the hearings, IVS proposed that the Commission modify and phase the timing for providing mitigation funds to match Project financing. Security for mitigation payments for all biological resources collectively would be as follows:

> Milestone 1. $1 million "good faith" payment (or letter of credit) to be paid on issuance of the CEC permit and BLM right-of-way grant.
>
> Milestone 2. $1 million to be paid each quarter following issuance of the CEC permit and BLM right-of-way grant until financial close (if any).
>
> Milestone 3. Remainder of payment for mitigation for acreage associated with Phase I of the project to be made on financial close.
>
> Milestone 4. Mitigation payment for acreage associated with Phase II to be made prior to breaking ground on Phase II SunCatcher installation or January 1, 2013, whichever is earlier. Ex. 135 (Special Status Species Habitat Compensatory Mitigation; *see also* Ex. 132 (Gallagher Prepared Testimony) at 8-10.

Under this proposal, mitigation funding always will be in place before corresponding impacts would occur.[10] At least $1 million – or roughly between 7% and 11% of the cost estimates for total biological mitigation security[11] – will be in place before the pre-financial close disturbance of approximately 200-300 acres, or roughly 5% of the Project area. Then, *all* of the funding required for the full mitigation program applicable to Phase 1 of the Project will be paid at financial close and before any further ground disturbance would occur. See Milestones 1 and 3, above. The Commission's conditions are enforceable. Pub. Res. Code §§ 25534, 25900. Thus, conditions that include the milestones described above would ensure that mitigation is in place before impacts occur, which is all that CEQA requires.

(Footnote Continued from Previous Page.)

reflect improved estimates or corrections in these costs.

[10] IVS proposes similar milestones for payment of security on the compensatory mitigation for bighorn sheep and waters of the U.S. required by BIO-17 and for special status plans required by BIO-19. Exs. 136 & 137. Because the compensatory mitigation lands to be acquired for mitigation of FTHL impacts (pursuant to Condition of Certification of BIO-10) will likewise mitigate for impacts to Bighorn Sheep, waters of the United States, and special status plant species, the same $1M good faith pre-financial close payment of security would satisfy the corresponding milestones for BIO-10, BIO-17, and BIO-19.

[11] These percentages are calculated from Staff's mitigation fee estimates that includes separate long term funding and from the IVS' estimates, which removes this duplicative funding. See Section.

2. Phasing Mitigation To Better Correspond With the Timing of Impacts Most Faithfully Implements CEQA.

A fee imposed at a later date is not the same as a fee immediately imposed, due to the time value of money, and due to the deprivation of use of the money. Given the amounts of money at issue in the mitigation, the difference between the immediate fee and the phased fee is substantial. Phasing mitigation to correspond with the timing of impacts reflects the requirement that mitigation be proportionate to impacts. *See Environmental Council of Sacramento,* 142 Cal. App. 4th at 1040 ("Mitigation measures must be roughly proportional to the impacts caused by the project."); *see* 14 CCR §§ 15126.4, 14 CCR 15126.4(4).

The timing of mitigation measures is commonly tied to various development milestones to ensure that mitigation is implemented at the most appropriate time under CEQA. *See* Kostka & Zischke, *Practice Under the California Environmental Quality Act,* Continuing Education of the Bar (2d ed. 2010 Update) § 18.10 (noting that public agencies should "be able to tailor a monitoring or reporting program" for mitigation measures "to the development timetable of the project"). Most mitigation measures "will usually be implemented *during* construction, so requiring less frequent monitoring in a project's early, or preconstruction, stages may be appropriate." *Id.* Mitigation programs that require various measures to be implemented at various stages of development of a Project – just as IVS proposes with its phased mitigation program – are perfectly consistent with CEQA. *Christward Ministry v. County of San Diego*, 13 Cal. App. 4th 21, 48 (1993) (upholding program requiring different elements of mitigation to be implemented at various stages such as "prior to initiation of grading, construction and operation" and "during the grading and construction phase of the project"); *see also* 14 Cal. Code Regs, 14 § 15097(c); Kostka & Zischke, *Practice Under the California Environmental Quality Act* § 18.10.

The phased mitigation program proposed by IVS is no different than a program of enforceable commitments to perform certain mitigation measures in the future, which has long been held to be appropriate under CEQA. *See Defend the Bay v. City of Irvine,* 119 Cal. App. 4th 1261, 1277 (2004) (commitment to future mitigation based on a triggering event was proper); *see also Save Our Peninsula Committee v. Monterey County Board of Supervisors,* 87 Cal. App. 4th 99, 141 (2001) (CEQA does not require "that the EIR set forth a time-specific schedule" for mitigation. "All that is required by CEQA is that there be a reasonable plan for mitigation."). Similarly, the fact that mitigation may properly be scaled and timed according to a set of performance standards necessarily means that phased implementation of already established mitigation measures is likewise appropriate. *See Gentry v. City of Murrieta,* 36 Cal. App. 4th 1359, 1395 (1995) (adopting specific standards to be imposed on future phases of a project is appropriate approach to mitigation); *Gray v County of Madera,* 167 Cal. App. 4th 1099, 1126 (upholding deferral of design of exterior lighting system subject to performance standards until after facility is built and light placement can be more effectively determined); *Laurel Heights Improvement Ass'n v Regents of Univ. of Cal.,* 47 Cal. 3d 376, 418 (1988) (upholding mitigation measure for noise impacts that

required evaluation of specific noise control techniques to ensure compliance with noise performance standards once ventilation system had been designed).

3. The Commission Has Endorsed Similarly Phased Mitigation Programs in Other Proceedings.

This Commission has itself approved phased approaches to mitigation payments like the one proposed here by IVS. The IVS Project is entitled to a similarly well-tailored program that takes account of the timing of expected impacts in determining when mitigation payments must be made.

In October 2000, the Commission incorporated phased payments for a $7 million mitigation obligation into the conditions of certification for the Moss Landing Power Plant Project. Cal. Energy Commission Decision, Application for Certification, Moss Landing Power Plant Project, Docket No. 99-AFC-4 (Oct. 25, 2000) at 194. The Commission's certification required the applicant to fund a watershed acquisition and enhancement program. Payment toward this mitigation obligation was divided into seven parts. The first payment of $1.5 million was due within 120 days after construction began on new power generation units. The next two payments of $750,000 each were scheduled for the respective dates of commercial operation of two such units. The fourth and fifth payments were for $1 million each and were due one year after the respective commercial operation dates. Finally, the sixth and seventh payments, also for $1 million each, were due two years from the start of commercial operation for each respective unit. *Id.*

In February 2005, the Commission approved phased mitigation for the El Segundo Power Redevelopment Project. Cal. Energy Commission Decision, Application for Certification, El Segundo Power Redevelopment Project, Docket No. 00-AFC-14 (Feb. 2, 2005) at 66-67. The project owner was required to place $5 million in trust for a third-party group "to assess the ecological condition of the Santa Monica Bay and to develop and implement actions to improve the ecological health of the Bay." *Id.* at 66. The total funding obligation was divided into two categories: $1 million that would be paid first, subject to a pre-established schedule; and $4 million to be paid under a payment schedule that would be devised later. The initial payment toward the first $1 million was due thirty days after the Commission's decision became final and was for $250,000. Every 90 days thereafter, an additional $250,000 was due until $1 million had been contributed in total. Then, under the condition of certification, the third-party group in consultation with the applicant would propose a schedule to govern payment of the remaining funds ($4 million). *Id.*

In 2004, the Commission approved a condition of certification for the Morro Bay Power Plant Project that deferred altogether until a later date the determination of when mitigation payments would be due. *See* Cal. Energy Commission 3d Rev. PMPD, Application for Certification, Morro Bay Power Plant Project, Docket No. 00-AFC-12 (June 15, 2004) at 323-24 (final decision unavailable online). A biological condition of certification required the project owner to "provide payment for a habitat enhancement program." *Id.* at 323. The condition left "the amount and timing" of payment to

subsequent identification in the project's National Pollutant Discharge Elimination System (NPDES) permit. *Id.* Regardless, therefore, of what the NPDES permit ultimately provided, the Commission here sanctioned postponing mitigation payments and opened the door to a phased approach to mitigation.

The Moss Landing, El Segundo, and Morro Bay plants all had significant environmental impacts requiring mitigation payments comparable in magnitude to the Project. The same reasons that prompt IVS to request phased mitigation – protection of Project feasibility and preservation of proportionality between mitigation and impacts – certainly applied to these projects as well. The Commission's previous decisions demonstrate that these circumstances justify the tailored, phased mitigation program that IVS proposes.

VI. THE PROJECT'S BENEFITS AMPLY SUPPORT AN OVERRIDE OF LORS AND SIGNIFICANT AND UNAVOIDABLE IMPACTS.

Staff has recommended that the Commission approve two different types of overrides necessary for approval of the Project: a LORS override and a CEQA override. Letter to Commissioner Byron, Commissioner Eggert, and Hearing Officer Renaud from Terry O'Brien, July 27, 2010. The LORS override is needed because the Project is inconsistent with the County's zoning ordinance with respect to the use designation and the setback requirements for the Project site. Additionally, the Project might also be considered inconsistent with certain County General Plan Goals and Objectives from the Conservation and Open Space Element. In addition, staff has identified certain environmental impacts that will remain significant despite the imposition of all feasible mitigation measures. Accordingly, a CEQA statement of overriding considerations is also required.

The Project's benefits amply support both override determinations. With regard to the LORS inconsistencies, the Project serves public convenience and necessity and is necessary to help California achieve its Renewable Portfolio Standard. There are no alternative solutions to the problems posed by the LORS inconsistencies. Under CEQA, the benefits of the Project outweigh its significant unavoidable environmental impacts.

A. Project Benefits Compel an Override of Inconsistencies With Laws, Ordinances, Regulations And Standards.

Under the Warren-Alquist Act, the CEC cannot license a project that conflicts with one or more state, regional or local laws, ordinances, regulations or standards (LORS) unless it: (1) consults with the local agency to attempt to eliminate the noncompliance, (2) finds that the facility is required for public convenience and necessity, and (3) finds that there are no more prudent and feasible means of achieving a similar public convenience and necessity. Pub. Resources Code, § 25525. This determination must be made based on the totality of the evidence of record and must consider environmental impacts, consumer benefits, and electric system reliability. (*Id.*) In

essence, a project's lack of conformity with LORS is to be balanced against its benefits. Staff believes the Commission could address the LORS inconsistency by making the "so-called 'LORS override'" determination. Letter to Commissioner Byron, Commissioner Eggert, and Hearing Officer Renaud from Terry O'Brien, July 27, 2010.

Staff has raised questions regarding compliance with the County's zoning ordinance in two respects. First, staff questions whether the solar facility is a use allowed by the County's zoning ordinance. Second, staff points to setback requirements, which would preclude the landowner from making any use of 20- to 30-foot strips of land that are interior to the Project site, and that happen to surround interior parcel lines. Staff has also identified two Goals and two Objectives of the Imperial County General Plan Conservation and Open Space Element with which the project might or might not be considered inconsistent. IVS has requested that the CEC override both the zoning inconsistencies and the potential General Plan inconsistencies. Ex. 132 Gallagher Prepared Testimony, July 20, 2010, p. 1, Answer 4.

1. Zoning Inconsistencies.

A portion of the Project site is made up of private properties that are zoned "S-2," which is a zoning district that does not expressly allow solar facilities. Imperial County Code § 90519.01. Many buildings and facilities are allowed as of right and with a use permit in the S-2 zone, but a solar generation facility is not expressly listed among them.

Additionally, the zoning regulations applicable to the S-2 district require setbacks of 30 feet from the front property line (or 80 feet from the center line of an adjacent road) and 20 feet from the side and back property lines. Imperial County Code § 90519.06. These setback requirements would normally preclude a landowner from making any use of the 20- and 30-foot strips of land at the edge of his or her property.

IVS proposes to use the Project site for its thermal solar plant. It proposes a minimum 30-foot setback from private properties that are not part of the Project, and from the exterior project boundary. IVS requests that the CEC override zoning to allow use of the property for a solar facility, and it requests that the CEC override setback requirements insofar as they would otherwise apply to interior property lines that separate parcels owned or controlled by IVS, and interior property lines that separate property controlled by IVS from BLM lands. Testimony by Negar Vahidi, Transcript of July 26, 2010, Evidentiary Hearing at 48-49 (staff agreeing that interior setbacks are not necessary here to protect the goals of having setbacks).

a. Unsuccessful Attempts to Resolve Zoning Inconsistencies.

Staff has received correspondence from the County stating that the County has determined that the SunCatcher-type solar thermal project is not identified as an allowed or conditionally allowed use in the "Government Special Public" and "Open Space Preservation" zones, as set forth in the County's Land Use Ordinance, which is

LORS. Letter to Christopher Meyer dated May 27, 2010, p.3 (§ 8). However, the County suggests that IVS could request that the CEC exercise its authority to override the LORS. *Id.*

The Staff Assessment discusses the fact that a solar facility is not expressly allowed under the zoning code in the S-2 zone, but suggests that it may be permitted should the County determine that a solar facility is similar to the uses that are allowed. Ex. 300, SA-DEIS, at C.8-24 - C.8-27. Under County Code section 90203.10, "[w]hen an applicant proposes a use that is not specifically authorized or listed as a use or conditional use in the specific zone, he or she may apply for a determination of similar use to the planning commission." However, no solar project or any energy generation facility of this scale has been developed in any zone within the County of Imperial. It is unlikely that the IVS Project can qualify for a Similarity of Use determination.

The Staff Assessment addresses the fact that the Project will not comply with the setback requirements in the S-2 zone because the Project site is comprised of numerous parcels. *See* Ex. 300 (SA-DEIS) at C.8-22. The Staff Assessment proposes that one solution to this problem would be for the applicant to own all the parcels, and then merge them under the Subdivision Map Act. *See id.* However, the applicant has a lease arrangement, making ownership not feasible. Ex. 124 (Prepared Additional Testimony of Marc Van Patten). The applicant has attempted to purchase all the parcels, but three of the properties are simply not for sale. *Id*. Parcels under separate ownerships cannot be merged. *See* Gov't Code § 66451.11. Moreover, the parcels within the project site are not all physically contiguous with each other, meaning that not all of the private properties could be merged into only one parcel. *See id.* Finally, even if all the private parcels could be merged, it would not be possible to merge the private parcels with the BLM lands. There would still be a need for an override of setback requirements as they apply to property controlled by IVS that is adjacent to BLM property.

The County may not grant a variance to resolve the setback issue. Under state law, a variance can be granted only when "because of special circumstances applicable to the property, including size, shape, topography, location or surroundings, the strict application of the zoning ordinance deprives such property of privileges enjoyed by other property in the vicinity and under identical zoning classification." Gov't Code § 65906. A variance cannot be used as an ad hoc change to zoning requirements, and "shall not constitute a grant of special privileges inconsistent with the limitations upon other properties in the vicinity and zone." *Id.; Orinda Ass'n v. Bd. of Supervisors,* 182 Cal.App.3d 1145 (1986). Here, there are no privileges enjoyed by all owners of property in the S-2 zone that IVS seeks to enjoy. It is not the nature of the individual private parcels that generates the need for an exception from the setback requirements; it is the nature and location of the IVS Project. Moreover, even if a solar facility were allowed in the S-2 zone, it would be allowed only under a use permit. Imperial County Code § 90203.10 (Similarity of Use determination applies only in processing a use permit application). The Government Code section that addresses variances states: "The provisions of this section shall not apply to conditional use permits." Gov't Code § 65906.

b. Effect of Overriding Zoning Inconsistencies.

The override of zoning use classifications and setback requirements will not harm the County. It would not interfere with agricultural uses, as the Ocotillo-Nomirage Community Area Plan, which is applicable to the area, already has goals and objectives to eliminate agricultural zoning and commercial agricultural lands, and prohibit agriculture uses. Additionally, the area is already disturbed near Plaster City. Also, the zoning ordinance was written prior to the increase in interest and importance of solar energy generation or recognition of the special suitability of Imperial County for these facilities. These factors should be given consideration.

2. Potential General Plan Inconsistencies.

CEC staff has identified two of the County's Goals and related Objectives in the Conservation and Open Space Element of the County General Plan with which the IVS Project is potentially inconsistent. Ex. 302 (SSA) at C.13-41.

> **Preservation of Visual Resources**
>
> Goal 7: The aesthetic character of the region shall be protected and enhanced to provide a pleasing environment for residential, commercial, recreational, and tourist activity.
>
> Objective 7.1 Encourage the preservation and enhancement of the natural beauty of the desert and mountain landscape.
>
> **Preservation of Open Space**
>
> Goal 10: Open space shall be maintained to protect the aesthetic character of the region, protect natural resources, provide recreational opportunities, and minimize hazards to human activity.
>
> Objective 10.9 Conserve desert lands, within the county's jurisdiction for wildlife protection, recreation, and aesthetic purposes.

With regard to Goal 7 and Objective 7.1, CEC staff states, "While the Goals and Objectives call for development of programs to institute preservation and enhancement of visual resources and open space, policies and implementation programs have not yet been developed." Ex. 302 (SSA) at C.13-41. Staff states that the IVS Solar project would not conform with Goal 10. *Id.* The SSA also states that while the majority of the site does not lie within county jurisdiction, the portion that does would not conform with Objective 10.9. However, no policies have been developed for implementation of this objective so there is no specific policy with which the Project would not conform. *Id.*

While the County notes that it agrees with statements in the SA/DEIS regarding the IVS Project's impacts to visual resources along Interstate 8, the County does not identify any LORS inconsistency with regard to preservation of visual resources or open space. Letter to Christopher Meyer dated May 27, 2010 at 1 (§ 2).

However, to remove all doubt regarding the ability of CEC to approve the IVS Project and out of an abundance of caution, IVS has requested that the CEC make an override determination with respect to the County General Plan's Conservation and Open Space Element. Ex. 132 (Gallagher Prepared Testimony) at 1, Answer 4.

3. Public Convenience and Necessity.

While there is no judicial decision interpreting section 25525, numerous decisions address the phrase "public convenience and necessity" as it appears in Public Utilities Code section 1001. This phrase is used in a similar context in both statutes and, absent evidence of legislative intent to the contrary, is presumed to have a similar meaning for present purposes. *Building Material & Construction Teamsters' Union* v. *Farrell* (1986) 41 Cal.3d 651, 665. It is well-settled by the judicial decisions interpreting Section 1001 that "public convenience and necessity" has a broad and flexible meaning, and that the phrase "cannot be defined so as to fit all cases." (*San Diego & Coronado Ferry Co.* v. *Railroad Commission* (1930) 210 Cal. 504, 511.) In this context, "necessity" is not used in the sense of something that is indispensably requisite. Rather, any improvement which is highly important to the public convenience and desirable for the public welfare may be regarded as necessary. It is a relative rather than absolute term whose meaning must be ascertained by reference to the context and the purposes of the statute in which it is found. *Id.* at 512.

In assessing whether the IVS project is required for public convenience and necessity, the CEC should consider the policy of the Warren-Alquist Act, which expressly recognizes that electric energy is essential to the health, safety, and welfare of the people of California, and to the state's economy. Moreover, the statute declares that it is the responsibility of state government to ensure that the state is provided with an adequate and reliable supply of electrical energy. Pub. Resources Code § 25001.

The IVS Project is a solar plant that will help California meet its renewable portfolio standard (RPS) and its AB 32 greenhouse gas emission reduction goals. The IVS Project will provide critical state, regional, and even global environmental benefits.

Staff states that "an override is appropriate" in the case of IVS. (Letter to Commissioners Byron and Eggert and Hearing Officer Renaud regarding *Staff's comments Regarding a Possible Energy Commission finding of Overriding Consideration - Imperial Valley Solar Project (08-AFC-5)*, July 27, 2010. Staff's recommendation is site specific as staff points out the IVS Project's location, adjacent to and in the vicinity of existing and planned development, including major transmission lines and other propose renewable energy projects is a significant factor in reaching its conclusion that an override is appropriate. *Id.*

The IVS Project will generate much of its power at peak times, when the demand for electricity is greatest and will thereby provide the electrical system with flexible peaking capacity that is necessary to keep the electrical grid stable.

4. There Are No More Feasible Or Prudent Alternatives.

As with the phrase “public convenience and necessity,” there is no simple, one-size-fits-all meaning of “prudent and feasible.” There appears to be no clear or meaningful distinction between the words "prudent" and "feasible" as used in section 25525. Under the Warren-Alquist Act, the existence of a "prudent and feasible" means of achieving the public convenience and necessity does not prevent an override; only the existence of a "more prudent and feasible" means prevents the Commission from overriding LORS noncompliance. Cal. Pub. Res. Code § 25525.

The IVS Project will provide critical environmental benefits by helping the state reduce its greenhouse gas emissions. (Letter to Commissioner Byron, Commissioner Eggert, and Hearing Officer Renaud regarding *Staff’s comments Regarding a Possible Energy Commission finding of Overriding Consideration - Imperial Valley Solar Project (08-AFC-5)*, July 27, 2010. No other alternative is more prudent and feasible.

Staff has analyzed several project alternatives and has determined that the LEDPA is the best achievable balance between energy production and environmental impacts. The LEDPA is described as the “Modified Project to Avoid the Highest Flow Resources Alternative” because its primary purpose is to avoid impacts to the highest-flow ephemeral drainages on the Project site and thereby reduce impacts to the highest functioning aquatic areas onsite. Ex. 143 (Prepared Testimony of Mike Fitzgerald, July 27, 2010, Answer 9.) The LEDPA is the more prudent and feasible alternative in terms of environmental impacts, electric system reliability, efficiency and consumer benefits. The No Project Alternative, while minimizing the environmental impacts, does not provide any of these benefits provided by the LEDPA.

B. Project Benefits Compel An Override of Significant And Unavoidable Impacts Under CEQA.

Under CEQA, the Commission cannot approve a project that will result in significant environmental impacts that cannot be mitigated unless it finds that the project’s benefits outweigh the adverse effects.

The Commission may determine that even significant impacts are acceptable due to overriding concerns. 14 Cal. Code Regs. §§ 15092(b)(2)(B). Where the Commission balances the environmental risks against any applicable “economic, legal, social, technological or other benefits” of the Project and can find that the benefits outweigh the adverse environmental effects, it may it determine those effects are “acceptable” and properly override them. *Id.;* 14 Cal. Code Regs. § 15093(a).

1. IVS Project Has Impacts That Remain Significant

Staff believes that the Project's impacts to biological resources, soil and water resources, and visual resources and its cumulative impacts to these resources and land use, will be significant. Letter to Commissioner Byron, Commissioner Eggert, and Hearing Officer Renaud regarding *Staff's comments Regarding a Possible Energy Commission finding of Overriding Consideration - Imperial Valley Solar Project (08-AFC-5)*, July 27, 2010.

IVS does not agree with all of staff's conclusions regarding significant adverse impacts, such as ground water basin impacts and certain short or long term impacts to biological resources. Ex.132 (Gallagher Prepared Testimony 7/20/10, at 11.) The applicant does agree, however, that some significant unavoidable impacts will result from the IVS project and, therefore, that a CEQA override is required.

2. Overriding Considerations Justify Project Approval.

In accordance with CEQA Guidelines Section 15093, the CEC should, in determining whether or not to approve the Project, balance the economic, social, technological, and other project benefits against its unavoidable environmental risks, and find that each of the benefits of the IVS Project set forth below outweighs the significant adverse environmental effects that are not mitigated to less-than-significant levels. Each of the benefits identified below provides a separate and independent basis for overriding the significant environmental effects of the IVS Project. The benefits of the IVS Project are as follows:

a. Provision of Renewable Energy

The IVS Project will provide clean, renewable, solar-powered electricity and assist San Diego Gas & Electric (SDG&E) in meeting its legislatively mandated obligations under the RPS program. Ex. 116 (Gallagher Prepared Testimony, March 15, 2010, Answer 6. Tessera Solar has a power purchase agreement with SDG&E to purchase power from this Project, which was approved by the California Public Utilities Commission.

b. Reduction of Greenhouse Gas Emissions

The IVS Project will also assist SDG&E and the State of California in reducing greenhouse gas emissions as required by the California Global Warming Solutions Act (AB 32). It also will reduce criteria air emissions associated with the displacement of fossil generation. Ex. 116 (Gallagher Prepared Testimony, March 15, 2010, Answer 6. The IVS Project can displace the equivalent amount of power from an out-of-state coal fired plant. As part of larger state, national and global strategies, reductions in greenhouse gas emission from this Project will have long-term secondary biological, social and economic benefits.

c. Displacement of Generation from Coastal Power Plants That Use Once-Through Cooling

The IVS Project will contribute to the Water Resource's Control Board's goal of phasing out once-through cooling (OTC) in California's 19 coastal power plants to reduce impacts on marine life. Ex. 116 (Gallagher Prepared Testimony, March 15, 2010, Answer 6) The IVS Project will contribute to this effort by providing power to SDG&E and becoming available to displace power currently generated by both South Bay and Encina Power Plants, which use OTC technology.

d. Source of Jobs Locally, Regionally and Nationwide

The Project will be funded with support of the American Recovery and Reinvestment Act of 2009 and is part of the national program to "create new jobs and save existing ones" and to "spur economic activity and invest in long-term growth." Ex. 116 (Gallagher Prepared Testimony, March 15, 2010, Answer 6).

3. Staff Concurs That An Override Of LORS and Significant Impacts Is Appropriate.

Staff believes that it would be appropriate for the Commission to approve the IVS Project based on a finding of overriding considerations. Letter to Commissioner Byron, Commissioner Eggert, and Hearing Officer Renaud regarding *Staff's comments Regarding a Possible Energy Commission finding of Overriding Consideration - Imperial Valley Solar Project (08-AFC-5)*, July 27, 2010. Staff's recommendation is based upon the critical environmental benefits and positive attributes of the IVS Project, including helping the state reduce its greenhouse gas emissions, weighed against the adverse impacts that global warming will have upon the state and the environment, including the desert ecosystems.

VII. CONCLUSION

For the foregoing reasons, IVS respectfully requests that the Commission override the identified LORS non-compliance and significant unavoidable environmental impacts and grant certification of the Project subject to Conditions of Certification. IVS requests that the Conditions of Certification reflect the agreed upon modifications in Attachment A as well as the modifications requested by IVS as to SOIL&WATER-2 and -9 (Ex. 122), SOIL&WATER-7 (Ex. 138), BIO-10 (Ex. 135), BIO-17 (Ex. 136), and BIO-19 (Ex. 137).

Date: August 11, 2010

Respectfully submitted,

Ella Foley Gannon
Attorneys for Applicant
Imperial Valley Solar LLC

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Attachment A
to
Applicant Imperial Valley Solar's Post-Hearing Brief

This Attachment A sets forth the agreed upon Conditions of Certification for which IVS had previously proposed revisions as set forth in Exhibit 122 (Applicant's Requested Changes to Conditions). In Part 1 of this Attachment A, IVS lists all Conditions for which IVS and Staff have agreed upon the language set forth herein. In Part 2, IVS lists the Conditions on which IVS and Staff have agreed in concept, but for which IVS or Staff are providing additional language. IVS summarizes, in brackets, the additional information needed for the "agreed-upon in concept" provisions.

Part 1

Staff and IVS have agreed to the language in the following Conditions.

BIO-21 The project owner shall prepare and implement a Bird Monitoring Study to monitor the death and injury of birds from collisions with facility features such as reflective mirror-like surfaces and from heat, and bright light from concentrating sunlight. The study design shall be approved by BLM's Biologist and the CPM in consultation with CDFG and USFWS, and shall be incorporated into the project's BRMIMP and implemented. The Bird Monitoring Study shall include detailed specifications on data and carcass collection protocol and a rationale justifying the proposed schedule of carcass searches. The study shall also include seasonal trials to assess bias from carcass removal by scavengers as well as searcher bias. The Plan shall include adaptive management strategies that include the placement of bird flight diverters, aerial markers, or other strategies to minimize collisions with the SunCatcher units.

Verification: No more than 30 days following the publication of the Energy Commission License Decision or the Record of Decision/ROW Issuance, whichever comes first, the project owner shall submit to the CPM, BLM's Biologist, USFWS, and CDFG, a final Bird Monitoring Study. Modifications to the Bird Monitoring Study shall be made only after approval from BLM's Biologist and the CPM.

For one year following the beginning of power plant operation the Designated Biologist shall submit quarterly reports to BLM's Biologist, CPM, CDFG, and USFWS describing the dates, durations, and results of monitoring. The quarterly reports shall provide a detailed description of any project-related bird or wildlife deaths or injuries detected during the monitoring study or at any other time. Following the completion of the fourth quarter of monitoring the Designated Biologist shall prepare an Annual Report that summarizes the year's data, analyzes any project-related bird fatalities or injuries detected, and provides recommendations for future monitoring and any adaptive management actions needed. The Annual Report shall be provided to the CPM, BLM's Biologist, CDFG, and USFWS. Quarterly reporting shall continue until BLM's Biologist

and the CPM, in consultation with CDFG and USFWS determine whether more years of monitoring are needed, and whether mitigation and adaptive management measures are necessary. ~~After the Bird Monitoring Study is determined by BLM's Biologist and the CPM to be complete, the project owner or contractor shall prepare a paper that describes the study design and monitoring results to be submitted to a peer-reviewed scientific journal. Proof of submittal shall be provided to BLM's Wildlife Biologist and the CPM within one year of concluding the monitoring study.~~

~~**LAND-1** The project owner shall comply with the Subdivision Map Act (Pub. Resources Code Section 66410-66499.58) by adhering to the provisions of Imperial County Land Use Ordinance, Title 9, Division 8, Subdivision Ordinance, Section 90801.01 to ensure legality of parcels and site control.~~

~~**Verification:** At least 30 days prior to construction of the project, the project owner shall submit evidence to the CPM, indicating approval of the merger of parcels by Imperial County, or written approval of another process (i.e., to adjust lot lines) that is acceptable to the county. The submittal to the CPM shall include evidence of compliance with all conditions and requirements associated with the approval of the Certificate of Merger and/or Notice of Lot Line Adjustment by the county. If all parcels or portions of parcels are not owned by the project owner at the time of the merger, a separate deed shall be executed and recorded with the county recorder. A copy of the recorded deed shall be submitted to the CPM, as part of the compliance package.~~

HAZ-2 The project owner shall concurrently provide a Hazardous Materials Business Plan and level 3 RMP to the Imperial County Department of Toxic Substances Control for review and the CPM for review and approval. After receiving comments from the Imperial County and the CPM, the project owner shall reflect all received recommendations in the final documents. If no comments are received from the county within 30 days of submittal, the project owner may proceed with preparation of final documents upon receiving comments from BLM's authorized officer and the CPM. . Copies of the final Hazardous Materials Business Plan shall then be provided to the Imperial County Department of Toxic Substances Control for information and to the BLM's authorized officer and CPM for approval.

Verification: At least 60 days prior to receiving any hazardous material on the site for commissioning or operations, the project owner shall provide a copy of a final Hazardous Materials Business Plan to BLM's authorized officer and the CPM for approval.

At least 60 days prior to receiving any hydrogen on the site for commissioning or operations, the project owner shall provide a copy of a final level 3 RMP to BLM's authorized officer and the CPM for approval.

HAZ-7 The project owner shall have the hydrogen storage and handling system reviewed and stamped by a Mechanical Engineer registered in California to

ensure that it complies with all applicable ANSI, ASME, and NFPA design codes.

Verification: At least ~~60~~ 30 days prior to ~~construction~~ receiving any hydrogen on the Project site, the Project owner shall provide a copy of design drawings, documentation, and specification of the hydrogen storage and handling system reviewed and stamped by a Mechanical Engineer registered in the state of California.

The project owner shall submit a water use summary report to the CPM in the annual compliance report for the entire time that Imperial Valley Solar is using water from the well or paying the well owner for an equivalent amount of water that will not be pumped from the well. ~~life of the project.~~ As part of this report, the project owner shall include the monthly sales invoices of sales to Imperial Valley Solar by the Dan Boyer Water Company. The monthly sales invoices shall differentiate between water sold to Imperial Valley Solar and water sold to other customers (which need not be identified and which may be collectively accounted for). The annual water use summary report shall be based on the volume of water used by Imperial Valley Solar and shall distinguish recorded daily use of potable and operation water. The report shall include the project's daily maximum, monthly range, and monthly average in gallons per day, and the annual use in acre-feet. After the first year and for subsequent years, this information shall also include the yearly range and yearly average potable and operation water used by the project.

SOIL&WATER-12: If the project uses groundwater that is not from an established potable water provider as a drinking water supply, the project is subject to the requirement of Title 22, Article 3, Sections 64400.80 through 64445 for a non-transient, non-community water system (serving 25 people or more for more than six months) and the project owner shall obtain a permit from the County of Imperial to operate a non-transient, non-community water system.

Verification: If the project proposes to use groundwater that is not from an established potable water provider to meet potable demands at the Project, t~~T~~he project owner shall ensure the groundwater well owner has ~~obtain~~ a permit to operate a non-transient, non-community water system from the County of Imperial at least sixty (60) days prior to commencement of construction at the site. The project owner shall supply updates annually for all monitoring requirements and submittals to County of Imperial related to the permit, and proof of annual renewal of the operating permit.

NOISE-4 The project design and implementation shall include noise mitigation measures that ensure that the operation of the project will not cause the noise levels due to plant operation alone to exceed an average of 45 dBA Leq at the residence located at or near 1510 Painted Gorge Road.

No new pure-tone components shall be caused by the project. Pure tone is defined as a prominent one-third octave band with prominence evaluated between adjacent one-third octave band project operation sound levels and using frequency-dependent prominence ratio criteria values similar to those as defined

by ANSI S1.13-2005 A.8.6. No single piece of equipment shall be allowed to stand out as a source of noise that draws legitimate complaints.

A. When the project first achieves a sustained output of 85% or greater of rated capacity, the project owner shall conduct a 25-hour community noise survey at a monitoring location ~~SR2, or at a closer location~~ acceptable to the CPM. This survey shall also include measurement of one-third octave band sound pressure levels to ensure that no new pure-tone noise components have been caused by the project.

   During the period of this survey, the project owner shall also conduct a short-term survey of noise at a monitoring location ~~SL1 or at a closer location~~ acceptable to the CPM. The short-term noise measurements at this location shall be conducted during morning, early afternoon, and evening hours.

   The measurement of power plant noise for the purposes of demonstrating compliance with this condition of certification may alternatively be made at a location, acceptable to the CPM, closer to the plant (e.g., 400 feet from the plant boundary) and this measured level then mathematically extrapolated to determine the plant noise contribution at the affected residence. The character of the plant noise shall be evaluated at the affected receptor locations to determine the presence of pure tones or other dominant sources of plant noise.

B. If the results from the noise survey indicate that the power plant noise at the affected receptor sites exceeds the above specified values, mitigation measures shall be implemented to reduce noise to a level of compliance with these limits.

C. If the results from the noise survey indicate that pure tones are present, mitigation measures shall be implemented to eliminate the pure tones.

Verification: The survey shall take place within 30 days of the project first achieving a sustained output of 85% or greater of rated capacity. Within 15 days after completing the survey, the project owner shall submit a summary report of the survey to the CPM. Included in the survey report will be a description of any additional mitigation measures necessary to achieve compliance with the above listed noise limit, and a schedule, subject to CPM approval, for implementing these measures. When these measures are in place, the project owner shall repeat the noise survey.

NOISE-6 Heavy equipment operation and noisy construction[1] work relating to any project features shall be restricted to the times of day delineated below, unless:

[1] Noisy Construction: "Noise that can potentially draw legitimate complaints."
Legitimate Complaint: "A legitimate noise complaint refers to a complaint about noise that is confirmed by the CPM to be disturbing, and that is caused by the Calico project as opposed to another source. A

The project owner obtains the consent of the homeowners at SR1 and SR2; or

The CPM determines that the noise will not exceed the daytime ambient noise levels at SR1 and SR2 (as shown in **Noise Table 5**) by more than 10 dBA and the nighttime ambient noise levels at SR1 and SR2 (as shown in **Noise Table 5**) by more than 5 dBA; or

Construction that is expected to increase those daytime ambient noise levels at those locations by more than 10 dBA continues no longer than four consecutive weekends or construction that is expected to increase nighttime ambient noise levels at those locations by more than 5 dBA continues no longer than five consecutive nights.

Mondays through Fridays: 7:00 a.m. to 7:00 p.m.
Saturdays: 9:00 a.m. to 5:00 p.m.
Sundays and Holidays: No Construction Allowed (without approval by the CPM)

In the event that nighttime construction is believed necessary by the project owner, a written request shall be submitted to the CPM for approval. Approval for nighttime construction will be limited to construction activities which are not noisy (less than 75 dbA) and that would be difficult to complete during daytime hours (such as concrete pours during hot summer months).

Haul trucks and other engine-powered equipment shall be equipped with mufflers that meet all applicable regulations. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust brake use shall be limited to emergencies.

Verification: Prior to ground disturbance, the project owner shall transmit to the CPM a statement acknowledging that the above restrictions will be observed throughout the construction of the project. At least 20 days prior to the start of construction activities to occur outside the above required schedule restrictions, the project owner shall submit to the CPM a letter showing the affected homeowner's consent. If the consent cannot be obtained, at least 15 days prior to the start of those activities, the project owner shall submit to the CPM documentation showing the expected construction noise levels at SR1 and SR2, the nature of the work, the time of day/night that work will occur, and the duration of the work.

Prior to the start of nighttime construction activities the project owner shall submit a written request to allow nighttime construction to the CPM for approval. The request shall outline the expected extended hours beyond the limitations specified in this condition of certification, the reason for the extended hours, the nature of the activities, and the measures that will be taken to ensure that nighttime activities will not constitute

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legitimate complaint constitutes a violation by the project of any noise condition of certification (as confirmed by the CPM), which is documented by an individual or entity affected by such noise."

noisy construction work. A copy of the CPM's approval, if it is issued, shall be submitted to Imperial County.

TRANS-3 Prior to construction, the project owner shall document the existing condition of the primary roadways that will be used by the construction workers and heavy vehicle deliveries (up to 3 miles of the site). Subsequent to construction, the project owner shall document the condition of these same roadways and either directly reconstruct or reimburse the County of Imperial for needed repairs.

Verification: At least 3 months prior to the start of site mobilization, the project owner shall submit a review of existing roadway pavement conditions to Imperial County for review and comment and the CPM for review and approval. This review will include photographs and the analysis of pavement and sub-surface conditions. The CPM will need to approve the summary of existing pavement conditions prior to the commencement of construction.
No later than 2 months after the end of construction activities, the applicant shall submit an analysis of the roadway pavement conditions to Imperial County for review and comment and the CPM for review and approval.

After the repairs are completed, the applicant shall submit a letter to Imperial County and the CPM indicating such repairs are finished and ready for inspection.

VIS-1 As feasible, ~~T~~the project owner shall treat all non-mirror surfaces of all project structures and buildings visible to the public such that a) their colors minimize visual intrusion and contrast by blending with the existing tan and brown color of the surrounding landscape; b) their colors and finishes do not create excessive glare; and c) their colors and finishes are consistent with local policies and ordinances. The transmission line conductors shall be non-specular and non-reflective, and the insulators shall be non-reflective and non-refractive. This measure shall include coloring of security fencing with vinyl or other non-reflective coating; or with slats or similar semi-opaque, non-reflective material, to blend to the greatest feasible extent with the background soil.

The project owner shall submit for CPM and BLM Authorized Officer review and approval, a specific Surface Treatment Plan that will satisfy these requirements. The treatment plan shall include:

A. A description of the overall rationale for the proposed surface treatment, including the selection of the proposed color(s) and finishes;

B. A list of each major project structure, building, tank, pipe, and wall; the transmission line towers and/or poles; and fencing, specifying the color(s) and finish proposed for each. Colors must be identified by vendor, name, and number; or according to a universal designation system;

C. One set of color brochures or color chips showing each proposed color and finish;

D. A specific schedule for completion of the treatment; and

E. A procedure to ensure proper treatment maintenance for the life of the project.

The project owner shall not specify to the vendors the treatment of any buildings or structures treated during manufacture, or perform the final treatment on any buildings or structures treated in the field, until the project owner receives notification of approval of the treatment plan by BLM's Authorized Officer and the CPM. Subsequent modifications to the treatment plan are prohibited without BLM's Authorized Officer and CPM approval.

Verification: At least 90 days prior to specifying to the vendor the colors and finishes of the first structures or buildings that are surface treated during manufacture, the project owner shall submit the proposed treatment plan to BLM's Authorized Officer (AO)and the CPM for review and approval and simultaneously to Imperial County for review and comment. The CPM and BLM AO shall make a field determination of an appropriate color from the BLM Environmental Color Chart and provide guidance t the proponent to maximize effectiveness of mitigation. If BLM's Authorized Officer and the CPM determine that the plan requires revision, the project owner shall provide to BLM's Authorized Officer and the CPM a plan with the specified revision(s) for review and approval by BLM's Authorized Officer and the CPM before any treatment is applied. Any modifications to the treatment plan must be submitted to BLM's Authorized Officer and the CPM for review and approval.

Prior to the start of commercial operation, the project owner shall notify BLM's Authorized Officer and the CPM that surface treatment of all listed structures and buildings has been completed and they are ready for inspection and shall submit to each one set of electronic color photographs from the same key observation points identified in (d) above. The project owner shall provide a status report regarding surface treatment maintenance in the Annual Compliance Report. The report shall specify a): the condition of the surfaces of all structures and buildings at the end of the reporting year; b) maintenance activities that occurred during the reporting year; and c) the schedule of maintenance activities for the next year.

VIS-2 To the extent feasible and consistent with safety and security considerations, the project owner shall design and install all temporary and permanent exterior lighting so that:

a) lighting does not cause excessive reflected glare;

b) lighting does not illuminate the nighttime sky;

c) mounting heights and locations of all lighting fixtures will not allow light to fall on the mirror surfaces of the SunCatchers in the stowed position,

d) illumination of the project and its immediate vicinity is minimized as to times of use and extent, and;

~~e) lighting on the exhaust stacks shall be the minimum needed to satisfy safety and security concerns.~~

Permanent night lighting shall comply with all applicable standards, practices, and regulations including, and specifically, the following Illuminating Engineering Society documents: 1. RP-33-99 Lighting for Exterior Environments 2. DG-13-99 Outdoor Lighting 3. TM-10-00 Addressing Obtrusive Light (Urban Sky Glow and Light Trespass) in Conjunction with Roadway Lighting 4. TM-15-07 Luminaire Classification System for Outdoor Luminaires.

Verification: At least 30 ~~90~~ days prior to ordering any temporary exterior lighting, the project owner shall contact the CPM to show compliance of temporary lighting with all of the above requirements. At least 30 days prior to ordering any permanent exterior lighting, the project owner shall contact the CPM to show compliance of permanent lighting with all of the above requirements. This shall include, but not be limited to, final lighting plans, fixture and control schedules, fixture and control cut sheets and specifications, a photometric plan showing vertical and horizontal footcandles at all property lines to a height of 20 feet, and the proposed time clock schedule.

Prior to construction and prior to commercial operation, the project owner shall notify the CPM that the installation of the temporary and permanent lighting has been completed and is ready for inspection. If after inspection the CPM notifies the project owner that modifications to the lighting are needed, within 30 days after receiving the notification the project owner shall implement the modifications and notify the CPM when the modifications are competed and ready for inspection.

Within 48 hours of receiving a lighting complaint, the project owner shall provide the CPM with a complaint resolution form as specified in the Compliance General Conditions, including a proposal to resolve the complaint, and a schedule for implementation of the proposed resolution. The project owner shall notify the CPM within 48 hours after completing the resolution of the complaint. A copy of the complaint resolution form report shall be submitted to the CPM within 30 days and included in the Annual Report.

~~**VIS-3** To reduce the prominence of the proposed new segment of transmission line paralleling Highway I-8, the applicant shall, if feasible, set back the transmission line at least 1/2 mile from Highway I-8 within the project site. This measure applies only to that portion of the proposed transmission line paralleling Highway I-8 within the project site boundaries.~~

~~**Verification**: At least 90 days prior to start of construction, the project owner shall present to BLM's Authorized Officer and the CPM a revised plan depicting how the proposed transmission line will be set from the highway. If BLM's Authorized Officer and the CPM determine that the plan requires revision, the project owner shall provide to~~

~~BLM's Authorized Officer and the CPM a revised plan for review and approval by BLM's Authorized Officer and the CPM. The project owner shall not begin construction until receiving BLM Authorized Officer and CPM approval of the revised plan.~~

VIS-4 To reduce the visual dominance and glare effects of the SunCatchers to motorists on Highway I-8, the applicant shall employ a combination of measures as necessary, including set-backs of the nearest SunCatcher units to a distance of ~~360~~ 223 feet from the adjoining roadway or as necessary to avoid excessive glare and reduce visual height and dominance of SunCatchers, slatted fencing as described under Condition of Certification VIS-6, and set-backs of SunCatcher units from project fencing.

Verification: At least 90 days prior to start of construction, the project owner shall present to BLM's Authorized Officer and the CPM a revised plan depicting how the proposed SunCatchers will be set back from the highway. If BLM's Authorized Officer and the CPM determine that the plan requires revision, the project owner shall provide to BLM's Authorized Officer and the CPM a revised plan for review and approval by BLM's Authorized Officer and the CPM. The project owner shall not begin construction until receiving BLM Authorized Officer and CPM approval of the revised plan.

VIS-6

1. The project owner shall insure the minimum distance from any SunCatcher reflector assembly to the property line shall be no less than ~~360~~ 223 feet to the nearest public roadway to reduce the possibility of flash blindness.

2. The project owner shall add a perforated metal diffusion shield to all SunCatchers behind the PCU to mitigate the 5% of the visible light spectrum that is observed in the operational images. If the PCU is approximately, 5'x7', then 2' on either side of the PCU should give a significant reduction in the halo effect.

3. The project owner shall modify the "offset tracking" procedure to require a 25° offset to minimize the presence of intrusive brightness.

4. The project owner shall modify the "Morning Stow to Tracking Transitions" timing to occur 30 minutes before sunrise and end in a 25° offset tracking position, ready to move into tracking position.

5. The project owner shall modify the "Night Stow" timing so it occurs 30 minutes after sunset to avoid any intrusive light effects.

6. The project owner shall develop an Emergency Glare Response Plan to quickly redirect a malfunctioning mirror to a safe orientation.

7. The project owner shall monitor the site during all hours of operation on a weekly basis for five years using video surveillance trucks to identify and document intrusive light conditions needing correction.

Verification: Within 90 days before commercial operation of any part of the generation system, the project owner will submit an Emergency Response Plan, a visual monitoring plan and a confirmation of the intrusive light reduction of the modifications of the SunCatcher units If BLM's Authorized Officer and the CPM determine that the plan requires revision, the project owner shall provide to BLM's Authorized Officer and the CPM a revised plan for review and approval by BLM's Authorized Officer and the CPM . The project owner shall not begin commercial operation until receiving BLM Authorized Officer and CPM approval of the revised plan. Within 48 hours of receiving a glare complaint, the project owner shall provide the BLM Authorized Officer and CPM with a complaint resolution form report as specified in the Compliance General Conditions including a proposal to resolve the complaint, and a schedule for implementation.

The project owner shall notify the BLM Authorized Officer and CPM within 48 hours after completing implementation of the proposal. A copy of the complaint resolution form report shall be submitted to the BLM Authorized Officer and CPM within 30 days.

Part 2

Staff and IVS have conceptually agreed to these revised Conditions. Staff or IVS are providing additional language.

BIO-6 The project owner shall develop and implement project-specific Worker Environmental Awareness Program (WEAP) and shall secure approval for the WEAP from the BLM Biologist, USFWS, CDFG, and the CPM. The WEAP shall be administered to all onsite personnel including surveyors, construction engineers, employees, contractors, contractor's employees, supervisors, inspectors, subcontractors, and delivery personnel. The WEAP shall be implemented during site mobilization, ground disturbance, grading, construction, operation, and closure. The WEAP shall:

- Be developed by or in consultation with the Designated Biologist and consist of an on-site or training center presentation in which supporting electronic media and written material, including wallet-sized cards with summary information on special status species and sensitive biological resources, is made available to all participants;
- Discuss the locations and types of sensitive biological resources on the project site and adjacent areas, explain the reasons for protecting these resources, and the function of flagging in designating sensitive resources and authorized work areas;
- Place special emphasis on FTHL, including information on physical characteristics, distribution, behavior, ecology, sensitivity to human activities, legal protection and status, penalties for violations, reporting requirements, and protection measures;
- Include signage to be posted at the entrance to the project site and throughout the project site which has the following information:
    - ~~15 m.p.h. speed limit~~ 10 m.p.h. speed limit (for all unpaved roads that are not stabilized) or 25 m.p.h. speed limit (for all paved or stabilized roads);

[Staff to add language regarding designated biologist's ability to change speed limits, as necessary to protect species]

- A picture of the FTHL; and
- Reminder to check under vehicles before driving.

- Include a discussion of fire prevention measures to be implemented by workers during project activities; request workers to dispose of cigarettes and cigars appropriately and not leave them on the ground or buried;
- Present the meaning of various temporary and permanent habitat protection measures;
- Identify whom to contact if there are further comments and questions about the material discussed in the program; and
- Include a training acknowledgment form to be signed by each worker indicating that they received the WEAP training and shall abide by the guidelines.
- The specific program can be administered by a competent individual(s) acceptable to the Designated Biologist.

Verification: At least 30 days prior to the start of any project-related site disturbance activities, the project owner shall provide to the BLM Biologist and the CPM a copy of the draft WEAP and all supporting written materials and electronic media prepared or reviewed by the Designated Biologist and a resume of the person(s) administering the program.

The project owner shall provide in the Monthly Compliance Report the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date. At least ten days prior to site and related facilities mobilization, the project owner shall submit two copies of the BLM- and CPM-approved final WEAP.

Training acknowledgement forms signed during construction shall be kept on file by the project owner for at least six months after the start of commercial operation.

Throughout the life of the project, the worker education program shall be repeated annually for permanent employees, and shall be routinely administered within one week of arrival to any new construction personnel, foremen, contractors, subcontractors, and other personnel potentially working within the project area. Upon completion of the orientation, employees shall sign a form stating that they attend the program and understand all protection measures. These forms shall be maintained by the project owner and shall be made available to the BLM Biologist and the CMP upon request. Workers shall receive and be required to visibly display a hardhat sticker or certificate that they have completed the training.

During project operation, signed statements for operational personnel shall be kept on file for six months following the termination of an individual's employment.

BIO-8 The project owner shall undertake the following measures to manage the construction site and related facilities in a manner to avoid or minimize impacts to biological resources during construction and operation:

- The boundaries of all areas to be disturbed (including staging areas, access roads, and sites for temporary placement of spoils) shall be delineated with stakes and flagging prior to construction activities. Spoils shall be stockpiled in disturbed areas lacking native vegetation or where habitat quality is poor. Spoil sites shall not be located within drainages or locations that may be subjected to high storm flows, where spoil shall be washed back into a drainage or lake. Disturbance of shrubs and surface soils due to stockpiling shall be minimized. All disturbances, vehicles and equipment shall be confined to the flagged areas.
- Whenever possible, equipment and vehicles shall use existing surfaces or previously disturbed areas rather than clearing vegetation and grading the ROW. Where grading is necessary, surface soils shall be stockpiled and replaced following construction to facilitate habitat restoration.
- To the extent possible, existing roads shall be used for travel and equipment storage. New and existing roads that are planned for construction, widening or other improvements shall not extend beyond the flagged impact area as described above. All vehicles passing or turning around would do so within the planned impact area or in previously disturbed areas. Where new access is required outside of existing roads (e.g. new spur roads associated with both transmission line options) or the construction zone, the route would be clearly marked (i.e., flagged and/or staked) prior to the onset of construction.
- Newly created access routes shall be restricted by constructing barricades, erecting fences with locked gates at road intersections, and/or by posting signs. In these cases, the project proponent shall maintain, including monitoring, all control structures and facilities for the life of the project and until habitat restoration is complete.
- Vehicular traffic during project construction and operation shall be confined to existing routes of travel to and from the project site, and cross country vehicle and equipment use outside designated work areas shall be prohibited. The speed limit shall not exceed ~~15 miles per hour on the project site~~ 10 miles per hour on all unpaved roads that are not stabilized and 25 miles per hour on all paved or stabilized roads.) **[Staff to add language regarding designated biologist's ability to change speed limits, as necessary to protect species]**
- Transmission lines, access roads, pulling sites, storage and parking areas shall be designed, installed, and maintained with the goal of minimizing impacts to native plant communities and sensitive biological resources.
- Transmission lines and all electrical components shall be designed, installed, and maintained in accordance with the Avian Power Line Interaction Committee's (APLIC's) Suggested Practices for Avian Protection on Power Lines (APLIC 2006) and Mitigating Bird Collisions with Power Lines (APLIC 2004) to reduce the likelihood of large bird electrocutions and collisions.
- Road surfacing and sealants as well as soil bonding and weighting agents used on unpaved surfaces shall be non-toxic to wildlife and plants.
- Facility lighting shall be designed, installed, and maintained to prevent side casting of light towards wildlife habitat. Lighting shall be kept to the minimum level for safety and security needs by using motion or infrared light sensors and switches to keep lights off when not required, and shielding operational lights

downward to minimize skyward illumination. No high intensity, steady burning, bright lights such as sodium vapor or spotlights shall be used. FAA visibility lighting shall employ only strobed, strobe-like or blinking incandescent lights, preferably with all lights illuminating simultaneously. Minimum intensity, maximum “off-phased” duel strobes are preferred, and no steady burning lights (e.g., L-810s) shall be used.

- Parking and storage shall occur where FTHL removal surveys have been conducted.
- At the end of each work day, the Designated Biologist shall ensure that all potential wildlife pitfalls (trenches, bores and other excavations) have been inspected for wildlife and then backfilled. If backfilling is not feasible, all trenches, bores, and other excavations shall be sloped at a 3:1 slope at the ends to provide wildlife escape ramps, or covered to completely prevent wildlife access. All trenches, bores and other excavations outside the permanently fenced area shall be inspected periodically throughout and at the end of each workday by the Designated Biologist or a Biological Monitor. Should a FTHL or other wildlife become trapped, the Designated Biologist or Biological Monitor shall remove and relocate the individual to a safe location.
- During construction, examine areas of active surface disturbance periodically—at least hourly when surface temperatures exceed 29°C (85°F) for the presence of FTHL.
- Any construction pipe, culvert, or similar structure with a diameter greater than three inches, stored less than eight inches aboveground for one or more nights, would be inspected for wildlife before the material is moved, buried, or capped. As an alternative, all such structures may be capped before being stored outside the fenced area, or placed on pipe racks.
- Water applied to dirt roads and construction areas (trenches or spoil piles) for dust abatement shall use the minimal amount needed to meet safety and air quality standards in an effort to prevent the formation of puddles, which could attract FTHL predators to construction sites. During construction, a Biological Monitor shall patrol these areas to ensure water does not puddle and attract common ravens, and other wildlife to the site, and shall take appropriate action to reduced water application rates where necessary.
- During construction, road killed animals or other carcasses detected by personnel on roads associated with the Project area will be reported immediately to a Biological Monitor or Designated Biologists, who will remove the roadkill promptly. During operations, the Project Environmental Compliance Monitor will be notified of any roadkills and promptly remove and dispose of any roadkills to discourage scavenger activity. For special-status species road-kill, the Biological Monitor shall contact CDFG and USFWS within 1 working day of receipt of the carcass for guidance on disposal or storage of the carcass. The Biological Monitor shall report the special-status species record as described in BIO-11 below.
- All vehicles and equipment shall be maintained in proper working condition to minimize the potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. The Designated Biologist shall be

informed of any hazardous spills immediately as directed in the project Hazardous Materials Plan. Hazardous spills shall be immediately cleaned up and the contaminated soil would be properly disposed of at a licensed facility. Servicing of construction equipment shall take place only at a designated area. Service/maintenance vehicles shall carry a bucket and pads to absorb leaks or spills.

- All contractors, subcontractors, employees and visitors shall comply with litter and pollution laws. During construction all trash and food-related waste shall be placed in self-closing containers and removed ~~daily from the site~~ regularly to prevent overflow. Workers shall not feed wildlife, or bring pets to the project site. Except for law enforcement personnel, no workers or visitors to the site shall bring firearms or weapons.
- Standard erosion control measures shall be implemented for all phases of construction and operation where sediment run-off from exposed slopes threatens to enter “Waters of the State” and/or “Waters of the U. S.”. Sediment and other flow-restricting materials shall be moved to a location where they shall not be washed back into the stream. All disturbed soils and roads within the Project site shall be stabilized to reduce erosion potential, both during and following construction, except for those portions of roads crossing Waters of the U.S. where soil tackifiers shall not be used. Areas of disturbed soils (access and staging areas) with slopes toward drainages shall be stabilized to reduce erosion potential.
- If preconstruction site mobilization requires ground-disturbing activities such as for geotechnical borings or hazardous waste evaluations, a Designated Biologist or Biological Monitor shall be present to monitor any actions that could disturb soil, vegetation, or wildlife.
- The owner shall minimize road building, construction activities, and vegetation clearing within ephemeral drainages to the extent feasible.
- The project owner shall not allow water containing mud, silt or other pollutants from grading, aggregate washing, or other activities to enter a lake or flowing stream or be placed in locations that may be subjected to high storm flows.
- Raw cement/concrete, broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, asphalt or washings thereof, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to vegetation or wildlife resources, resulting from project related activities shall be prevented from contaminating the soil and/or entering waters of the state. These materials, placed within or where they may enter a drainage or lake, by project owner or any party working under contract or with the permission of the project owner shall be removed immediately.
- When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any drainage.
- No equipment maintenance shall be done within 150 feet of any ephemeral drainage except in designated maintenance areas where petroleum products or other pollutants from the equipment may not enter these areas under any flow.

- The project owner must have a Frac-Out Contingency Plan approved by CDFG and the CPM prior to commencement of construction of the reclaimed water pipeline for horizontal directional drilling under the waterways.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP and implemented. Implementation of the measures would be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying how measures have been completed.

BIO-9 The project owner shall implement conservation measures and/or design features identified in the USFWS Conferencing Opinion that would avoid, minimize, and offset potential adverse effects to the FTHL into the Project's BRMIMP.

In addition, the project owner shall prepare a Before-After Control-Impact (BACI) Occupancy Estimation Study that would analyze the persistence of FTHL onsite after construction and during plant operations. At a minimum, the Study shall include:

- Parameters to be measured;
- Sample size;
- Level of effort per plot;
- Assessment approach; and
- Verification of scat source and extirpation of habitat.

The Study shall be approved by USFWS, BLM, and Energy Commission in consultation with CDFG, and shall be incorporated into the project's BRMIMP and implemented.

Verification: No more than 30 days following the publication of the Energy Commission License Decision or the Record of Decision/ROW Issuance, whichever comes first, the project owner shall submit to the CPM, BLM's Biologist, USFWS, and CDFG a final BACI Occupancy Estimation Study. Modifications to the BACI Occupancy Estimation Study shall be made only after approval from BLM's Biologist, USFWS, and the CPM, in consultation with CDFG. Within 30 days of completion of FTHL preconstruction occupancy surveys, the Designated Biologist shall submit a report to the CPM, BLM Biologist, USFWS, and CDFG describing the results of the survey.

During construction, the Designated Biologist shall submit a quarterly report describing the results of any removal surveys required by the Conferencing Opinion to the CPM, BLM Biologist, USFWS, and CDFG. The removal survey report shall include the FTHL survey results, capture and release locations of any FTHL encountered, description of any project related deaths or injuries detected during the study or at any other time, and any other information needed to demonstrate compliance with the measures described above. Following the completion of the fourth quarter of monitoring the Designated Biologist shall prepare an Annual Report that summarizes the year's data, analyzes any project-related FTHL fatalities or injuries detected, and provides recommendations for

future monitoring and any adaptive management actions needed. The Annual Report shall be provided to the CPM, BLM's Biologist, CDFG, and USFWS. Post-construction sampling reports will be due to the CPM, BLM Biologist, USFWS, and CDFG by January 31st after sampling has taken place. The post-construction sampling report shall include the FTHL survey results, capture and release locations of any FTHL encountered, whether mitigation and adaptive management measures are necessary, and any other information needed to demonstrate compliance with the measures described above. ~~After the BACI Occupancy Estimation Study is completed, the project owner or contractor shall prepare a paper that describes the study design and results to be submitted to a peer-reviewed scientific journal. Proof of submittal shall be provided to BLM's Biologist and the CPM within one year of concluding the monitoring study~~. **[Staff to include language regarding publication]**

HAZ-5 The project owner shall prepare a site-specific Security Plan for the operational phase and shall be made available to BLM's authorized officer and the CPM for review and approval. The project owner shall implement site security measures addressing physical site security and hazardous materials storage. The level of security to be implemented shall not be less than that described below (as per NERC 2002). The Operation Security Plan shall include the following:

1. Permanent full perimeter fence, at least eight feet high around the Solar Field;

2. Main entrance security gate, either hand operable or motorized;

3. Evacuation procedures;

4. Protocol for contacting law enforcement and the CPM in the event of suspicious activity or emergency;

5. Written standard procedures for employees, contractors and vendors when encountering suspicious objects or packages on-site or off-site;

6. a. A statement (refer to sample, attachment "A") signed by the project owner certifying that background investigations have been conducted on all project personnel. **[IVS to provide language limiting investigation of personnel during construction phase.]** Background investigations shall be restricted to ascertain the accuracy of employee identity and employment history, and shall be conducted in accordance with state and federal law regarding security and privacy;

   b. A statement(s) (refer to sample, attachment "B") signed by the contractor or authorized representative(s) for any permanent contractors or other technical contractors (as determined by the CPM after consultation with the project owner) that are present at any time on the site to repair, maintain, investigate, or conduct any other technical duties involving critical components (as determined by the CPM after consultation with the

project owner) certifying that background investigations have been conducted on contractor personnel that visit the project site.

7. Site access controls for employees, contractors, vendors, and visitors;

8. Closed Circuit TV (CCTV) monitoring system, recordable, and viewable in the power plant control room and security station (if separate from the control room) capable of viewing, at a minimum, the main entrance gate; and

9. Additional measures to ensure adequate perimeter security consisting of either:

    a. Security guard present 24 hours per day, seven days per week, OR b. Power plant personnel on-site 24 hours per day, seven days per week and all of the following:

        1) The CCTV monitoring system required in number 8 above shall include cameras that are able to pan, tilt, and zoom (PTZ), have low-light capability, are recordable, and are able to view 100% of the perimeter fence, the outside entrance to the control room, and the front gate from a monitor in the power plant control room; AND

        2) Perimeter breach detectors or on-site motion detectors.

The project owner shall fully implement the security plans and obtain BLM's authorized officer and CPM approval of any substantive modifications to the security plans. BLM's authorized officer and the CPM may authorize modifications to these measures, or may require additional measures, such as protective barriers for critical power pant components (e.g., transformers, gas lines, compressors, etc.) depending on circumstances unique to the facility or in response to industry-related standards, security concerns, or additional guidance provided by the U.S. Department of Homeland Security, the U.S. Department of Energy, or the North American Electrical Reliability Council, after consultation with appropriate law enforcement agencies and the applicant.

Verification: At least 30 days prior to the initial receipt of hazardous materials on-site, the project owner shall notify BLM's authorized officer and the CPM that a site-specific Operations Site Security Plan is available for review and approval. In the Annual Compliance Report, the project owner shall include a statement that all current project employee and appropriate contractor background investigations have been performed, and updated certification statements are appended to the Operations Security Plan. In the Annual Compliance Report, the project owner shall include a statement that the Operations Security Plan includes all current hazardous materials transport vendor certifications for security plans and employee background investigations.

SOIL&WATER-11 Imperial County Land Use Ordinance 9 prohibits the export of groundwater from the groundwater basin from which the water was derived without a permit. No water from wells located in the Ocotillo/Coyote Wells

Groundwater Basin shall be exported by Imperial Valley Solar for use in the Imperial Valley Groundwater Basin, without a permit.

Verification: In the absence of a permit from Imperial County to export water from the Ocotillo/Coyote Wells basin to the Imperial Valley basin, or proof that Imperial County has determined that no export permit is required for the Imperial Valley Solar project, the project applicant shall submit as part of the annual water use summary report required by SOIL&WATER-2 documentation verifying that no Ocotillo/Coyote Wells Groundwater Basin water was utilized for power plant operations in areas overlying the Imperial Valley Groundwater Basin. **[Staff to provide additional language.]**

WORKER SAFETY-7 [Staff and IVS stipulated to language for this condition. *See* Ex. 304.] The project owner shall either (1) reach an agreement with the Imperial County Fire Department regarding the funding of resources to mitigate potential project-related impacts on fire protection services or if no agreement can be reached shall (2) fund an independent consultant's study to evaluate the following:

- Potential for impacts on local fire protection and costs of new local fire protection services necessary to mitigate such impacts;
- The risk of impact on the local population that could result from potential unmitigated impacts on local fire protection services;
- The extent to which local tax revenue from the project will provide funding to reduce impacts on local fire protection services;
- Recommend the amount of funding that should be provided to mitigate any identified significant impacts on local fire protection services.

Compliance Protocols:

- The project owner shall provide a protocol for conducting the independent consultant study for review and comment by the Imperial County Fire Department and review and approval by the CEC CPM prior to conducting the study.
- The independent consultant study shall be funded by the project owner and conducted by a consultant approved by the CEC CPM.
- No construction of permanent above ground structures shall occur until funding of mitigation occurs either pursuant to an agreement reached between the project owner and the Imperial County Fire Department, pursuant to the staff-approved independent consultant's study, or payment of $200,000 to the Imperial County Fire Department to be used as an initial payment. If initial payment is made, this payment will off-set any initial funding required by the independent consultant's study based on a full accounting by Imperial County Fire Department regarding the use of these funds.
- In the event that the parties disagree with the consultant's recommendations the CEC CPM shall, based on the results of the CEC CPM approved independent consultant study and comments from the project owner and the Imperial County Fire Department, make the final determination regarding the mitigation measures

that will be required and the amounts of funding to be provided to the Imperial County Fire Department to accomplish any required mitigation.

Verification: The project owner shall provide the CEC CPM with a copy of the agreement with the Imperial County Fire Department; or a study outline and scope of work for the proposed independent consultant study and qualifications for proposed contractors for approval. The project owner shall provide the CEC CPM with a copy of the completed study prior to any construction of permanent above-ground structures at the project site. In the event that an agreement is not reached with Imperial County Fire Department nor has the independent consultant's report been prepared, the project owner shall provide proof that the initial $200,000 payment has been made to the Imperial County Fire Department. Annually thereafter, the owner shall provide the CEC CPM with verification of funding to the Imperial County Fire Department for required fire protection services mitigation pursuant to the agreement with the Department *or* the CEC CPM approved independent consultant study.

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BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
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APPLICATION FOR CERTIFICATION FOR THE
IMPERIAL VALLEY SOLAR PROJECT
(formerly known as SES Solar Two Project)
IMPERIAL VALLEY SOLAR, LLC

Docket No. 08-AFC-5
PROOF OF SERVICE
(Revised 6/8/10)

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DECLARATION OF SERVICE

I, Jennifer Draper, declare that on August 11, 2010, I served and filed copies of the attached, Applicant's Submittal of Post-Hearing Brief. The original documents, filed with the Docket Unit, are accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:
[http://www.energy.ca.gov/sitingcases/solartwo/index.html]

The documents have 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;

_____ by personal delivery;

__X__ by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date 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 emailed respectively, to the address below (***preferred method***);

OR

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

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 08-AFC-5
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, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

original signed by
Jennifer Draper

*indicates change