Stephan C. Volker
Alexis E. Krieg
Stephanie L. Clarke
Daniel P. Garrett-Steinman
Jamey M.B. Volker
M. Benjamin Eichenberg

Law Offices of
Stephan C. Volker
436 – 14th Street, Suite 1300
Oakland, California 94612
Tel: (510) 496-0600 ❖ Fax: (510) 496-1366
svolker@volkerlaw.com

11.172.01

January 15, 2015

VIA EMAIL AND U.S. POST
Ashley.Gungle@sdcounty.ca.gov
Mindy.Fogg@sdcounty.ca.gov

Ashley Gungle
Mindy Fogg
San Diego County Planning & Development Services Department
5510 Overland Avenue, 3rd Floor
San Diego, California 92123

Re: Comments of Backcountry Against Dumps and Donna Tisdale for the Final Programmatic Environmental Impact Report on the Soitec Solar Development Project, SCH No. 2012-121-018

Dear Ms. Gungle and Ms. Fogg:

Backcountry Against Dumps and Donna Tisdale (collectively, "Backcountry") submit the following comments on the December 2014 Final Program Environmental Impact Report ("FPEIR") for the Soitec Solar Development Project at the Rugged, Tierra del Sol, LanEast, and LanWest locations[1] ("Project"). These comments build on Backcountry's October 10, 2013 Scoping Comments, Backcountry's March 1, 2014 Draft Program Environmental Impact Report ("DPEIR") comments, and the March 3, 2014 supplement to those comments submitted by Richard James of E-Coustic Solutions. Backcountry's March 1 DPEIR comments and Richard James' March 3 DPEIR comments can be found – with San Diego County's ("County's") response – at FPEIR Response to Comments O10_1 to O10_142 and O21_1 to O21_10, respectively.[2] Backcountry was delayed in preparing these comments by the County's delay in

[1] Although Soitec Solar Development (and its subsidiary LanWest Solar Farm LLC) requested that the County "withdraw the Major Use Permit Application for the LanWest solar farm project," and "close the case out" on September 5, 2013, because the facility is discussed as part of the Project in the FPEIR, Backcountry will address the facility as part of the Project.

[2] Those comment letters, along with Backcountry's October 10, 2013 Scoping Comments, are also available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/201

updating critical hydrologic information about the Project on the County's website on which Backcountry and its experts relied.

I. INTRODUCTION

Backcountry urges the Planning Commission to disapprove the environmentally harmful Soitec Solar Project, including the proposed Project, any alternatives,[3] and the additional "new, optional [energy storage system] that was not analyzed in the [DPEIR]." FPEIR AIS.0-1. Backcountry urges the County to move away from needlessly destructive industrial-scale energy development such as this Project and to embrace instead smart and effective energy policies to halt global warming, such as increased use of rooftop solar photovoltaics and other distributed generation sources. In combating global warming, San Diego may not abdicate its solemn duty to ensure the health and welfare of the County's residents and environment. *Davidson v. County of San Diego* (1996) 49 Cal.App.4th 639, 648-649. Pursuant to the California Environmental Quality Act ("CEQA"), Public Resources Code ("Pub.Res.Code") section 21000 *et seq.*, the County must protect the health and safety of its residents by disapproving any project that poses significant but avoidable environmental impacts unless they are fully disclosed, analyzed and mitigated to insignificance. Pub.Res.Code § 21002. The FPEIR fails to meet these mandates because it does not adequately study, mitigate and consider alternatives that would achieve the Project's renewable energy objectives *without* its many significant public health and environmental impacts.

This Project represents an unnecessary industrialization of scenic and environmentally sensitive rural land, including important wildlife habitat, farmland and open space. Backcountry urges the County to analyze and adopt a non-fossil fuel distributed generation alternative that would locate energy generation near demand centers in already-disturbed areas. Distributed generation is vastly preferable to the Project's approximately 1,490 acres of solar farms that will

---

4-03-01-StephanVolker-Comment-Cover-Letter-Soitec-Solar-DPEIR.pdf (March 1, 2014 DPEIR Comments), www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-03-RichardJames-Comment-Letter-Soitec-Solar-DPEIR-Supplement-to-StephanVolker-Comments.pdf (Richard James Comments), and www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2013-10-10-Stephan-Volker-Letter-re-Soitec-Solar-PEIR-Scoping-Comments-of-The-Protect-Our-Communities-Foundation-et-al.pdf (October 10, 2013 Scoping Comments).

[3] Including Alternative 7, the environmentally preferred alternative, and Alternative 2A, the newly added alternative on which the Planning Commission focuses its Staff Report.

needlessly destroy highly scenic and largely untrammeled rural lands. Yet the FPEIR improperly dismisses this alternative. FPEIR 4.0-4 to 4.0-9. A proper CEQA review would show that distributed energy would achieve the Project's renewable energy objectives at a vastly smaller environmental cost.

As detailed below, the County's FPEIR is disorganized, incomplete, and fails to address the Project's significant impacts. In addition, although the FPEIR focuses its analysis on the proposed project, it also identifies Alternative 7, the Relocate Tierra del Sol, LanWest and LanEast Alternative, as the environmentally superior alternative. FPEIR 4.0-71 to 4.0-72. Yet, the FPEIR's brief discussion of Alternative 7 completely fails to analyze its impacts and cannot support this conclusion. For each of these reasons, the FPEIR violates CEQA.

II. THE FPEIR'S PROJECT DESCRIPTION IS DEFECTIVE.

An adequate project description is an essential starting point for analysis of a project's environmental impacts, and all environmental impact reports must provide one. 14 California Code of Regulations ["CEQA Guidelines"] § 15124. As directed by the CEQA Guidelines, the project description "shall contain the following information:"

> (a) The precise location and boundaries of the proposed project . . . shown on a detailed map.
>
> (b) A statement of objectives sought by the proposed project[, which] will help the Lead Agency develop a reasonable range of alternatives to evaluate in the EIR . . . . The statement of objectives should include the underlying purpose of the project.
>
> (c) A general description of the project's technical, economic, and environmental characteristics . . . .

Id.

"An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR." *County of Inyo v. City of Los Angeles* ("*County of Inyo*") (1977) 71 Cal.App.3d 185, 193. By contrast,

> [a] curtailed or distorted project description may stultify the objectives of the reporting process. Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefits against its environmental cost, consider mitigation measures, assess the advantage of

> terminating the proposal (i.e. the "no project" alternative) and weigh other alternatives in the balance.

Id. at 192-193.

Rather than "accurate, stable and finite," the FPEIR's Project description remains so "distorted" that it precludes a full and accurate analysis of the Project's environmental impacts and identification of a range of reasonable alternatives. *Id*. Many of the basic assumptions undergirding the FPEIR's analysis of the Project are either wrong, unsupported, or otherwise questionable.

A. THE ADDITION OF A NEW ENERGY STORAGE COMPONENT SIGNIFICANTLY ALTERS THE PROJECT REQUIRING RECIRCULATION OF THE EIR.

For the first time, the FPEIR introduces an entirely new component of the Project "that was not analyzed in the [DPEIR]." FPEIR AIS.0-1. The FPEIR attempts to sneak in an Li-ion battery storage system. AIS.0-5. This battery storage system would be housed in giant forty-foot steel shipping containers with the supplier's logo prominently displayed on the side, lined up into two rows of eighty containers, or four rows of forty containers. FPEIR AIS.0-3. This huge addition to the Project is completely downplayed by the FPEIR, which claims that "the addition of the energy storage system on Rugged solar farm would not affect the conclusions of the DPEIR prepared and circulated for the [Project]." FPEIR AIS.0-1.

However CEQA Guidelines section 15088.5 requires recirculation of an EIR in situations just like this. Indeed, the County "is *required* to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review." CEQA Guidelines § 15088.5(a) (emphasis added). Here, significant new information was presented in the FPEIR, *long after* the public was notified of the availability of the DPEIR[4] and the close of the public comment period.[5] FPEIR AIS.0-1 to AIS.0-18.

---

[4] Notice of Availability for the DPEIR, January 2, 2014, available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/EIR-FILES/Legal-Ad.pdf

[5] Notice of Extension of Public Comment Period until March 3, 2014 for the DPEIR, February 12, 2014, available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/EIR-FILES/2014-02-12

New information is considered "significant" where, like here, "the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect." CEQA Guidelines § 15088.5(a). Since the new energy storage system was never analyzed prior to the FPEIR, the public was deprived of *any* opportunity to comment on the admitted substantial adverse impacts of this new component, completely precluding the public from raising additional feasible mitigation measures. *Id.*; FPEIR AIS.0-1, AIS.0-8 (aesthetic impacts), AIS.0-12 to AIS.0-14 (noise impacts), AIS.0-14 to AIS.0-16 (fire impacts). This new component also has the potential to impact numerous other resources in the area, including groundwater, public health and safety, and greenhouse gas emissions. Therefore, the EIR *must* be recirculated to allow the public to consider this new component, its impacts to the area's resources, and potential mitigation measures. CEQA Guidelines § 15088.5.

B. THE FPEIR FALSELY CLAIMS THAT THE PROJECT MUST BE BUILT IN SAN DIEGO COUNTY.

The FPEIR states – and its entire environmental analysis assumes – that the Project must be located in San Diego County. FPEIR S.0-1, 1.0-1 to 1.0-2. The FPEIR does not examine a single alternative outside of San Diego County. Yet we now know that Soitec sought contract terms in its power purchase agreements ("PPAs") allowing the entire Project to be built in *Imperial County*. In a letter to the CPUC San Diego Gas and Electric ("SDG&E") reported that, "[i]n 2013, Soitec requested an amendment to the Soitec PPAs to permit Soitec to move its projects from the Boulevard area to the Imperial Valley, as well as to provide for an extension of certain dates in the PPAs." Dec. 22, 2014 SDG&E Letter to CPUC ("SDG&E Letter"), p. 7.[6] On January 16, 2014, the California Public Utilities Commission ("CPUC") adopted Resolution E-4637, which approves amendments to "the long-term power purchase agreements . . . between San Diego Gas & Electric Company[("SDG&E")] and Tierra del Sol Solar Farm, LLC, LanWest Solar Farm, LLC, LanEast Solar Farm, LLC, and Rugged Solar, LLC." Resolution E-4637 ("Resolution"), p. 1.[7] Among other things, the amendments "result in . . . [a] new site location [and] new interconnection point" for the projects in Imperial County, California. *Id*. The "new

---

-Legal-Ad-Notice-of-Extended-Public-Review-Period-Soitec-Solar.pdf

[6] The SDG&E Letter is *available at* http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M143/K931/143931998.PDF, and attached as Exhibit 5.

[7] Available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-1-Soitec-Solar-DPEIR.pdf

project sites" would be located "near Calexico, Imperial County, California," and would interconnect at the Imperial Valley Substation. *Id*. at 2. All Soitec PPAs with SDG&E were terminated as of December 19, 2014, due to a failure to satisfy certain contractual obligations, but the fact remains that Soitec worked out a contract with SDG&E to locate the Project in Imperial County. SDG&E Letter, p. 8.

The attempt to relocate the Project to Imperial County renders the entire FPEIR and CEQA process to date obsolete. The County must revise the FPEIR in the following ways, among others: (1) amend the Project location description to include as an alternate site Calexico (Imperial County); (2) remove the San Diego-specific Project objectives, including objectives 2 and 4 (FPEIR 1.0-1); and (3) describe and fully analyze the environmental impacts of the Calexico alternative and any other out-of-county alternatives. After revising the FPEIR with that "significant new information," the County must recirculate it. PRC § 21092.1; *Laurel Heights Improvement Association v. Regents of the University of California* ("*Laurel Heights I*") (1992) 6 Cal.4th 1112, 1126-1132.

The FPEIR's Response to Comments attempts to sidestep the issue by claiming that the PPAs have no impact on the proposed Project. FPEIR Response to Comments O10_5 to O10_7. Yet the PPAs are key to the Project's qualification under the Renewable Portfolio Standards ("RPS") system, which is the very first objective listed.[8] FPEIR 1.0-1. Additionally, the Response to Comments fails to make clear the distinction between "relocating [power purchase agreements] to sites in Calexico" with the same names as the sites detailed in the Project Description, and relocating the sites detailed in the Project Description. FPEIR Response to Comments O10_7.

Furthermore, the fact that "Soitec does not have site control over the Calexico site" does not, contrary to the FPEIR's claim, make it "infeasible to consider the site as an alternative for the proposed project. FPEIR Response to Comments O10_7.[9] Site control is only *one* of the

---

[8] Indeed, the FPEIR's Response to Comments claims that "[t]he Proposed Project would meet Objective 1 by creating solar energy that qualifies under the RPS." FPEIR Response to Comments O10_7. The FPEIR fails to specify how objective 1 would be met without a power purchase agreement.

[9] The County later denies that it found a location "infeasible based only on the applicant's inability to acquire, control, or otherwise have access to alternative sites." FPEIR Response to Comments O10_112 to O10_113. However, if there is some other reason for the County's infeasibility determination, it is not evident from the FPEIR nor from the FPEIR's Response to Comments.

"factors that *may* be taken into account when addressing the feasibility of alternatives." CEQA Guidelines § 15126.6(f)(1) (emphasis added). As section 15126.6(f)(1) makes clear, "[*n*]*o one* of these factors is a fixed limit on the scope of reasonable alternatives." *Id*. (emphasis added). And where, as here, the project applicants *themselves* are considering – if not likely to adopt – alternative locations that "already have all of the required major permits," the "alternative site" factor is *no limit at all*. Resolution at p. 2.[10]

C. THE FPEIR'S PROJECT OBJECTIVES ARE FLAWED.

In addition to unduly circumscribing the Project objectives to focus on San Diego County, the FPEIR misleads the public by suggesting – without supporting evidence – that the Project would meet the listed objectives. For example, the FPEIR states, in objectives 1 and 7, that the Project is intended to "[a]ssist in achieving the state's Renewable Portfolio Standard (RPS) and greenhouse gas emissions (GHG) reduction objectives" by "[d]evelop[ing] up to 168.5 MW of renewable solar energy systems that reduce consumption of non-renewable resources and reduce GHG." FPEIR 1.0-1. Yet the FPEIR provides no assurance whatsoever that the Project would "reduce consumption of non-renewable resources" that produce a greater per-watt amount of GHGs. It merely states the Project "would provide a *potential* reduction" in GHGs emitted "*if* the electricity generated by [the Project] *were* to be used instead of electricity generated by fossil-fuel sources." FPEIR 3.13-25 (emphasis added), 3.13-30, 3.13-38 to 3.13-39 (same).

Instead of substantively evaluating the Project's impact on GHG production by other types of generating facilities, the FPEIR left its GHG section virtually untouched. FPEIR Section 3.13. New electrical generating capacity in California is unlikely to be produced using GHG-intensive technologies like coal or fuel oil, as the County is well aware. Any comparison of GHG emissions should rather be with the emissions of other *renewable* energy sources, including distributed generation, rather than with fossil-fuel alternatives that are plainly obsolete. Particularly because this comparison would most likely prove unfavorable for the Project, such an "oranges-and-oranges" analysis is essential to an informed choice between the options actually likely to be built. Decisionmakers and the public deserve no less before invaluable, irreplaceable and non-renewable resources such as the ecosystems where this Project will be built are destroyed. The FPEIR's inapt selection of the choices presented – comparing the Project to outdated technology instead of other comparable renewable energy projects in California – precludes a full and accurate analysis of a reasonable range of alternatives in violation of CEQA. *County of Inyo*, 71 Cal.App.3d at 192-193.

---

[10] Available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-1-Soitec-Solar-DPEIR.pdf.

The County's response to comments indicates that it believes it does not have to show an actual reduction in GHGs because the purpose of California's Renewable Portfolio Standard ("RPS") is to reduce GHGs.[11] FPEIR Response to Comments O10_7 to O10_8. This reasoning is circular and indicative of the impact that distorted project objectives can have on an agency's decisionmaking process. The purpose of the impact report is to inform the agency of the impacts of a project, not to restate statutory preambles. Where a project objective is the reduction of GHGs, baldly claiming that "the Proposed Project would generate electricity while reducing consumption of non-renewable resources" does not satisfy CEQA. FPEIR Response to Comments O10_8. Because a Project objective is to reduce GHGs, the FPEIR must detail some method by which GHGs are reduced. *Otherwise, it would appear that this Project simply substitutes a harmful and inefficient form of renewable energy – remote, industrial solar – for a far less impactful and more efficient form – distributed generation including roof-top solar.* Satisfying some portion of the RPS does not, by itself, show decisionmakers and the public how GHGs will be reduced by this particular project.

Furthermore, an explanation of why energy must be "utility-scale" is lacking from the Project Objectives, FPEIR 1.0-1, and insufficient in later sections. *See, e.g.*, 4.0-4 to 4.0_10 (distributed generation alternative). In fact, adding a requirement for "utility scale" limits the ability of the Project to meet its other objectives. California is in the midst of a revolution in distributed generation energy sources which are more secure, more efficient, have less environmental impact, are cheaper, and require less transmission than "utility scale" installations.[12] Building additional distributed generation capacity is a priority in California. The only reason the term "utility scale" is in the objectives is to preemptively eliminate an otherwise reasonable alternative – distributed generation – from consideration. This is unacceptable under CEQA.

---

[11] California's RPS requires independent operator utilities to obtain a certain percentage of their energy from certified renewable sources. Where that percentage has been satisfied, additional renewable capacity no longer accomplishes RPS objectives. SDG&E has no need for additional PPAs to help it achieve its RPS obligations, rendering this objective moot. SDG&E Letter, p. 13 (describing "SDG&E's current lack of RPS need" in the context of future contracts with Soitec), 14 (citing CPUC Decision 14-11-042 finding "that SDG&E is not obligated to undertake other RPS procurement during the time period covered by the 2014 solicitation cycle (*i.e.*, 2015)").

[12] California is streamlining permit approvals and relaxing resource availability requirements for distributed generation systems. *See Cal. Indep. Sys. Operator Corp.*, 141 FERC ¶ 61,132 (2012), on reh'g, 144 FERC ¶ 61,189 (2013).

.

The FPEIR's statement of Project objectives thus paints a wishful and erroneous picture of the Project instead of providing the public and decisionmakers with the "accurate view" that CEQA requires. *County of Inyo*, 71 Cal.App.3d at 192. And in doing so, it *prevents* rather than "help[s] the [County from] develop[ing] a reasonable range of alternatives to evaluate in the EIR." CEQA Guidelines § 15124. "An EIR's discussion of alternatives must contain analysis sufficient to allow informed decision making." *Laurel Heights Improvement Association v. Regents of University of California* (1988) 47 Cal.3d 376, 404. An alternative may "not be eliminated from consideration solely because it would impede to some extent the attainment of the project's objectives." *Habitat and Watershed Caretakers v. City of Santa Cruz* (2013) 213 Cal.App.4th 1277, 1304 ("*HAWC*"); CEQA Guidelines §15126.6(b). "The EIR is required to make an in-depth discussion of those alternatives identified as at least potentially feasible." *HAWC,* 213 Cal.App.4th at 1303 (emphasis and quotation omitted). Thus, as discussed, the County must revise its Project description, Project objectives and alternatives analysis and then recirculate the FPEIR.

III. THE FPEIR'S ANALYSIS OF THE PROJECT'S IMPACTS IS INADEQUATE.

A. GROUNDWATER, WATER SUPPLY AND OTHER HYDROLOGICAL IMPACTS

Backcountry applauds the County for acknowledging several deficiencies in the DPEIR's calculations for the Project's water demands. Despite the FPEIR's substantial upward revision to the Project's water demand, the County continues to improperly find that the Project will have less than significant impacts to area groundwater, and to local water supply. This is because the FPEIR continues to avoid reasonably foreseeable impacts of supplying water to the Project. It continues to understate the Project's water demand, and does not adequately address the future water sources or discuss the level of uncertainty involved with supplying water to the Project. Thus the FPEIR violates CEQA's informational mandate.

1. The FPEIR Underestimates the Project's Construction Water Demands.

Backcountry appreciates the County's revision of the FPEIR to correct errors in the DPEIR's calculation of construction-stage water demand. These significant revisions, however, are insufficient to fully address the Project's construction-stage demand.

The County continues to underestimate the Project's water demands on the assumption that it will not need to adjust the grade for tracker mast installation "in most cases." FPEIR 9.0-19. Yet the FPEIR does not define "most cases" and fails to explain the conditions that would require grading for tracker mast installation, and the prevalence of those conditions at the Project

locations. Without this information, neither the public nor the County can conclude that the FPEIR's assumptions establish the amount of grading required for Project installation.

Further, the FPEIR assumes swapping out 47 CVP trackers for 160 battery storage containers at the Rugged site would have no additional grading demands. FPEIR AIS.0-5 to AIS.0-6. These battery storage containers, and associated inverters and HVAC systems, would require between 7 and 7.5 acres, depending on configuration. FPEIR AIS.0-3. The FPEIR admits that each 340-square-foot container "would be . . . arranged on a graded pad." FPEIR AIS.0-6. In comparison, the 47 tracker masts that this battery storage system replaces are each 28-inches in diameter. FPEIR 1.0-7. Assuming that the FPEIR's claim that no grading is required to install most tracker masts is accurate, the amount of grading required for the 7.5 acre battery storage area is necessarily more than the grading for the 47 tracker masts it would replace. FPEIR 9.0-19. Either way, the FPEIR underestimates the amount of grading required for the Project, and thus the amount of water required for Project construction. By understating the Project's water demands, the FPEIR does not accurately present the Project's impacts to groundwater and imported water resources.

2. The FPEIR Continues to Understate the Project's Operational Water Demands.

Backcountry reiterates its concern that the Project's proposed tracker washing schedule is too optimistic for the environmental conditions at the Project locations. The County claims that the proposed schedule of "9 times per year . . . would capture the potential effects of nearby construction and agricultural activity." FPEIR 9.0-20. This assumption arises from a general guess, not from any attempt to quantify or plan for off-site dust generation. *Id*; *see also* FPEIR Response to Comments O10_11 to O10_3, Comment O10-17. This speculation is insufficient to support the County's claims.

The FPEIR re-states the claim that restoring the Project locations during decommissioning would require less water than either Project operation or construction does. FPEIR Response to Comments O10_13 to O10_14; FPEIR 1.0-24. The FPEIR makes this amazing claim on the basis that returning the disturbed lands – including interior roads, building pads and tracker areas – to surrounding grade, and then reseeding and restoring this land will not require much water. The FPEIR's decommissioning plan is to remove *all* structural elements down to 20 feet below grade. FPEIR 2.2-23. Thus, under Alternative 2a, approximately 3,291 tracker masts at Rugged and 2,499 tracker masts at Tierra del Sol must be removed to a depth of 20 feet during decommissioning. This sort of demolition and restoration activity requires fugitive dust controls during site decommissioning, as restoration will require soil to fill approximately 5,790 20-foot holes. *See e.g.* FPEIR 2.2-20 (construction stage fugitive dust control measures to reduce construction-stage criteria pollutants). Yet the FPEIR makes no

attempt to calculate or quantify the potential demands associated with these restoration activities. The FPEIR's facile assumption that Project decommissioning "is more likely to be the same or less than the water demand associated with operation and maintenance of the Proposed Project" is unsupported. FPEIR Response to Comments O10_14, FPEIR 1.0-24.

3. The FPEIR's Analysis of the Project's Impacts to Groundwater Resources Is Flawed and Deficient.

While the County has updated the FPEIR to specify that the conditions on Tierra del Sol's Use Permit will limit onsite pumping to 18 acre feet of water during the first year of construction, and no more than seven acre feet of water during the first 90 days of construction, this condition is *not* part of the any CEQA mitigation for *well interference*. FPEIR 3.1.5-51 to 3.1.5-52; FPEIR Response to Comments O10_15. Yet it is only through this condition that the County claims that Tierra del Sol groundwater pumping will draw down the nearest residential wells to 19.9 feet, 0.1 foot below the County's significance threshold of 20 feet. FPEIR 3.1.5-51. Backcountry notes and incorporates by this reference the comments of hydrogeologist Scott Snyder of Snyder Geologic concluding that even *with* these conditions, pumping at Tierra del Sol will *exceed* the County's threshold of significance during Project construction. Because the County refused to incorporate a limit on groundwater pumping to mitigate the potentially significant impact of well interference, this significant impact remains unmitigated. While the County has imposed measures to monitor groundwater dependent habitat, these measures do not address the Project's significant impact on neighboring wells, despite the County's claim otherwise. FEIR 3.1.5-52.

The FPEIR clarifies that the Project is designed to rely solely on onsite wells for the Project's operational needs. FPEIR Response to Comments O10_15. Further the FPEIR clarifies that the Project's mitigation measures include well monitoring and oak woodland/tamarisk scrub habitat monitoring for wells at Rugged, and Tierra del Sol. FPEIR Response to Comments O10_17 to O10_18; FPEIR S-39 to S-48. The FPEIR also clarifies that Pine Valley Mutual Water Company and Jacumba Community Services District wells will be monitored as part of the Project's groundwater supply mitigation. FPEIR S-39 to 48. Yet, the oak woodland habitat monitoring ceases after one year, if during that year the construction's water demand does not draw down the surrounding wells by more than 3 feet. *Id*. Because the Project will be using onsite wells for all operational demands, however, the potentially significant habitat impacts of the operational water use are not mitigated if these impacts occur after the construction phase has ended.

The FPEIR further continues to ignore groundwater-dependent habitat that will be impacted by groundwater pumping, solely on the basis of Rugged's Tetris-shaped site boundaries. *See, e.g.,* FPEIR Appendix 3.1.5-6, fig 11 (map of groundwater-dependent vegetation types). The FPEIR simply does not examine or identify any groundwater-dependent

habitat adjacent to the site. *Id.* The County, in responding to Backcountry's comments, fails to address this concern. FPEIR Response to Comments, Response O10-23. The County has ignored the first step of CEQA analysis: identify the Project's impacts. CEQA Guidelines § 15126.2(a). Instead, the County claims that "impacts would first become apparent in locations closer to the pumping and in species that have roots deep enough to actually access the available groundwater." FPEIR Response to Comments O10_18. Yet the County fails to acknowledge that the FPEIR identifies wells 6, 6a and 6b as adjacent to the southern site boundary. FPEIR Appendix 3.1.5-6, figs 10, 11. While the FPEIR identifies a new site-monitoring well to be drilled at the southern site boundary "350 feet south of Well 6a/6b", it does not indicate the exact location of this well. *Id*; FPEIR .0-24. The County's reliance upon the groundwater monitoring and mitigation program to mitigate any impacts to groundwater-dependent habitat cannot serve as a solution when the County does not know the extent of the impact it attempts to mitigate.

In addition, in the event that drought conditions continue or worsen, the aquifer's recharge rate will slow; yet the FPEIR's monitoring requirements for the surrounding habitat end long before the Project's proposed end date. The FPEIR does not plan for an alternative water supply for Project operation in the event that drought conditions compromise the Project's wells after construction. The FPEIR's response to comments implies that the Project would use trucked water if onsite water is not available during Project operation, but the FPEIR never makes any explicit investigation or discussion of this option. *See* FPEIR Response to Comments O10_19. Indeed, the FPEIR's Groundwater Investigations for all offsite groundwater supply options are expressly limited to the short-term supply of construction water. FPEIR Appendices 3.5.1-7, 3.5.1-8. Further, the onsite operational water demands include potable water, but the recycled water supplied by Padre Dam Municipal Water District is not potable. Thus, the FPEIR fails to adequately discuss and identify the Project's impacts on local groundwater supplies, in violation of CEQA. *Vineyard*, *supra*, 40 Cal.4th 434.

The FPEIR's addition of battery storage at the Rugged site includes an enormous increase in onsite hazardous materials. Yet the FPEIR's additional information on battery storage makes no attempt to address whether the increased battery storage and associated HVAC systems could introduce contaminants to the local surface and groundwater supply at the Project site. For all these reasons, the FPEIR fails to present an accurate accounting of the Project's significant impacts on groundwater resources.

4. The FPEIR's Discussion of the Project's Reliance Upon Imported Water Supply Is Insufficient.

The FPEIR assumes that all Project water demand will be met by a combination of onsite well water and imported water. FPEIR Response to Comments O10_19. Mitigation measure M-BI-PP-15 establishes criteria to cease onsite pumping to prevent damage to groundwater

dependent habitat. *Id*; FPEIR 2.3-203 to 2.3-310. The FPEIR relies upon Jacumba Community Services District ("Jacumba CSD"), Pine Valley Mutual Water Company ("Pine Valley MWC") and the Padre Dam Municipal Water District ("Padre Dam MWD") to supply water in such an instance. FPEIR 9.0-26 to 9.0-27. These existing commitments are insufficient to supply Rugged, should onsite wells become unavailable. While the FPEIR claims that Padre Dam MWD can supply additional water, the record contains no evidence or commitment that such water is available. Further, each groundwater dependent utility's commitment is conditioned on groundwater availability. Yet the new Groundwater Resources Investigation Report ("GRIR") for JCSD, released by the County on January 9, 2015, contradicts the previous report in ways that undermine its credibility, as identified in hydrogeologist Scott Snyder's previously incorporated comments. For these reasons, the FPEIR fails to establish that construction-related water demands can be met, should the groundwater dependent habitat mitigation measures trigger a cessation of pumping at the Project sites.

5. The FPEIR's Conclusion that Alternative 7 Would Reduce Water Supply and Hydrological Impacts Is Unsupported.

The County's claim that the use of the Los Robles site would reduce hydrological impacts remains unsupported. FPEIR 4.0-60. The County relies upon Alternative 7's removal of the Tierra del Sol gen-tie to claim that Alternative 7 requires less water than the Project. But the County lacks any detailed information about the Los Robles site's water demands to determine whether those demands would offset this change to the Project. Thus, the County necessarily bases its claim that Alternative 7 is environmentally superior on its assumption that the site's grading needs, soil moisture content, and construction water demands are the same as the proposed Project. Yet the FPEIR provides no analysis showing that the conditions at the Los Robles site would be sufficient to make these assumptions. If the groundwater wells – mentioned in passing in the FPEIR's response to comments – were not available to provide water for Alternative 7, then necessary water would have to be imported. The Project's groundwater investigations, however, do not address whether the Jacumba CSD can serve the water required to construct this alternative. *See e.g.* FPEIR Appendix 3.1.5-8, pp. ES-1, 1-1 (investigating water for Tierra del Sol and Rugged only). Further the FPEIR contains no discussion of Padre Dam MWD's ability to serve this site. The FPEIR's conclusion that Alternative 7 would require less water than the Project lacks evidentiary support, and cannot buttress the claim that Alternative 7 is environmentally superior.

6. Alternative 2A Would Have the Same Deleterious Impacts as the Proposed Project.

Alternative 2a, identified as the applicant's and staff's preferred alternative in the staff report for the January 16, 2015, Planning Commission meeting, does not alter the serious and

significant flaws associated with the Project's demands for water. For all of these reasons, the FPEIR underestimates the Project's water demands, overstates the water supply, and fails to adequately address or mitigate the Project's groundwater pumping impacts on vegetation, neighboring wells, and public utilities.

B. BIOLOGICAL IMPACTS

The FPEIR's analysis of biological impacts is insufficient, as shown below and in the January 14, 2015 comments of expert environmental biologist, Scott Cashen.[13] The public and decisionmakers need significantly more detail on the impacts to wildlife and vegetation in order to make an informed decision, as CEQA requires. The County must provide additional information and perform the necessary studies to establish the Project's impacts to biological resources. The few surveys that were completed are inadequate and do not meet commonly accepted standards for biological surveys. "A clearly inadequate or unsupported study is entitled to no judicial deference," and does not constitute substantial evidence supporting an agency's finding. *Laurel Heights I*, *supra*, 47 Cal.3d at 409 n.12.

The Project will "result in indirect impacts related to construction effects and operational activities, as well as direct effects related to permanent removal of suitable habitat, [and therefore] the Proposed Project would result in *significant* impacts to related sensitive species." FPEIR 2.3-137. Among those "sensitive species" that the Project would likely harm are the federally endangered Quino checkerspot butterfly ("QCB"), whose critical habitat extends near the Project sites, the federally endangered Peninsular bighorn sheep ("PBS"), the federally-protected golden eagle, and the burrowing owl, which is a California State Species of Special Concern. The County must thoroughly analyze the Project's impacts to these and other species. It did not, yet the FPEIR claims that the analysis is sufficient and the implementation of mitigation measures M-BI-PP-1 through M-BI-PP-13 will make the impacts less than significant. FPEIR Response to Comments O10_24 to O10_25. However, the FPEIR provides no support for this assertion, and in fact, it is not true.

1. The FPEIR's Discussion of Biological Resources Is Disorganized and Confusing.

The County admits that there were numerous errors in the DPEIR's discussion of biological impacts that needed to be remedied. FPEIR Response to Comments O10_24 to O10_27. Indeed, the FPEIR admits that there were "typos in Appendix 2.3-1 at pp. 1-17 and 2-20." FPEIR Response to Comments O10_26. However, the County never remedied the

[13] Backcountry incorporates Scott Cashen's comments fully by reference herein.

Biological Resources Report's ("BRR's") inadequate discussion of the impacts of the Tierra del Sol gen-tie alignment on golden eagles despite its admission of error. FPEIR Appendix 2.3-1, p. 1-17.

Furthermore, the FPEIR does not accurately reflect the changes made from the DPEIR. The County admits that it "made revisions and clarifications to the DPEIR to correct the error . . . presented in ~~strikeout~~/underline format . . . to Section 2.3.3.5." FPEIR Response to Comments O10_27. However the introduction to that section fails to provide tracked changes for the list of Guidelines. FPEIR 2.3-166 to 2.3-167. Indeed, the FPEIR completely changed the identifying letters for each Guideline. *Compare* FPEIR 2.3-166 to 2.3-167, *with* DPEIR 2.3-150 to 2.3-151. Yet despite this change – and the assertion that the FPEIR would identify it – the FPEIR fails to acknowledge this difference.

The FPEIR's failure to provide this information in an organized, concise, and accurate manner violates CEQA's informational purpose and prevents the public and decisionmakers from fully considering the impacts of the Project. CEQA Guidelines §15144; *Vineyard*, 40 Cal.4th at 428; *Berkeley Keep Jets,* 91 Cal.App.4th at 1355-1356.

2. The FPEIR Fails to Adequately Survey for and Address the Impacts to Avian Species.

a. Golden Eagles

Golden eagles are fully protected under federal, state and local laws, including the Migratory Bird Treaty Act ("MBTA")[14] and the Eagle Act, as well as state and local designations as sensitive and protected species. FPEIR 2.3-19; 16 U.S.C. §§ 701, *et seq.*; 16 U.S.C. § 668. Indeed, the County has designated golden eagles as a sensitive species (County Group I) and its CEQA biological guidelines mandate special considerations for golden eagles. *Id*; County of San Diego, Land Use and Environmental Group, *Guidelines for Determining Significance and Report*

[14] The federal government has taken substantive action to enforce the MBTA's permit requirement against renewable energy projects that kill birds. Soitec should not dismiss the potential deaths of MBTA-protected birds at renewable energy facilities. *See*, *e.g.*, Plea Agreement, *United States of America v. Duke Energy Renewables, Inc.,* Case No. 213-cr-00268-KHR (D. Wyo., Filed 11/07/13), Attachment B, available in the Project's Administrative Record at:
www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-6-Soitec-Solar-DPEIR.pdf.

Format and Content Requirements: Biological Resources, Fourth Revision, September 2010.[15] Yet the FPEIR makes the unsupported claim that the discussion of impacts to golden eagles is sufficient. FPEIR Response to Comments O10_27 to O10_28.

The FPEIR admits that there has been "recent golden eagle breeding activity in six golden eagle territories surrounding the Proposed Project site . . . [including t]wo active golden eagle territories ('Carrizo Gorge' and 'Table Mountain') [that] overlap with the Proposed Project site and one extirpated golden eagle territory ('Boulevard') [] within and around the Proposed Project site." FPEIR 2.3-20. The Proposed Project area is also "a potential golden eagle flyway zone." *Id.* However, the FPEIR asserts that "there are no CNDDB records of this species within the project area or surrounding quadrangles." *Id.* This entirely ignores a December 2013 golden eagle siting by a wildlife biologist on the Rough Acres Ranch, which falls *on or within the surrounding quadrangles of the Rugged site*. California Native Species Field Survey Form, 12/01/2013.[16] Therefore, the FPEIR's discussion of golden eagles fails to satisfy the requirements set forth for protecting golden eagles under the MBTA and the Eagle Act, and specifically, fails to meet the requirements set forth in CEQA for a complete and informative EIR. CEQA Guidelines §15144; *Vineyard*, 40 Cal.4th at 428.

i. Inadequacy of Surveys for Golden Eagles

The FPEIR claims that surveys completed for golden eagles were adequate because WRI has "over 24 years" experience studying the San Diego County golden eagle population and has "prepared golden eagle reports for projects in close proximity to the Proposed Project." FPEIR 9.0-8. However, this historical experience fails to remedy the lack of current, site-specific surveys for the Project.[17] The County claims that the "2012 helicopter surveys conducted by WRI included the project sites and therefore can be considered a site specific survey," but WRI itself admits that *no site-specific surveys were completed*. FPEIR Response to Comments

[15] Available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-7-Soitec-Solar-DPEIR.pdf

[16] Available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-8-Soitec-Solar-DPEIR.pdf

[17] Additionally, no site-specific studies were performed for Alternative 2A or Alternative 7.

O10_28; DPEIR Appendix 2.3-2, Appendix J, p. 13[18] (WRI report specifically stating that "site-specific studies have not been conducted"). This failure to perform site-specific surveys does not meet CEQA's requirement that the County make every effort to determine the impacts of the Project and inform the public of those concerns. CEQA Guidelines §15144; *Vineyard*, 40 Cal.4th at 428; *Berkeley Keep Jets,* 91 Cal.App.4th at 1355-1356. This is especially true given that Project impacts can only be considered less than significant if a "biologically based determination can be made that the project would not have a substantially adverse effect" on the species. FPEIR 2.3-99. Since no site-specific studies were performed, and the County itself confirmed that these surveys were necessary, the FPEIR's reliance on historical data and data from *other* projects at *different* locations is insufficient and frustrates informed decision making.

The County also erroneously claims that the surveys were adequate because "USFWS protocol indicates than aerial surveys can be the primary survey method, or can be combined with follow-up ground monitoring," and "helicopter surveys conducted by WRI consisted of two surveys, spaced at least 30 days apart." FPEIR 9.0-9; United States Fish and Wildlife Service ("USFWS"), Pagel, J.E., D.M. Whittington, and G.T. Allen, *Interim Golden Eagle Inventory Monitoring Protocols; and Other Recommendations* ("USFWS Protocol"), 2010, Division of Migratory Bird Management, p. 10.[19] However, USFWS itself declares that these surveys "may not be sufficient to assess the full scope of potential impacts to golden eagles." USFWS, FPEIR Comments, January 14, 2015, p. 2.[20] The FPEIR asserts that the "ground observation methods" calling for at least two ground observation periods of at least four hours each, spaced at least 30 days apart "are specifically described as an alternate method for determining if a habitat or territory is unoccupied, and is not a method required in addition to aerial surveys." *Id*. (citing USFWS Protocol, p. 11). Wrong. The USFWS Protocol also specifically requires that ground surveys to "collect monitoring data at a known nest territory" must include "at least 2 observation periods per season," that "last at least 4 hours for known sites," and are "at least 30 days apart." USFWS Protocol, p. 18. The USFWS Protocol makes it clear that aerial surveys do not obviate the County's duty to follow the appropriate methods for follow-up ground surveys. The FPEIR's

---

[18] This WRI Report, on which the FPEIR relies heavily, is not included in the FPEIR appendices, and therefore Backcountry has referred to its location in the DPEIR. However, this omission must be remedied.

[19] Available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/CEQA/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-9-Soitec-Solar-DPEIR.pdf

[20] Available in the Project's Administrative Record at: http://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Record-Documents/2015-01-14-USFWS-email-Soitec-FPEIR-Comments.pdf

attempt to lump these two types of surveys together and circumvent the duty to perform adequate ground surveys must fail and the County's admitted failure to complete adequate surveys must be remedied before the Project can be considered for approval.

ii. Inadequacy of Discussion of Impacts to Golden Eagles

Aside from one typographical error, the FPEIR fails to remedy the inadequacies in the discussion of the Project's impacts to golden eagles. FPEIR Response to Comments O10_34 to O10_36. The Project poses significant threats to golden eagles but the FPEIR's analysis of those threats is inadequate. Without adequate golden eagle surveys that follow USFWS protocol, the public and decisionmakers cannot accurately determine the impacts of the Project on golden eagles and their habitat, in violation of CEQA. CEQA Guidelines §15144; *Vineyard*, 40 Cal.4th at 428; *Berkeley Keep Jets,* 91 Cal.App.4th at 1355-1356.

Despite the lack of focused avian studies conducted for this Project, the FPEIR nonetheless claims that there will be significant impacts to golden eagles, including impacts to foraging habitat, and to nesting success of tree-nesting raptors – although it subsequently asserts that all those impacts will be mitigated to *in*significance.. FPEIR 2.3-233 to 2.3-257. However, the public and decisionmakers cannot determine the effectiveness of those mitigation measures without adequate surveys, contrary to CEQA.

b. Raptors

Similarly, the FPEIR's discussion of impacts to other raptor species also fails. First, the County misunderstands Backcountry's concerns. Backcountry's DPEIR comments discussed the Project's detrimental impacts to other raptors, in addition to the golden eagle. Backcountry DPEIR Comments, pp. 23-24.[21] Yet the County begins its response by stating that "the analysis of *golden eagles* in the DPEIR" is adequate. FPEIR Response to Comments O10_37 (emphasis added). As discussed above, that statement is incorrect; but more importantly, it does not address Backcountry's concerns regarding *other raptors*.

The FPEIR admits that only one survey was conducted to determine the presence of raptors in the Project area. FPEIR 2.3-2 to 2.3-3; FPEIR Appendix 2.3-1, p. 1-10; FPEIR Appendix 2.3-2, pp. 1-12 to 1-14; FPEIR Appendix 2.3-4, pp. 9-10; FPEIR Response to Comments O10_37. That *one-day* survey, completed by a single biologist, is insufficient to

[21] Available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Cover-Letter-Soitec-Solar-DPEIR.pdf

determine the impacts of the proposed Project, Alternative 2A, or Alternative 7 on raptors as required by CEQA. CEQA Guidelines §15144; *Vineyard*, 40 Cal.4th at 428; *Berkeley Keep Jets,* 91 Cal.App.4th at 1355-1356. The FPEIR's conclusory statement that the "County disagrees . . . that site-specific surveys were required to comply with County Guidelines and CEQA," is completely unsupported and contrary to settled law. *Id.*; FPEIR Response to Comments O10_37.

Furthermore, while the County admits that its "Revised Comprehensive List of Sensitive Species states that directed surveys are required for several raptor species," it claims that it "stated in meetings with the project applicant that a habitat assessment for these species would suffice." FPEIR Response to Comments O10_37. But the FPEIR's reliance on historical data and data for *other projects* does not suffice under CEQA. CEQA Guidelines §15144; *Vineyard*, 40 Cal.4th at 428; *Berkeley Keep Jets,* 91 Cal.App.4th at 1355-1356. The County called for "directed surveys," not historical analysis, of the Project's impacts to raptors. FPEIR Response to Comments O10_37. The FPEIR did not satisfy the County's own demands, let alone the demands under CEQA. As with golden eagles, directed, site-specific surveys for raptors must be completed for *all* of the Project sites before the Project can be considered for approval.

c. Pseudo-Lake Effect

The County admits that "[a]vian species might be susceptible to impacts related to glare, either by thinking that the trackers are a water body thus causing energetic impacts by inadvertently leading them to the array, or disorienting them." FPEIR Response to Comments O10_40. Despite this admission, the County ignores Backcountry's concerns and evidence of birds in the area, and instead reiterates the unsupported statements made in the FPEIR. *Id*. ("due to the CPV specific technology proposed, distance from primary migration routes and typical migration patterns, and configuration of the trackers, glare is not expected to result in significant impacts to migrating avian species.")

In its DPEIR comments, Backcountry identified numerous examples of the potential impact that glare can have, as well as numerous species that it might impact. Both the solar Genesis project, approximately 75 miles east of Indio, and Desert Sunlight, 25 miles to the west of Genesis, have attracted water birds such as teals, grebes, avocets, egrets, loons, pelicans and clapper rails, in many instances with deadly results.[22] The FPEIR claims that, because the Project

[22] *See, e.g.,* the August 2013 Monthly Compliance Report, Genesis Solar Energy Project, Avian Reporting Data Table and Forms, pp. 1-11 (182- 193 of the pdf) (available at: http://docketpublic.energy.ca.gov/PublicDocuments/09-AFC-08C/TN200657_20130930T120056_August_2013_Monthly_Compliance_Report.pdf) and Appendix B – Avian and Bat Mortality Solar Farm – of the 2013 Yearly Biological Resources Report for Desert Sunlight (available for

is "east of the main coast migration route and west of the primary route between the Gulf of California and the Salton Sea" the Project should not attract migratory species. FPEIR 2.3-126, 2.3-129, 2.3-131, 2.3-175, 2.3-177. But the Project's location within the Pacific Flyway should not be downplayed; indeed, egrets and other water birds are known to visit the wetlands in close proximity to the Rugged sites,[23] and nearby Lake Domingo is known to host migrating blue-winged teal.[24] Ring-neck duck,[25] ruddy duck,[26] cinnamon-teal,[27] green-winged teal,[28] and many other water birds frequent both natural and artificial ponds and wetlands in the vicinity of the Project.

Even with space between solar panels and the latest technology, when viewed from elevation, the Project is likely to appear like marshy wetlands to birds, potentially luring them to try to land on the trackers. Instead of examining the impacts of the Project on avian species, the FPEIR claims that any discussion of this impact would be speculative because there is not much scientific information available on the pseudo-lake effect. See FPEIR 2.3-174 to 2.3-178; FPEIR Response to Comments O10_41; FPEIR Response to Comments F1_7. Under CEQA, a lead agency must "use its best efforts to find out and disclose all that it reasonably can," to demonstrate it has fully "considered the environmental consequences of [its] action." CEQA

---

download at:
http://www.firstsolar.com/en/about-us/projects/desert-sunlight-solar-farm/biological%20monitoring%20report%20-%20annual/biological%20monitoring%20report%20annual%20report%202013?dl=1).

[23] See photographic evidence documenting an egret between the Rugged site locations, available in the Project's Administrative Record at:
www.sandiegocounty.gov/content/dam/sdc/dplu/CEQA/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-14-Soitec-Solar-DPEIR.pdf

[24] Blue-winged teal, San Diego Bird Atlas hosted by the San Diego Natural History Museum, available at: http://sdplantatlas.org/birdatlas/pdf/Blue-winged%20Teal.pdf

[25] San Diego Bird Atlas, available at:
http://sdplantatlas.org/birdatlas/pdf/Ring-necked%20Duck.pdf

[26] San Diego Bird Atlas, available at: http://sdplantatlas.org/birdatlas/pdf/Ruddy%20Duck.pdf

[27] San Diego Bird Atlas, available at: http://sdplantatlas.org/birdatlas/pdf/Cinnamon%20Teal.pdf

[28] San Diego Bird Atlas, available at:
http://sdplantatlas.org/birdatlas/pdf/Green-winged%20Teal.pdf

Guidelines §15144; *Vineyard*, 40 Cal.4th at 428; *Berkeley Keep Jets*, *supra*, 91 Cal.App.4th at 1355-1356; *Citizens to Preserve the Ojai v. County of Ventura* (1985) 176 Cal.App.3d 421, 431. Here, the FPEIR's dismissal of the pseudo-lake effect's impacts on these species runs afoul of this mandate.

3. The FPEIR Fails to Adequately Address the Impacts to Peninsular Bighorn Sheep.

The FPEIR significantly downplays the potential for the Project to impact PBS. It admits that PBS migrate "along the Peninsular Mountain Range and south in mountain ranges of Baja California," and use areas nearby for habitat connectivity and migration corridors, yet it erroneously concludes that "development in the project area would not affect bighorn sheep movement or lambing areas." FPEIR 2.3-33. This conclusory statement finds no support in the record, nor in the County's response to comments. Indeed, the record indicates that PBS are found within five miles of the Tierra del Sol and Rugged sites, and within *0.8 miles* of the LanEast site. FPEIR 2.3-40 (Tierra), 2.3-56 (Rugged), 2.3-73 (LanEast); FPEIR Figures 2.3-8, 2.3-12, 2.3-20. The FPEIR's claim that the Project area "does not contain constituent elements required for [PBS]" ignores the proximity of the sheep to the Project site and the importance of habitat connectivity and migration corridors for their survival. FPEIR 2.3-56.

4. The FPEIR Fails to Adequately Address Impacts to Water-Dependent Vegetation and Special Status Plan Species.

The FPEIR mischaracterizes Backcountry's concerns regarding vegetation. In its DPEIR comments, Backcountry identified the duplicate use of the Rugged site as a (1) development site for this Project, and (2) mitigation site for the Sunrise Powerlink Project. Backcountry DPEIR Comments, p. 28.[29] By constructing a large-scale solar development on the Rugged site, that site is no longer available as mitigation for the Sunrise Project.[30] While the FPEIR admits that use of the Rugged site will preclude its use as a mitigation for a different project's impacts, the County

---

[29] Available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Cover-Letter-Soitec-Solar-DPEIR.pdf

[30] *See* California Public Utilities Commission *Approval of Alternative Program to Mitigate for Impacts at Rough Acres Yard*, June 18, 2013 ("CPUC Approval"), p. 1-3 available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Record-Documents/2013-06-18-Fritts-Golden-email-re-Mitigation-Restoration-in-lieu-of-using-Rough-A.pdf

fails to consider the effect this will have on the Project's mitigation measures, what land will be available to mitigate the Project's impacts, and what cumulative impact the loss of this land will have. FPEIR Response to Comments O10_52. While the FPEIR states that there are between 302 and 2,660 instances of Jacumba milk-vetch at the Rugged site (FPEIR 2.3-53), and that the Rugged site will cause a significant direct impact on 66 to 480 of them (FPEIR 2.3-106), the Project's off-site mitigation plans ignores the impacts already induced by the Project. FPEIR 2.3-191 to 2.3-194.

5. The FPEIR Fails to Adequately Address the Impacts of the New Energy Storage Component on Biological Resources.

The FPEIR's addition of an entirely new component of the Project – a 7 acre energy storage system – necessitates an in-depth discussion of its potential impacts to the area's biological resources and recirculation of the EIR for public review. FPEIR AIS.0-1, AIS.0-10. The FPEIR's two-paragraph discussion is both cursory and unsupported. FPEIR AIS.0-10. It claims that the new component "would not result in any additional ground disturbance and as such, impacts to sensitive habitat and natural communities." *Id*. However, that premise is fundamentally flawed. A shipping container that measures 40 feet by 8.5 feet by 9.5 feet will certainly have greater ground disturbance than a 28-inch diameter mast that makes up the foundation of the trackers. FPEIR AIS.0-3, 1.0-13. The FPEIR's attempt to treat the CPV tracker itself as the area of ground disturbance is misleading, at best. The Project cannot be approved without substantial, in-depth consideration of this important change.

6. The FPEIR's Mitigation Measures Are Insufficient to Reduce the Project's Potentially Significant Wildlife Impacts.

The FPEIR claims that off-site open-space preservation of an acreage of native habitats equivalent to or greater than the acreage of project impacts will mitigate the Project's potentially significant impacts. FPEIR 2.3-191 to 2.3-194 (M-BI-PP-1). The FPEIR recognizes that the offsite parcel must be evaluated to see if it provides similar or greater biological function and value than the impacted Project locations. *Id.* In order for this assessment to have value, however, the County must know what the Project's impacts are. The County downplays the importance of this impact assessment, and merely claims that the FPEIR discussion was adequate, again without support. FPEIR Response to Comments O10_52 to O10_53. Without an adequate assessment of the Project's impacts the County cannot determine whether the off-site mitigation location is suitable using the 1:1 – or any other – replacement ratio.

While admitting that many of Backcountry's concerns are in fact accurate, the County minimizes those concerns and instead argues that the proposed mitigation property identified in the FPEIR "supports both habitat for, and populations of, special-status plant and wildlife species

impacted by" the Project. FPEIR Response to Comments O10_53. The FPEIR admits the proposed gen-tie line would overlap with the proposed mitigation site. FPEIR Response to Comments O10_54. Despite this admission, the County deems this mitigation site acceptable. *Id.*

Furthermore, USFWS and the California Department of Fish and Wildlife have indicated that the mitigation property's value will depend on whether it can be connected to land north of Interstate 8.[31] However, the County's only response to this issue is one unsupported claim that "[f]uture preservation/reserve needs can be designed to expand upon the potential mitigation site, connecting habitat areas south and north of I-8." FPEIR Response to Comments O10_53. However, the FPEIR does not propose a plan, time line, or even guidelines for how this will occur, in violation of CEQA. Although Backcountry supports the concept of keeping habitat mitigation within the general community area of a project, it must be done without damaging the conservation values for which mitigation is being sought. Otherwise, impacts will not be reduced to below the level of significance. In this case, there should not be an overhead power line for the Project running through mitigation property, given the well-known risks of collision and electrocution that power lines pose to birds and since mitigation for loss of bird habitat is being sought.

Finally, the FPEIR admits that more needs to be done for post-construction monitoring of avian mortality. FPEIR Response to Comments O10_55; FPEIR Response to Comments F1_5 to F1_8. Indeed, the FPEIR states that in response to comments, "the applicant has voluntarily agreed to implement a Bird and Bat Monitoring Program as a condition of approval for the Proposed Project." FPEIR 2.3-124; FPEIR Response to Comments O10_55. However, as USFWS notes, the applicant failed to "work with [USFWS] and [CDFW] to develop such a plan." USFWS, FPEIR Comments, January 14, 2015, p. 1.[32] Without collaboration, these

---

[31] Goebel, Karen and Gail Sevrens, Letter to Patrick Brown, December 4, 2013, available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2013-12-04-Karen-Goebel-Gail-Sevrens-Letter-re-Biological-Evaluation-of-the-Proposed-Soitec-Mitigation-Site-San-Diego-County-CA.pdf

[32] Available in the Project's Administrative Record at: http://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Record-Documents/2015-01-14-USFWS-email-Soitec-FPEIR-Comments.pdf

agencies cannot "ensure that [the plan's] implementation will provide adequate data to assess impacts." *Id*. This type of monitoring must be *required* for any Project approval, whether it be the Proposed Project or one of the alternatives. Without adequate mitigation measures and monitoring, the Project cannot be approved.

7. The FPEIR's Cumulative Biological Impacts Analysis Is Inadequate.

The FPEIR lists Tule Wind as the only solar or wind project that should be cumulatively considered and the County defends this overly narrow view despite its knowledge of numerous other projects currently under consideration or development in the area. FPEIR 2.3-228 to 2.3-229 (Table 2.3-16); FPEIR Response to Comments O10_56 to O10_57 (identifying numerous projects in the area including Energia Sierra Juarez Wind Projects, Ocotillo Express LLC, Imperial Valley Solar, and Jacumba Solar Farm Projects). The County understates the Project's cumulative impacts by artificially limiting the "biological resources cumulative study area [to] the Peninsular Ranges of the California Floristic Province." FPEIR Response to Comments O10_56. The FPEIR claims that limiting the survey area to this narrow region is appropriate because "[p]rojects within this study area have the potential to affect similar vegetation communities as the Proposed Project." Id. However, it is not only vegetative communities that impact wildlife and other biological resources. Limiting the study area based on vegetation alone does not allow for an adequate cumulative analysis.

The County fails to respond to Backcountry's concerns regarding the cumulative impact analysis of golden eagles. FPEIR Response to Comments O10_59. Instead the County relies on common response BIO1 and states that it "does not agree that the analysis of golden eagles in the DPEIR is inadequate." Id. However, common response BIO1 admits that "[b]ecause golden eagles do not nest within the Proposed Project sites, cumulative impacts to nests were not analyzed." FPEIR 9.0-13. The FPEIR's limited consideration of cumulative impacts to foraging only underestimates the Project's impacts. Looking only at the predicted golden eagle mortality of the Tule Wind project combined with the loss of golden eagle foraging habitat predicted for the Soitec Solar project, these impacts are likely to be severe. FPEIR 2.3-228.

Similarly, the FPEIR fails to adequately analyze the cumulative impacts to raptors, and the mitigation measures proposed do not remedy the significant impacts of the projects in the area. FPEIR Response to Comments O10_59. The FPEIR predicts that impacts to foraging habitat for raptors, including for golden eagles, will be potentially significant at the Tierra del Sol, Rugged, LanEast, and LanWest sites. FPEIR 2.3-117 to 2.3-120.[33]

[33] The Los Robles site, Alternative 7, was not included in the FPEIR's assessment of significance of impacts to foraging and functional foraging habitat; and in fact no biological assessment of the Los Robles site was included in the FPEIR at all, which compounds the previously discussed

While the "County does not concur with the assertion that the surveys are inadequate," the Project's avian studies were flawed and did not follow USFWS protocol. FPEIR Response to Comments O10_59. Therefore, despite the County's unsupported claims otherwise, the cumulative impact analysis for the Project was also flawed because it was based on inadequate surveys.

Finally, the County's unsupported denial of the Project's impact on special status wildlife species does nothing to change the fact that wildlife is dependent on habitat for its survival, and the very act of having to move from one area to another is a significant impact that can be detrimental to an animal's survival. It is a fundamental principle of conservation biology that habitat is usually fully occupied.[34] Consequently if wildlife is displaced by a project, usually the areas into which it is dispersed will *already* be fully occupied. The County must provide "facts and analysis, not just bare conclusions" in its responses. *Kings County*, 221 Cal.App.3d at 736; CEQA Guidelines § 15088. Thus, the FPEIR's unsupported conclusion that wildlife will "move out of the way" and therefore not be harmed nor create a cumulative impact is not only wrong as a matter of fundamental conservation biology, but unlawful under CEQA.

C. NOISE

The FPEIR's amended discussion of the Project's low-frequency noise and infrasound ("ILFN")[35] emissions still fails. FPEIR 2.6-59 to 2.6-60; FPEIR Response to Comments O10_63 to O10_65. The conclusion that "no health effects are anticipated to occur due to low frequency noise associated with the Proposed Project" is based entirely on a court decision that is currently being appealed and is therefore not final, and subject to change. FPEIR 2.6-60. The County's reliance on this non-scientific conclusion ignores the growing body of evidence that ILFN impacts human health.

---

inadequacies of the FPEIR's environmental analysis.

[34] This principle is often expressed with the simple truism that "nature abhors a vacuum." Bolen, *Ecology of North America*, New York: John Wiley & Sons; 1998, p. 9.

[35] "Infrasound is defined as sound with a frequency of less than 20 Hz, and low frequency noise as sound with a frequency of less than 200 Hz." Farboud *et al.*, 2013, "'Wind Turbine Syndrome': Fact or Fiction?," *The Journal of Laryngology & Otology*, 127(3):222-226, at p. 226, available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/CEQA/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-17-Soitec-Solar-DPEIR.pdf.

Furthermore, the FPEIR completely fails to analyze the ILFN impacts from the newly added energy storage system that was not discussed in the DPEIR. FPEIR AIS.0-1, AIS.0-12 to AIS.0-14; FPEIR AIS 3 (Addendum: Acoustical Assessment Report), pp. 1-13. Acoustical engineer Rick James details additional County failures to analyze noise impacts from the energy storage system in his January 15, 2015 "Comments on Soitec Solar Acoustical Assessment Reports for Tierra del Sol and Rugged Solar Related to Proposed Energy Storage Facility," which comments are incorporated fully by reference herein. In order to foster informed decisionmaking, as CEQA requires, these impacts must be analyzed in detail, and the EIR recirculated for public review. CEQA Guidelines §§ 15088.5, 15144; *Vineyard*, 40 Cal.4th at 428.

Additionally, the noise analysis focuses solely on vibratory pile-driving. FPEIR 2.6-25 to 2.6-27, 2.6-32 to 2.6-33, 2.6-37 to 2.6-39, 2.6-41 to 2.6-44, 2.6-50 to 2.6-51. However, as discussed below, the FPEIR is inconsistent regarding the type of pile-driving that will be used – conventional or vibratory. Indeed, the FPEIR admits that "conventional pile-driving would be appropriate" in some instances. FPEIR 1.0-13; *see also* FPEIR 9.0-19 (vibratory or conventional pile-driving will be used). Since the FPEIR proposed the use of conventional pile-driving in some instances, it must analyze the impacts of that activity.

D. ELECTRIC AND MAGNETIC FIELD POLLUTION

The FPEIR entirely fails to address the potential for electric and magnetic field ("EMF") pollution caused by the newly added, unanalyzed battery storage system. FPEIR AIS.0-1 to AIS.0-18. This potentially substantial impact must be addressed and recirculated to the public prior to Project approval. CEQA Guidelines § 15088.5. Without such an analysis, the FPEIR violates CEQA.

E. AGRICULTURAL AND OPEN SPACE IMPACTS

The County admits that the Project will use on-site well water to supply the Project's operational water needs, and that the Project will affect the remaining ranchers' and farmers' ability to cost-effectively obtain supplies and services. FPEIR Response to Comments O10_70 to O10_72. The County also admits that the DPEIR failed to address these significant impacts. *Id.* Despite these admissions, however, the FPEIR still erroneously asserts that these impacts – and other agricultural and open space impacts identified in the FPEIR – will not have a significant impact. FPEIR Response to Comments O10_71 to O10_72. The FPEIR substantially downplays these impacts and therefore fails to include appropriate mitigation measures. FPEIR Response to Comments O10_70.

The FPEIR cannot simply ignore the destruction of agricultural and open space lands and conclude that there will be no significant impact based on a single factor – the lack of available water at the Project location. FPEIR 3.1.1-1, 3.1.1-19 to 3.1.1-21. To the contrary, there is a history of grazing at the Rugged, LanEast, and LanWest locations, and Rugged currently hosts an active ranching operation. FPEIR 3.1.1-19 to 3.1.1-21. Further, part of the Tierra del Sol location is an agricultural preserve, and was in the past managed under the Williamson Act; this parcel also abuts land presently managed under the Williamson Act. FPEIR 3.1-22. By converting this land from low-intensity agricultural use to solar farms, for "30 to 40 years or longer" – (FPEIR 1.0-18), and stripping those lands of their agricultural use protections, the Project makes it unlikely that the lands would be ever again be available – let alone used – for agriculture. At Tierra de Sol, the soil quality is sufficient that "almost all" of the 95% of the site currently available for agricultural use meets "the criteria for Farmland of Statewide Importance." FPEIR 3.1.1-10. At Rugged, about 40% of the site has "soil types that are candidates for Prime Farmland or Farmland of Statewide Significance." FPEIR 3.1.1-11. As the lands are converted from low-intensity grazing, agricultural, and other rural uses, the Project would likely cause substantial disruption of these important fertile and difficult-to-replace topsoils, during site preparation, grading, and through ongoing erosion. The Project's decommissioning provisions, while requiring removal of the Project fixtures, cannot replace the valuable topsoil once it is gone, and thus are insufficient to mitigate this loss. FPEIR 1.0-18 to 1.0-20. At a minimum, the acquisition of offsite agricultural preservation easements must be considered to mitigate this loss. *Masonite Corp. v. County of Mendocino* (2013) 218 Cal.App.4th 230, 237-242. The fact that the County downplays this impact does not negate the need for mitigation.

F. GLARE

While the County admits that the Project's glare impacts are significant and unavoidable, the County fails to grasp the importance of clearly establishing *how* disruptive and harmful glare can be. The severity of an impact should be an important consideration when the County considers whether the significant impacts of approval can be offset by the Project's benefits. Here, the County's initial presentation of the Project's glare impacts overlooked the entire community of Ejido Jardines Del Rincon, which the FPEIR admits will have "direct and unobscured foreground views of the solar farm facility" that are "permanent and long-term." FPEIR Response to Comments O10_77 to O10_78, Comment O10-77. The FPEIR presents no analysis of the severity this impact, aside from its general concession that it will be significant and unavoidable. Further, as discussed above, the FPEIR continues to improperly downplay the Project's impacts on avian species due to glare. The FPEIR's failure to acknowledge the serious impacts of glare frustrates CEQA's informational mandate, and the County should not certify the FPEIR without a clear presentation of these significant impacts.

G. FIRE

The FPEIR continues to downplay or ignore the Project's significant fire-associated impacts. First, the FPEIR continues to state that Tierra del Sol "would not result in significant risks associated with aviation activities for emergency response" because the "the Tierra del Sol solar farm and gen-tie would not conflict with FAA rules or regulation, nor would it constitute a hazard based on FAA review of Form 7460-1." FPEIR 3.1.4-44 (first quote) 3.1.4-43 (second quote). Yet, as Backcountry's DPEIR comment letter clearly states, the FAA's evaluation of the Project and determination that it will not create a hazard to air navigation does *not* address emergency response. Rather, it only addresses the proposed Project's potential hazard to normal air traffic under non-emergency conditions.[36] The truth of the matter is that the Tierra del Sol Gen-Tie poles, which will be approximately 125 to 150 feet tall, are tall enough to prevent helicopters from effectively fighting fires near those poles. Indeed, as the County admits, helicopters fight fires with "drops from 50 to 150 feet above ground surface." FPEIR Response to Comments O10_81. The County claims that "the presence of tall, vertical structures on the landscape was shown to have little overall effect on aerial firefighting" when it considered this impact in other locations, and for other projects. FPEIR Response to Comments O10_80 to O10_81. But the analysis undertaken for *other* projects, with *different* topography and *shorter* structures, cannot support this conclusion. The County's claims that these poles "would not interfere or pose a threat of collision" are contradicted by the fact that the Project's tall structures will impede helicopter-based firefighting.

Second, the County downplays the Project's impacts to on-the ground firefighting. The County states that "firefighters will be able to place CPV trackers into 'stow mode' and work with site personnel and/or remote monitors to de-energize the system so that response can proceed in a safe manner." FPEIR Response to Comments O10-82. Backcountry notes that "[i]t takes approximately 10 minutes for a CPV tracker to move into horizontal stow position." FPEIR Response to Comments O10_75. The FPEIR does not indicate that a CVP tracker can move into a vertical stow position at a faster rate. *See e.g.* FPEIR Appendix 3.1.7-1_104 to 3.1.7-1_105. Thus emergency responders may have to wait an additional 10 minutes (after a response time that may be in excess of 20 minutes depending on staffing levels at the local fire stations) in order to effectively fight fires at the Project sites.

[36] The FAA's determination letter is available in the Administrative Record at: http://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Record-Documents/2013-09-25-Joan-Tengowski-Letter-to-Patrick-Brown-re-Determination-of-no-Hazard-to-Air-Navigation.pdf

Third, while the County relies on mutual aid to cover for Boulevard Fire Station's significant staffing shortages – as identified in Backcountry's DPEIR comments – the County's assessment of response times for the Project assumes that Boulevard Fire Station will be the first to respond. And while the scenarios examined in FPEIR Appendix 3.1.7-1 discuss response from other stations, none of these scenarios discuss the actual response times from any mutual aid providers. Further, while the fire protection plan for Tierra del Sol (FPEIR Appendix 3.1.4-5) presents an approximate distance for the San Diego Rural Fire Protection District stations, the distances provided are *not* in relation to Tierra del Sol. FPEIR Appendix 3.1.4-5_31. Additionally, the FPEIR's fire protection plan for Rugged is incomplete; as presented on the County's website, the document ends at page 8. FPEIR Appendix 3.1.4-6. DPEIR Appendix 3.1.4-6, however uses the same distances as Tierra del Sol when discussing emergency response and mutual aid. DPEIR Appendix 3.1.4-6_32. None of the information provided is sufficient to inform the public of the potential range of response times to fire events at the Project. The FPEIR's continued reliance upon compliance with these flawed fire protection plans to mitigate any fire-related impacts remains improper.

Fourth, as discussed in Backcountry's DPEIR comments, the inclusion of onsite battery storage at Rugged increases the Project's fire dangers. The risks of thermal runaway is especially high as each of the 160 battery containers includes sufficient storage for one mW of battery power. As Boeing learned after fires in its lithium-ion battery systems grounded the 787 Dreamliners, manufacturing defects can lead to dangerous chain-reactions from one battery cell to another when batteries are stored in close proximity to each other.[37] Yet the FPEIR assumes that any battery fire in a battery storage container would not be likely to chain react. FPEIR AIS 4_26 (assumes no chain reaction in fire protection plan addendum). This assumption allows the FPEIR to downplay the fire risks of battery storage, and the complications to emergency response that battery storage creates. The FPEIR's cursory dismissal of the fire risks of thermal runaway and the increased hazards of lithium-ion battery combustion ignores the significant fire and emergency response impacts that the battery storage component present. The inclusion of the battery storage component in the FPEIR increases the Project's significant impacts, and warrants recirculation.

H. VALLEY FEVER

The County's FPEIR acknowledges that the Project will involve the grading of 39,263 cubic yards of soil for the Tierra del Sol and Rugged locations. FPEIR 1.0-13 (29,834 yd^3 +

[37] The National Transportation Safety Board's review of the 787 Dreamliner fires found that Boeing had improperly discounted the risks of chain-reactions, according to its December 1, 2014 press release, attached hereto as Exhibit 1. The press release is also available at http://www.ntsb.gov/news/Pages/..%5Cpress-releases%5CPages%5CPR20141201.aspx

9,429 yd^3 = 39,263). Yet the County denies that this grading activity will increase the likelihood that the *coccidioides immitis* fungus, which occurs naturally in the soil, will causes outbreaks of the disease coccidioidomycosis, also known as Valley Fever. FPEIR Responses to Comments O10_88 to O10_93. The County makes this unfounded claim based on two assumptions. First, the County assumes that the fungus will not be present at the Project sites because no cases of Valley Fever have been recorded in zip codes near the Project site since 2008. FPEIR Response to Comments O10_88 to O10_89. However, the presence of *coccidioides immitis* in the soil does not correlate with Valley Fever outbreaks absent soil disruption.[38]

Second, the County ignores the likely relationship between soil wetting for dust suppression and future *coccidioides immitis* blooms. While the California Department of Public Health ("CDPH") document cited by the County recommends soil wetting to reduce risk to workers during soil disturbing activities, these recommendations do not address whether soil wetting causes additional *coccidioides immitis* blooms in the future. FPEIR Response to Comments O10_92 to O10_93. Indeed, CDPH's investigations into occupational exposure to *coccidioides immitis* at Camp Roberts in San Luis Obispo County indicate that a combination of rain events and a leaking water pipe at a construction site likely facilitated fungal growth leading to the infection of ten construction workers who were involved in soil excavation work. Exhibit 2, pp. 565, 567. The risk for Valley Fever outbreaks at Camp Roberts was not taken seriously prior to this cluster. *Id*, 568. The reasons the County cites for discounting the Project's potential to increase Valley Fever outbreaks in the County lack support. This potentially significant impact of the Project must be adequately exposed, discussed and mitigated.

I. GLOBAL WARMING

The County concedes that its Climate Action Plan ("CAP") was invalidated in *Sierra Club v. County of San Diego* (2014) 231 Cal.App.4th 1152. The Court of Appeal found that the CAP failed to "provide detailed deadlines and enforceable measures to ensure that [greenhouse gas] emissions will be reduced." 231 Cal.App.4th at 1176. The County downplays the significance of this decision because the Project did not conflict with the CAP before it was invalidated, and cannot conflict with the CAP now that it is not in effect. FPEIR Response to Comments O10_95. This lack of conflict cannot support a finding that the Project has no significant environmental impact. *Protect The Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1109.

---

[38] Rupali Das, *et al*. *Occupational Coccidioidomycosis in California: Outbreak Investigation, Respirator Recommendations, and Surveillance Findings*, 54 JOURNAL OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE 564 (May 2012), attached hereto as Exhibit 2 and available at http://www.cdph.ca.gov/programs/ohb/Documents/OccCocci.pdf

Further, the County claims that it has not violated CEQA in using thresholds of significance from its 2010 *Interim Approach to Addressing Climate Change* for "*any* commercial or light industrial use that exceeds a screening criteria threshold of 900 metric tons" of carbon dioxide equivalent ($MTCO_2E$) per year. FPEIR 3.1.3-17 (quote) (emphasis added), FPEIR Response to Comments O10_95 to O10_96. While the County admits that it has not adopted these thresholds through the public review process required by CEQA Guidelines section 15064.7(b), it claims that the interim nature of the guidance excuses this oversight. The County's reliance upon *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059 to support this assertion fails. There, Santa Barbara County applied a distinct threshold *specific* to the project under review, and was therefore in compliance with CEQA Guidelines section 15064.7(a). In contrast, in the five years since the so-called interim guidance was instituted, the County admits it has indiscriminately applied those thresholds across the board. FPEIR 3.1.3-17. The County's use of one-size-fits-all thresholds of significance that it has failed to adopt through a public review process violates CEQA.

The County continues to claim that spreading the Project's construction-stage greenhouse gas emissions out over the life of the Project is an appropriate way to calculate whether the Project will violate the state's time-sensitive greenhouse gas reduction goals. FPEIR Response to Comments O10-101. But by amortizing these construction-stage impacts, the County can hide the significant increase in emissions that Project construction causes. Construction emissions will actually occur *during construction*, not 30 years later. AB 32 mandates 1990 levels by 2020, not more than a decade later. That the gas emitted will linger after emission does not alter its existence upon emission.

The County also claims that it has no obligation to examine the Project's substantial *embedded* greenhouse gas emissions associated with production of the materials used to construct the Project, like the concentrated photovoltaic panels. Unlike a general construction project that uses modular or standard elements, Soitec will be manufacturing the Project's solar panels specifically for the Project. Further, because Soitec is manufacturing its own panels, it should be able to calculate the embedded greenhouse gas emissions associated with panel construction for this Project without any speculation. FPEIR Response to Comments O10_103 to O10_104. The County claims it does not know of any reason why Soitec's panels would not be manufactured even if the Project were not approved. *Id.* However, a recent article in the San Diego *Union Tribune* makes clear that Soitec's San Diego manufacturing plant requires active

customers for its production.[39] Absent orders, it does not continue to produce panels. Further, Soitec's more expensive process may not attract the market-share necessary to keep the company in business. Thus, the County should have included the greenhouse gas emissions associated with Soitec's panel production when calculating the Project's emissions.

The FPEIR also fails to calculate the greenhouse gas emissions associated with the production of the new battery storage component. While the FPEIR addresses the changes in emissions for construction and operation, the Project cannot offset its greenhouse gas emissions without taking into account the production of the battery storage systems. *See* FPEIR AIS.0-14.

Without an accurate picture of the Project's greenhouse gas emissions, the Project's global warming impacts cannot be mitigated or offset. Yet, the County claims that the Project will mitigate all impacts through offsets. FPEIR Response to Comments O10-97. The County's failure to set appropriate thresholds and accurately examine the Project's emissions makes its reliance upon offsets to mitigate the Project's impacts improper. The FPEIR precludes informed decisionmaking both by the agency and by the public, in violation of CEQA. *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 712.

J. GROWTH INDUCING IMPACTS

The County admits that a goal of the Project is to create a new source of energy production in San Diego County. FPEIR 1.0-1 to 1.0-2. Yet the County continues to deny that this new energy source could induce growth in the region. FPEIR Response to Comments O10_108 to O10_111. The addition of new energy sources without a corresponding reduction in energy supplies is a textbook example of an indirect growth-inducing CEQA impact. The County claims that outstanding California Public Utility Commission approvals for power purchase agreements or alterations in service areas prevent the County's approval from having a significant impact. *Id.* But for the purposes of CEQA, the Project includes "the whole of an action," even if it is "subject to several discretionary approvals by governmental agencies." CEQA Guidelines § 15378(a),(c). Thus, even if the CPUC has yet to finalize the utility that will receive power generated by the Project, the County has a duty to study the growth-inducing impacts of approving a Project that will provide a new source of energy generation in San Diego County.

[39] Attached hereto as Exhibit 3, also available at http://www.utsandiego.com/news/2014/dec/19/solar-manufacturer-uncertain-future/

K. RESPONSE TO COMMENTS REGARDING IMPACTS

The FPEIR's responses to comments are often conclusory, unsupported by fact, and contradicted by other sections of the FPEIR. For example when responding to a comment regarding the impacts of the Project's pile-driving on adjacent property, including foundations and wells, the County claims that "pile-driving is not proposed or anticipated for the installation of posts (pylons) to support the trackers. Pilot holes would be drilled for the posts, and then the posts would be installed using a vibratory driver which causes much less noise or vibration than a pile-driver." FPEIR Response to Comments I101-5 to I101-6, Comment I101-10. Yet the FPEIR states elsewhere that "conventional pile-driving would be appropriate" in some instances. FPEIR 1.0-13; *see also* FPEIR 9.0-19 (vibratory *or* conventional pile driving will be used), FPEIR Response to Comments I32_9 (same). The FPEIR neither estimates the quantity of pylons that will be installed conventionally, nor examines the noise impacts of this admittedly foreseeable Project activity. Instead, it studies only the noise impacts for vibratory pile-driving and dismisses comments concerned about the noise of conventional pile-driving, which *will* occur as part of the Project.

IV. INADEQUATE ALTERNATIVES

CEQA requires EIRs to "describe a range of reasonable alternatives to the project . . . which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." Guidelines § 15126.6(a); *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 566. Alternatives that would lessen significant effects should be considered even if they "would impede to some degree the attainment of the project objectives, or be more costly." Guidelines § 15126.6(b); *California Native Plant Society v. City of Santa Cruz* ("*CNPS*") (2009) 177 Cal.App.4th 957, 991; *HAWC,* 213 Cal.App.4th at 1303. The range of alternatives considered must "foster informed decisionmaking and public participation." Guidelines § 15126.6(a); *CNPS*, 177 Cal.App.4th at 980, 988. Alternatives may only be eliminated from "detailed consideration" when substantial evidence in the record shows that they either (1) "fail[] to meet most of the basic project objectives," (2) are "infeasibl[e]," or (3) do not "avoid significant environmental impacts." Guidelines § 15126.6©.

The FPEIR here fails to analyze a reasonable range of alternatives and impedes, rather than fosters, informed decisionmaking and public participation for at least four reasons. First, the FPEIR *entirely fails* to analyze the Calexico (Imperial County) alternative despite evidence that the entire Project may be developed there. Second, the FPEIR dismisses from detailed consideration the distributed generation alternative without adequate reasons or support. Third, the FPEIR improperly designates Alternative 7 as the environmentally superior alternative

without adequate support. And fourth, Alternative 2A, under which all of the applicable impacts described in this comment still apply, was not subject to public scrutiny because it was not discussed in the DPEIR.

As discussed below, no adequate grounds for eliminating these alternatives from study were provided by the County. Because the FPEIR fails to study alternatives that would avoid the Project's significant impacts, and because it improperly dismisses from consideration alternatives that could feasibly do so, it fails to analyze a reasonable range of alternatives. *HAWC*, 213 Cal.App.4th at 1305; *Center for Biological Diversity v. County of San Bernardino* (2010) 185 Cal.App.4th 866, 884-885; *Kings County Farm Bureau*, 221 Cal.App.3d at 733 (noting that the Guidelines stress that EIRs "must 'focus on alternatives capable of eliminating any significant adverse environmental effects or reducing them to . . . insignificance'").

A. THE FPEIR FAILS TO ANALYZE THE CALEXICO (IMPERIAL COUNTY) ALTERNATIVE.

The FPEIR fails to analyze a *single* out-of-county alternative. Yet, as discussed above in section II.A, recent evidence suggests that the entire Project may now be developed in *Imperial County*. On January 16, 2014, the California Public Utilities Commission ("CPUC") adopted Resolution E-4637, which approves amendments to "the long-term power purchase agreements . . . between [SDG&E] and Tierra del Sol Solar Farm, LLC, LanWest Solar Farm, LLC, LanEast Solar Farm, LLC, and Rugged Solar, LLC." Resolution at p. 1.[40] Among other things, the amendments "result in . . . new site location [and] new interconnection point" for the projects in Imperial County, California. *Id*. The "new project sites" would be located "near Calexico, Imperial County, California," and would interconnect at the Imperial Valley Substation. *Id*. at 2. CEQA requires the County to fully analyze the Calexico site as a Project alternative, if not as the proposed Project itself, which it appears it may now be.

The FPEIR asserts that under CEQA Guidelines section 15126.6(f)(1) "alternative locations only need be considered if the project proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)." FPEIR 4.0-12. Because, the FPEIR continues, the "Proposed Project applicants do not own or have the ability to easily acquire other sites within San Diego County [besides the Los Robles

[40] Available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-1-Soitec-Solar-DPEIR.pdf.

site] that meet [the Project] objective[s]," no "other alternative location[s] [are] further considered in this EIR." *Id*. The FPEIR is wrong for two reasons, and its out-of-hand dismissal of all alternative locations besides the Los Robles site violates CEQA.

First, the FPEIR grossly misstates the CEQA Guidelines. The Guidelines do *not* provide that agencies are free to ignore alternative locations in their EIRs so long as "the project proponent can reasonably acquire, control or otherwise have access to the alternative site," as the FPEIR asserts. *Id*. To the contrary, that is only *one* of the "factors that *may* be taken into account when addressing the feasibility of alternatives." Guidelines § 15126.6(f)(1) (emphasis added). As section 15126.6(f)(1) makes clear, "*[n]o one* of these factors is a fixed limit on the scope of reasonable alternatives." *Id*. (emphasis added). And where, as here, the project applicants *themselves* are considering – if not likely to adopt – alternative locations that "already have all of the required major permits," the "alternative site" factor is *no limit at all*. Resolution at p. 2.[41]

Second, as discussed above in section II.A and despite the County's protests to the contrary,[42] the County is not justified in limiting the project description, project objectives and scope of alternatives to San Diego County. The potential relocation of the Project to Imperial County renders the entire FPEIR and CEQA process to date obsolete. *County of Inyo*, 71 Cal.App.3d at 193. The County must accordingly (1) amend the Project location description to include Calexico (Imperial County), (2) remove the San Diego-specific Project objectives, including objectives 2 and 4 (FPEIR 1.0-1), and (3) describe and fully analyze the environmental impacts of the Calexico alternative and any other out-of-county alternatives. After revising the FPEIR with that "significant new information," the County must recirculate it. PRC § 21092.1; *Laurel Heights II*, 6 Cal.4th 1112 at 1126-1132.

CEQA requires the consideration of alternatives for each of the potentially significant impacts of a given project, even if such alternatives fall outside of San Diego County. That means that the County's claim that it "is not required to analyze the Calexico site or any other sites outside of the County as alternatives to the Proposed Project" is contrary to law. FPEIR Response to Comments O10_113. *HAWC*, 213 Cal.App.4th at 1305; *Center for Biological Diversity v. County of San Bernardino* (2010) 185 Cal.App.4th 866, 884-885; *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 733. The County *is* required to

[41] Available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-1-Soitec-Solar-DPEIR.pdf.

[42] FPEIR Response to Comments O10_113.

consider alternatives outside San Diego County where such alternatives address potentially significant Project impacts that are not otherwise addressed.

The FPEIR's Response to Comments claims, without further explanation or support, that "[t]he Calexico site already is slated for an approved solar project." O10_112. Yet the CPUC's Resolution states that "the purpose of the proposed amendments is to enhance project viability by moving projects to a permitted site [in Imperial County] with an approved interconnection agreement." Resolution at p. 5.[43] Further, the CPUC Resolution lists the sites as "Tierra del Sol," "LanWest," "LanEast," and "Rugged" and describes them as "new concentrating solar photovoltaic (CPV) facilities to be located near Calexico in Imperial County, California." The County's Response to Comments does not make clear whether these are different solar projects that just happen to have identical names to the FPEIR projects, or whether there is some other reason why the CPUC and SDG&E seem to be under the impression that these sites are being built near Calexico. Instead, the County simply states that "the Proposed Project has not changed as a result of the separate action of the CPUC on [power purchase agreements] entered into between SDG&E and the applicants." FPEIR Response to Comments O10_113. This is insufficient under CEQA. One of the purposes of the CPUC Resolution is to ensure that SDG&E qualifies for the RPS, a purpose the FPEIR claims is a central objective of the Project, rendering this Resolution entirely relevant to the FPEIR.

The County also fails to make clear what "Calexico site" it is referring to as being "already slated for an approved solar project" as there are numerous planned and operational solar sites in Imperial County near Calexico. FPEIR Response to Comments O10_112. An Imperial County map compiled in 2013, for instance, shows 24 different solar sites. Exhibit 4. With all of this solar development, surely there is room for more than one approved project near Calexico. Furthermore, the County claims that it does not agree that it "improperly ignored [the Calexico site] as infeasible based only on the applicant's inability to acquire, control, or otherwise have access to" it. FPEIR Response to Comments O10_113. This statement is directly at odds with the County's position that it is not considering the Calexico site because there is another solar project slated for that precise, though unspecified, site. *Id*. at O10_12.

B. THE COUNTY MUST ANALYZE THE DISTRIBUTED GENERATION ALTERNATIVE IN DETAIL.

In their October 10, 2013, Scoping Comments, and in their March 1, 2014 DPEIR Comments, Backcountry urged the County to adopt as an alternative to the proposed Project the

[43] Available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-1-Soitec-Solar-DPEIR.pdf.

development of non-fossil fuel distributed generation projects near demand centers in already-disturbed areas. Backcountry also demonstrated in their comments that a distributed generation alternative is not only feasible, it is better for the environment and the economy than remote, industrial-scale generation projects like Soitec Solar. Many other commenters on the Project have likewise voiced their support for and demonstrated the feasibility and benefits of a distributed generation alternative. Likewise, the FPEIR itself admitted that "rooftop solar would result in a significant net reduction in impacts, to the environment overall, compared with the Proposed Project." FPEIR Response to Comments O10_122; FPEIR 4.0-5. Nonetheless, the FPEIR fails to analyze distributed generation as an alternative.

The FPEIR proposes a distributed generation policy alternative under which "distributed generation including but not limited to residential and commercial roof-top solar panels, biofuels, hydrogen fuel cells, and other renewable distributed energy sources would be installed throughout San Diego County in place of the Proposed Project." FPEIR 4.0-4. Yet while the FPEIR admits that "this alternative, including rooftop solar, would result in a *significant net reduction in project impacts* as compared with the Proposed Project," it dismisses the distributed generation alternative without any detailed analysis. FPEIR 4.0-5 (emphasis added).

The FPEIR's failure to analyze the distributed generation alternative is partially based on the County's misconception and mischaracterization of the nature of distributed generation. For instance, the County states that "[t]he Project being considered by the County are solar farms to be developed and operated by private entities, not a distributed generation program, which would be a policy-based initiative proposed by a government entity, not the applicants." FPEIR Response to Comments O10_114. Distributed generation is not limited to a particular type of generation or location, but rather designates the production of energy through means located on already disturbed or in-use sites, near already constructed transmission facilities.[44] Such projects can certainly be operated by private entities.

The FPEIR provides six excuses for not analyzing the distributed generation alternative. To wit, the FPEIR asserts that

1. The alternative "is outside the control of, and could not be implemented by, the project applicant" and "it is outside the control of the County to approve" (FPEIR 4.0-5);

[44] Distributed generation can easily incorporate features such as built in storage and rotating panels, contrary to the County's claim that "utility scale solar facilities can be optimally oriented toward the sun, whereas most residential and commercial rooftops are not optimally oriented toward the sun" and "can include built in storage capacity that provides power even when the sun is not shining." FPEIR Response to Comments O10_116.

2. The alternative would not "meet Objective 1 of assisting in achieving the state's [Renewables Portfolio Standard ("RPS")] and GHG reduction objectives of obtaining 33% of electricity from renewable resources by 2020" (*id.*);[45]
3. The "alternative also would not meet Objective 2 since, by definition, it would only create at most half of the utility-scale solar energy facilities that the Proposed Project would create" (FPEIR 4.0-7);
4. The "alternative would not meet Objective 3, which calls for the location of solar power plant facilities as near as possible to existing or planned electrical transmission facilities" (FPEIR 4.0-8);
5. The "alternative would not meet Objective 5 because distributed energy installers are not required to offset GHG emissions associated with the installation and operation of each system, and therefore, would not meet the no net additional GHG emissions objective" (*id.*);
6. The "alternative would not commit to an investment of at least $100 million in economic development through the creation of high-wage, highly skilled construction and permanent jobs that pay prevailing and living wages (Objective 6)" (*id.*); and
7. A distributed solar photovoltaic ("PV") alternative is "infeasible from a technical and commercial perspective" (4.0-9).

All seven of the FPEIR's excuses fail, as discussed in turn below.

1. The County Is Not Limited by the Project Applicant's Access to or Control Over Land and Resources.

The FPEIR concludes that because the distributed generation alternative "is outside the control of, and could not be implemented by, the project applicant" and "is outside the control of the County to approve" it is infeasible and need not be analyzed. FPEIR 4.0-5; *see also* FPEIR Response to Comments O10_7 ("Soitec does have not [sic] site control over the Calexico site. Accordingly, it would be infeasible to consider the site as an alternative for the Proposed Project"). Wrong.

As discussed above, "whether the proponent can reasonably acquire, control or otherwise have access to the alternative site" is *only one* of the many "factors that may be taken into account when addressing the feasibility of alternatives." Guidelines § 15126.6(f)(1). "*No one* of these factors establishes a fixed limit on the scope of reasonable alternatives." *Id.*; *Citizens of*

[45] Under the RPS, which was formally codified in April 2011 by Senate Bill X1-2 (Skinner), all electricity retailers in the state – including investor-owned utilities like SDG&E – must supply at least 33 percent of their retail sales from "renewable" energy by 2020.

Goleta Valley v. Board of Supervisors ("*Goleta*") (1990) 52 Cal.3d 553, 575 n. 7 ("We emphasize that . . . site ownership [and] jurisdictional borders are simply a factor to be taken into account and *do not establish an ironclad limit* on the scope of reasonable alternatives" (emphasis added)); *Save Round Valley Alliance v. County of Inyo* (2007) 157 Cal.App.4th 1437, 1464-1465 (need for "an act of Congress" to enable use of an alternate project site "does not necessarily render the alternative infeasible").

Where an alternative – like the distributed generation policy alternative here – can be implemented by the lead agency without either the assistance or land ownership of the project proponent, it is irrelevant to the alternative's feasibility that it "is outside the control of, and could not be implemented by, the project applicant." FPEIR 4.0-5. The County has narrowly construed the Project Objectives in violation of CEQA to eliminate alternatives that cannot be implemented by the Project Applicant. Thus, its argument that it rejected the distributed generation alternative not because it could not be implemented by the applicant, but rather "because it did not meet most of the Proposed Project objectives," is the same thing under a new name.[46] *Id*. at O10_114.

By the County's own admission it can "implement policies to remove administrative hurdles to taking advantage of programs already established by the CPUC." *Id*. Doing so could well remove some of the FPEIR's objections to distributed generation.[47] It is also within the County's constitutional purview to adopt a distributed generation policy incentivizing or otherwise providing for expanded distributed generation installation. Cal. Const. art. X, § 7 ("A county . . . may make and enforce within its limits all local, police, sanitary, and other ordinances and regulations not in conflict with general laws"). The County does not need Soitec Solar to do so.

---

[46] Indeed, the rejection of the distributed generation alternative was a foregone conclusion, as the County admits: "It is irrelevant to the Proposed Project and the County's evaluation of its impacts whether the County could implement a broader policy relating to distributed generation without the assistance of the applicants." FPEIR Response to Comments O10_115. Obviously, pre-deciding the issue of alternatives before the completion of an environmental impact report is a serious subversion of the purposes of CEQA.

[47] The FPEIR later explains that SDG&E was forced to abandon distributed generation "projects because they were unlikely to meet an April 2016 deadline for commercial operations due to unexpectedly lengthy permitting processes." FPEIR 4.0-6 to 4.0-7, 4.0-10 (same). There is no explanation or analysis of what caused these delays, of what kind of fix for such delays may already be implemented or in the process of being implemented, or of the ways in which the County could help streamline such a process. Such analysis would be required of a fully developed alternative.

2. The Distributed Generation Alternative Would Assist California in Achieving Its RPS and GHG-reduction Goals.

The FPEIR concludes that the distributed generation alternative would not "meet Objective 1 of assisting in achieving the state's RPS and GHG reduction objectives of obtaining 33% of electricity from renewable resources by 2020." FPEIR 4.0-5. Yet there is absolutely no connection between the FPEIR's statement that meeting GHG-reduction goals "would require greater than 40% renewable generation by 2020, and up to 51% renewable generation by 2030" and its conclusion that "utilities will be required to procure additional utility-scale renewable generation beyond the amounts needed to meet the State's RPS goals in order to meet the State's GHG reduction objectives." FPEIR 4.0-6. No explanation is given as to why distributed generation could not or will not aid utilities in achieving these objectives in spite of the massive quantum of evidence before the County as to the effectiveness of distributed generation at reducing GHGs when compared to utility-scale facilities.[48]

The FPEIR offers two further reasons for its conclusion. Both are misplaced and fail to support the FPEIR's conclusion, as discussed in turn below.

a. Increased Distributed Generation Will Assist SDG&E in Achieving Its RPS Goals.

The FPEIR's first rationale for why the distributed generation alternative would not assist in "achieving the state's RPS and GHG reduction objectives" is that "SDG&E and other IOUs are still likely to need to procure additional utility-scale generation even if all of the distributed generation mandates listed above are met." FPEIR 4.0-5. But the FPEIR ignores the fact that even though rooftop PV and other distributed generation sources may not be directly RPS-eligible, they have a *major* impact on the quantity of RPS procurement necessary to meet the RPS target of 33 percent renewables by 2020. If distributed generation displaces electricity that would otherwise be purchased from the grid, the amount of RPS-eligible resources that must be purchased to achieve that 33-percent-renewables goal is reduced.

By way of example, recent legislation (AB 327 (Perea), signed into law in October 2013) has greatly expanded the net energy metering "pie" through the middle of 2017. AB 327 states that SDG&E must provide net metering "until such times as the large electrical corporation

[48] For instance, desert ecosystems hold much more carbon dioxide in their soils than was previously thought, making soil disturbance a potentially large source of GHG emissions for new construction in previously undisturbed areas.

reaches its net energy metering program limit [607 MW][49] or July 1, 2017, whichever is earlier." Pub. Util. Code § 2827(c)(4)(B).

There were 123 MW of net-metered PV in SDG&E's[50] territory at the end of 2012. FPEIR 4.0-9. The increase in rooftop, net-metered PV in SDG&E territory between the end of 2012 and mid-2017 will be: 607 MW – 123 MW = 484 MW. Assuming this PV has a composite annual capacity factor of 20 percent, the additional 484 MW of net-metered PV will produce 484 MW × 8,760 hr/yr × 0.20 = 847,968 MW-hr/yr of solar energy.

This means that SDG&E will require 847,968 MW-hr/yr less from the grid due to the expansion of rooftop PV. This also means that SDG&E will require 279,829 MW-hr/yr – 33 percent of 847,968 MW-hr/yr – less of RPS-eligible project capacity. This reduction in need for RPS-eligible project capacity is almost enough by itself to offset the 341,339 MW-hr/yr in RPS-eligible generation that the Soitec Project will produce.

The annual output of 168.5 MW[51] of Soitec Project capacity, assuming an annual capacity factor of 25 percent, would be: 168.5 MW × 8,760 hr/yr × 0.25 = 369,015 MW-hr/yr. The California Energy Commission ("CEC") estimates annual average transmission losses in California of approximately 7.5 percent. Adjusting for this percentage of transmission losses, the Project would produce net solar energy at the distribution level of: 369,015 MW-hr/yr × (1 – 0.075) = 341,339 MW-hr/yr.

The amount of RPS benefit from the non-speculative addition of 484 MW of new rooftop PV by mid-2017 in SDG&E territory is close, at 279,829 MW-hr/yr, to the 341,339 MW-hr/yr of

---

[49] SDG&E's net metering program limit is 606.7 MW, as calculated and discussed on SDG&E's own website: http://www.sdge.com/clean-energy/net-energy-metering/overview-nem-cap (a screenshot of which is available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-28-Soitec-Solar-DPEIR.pdf). *See also* Energy Policy Initiatives Center – U. of San Diego, PV Forecast for City of San Diego CMAP, Draft for Discussion 10-22-13.

[50] SDG&E is the utility to whom the Project's generated electricity will be sold, pursuant to a power purchase agreement approved by the CPUC. Resolution at pp. 1-2, available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-1-Soitec-Solar-DPEIR.pdf.

[51] Note that this 168.5 MW in nameplate capacity is a *best-case scenario*. Depending on many factors, including which of the four proposed Soitec projects get approved and built, the Project's nameplate capacity may actually be much less.

solar power that would be produced by the Soitec Project's 168.5-MW capacity. Also, assuming that (at least) the average annual rooftop PV installation rate in SDG&E territory of 80 to 100 MW[52] is maintained through 2020, these rooftop solar additions will reduce SDG&E's 2020 RPS procurement need by substantially more than the Soitec Project's 168.5-MW maximum nameplate capacity.

Furthermore, the FPEIR admits that it is possible for "larger scale distributed generation resources to be used to meet the state's RPS goals." FPEIR 4.0-6; FPEIR Response to Comments O10_119. While the County hems and haws about the speculative nature of CPUC approvals for "additional distributed generation in San Diego County,"[53] the fact that large-scale RPS-eligible commercial rooftop projects have been developed in California and can readily be developed in SDG&E's service territory and count directly towards its RPS-eligible project capacity is not examined or analyzed. *Id*. The first utility project of this type was Southern California Edison's 250-MW warehouse rooftop project *approved by the CPUC* in June 2009. In voting for the approval of the project, former CPUC Commissioner John Bohn stated that "[u]nlike other generation sources, [distributed generation] projects can get built quickly and without the need for expensive new transmission lines. And . . . these projects are extremely benign from an environmental standpoint, with neither land use, water, or air emission impacts."[54] The CPUC has thus demonstrated that it is ready and willing to issue approvals that make distributed generation facilities RPS-eligible.

The County's continued treatment of the distributed generation as solely a policy choice needlessly and severely limits the analysis in the FPEIR. FPEIR Response to Comments O10_117. It is perfectly natural to assume that if SDG&E were paying for distributed generation installation it would have the energy so generated delivered to it.[55] This possibility is not, as the

---

[52] This is the rate necessary to achieve the 607-MW allocation of total installed rooftop PV between 2013 and mid-2017.

[53] The County thus artificially narrowed – again – the scope of alternatives reviewed to exclude feasible alternatives that would address potentially significant impacts.

[54] CPUC, "CPUC Approves Edison Solar Roof Program," Press Release, June 18, 2009, available at: http://protectourcommunities.org/wp-content/uploads/2009/07/cpuc_pressrelease_sceurbanpv.pdf.

[55] The County attempts to show that distributed generation is not viable by describing SDG&E's failed attempts "to implement up to 26 MW of utility-owned solar PV generation under its CPUC-approved Solar Energy Project." FPEIR Response to Comments O10_120. Yet other utilities have managed to get utility owned distributed generation capacity up and running. SDG&E's initial ineptness is not a sufficient reason under CEQA to eliminate the distributed generation alternative from further consideration.

County claims, eliminated by the current lack of a power purchase agreement. *Id*.

b. CPUC Decision 11-01-025 Lifted the Stay on the Eligibility of Net-Metered Rooftop PV as Tradeable Renewable Energy Credits for RPS Compliance.

The FPEIR's second rationale for why the distributed generation alternative would not assist in "achieving the state's RPS and GHG reduction objectives" is that there are "numerous practical and regulatory limitations that would inhibit using small rooftop solar and other distributed generation for RPS compliance." FPEIR 4.0-5. These limitations include (1) reporting requirements; (2) meters with independently verified accuracy of two percent or higher; (3) Senate Bill SBx 1-2's limits on the use of unbundled Renewable Energy Credits ("RECs") for RPS compliance, as implemented by CPUC Decision 11-12-052; and (4) the claim that there is no viable market for RECs.

Reporting requirements are not a significant hurdle since the other alternatives evaluated by the FPEIR would *also* require reporting to the various regulatory agencies and institutions concerned with the management of California's energy grid. Likewise, instrumental accuracy would be required for devices used to meter the electricity no matter where or how it is generated. Further, the FPEIR does not explain why REC bundling or lack thereof affects the viability of distributed generation for RPS eligibility. As explained below, RECs can be traded by themselves, unbundled with the generated electricity, in a separate REC trading market. Unbundled RECs actually offer greater flexibility when satisfying RPS because excess RECs can be sold on the market instead of necessitating a transfer of both the energy that generated the REC and the REC itself.

The FPEIR's rationale with regard to the REC market is outdated and wrong. The CPUC lifted its stay on D.10-03-021 *more than three years ago* in Decision 11-01-025.[56] And the CEC subsequently approved as RPS eligible some RECs associated with energy from customer-side distributed generation installations.[57] In practical terms, this means that the entire 484 MW of rooftop PV to be added by mid-2007 can be converted into RPS capacity through the sale of the RECs associated with the rooftop PV capacity to SDG&E.

---

[56] D.11-01-025 is available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-29-Soitec-Solar-DPEIR.pdf.

[57] *See* CEC, April 2013, "Renewables Portfolio Standard Eligibility Guidebook," Seventh Edition, available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-30-Soitec-Solar-DPEIR.pdf.

3. Distributed Generation Would Increase Local Generation and Preserve Grid Reliability.

Project Objective 2 is to "[c]reate utility-scale solar energy in-basin to improve reliability for the San Diego region by providing a source of local generation." FPEIR 1.0-1. The FPEIR dismisses the distributed generation alternative because it "would not meet Objective 2 since, by definition, it would only create at most half of the utility-scale solar energy facilities that the Proposed Project would create." FPEIR 4.0-7. This statement is based on a faulty premise – that because half of currently planned distributed generation is customer-side, it cannot improve reliability by providing a source of local generation. Furthermore, because Objective 2 is unreasonably narrow, it may not be used to eliminate alternatives.

"The case law makes clear that . . . overly narrow objectives may unduly circumscribe the agency's consideration of project alternatives." Remy *et al.*, "Guide to CEQA," 11th ed. (2007) at p. 589. That is exactly what happened here. The FPEIR uses the "utility-scale" generation limitation in Objective 2 to dismiss the distributed generation alterative. Yet the "utility-scale" limitation *impedes* rather than *fosters* the three primary and beneficial goals within Objective 2, *i.e.* to (1) promote "solar energy" (2) in the San Diego "basin" to (3) "improve reliability for the San Diego Region." FPEIR 1.0-1. Furthermore, Objective 2 is worded such that its focus is on creating local generation – something distributed generation does far better than the utility-scale facilities the County favors. *Id*.

While the distributed generation alternative would not result in "utility-scale" electrical generation, it would meet all three of Objective 2's primary goals. First, the distributed generation alternative would promote "solar energy" by "including rooftop solar." FPEIR 4.0-7. Second, it would create "in-basin" generation by installing throughout San Diego County distributed generation. FPEIR 4.0-4 to 4.0-5. Indeed, because the distributed generation alternative would be produced on the same site as the electrical demand, it would result in *even more local production* than the Soitec Project. Third, as discussed below in section IV.B.7, it would preserve local reliability and create no imbalances in the grid system.

Because the "utility-scale" generation limitation in Objective 2 is needlessly – indeed, irrationally – restrictive, and because the distributed generation alternative would achieve all three of Objective 2's core goals, the County may not dismiss the alternative for "not meet[ing] Objective 2." FPEIR 4.0-7. The County's claim that "even if Objective 2 were rewritten [so as not to be unduly restrictive], the County would have eliminated the distributed generation alternative" anyway because (1) it was not proposed by the applicant, and (2) the technology was speculative is, on its face, specious. FPEIR Response to Comments O10_116 to O10_117 (quotation); FPEIR Response to Comments O10_113 to O10_114 (Response 102); FPEIR 9.0-3 (Common Response ALT2). By definition, "alternatives" are options *not* prepared by the

applicant. And to suggest that distributed energy is "speculative" is simply false. That the County would not have chosen the alternative anyway is an insufficient response under CEQA.

The County mentions concern for "resource availability" requirements set by the CPUC.[58] "SDG&E and other IOUs need to procure utility-scale solar energy facilities in order to meet CPUC requirements to obtain sufficient local and system generation capacity to ensure that they can serve load, referred to as resource adequacy (RA) requirements." FPEIR 4.0_7. However, faster, more streamlined processes are available to enable distributed generation systems to obtain adequacy deliverability status. To facilitate California's goals with regard to distributed generation, the CAISO filed and the Federal Energy Regulatory Commission (FERC) approved a petition to implement a faster, more streamlined process to enable distributed generation systems to obtain adequate deliverability status without requiring additional delivery network upgrades to the grid and without adversely affecting the deliverability status of existing or proposed generation resources.

The County points to limitations in the amount of distributed generation that can "count toward RA requirements in SDG&E's service territory," but never adequately explains how those limitations exclude consideration of distributed generation as an alternative to the current Project. FPEIR 4.0-8. The California Independent System Operator ("CAISO") limits that the County claims are preclusive in fact change from year to year. Yet the FPEIR provides no analysis of projected limit levels when a new distributed generation system becomes effective. *Id*. Indeed, according to CAISO's website, new methodologies must be developed for the anticipated 12,000-MW of distributed generation capacity planned for implementation by 2020.[59] Additionally, the methodology utilized by CAISO to calculate available MW for distributed generation deliverability only looks at nodes where there is existing distributed generation, so any increase in SDG&E's distributed generation capacity at nodes where none previously existed would also increase the CAISO estimate the County uses as a limiting factor. CAISO Results at 4 (see FPEIR 4.0-8). 19 out of SDG&E's 32 nodes either had no distributed generation associated with them or had deliverability constraints, implying that at least some of these nodes would be available to increase SDG&E's deliverability portfolio. *Id*. at 3.

---

[58] If such concerns do, in fact, inform the decisionmaking in the FPEIR, this emphasis on resource availability is directly related to power purchase agreements, and belies the County's claim that "[w]hether the Proposed Project has or does not have [power purchase agreements] is not an environmental issue for which a response is required." FPEIR Response to Comments O10_117. Power purchase agreements have much to do with environmental issues since the Project will not be completed, including its mitigation measures, if it is not funded.

[59] Website available at http://www.caiso.com/informed/Pages/StakeholderProcesses/DeliverabilityforDistributedGeneration.aspx.

The County also asserts that part of the distributed generation alternative's failure to meet Objective 2 is that it "also [does] not provide an opportunity for siting transmission level energy storage facilities to meet transmission level energy storage mandates." FPEIR 4.0-8. But energy storage is not mentioned among the objectives in the FPEIR (1.0-1), and this addition is nothing more than a *post hoc* rationalization. Distributed generation is equally as capable of providing opportunities for "siting transmission level energy storage" as any of the other alternatives considered in the FPEIR, so this does not constitute adequate grounds under CEQA to decline to consider this viable alternative.

4. Distributed Generation Can Be Located Closer to Existing or Planned Electrical Transmission Facilities than Utility-Scale Energy Generation Facilities.

The FPEIR asserts that the distributed generation "alternative would not meet Objective 3, which calls for the location of solar power plant facilities as near as possible to existing or planned electrical transmission facilities." FPEIR 4.0-8. However, the only evidence cited in the FPEIR to support this sweeping claim is that "at least half of California's distributed generation is on the customer-side of the meter and does not interconnect with existing or planned electrical transmission facilities at all." *Id*. First, a statement of where half of the distributed generation in California is located says nothing about the other half, and does nothing to limit where future distributed generation might be built. Second, almost every customer-side distributed generation location by definition has transmission facilities of some kind connected to it. And third, the whole purpose of distributed generation is to take advantage of already disturbed and developed sites, sites such as "existing or planned electrical transmission facilities," so distributed generation can actually be built closer to such facilities than utility-scale electrical generation.

5. The Distributed Generation Alternative Would Reduce Greenhouse Gas Emissions.

The FPEIR asserts that the distributed generation "alternative would not meet Objective 5 because distributed energy installers are not required to offset GHG emissions associated with the installation and operation of each system, and therefore, would not meet the no net additional GHG emissions objective." FPEIR 4.0-8. But the FPEIR ignores the forest for the trees. By the FPEIR's own logic, the distributed generation alternative would significantly reduce greenhouse gas emissions by "reducing consumption of non-renewable resources, such as fossil fuels, and would reduce both GHG emissions . . . and air pollutant emissions." FPEIR Response to Comments O10_8 to O10_9.

That the County decided not to include any measures in the distributed generation alternative to offset GHG emissions from "distributed energy installers," for example, does not change the fact that the alternative would result in significant greenhouse gas emission reductions. FPEIR 4.0-8. Furthermore, the FPEIR provides *no evidence whatsoever* demonstrating that the County could not adopt mitigation measures along with the distributed generation alternative to offset the greenhouse gas emissions resulting from implementation of the alternative. The County's unsupported and myopic excuse fails.

6. The Distributed Generation Alternative Would Produce a Substantial Investment in Economic Development through the Creation of High-Wage, Highly Skilled Jobs.

The FPEIR concludes that the distributed generation "alternative would not commit to an investment of at least $100 million in economic development through the creation of high-wage, highly skilled jobs (Objective 6)." FPEIR 4.0-8. This excuse for dismissing the alternative fails, just like all the others.

Distributed rooftop PV projects generate good jobs at an equal or greater rate than the construction and operation of the Soitec Project would. Using the numbers and formulas from a 2010 peer-reviewed study of the employment potential of renewable energy in United States, the construction of 168.5 MW of local PV would produce about 260 job-years of activity.[60]

7. Distributed Solar PV Is Feasible.

The FPEIR's final excuse for dismissing the distributed generation alternative from detailed consideration is that distributed solar PV is "infeasible from a technical and commercial perspective" because (1) a large "number of new [distributed PV] installations [would be] required to deliver up to an additional 168.5 MW of solar electricity by 2020 to meet the state's RPS goals (Objectives 1 and 7)," and (2) "[a]s yet undefined technical hurdles associated with high levels of PV development exist that create imbalances in the grid system." FPEIR 4.0-9. Both rationales for infeasibility are wrong.

---

[60] Wei *et al.*, January 2010, "Putting Renewables and Energy Efficiency to Work: How Many Jobs Can the Clean Energy Industry Generate in the US?," *Energy Policy*, 38:919-931, at p. 923, Figure 1 (available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-31-Soitec-Solar-DPEIR.pdf). Assume 168.5 MW of PV produces 295 GWh per year (168.5 MW x 8,760 hr/yr x 0.20 x 1 GWh/1,000 MWh). PV produces 0.87 job-years per GWh. Therefore, 0.87 x 295 = 257 job-years.

First, as discussed above in Section IV.B.2.a, at least 484 MW of new rooftop PV will be added in SDG&E territory by mid-2017, which would reduce the need for RPS-eligible project capacity by nearly the same amount – 279,829 MWh/yr – as the Soitec Project would add in RPS-eligible capacity – 341,339 MWh/yr. Furthermore, the FPEIR is mistaken in its assumption that the distributed generation alternative would only add generation capacity in the form of very-small-scale "domestic systems." FPEIR 4.0-9. As discussed above in section IV.B.2.a, large-scale RPS-eligible commercial rooftop projects have been developed in California – like Southern California Edison's 250-MW warehouse rooftop project – and can readily be developed in SDG&E's service territory.

Second, replacing the Soitec Project's capacity with rooftop PV capacity would create no imbalances in the grid system. SDG&E has an ambitious smart grid deployment plan intended in part to permit the absorption of ever greater amounts of distributed rooftop solar with no impacts on grid reliability.[61] The installation of 607 MW of net-metered local solar capacity in SDG&E territory by mid-2017 will represent only about 13 percent of the typical SDG&E summer peak load of approximately 4,500 MW. Daytime distributed generation solar inputs of less than 30 percent in aggregate are considered to presumptively have no impact on grid reliability.[62] The reason is that at this relatively low level of PV penetration, there is little or no possibility of backflow through the electric distribution system to the transmission system.

In sum, all seven of the FPEIR's excuses for dismissing the distributed generation alternative without detailed analysis fail. Because the distributed generation alternative is feasible, would "result in a significant net reduction in project impacts as compared with the Proposed Project," and would meet many if not all of the Project objectives, CEQA requires that the County fully analyze the alternative. FPEIR 4.0-5 (quote); Guidelines § 15126.6(b); *CNPS*, 177 Cal.App.4th at 991.

C. THE FPEIR IMPROPERLY DESIGNATES ALTERNATIVE 7 AS THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE WITHOUT ADEQUATE SUPPORT FOR THIS CONCLUSION.

"An EIR's discussion of alternatives must contain analysis sufficient to allow informed decision making." *Laurel Heights I*, *supra*, 47 Cal.3d at 403. The FPEIR lacks this analysis. As

---

[61] SDG&E Smart Grid Deployment Plan 2011-2020, June 2011, available at: https://www.sdge.com/sites/default/files/regulatory/deploymentplan.pdf.

[62] Powers, March 2012, *Bay Area Smart Energy 2020*, Chapter 11, available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Letter-Exhibit-32-Soitec-Solar-DPEIR.pdf.

discussed above, the FPEIR improperly designates Alternative 7 as the environmentally superior alternative without adequate support. Neither the FPEIR nor its Appendices reveal site surveys, geotechnical investigations, groundwater investigations, glare analysis, or any other detailed investigation that would allow the County to examine whether relocating LanEast, LanWest, and Tierra del Sol to the Los Robles site would, in fact, reduce any project impacts. See FPEIR Response to Comments O10_126 to O10_127. Without filling these important data gaps, the County cannot conclude that this site is superior. *Laurel Heights I*, 47 Cal.3d at 404. The FPEIR's unsupported conclusions fly in the face of CEQA's informational mandate.

Soitec itself submitted a letter to the County in October 2014 on the "Infeasibility of the Los Robles Site as an Alternative Location to the Soitec Solar Development Project" (hereinafter the "Soitec Letter").[63] This means that Alternative 7 is not actually a reasonable alternative and violates CEQA Guidelines section 15126.6(b) and (c). The County has designated an environmentally superior alternative which it knows it can never select. Soitec Letter 3 ("selecting Alternative 7 would mean that the Tierra del Sol Solar Farm would not be constructed"). Soitec explains that Alternative 7 is infeasible because the Project Applicant lacks site control, it is economically infeasible, technologically infeasible, and socially infeasible, rendering Alternative 5 through 8 ineligible for selection as the environmentally preferred alternative. *Id*. at 4-5.

The County must select a new environmentally superior alternative, without which the FPEIR violates CEQA. *Laurel Heights I*, 47 Cal.3d at 404.

D. ALTERNATIVE 2A WAS NOT SUBJECT TO PUBLIC SCRUTINY BECAUSE IT WAS NOT DISCUSSED IN THE DPEIR, AND EVEN UNDER ALTERNATIVE 2A ALL OF THE IMPACTS FROM THE PROJECT REMAIN.

Alternative 2A was not subject to public scrutiny in the same way as the other alternatives because it was not discussed in the DPEIR. This alternative discusses 11 pages of impacts that were not available in the DPEIR. FPEIR 4.0-31 to 4.0-42. The FPEIR adds this alternative, and the staff report implies that it is the preferred alternative. But impacts from the Project still remain, even under Alternative 2A. FPEIR 4.0-41 to 4.0-42 (impacts from reduced alternative not expected to fall below level of significance); *see also* 4.0-33 ("significant and unmitigable [aesthetic] impacts would remain for the Tierra del Sol and Rugged solar farms"), 4.0-34 ("Alternative 2A would still result in a significant and unmitigable impact related to short-term

[63] The Soitec Letter is available in the Administrative Record at: http://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Record-Documents/2014-12-15-PatBrown-Attachment-1-2014-10-07-Soitec-Letter-to-County-re-Los-Robles-Site-as-an-Alternative-Location.pdf

construction emissions"), 4.0-34 (impacts to biological resources remain similar to the Proposed Project), etc.

The County violated CEQA's mandatory procedures by failing to recirculate a Revised DPEIR. CEQA contains public participation and informed decisionmaking procedures that require a revised EIR for public review and comment when "significant new information" comes to light after circulation of the draft EIR. Pub. Resources Code § 21092.1; CEQA Guidelines § 15088.5(a). This new alternative renders the FPEIR invalid because it establishes that the DPEIR was fundamentally inadequate. Recirculation allows the public and decisionmakers to consider and comment on the new alternative.

V. INADEQUATE MITIGATION MEASURES CANNOT CURE THE ENVIRONMENTAL HARMS OF THE PROJECT.

The County's assertion that the FPEIR's analysis does not stymie CEQA's informational goals is both unsupported and wrong. FPEIR Response to Comments O10_127. The County has a duty to fully consider feasible alternatives and mitigation measures and to "not approve [this] project[] as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of [this] proposed project[]." PRC §§ 21002; 21002.1(b); 21081(a),(b); CEQA Guidelines §§ 15091; 15093. CEQA mandates that "[*a*]*ll* phases [and components] of a project must be considered when evaluating its impact on the environment." CEQA Guidelines § 15126. As discussed above, the FPEIR's selective analysis – and its conclusions based thereon – stymie CEQA's informational goals and violate CEQA's mandate that EIRs "be prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences." CEQA Guidelines § 15151. By failing to adequately examine the impacts of the Project, the FPEIR eliminates the opportunity to appropriately mitigate those impacts.

Indeed, the County plays a coy game with its Project mitigation measures, undermining CEQA's informational purposes. The County includes "characteristics of the Proposed Project that would tend to decrease or even avoid a potential impact," which it terms "project design features" ("PDFs"). FPEIR Response to Comments O10_133. However, actions taken to "[a]void[] the impact altogether," "[m]inimiz[e] impacts," "repair[], rehabilitat[e], or restor[e] the impacted environment," "[r]educ[e] or eliminat[e] the impact over time," or "[c]ompensat[e] for the impact," are considered *mitigation* under CEQA, not PDFs. CEQA Guidelines § 15370. This attempt to conflate PDFs and mitigation measures prohibits a comprehensive understanding of the Project, the significance of its impacts, and the potential for measures to mitigate those impacts. Thus, PDFs are not a replacement for mitigation measures under CEQA, and to the

extent the FPEIR uses the term PDF interchangeably with mitigation measures, it frustrates the informational purposes of CEQA.

Furthermore, as the County acknowledges, it may not defer mitigation of significant impacts. When an agency preparing an impact report is required to examine future events that may be difficult to forecast, the agency "must use its best efforts to find out and disclose all that it reasonably can." CEQA Guidelines § 15144; *Planning and Conservation League v. Castaic Lake Water Agency* (2009) 180 Cal.App.4th 210, 242. "[M]itigation measure[s] [that do] no more than require a report be prepared and followed" do not provide adequate information for informed decisionmaking under CEQA. *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 794; CEQA Guidelines § 15126.4(a)(1)(B).

As described in Backcountry's DPEIR comments, numerous mitigation measures for the Project were improperly deferred. DPEIR Comment Letter, pp. 58-59.[64] The FPEIR's response to comments fails to remedy this concern. FPEIR Response to Comments O10_130 to O10_133. While the FPEIR does amend the performance criteria and requirements for eight mitigation measures – five of which the FPEIR terms mitigation measures, and three of which it erroneously calls PDFs – it downplays the impact of deferring 16 others. FPEIR Response to Comments O10_130 to O10_131. Instead, the County claims that a reference to County guidelines or ordinances is sufficient to defer the development of these plans. FPEIR Response to Comments O10_131. However, as discussed above, that is not appropriate under CEQA and undermines its basic purpose of informed decisionmaking.

Indeed, deferring this analysis until *after* the County has completed the CEQA process and approved the Project could pose impacts that were never evaluated. CEQA's informational purpose is not served by an impact report that neglects a final conclusion about the feasibility of mitigation measures. This information is critical both to the County, as the decisionmaking body, and to the public's ability to comment. *Laurel Heights I*, *supra*, 47 Cal.3d at 403.

VI. THE DRAFT STATEMENT OF OVERRIDING CONSIDERATIONS SUBMITTED BY COUNTY STAFF IS LACKING IN RECORD SUPPORT.

CEQA directs that "[n]o public agency shall approve . . . a project for which an EIR . . . identifies one or more significant environmental effects . . . unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding." Guidelines § 15091(a); Pub.Res.Code § 21081(a). Only three

[64] Available in the Project's Administrative Record at: www.sandiegocounty.gov/content/dam/sdc/dplu/ceqa/Soitec-Documents/Record-Documents/2014-03-01-StephanVolker-Comment-Cover-Letter-Soitec-Solar-DPEIR.pdf

findings are permissible: (1) that the project has been altered to "avoid or substantially lessen the significant environmental effect;" (2), that such "alterations are within the responsibility and jurisdiction of another public agency" and either "have been adopted by such other agency or can and should be adopted by such other agency;" and (3), that "[s]pecific economic, legal, social, technological, or other considerations . . . make infeasible the mitigation measures or project alternatives identified in the final EIR." *Id.*

If the agency made the third finding, then the agency must also find "that specific overriding economic, legal, social, technological or other benefits of the project outweigh the significant effects on the environment." Pub.Res.Code § 21081(b)); Guidelines §§ 15092(b)(2)(B), 15093. In making this last finding, the agency must "state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record." Guidelines § 15093(b); Pub.Res.Code § 21081.5; *Sierra Club v. Contra Costa County* (1992) 10 Cal.App.4th 1212, 1223 ("*Contra Costa*"), disapproved on other grounds in *Voices of the Wetlands v. State Water Resources Control Board* (2011) 52 Cal.4th 499. Thus, only if less-impactful alternatives or mitigation are infeasible *and* the project's benefits outweigh its impacts do those impacts become "acceptable." *Id*.

Here, the County failed to produce a draft statement of overriding considerations ("Statement")[65] that demonstrates, based on substantial evidence in the record, that the less-impactful distributed energy alternative proposed by Backcountry was infeasible. To the contrary, as shown in Section IV(B), this less-impactful alternative that provides most of the same benefits as the chosen alternative was feasible and should have been studied. Instead, the County has selected Alternative 2A, in spite of its finding "that this alternative does not mitigate, avoid, or substantially lessen all significant environmental impacts identified in the FPEIR." Statement, p. 58.

Nor did the County demonstrate that each of the purported benefits of the Project outweighed its impacts. The County claims that each of the ten purported benefits in its Statement "constitutes a separate and independent basis that justifies approval of Alternative 2A and outweighs the unavoidable adverse environmental effects of approving the Project." Statement, p. 80. However, many of the supposed benefits would also be provided by the alternatives commenters proposed, such as distributed generation, several are not benefits at all,

[65] CEQA Findings and Statement of Overriding Considerations for the Soitec Solar Development Project, Draft, December 30, 2014, available in the Project's Administrative Record at: http://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Record-Documents/2014-12-31-Planning-Commission-Hearing-01-16-2015-Agenda-Item-No.1-Soitec-Solar-Development-Staff-Report-Attach-G.pdf.

and none outweigh the Project's significant environmental impacts. Measures and alternatives that mitigate significant Project impacts must properly be found to be infeasible in order for a statement of overriding considerations to comply with CEQA.

Furthermore, the Statement submitted by County staff is deeply flawed because it lacks record support. In order to reap the rewards from construction of the Soitec facilities contemplated by the FPEIR, these facilities must be built and produce power in a competitive marketplace. If these facilities are half-way built when Soitec's funding runs out, many of the harmful environmental impacts contemplated in the FPEIR will still occur without funding for mitigation measures[66] or the benefits of job creation,[67] renewable energy production[68] to meet RPS standards,[69] reductions in GHG production,[70] or many of the other goals contemplated by the FPEIR's Project Description. FPEIR 1.0-1. The Statement has not demonstrated that these facilities are economically viable, and thus there can be no considerations that override the significant and unavoidable impacts from the Project.

Power Purchase Agreements ("PPAs") are generally negotiated by Investor Owned Utilities, such as SDG&E, with energy providers such as Soitec in order to guarantee an energy supply for the utility and an income stream for the provider such that construction of new facilities can be undertaken with as little risk as possible. Without PPAs, it is very difficult to secure the funding necessary to construct new energy facilities. The CPUC's recommended process for satisfying its RPS requirements, for instance, includes the negotiation of PPAs once bids have been submitted and projects evaluated.[71]

In 2011, SDG&E entered into five PPAs with Soitec for LanEast, LanWest, Desert Green, Rugged, and Tierra Del Sol, as approved by CPUC Resolution 4439 adopted on November 10, 2011. Dec. 22, 2014 SDG&E Letter to CPUC ("SDG&E Letter"), p. 3, n. 2.[72] This included a 2-4% reduction in the contract price. SDG&E Letter, p. 3 n. 5. All five of these

---

[66] Substantial overriding benefit 10. Statement, p. 83-85.
[67] Substantial overriding benefits 5 and 8. Statement, p. 82-83.
[68] Substantial overriding benefit 4. Statement, p. 81-82.
[69] Substantial overriding benefit 1. Statement, p. 81.
[70] Substantial overriding benefit 6. Statement, p. 82-83.
[71] The CPUC's website includes "an outline of the RPS procurement process." CPUC, Procurement, *available at* http://www.cpuc.ca.gov/PUC/energy/Renewables/procurement.htm (last visited Jan. 12, 2015).
[72] The SDG&E Letter is *available at* http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M143/K931/143931998.PDF, and attached as Exhibit 5.

PPAs have now been terminated. SDG&E Letter, p. 8. This calls all of the economic benefits cited in the Statement into question and demonstrates that the Statement lacks record support.

SDG&E entered into these PPAs and others like them with renewable energy companies like Soitec in order to satisfy RPS requirements. For instance, SDG&E explains that its PPAs with Soitec "were evaluated and compared against the other PPAs from SDG&E's 2009 RPS RFO [request for offers] to ensure that price, terms and conditions were comparable to the then-current market conditions." SDG&E Letter (Exhibit 5 hereto), p. 3. Without PPAs, it is unclear that the Project's energy will be used, and therefore that it "would assist in achieving the state's [RPS] . . . objectives." Statement, p. 81 (substantial overriding benefit 1).

Furthermore, the economic viability of Soitec's solar technology has been called into doubt by the United States Department of Energy ("DOE"). A peer review of Soitec's DOE grant expressed grave concern that the Concentrating Solar Photovoltaic technology Soitec is developing for manufacture lacks viability in competition with lower-cost standard PV technology. DOE Report, SunShot Initiative: 2014 Peer Review Report ("SunShot Report"), p. 238-239 (August 2014).[73] This review is bolstered by the difficulties other projects have experienced when attempting to use CPV panels manufactured by Soitec – the same CPV panels Soitec claims to be using for the Project[74] – which resulted in at least one project turning away from CPV to basic PV. SDG&E Letter, p. 3-5 (detailing Soitec's inability to finalize an equipment supply agreement). Thus, the Statement's claim that "[t]he Project would enable manufactured goods produced in San Diego County, specifically CPV trackers manufactured by Soitec Solar Industries, LLC, to be installed in San Diego County" lacks record support because it is not clear that Soitec will ever be able to finalize its equipment contracts and other necessary manufacturing infrastructure. Statement, p. 83 (substantial overriding benefit 9).

SDG&E has concluded that CPV may not be an economically viable technology. As a result, SDG&E has concluded that Soitec's ability to compete in California is "contingent upon its ability to offer a competitively priced product and commercially reasonable equipment supply arrangements. Absent this, SDG&E does not believe that Soitec can successfully participate in the development of new CPV facilities." SDG&E Letter, p. 9. Thus, the Statement's claim that "[t]he Project would maximize solar energy generation by siting CPV technology in the Boulevard area" lacks record support because it is not clear that the technology is economically viable. Statement, p. 81 (substantial overriding benefit 4).

---

[73] The SunShot Report is *available at* http://energy.gov/sites/prod/files/2014/09/f18/2014_sunshot_peer_review_report.pdf, and attached as Exhibit 6.

[74] PPAs between Soitec and SDG&E stipulate that these CPV panels must be used. SDG&E Letter, p. 7 (CPUC Resolution E-4637).

Finally, "the County's reputation as a leader in the development and deployment of innovative renewable energy and solar technologies" is not a substantial overriding benefit at all. Statement, p. 83 (substantial overriding benefit 7). In light of the doubts expressed by Soitec's past partners, the Project would be more likely to have the opposite effect. Regardless, reputation is an insufficient rationale under CEQA to allow all of the significant impacts listed in the Statement. *See* Statement, p. 78-80 (listing 12 significant and unmitigable impacts).

CEQA's primary objective is to compel agencies to identify environmental impacts and then reduce or avoid enumerated impacts by adopting alternatives or mitigation measures. To this end, CEQA directs that "if there are feasible alternatives . . . available which would substantially lessen the significant environmental effects of proposed projects," then agencies "should not approve" the proposed projects. Pub.Res.Code § 21002. It would subvert this core purpose of CEQA to allow an agency to approve a project even though feasible and less-impactful alternatives exist by merely proclaiming – without first studying the alternatives – the project to be preferable in a statement of overriding considerations.

VII. CONCLUSION

The County's FPEIR is disorganized, incomplete, and confusing. The FPEIR severely understates and ignores the Project's significant environmental impacts, and any purported benefits of the Project cannot outweigh its environmental harms. The County must overhaul the FPEIR to address the significant deficiencies identified above before it can consider approving the Project.

Respectfully submitted,

Stephan C. Volker
Attorney for Backcountry Against Dumps and Donna Tisdale

LIST OF EXHIBITS

List of exhibits in order of appearance in the comment letter:

Exhibit 1: National Transportation Safety Board, *NTSB Recommends Process Improvements for Certifying Lithium-ion Batteries as it Concludes its Investigation of the 787 Boston Battery Fire Incident*, Press Release (December 1, 2014)

Exhibit 2: Rupali Das, *et al*. *Occupational Coccidioidomycosis in California: Outbreak Investigation, Respirator Recommendations, and Surveillance Findings*, 54 JOURNAL OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE 564 (May 2012)

Exhibit 3: Morgan Lee, *Soitec Manufacturing in Jeopardy*, San Diego Union Tribune (December 19, 2014)

Exhibit 4: Imperial County Planning and Development Services, *Map: Imperial County Solar Farm Projects* (February 26, 2013)

Exhibit 5: San Diego Gas & Electric Letter to the California Public Utilities Commission , "Response of San Diego Gas and Electric Company (U 902 E) To Application of Soitec Solar Industries LLC for Modification of Resolution E-4613" (Dec. 22, 2014)

Exhibit 6: United States Department of Energy, "SunShot Initiative: 2014 Peer Review Report," p. 238-239 (August 2014)

EXHIBIT
1

NTSB Recommends Process Improvements for Certifying Lithium-ion Batteries as it Concludes its Investigation of the 787 Boston Battery Fire Incident

WASHINGTON – Shortcomings in design and certification ultimately led to the fire in a lithium-ion battery installed on a Boeing 787 jetliner that had just completed an intercontinental flight to Boston, the NTSB determined in its final report on the incident, which was released today.

On January 7, 2013, ground workers discovered smoke and flames coming from an auxiliary power unit lithium-ion battery in a Japan Airlines 787 that was parked at the gate at Boston Logan International Airport. There were no injuries to any of the 183 passengers or 11 crewmembers that had already deplaned after flying from Tokyo's Narita Airport. The battery was manufactured by GS Yuasa Corporation.

NTSB Materials Engineer Matt Fox examines the casing from the battery involved in the JAL Boeing 787 fire incident.

Early in the investigation, the NTSB said that the fire began after one of the battery's eight cells experienced an internal short circuit leading to thermal runaway of the cell, which propagated to the remaining cells causing full battery thermal runaway. This condition caused smoke and flammable materials to be ejected outside the battery's case and resulted in excessive heat and a small fire.

"The investigation identified deficiencies in the design and certification processes that should have prevented an outcome like this," said NTSB Acting Chairman Christopher A. Hart. "Fortunately, this

incident occurred while the airplane was on the ground and with firefighters immediately available."

Because the APU and main lithium-ion batteries installed on the 787 represented new technology not adequately addressed by existing regulations, the Federal Aviation Administration required that Boeing demonstrate compliance with special conditions to ensure that the battery was safe for use on a transport category aircraft.

Investigators said that Boeing's safety assessment of the battery, which was part of the data used to demonstrate compliance with these special conditions, was insufficient because Boeing had considered, but ruled out, cell-to-cell propagation of thermal runaway (which occurred in this incident) but did not provide the corresponding analysis and justification in the safety assessment. As a result, the potential for cell-to-cell propagation of thermal runaway was not thoroughly scrutinized by Boeing and FAA engineers, ultimately allowing this safety hazard to go undetected by the certification process.

As a result of its findings, the NTSB is recommending that the FAA improve the guidance and training provided to industry and FAA certification engineers on safety assessments and methods of compliance for designs involving new technology.

"Through comprehensive incident investigations like this one, safety deficiencies can be uncovered and addressed before they lead to more serious consequences in less benign circumstances," said Hart."

NTSB investigators also identified a number of design and manufacturing concerns that could have led to internal short circuiting within a cell.

As a result of the investigation, the NTSB made 15 safety recommendations to the FAA, two to Boeing, and one to GS Yuasa.

"The aviation industry is continually benefitting from technological advances, and we are hopeful that the lessons learned in this investigation will further enhance the industry's ability to safely bring those innovative technologies to market," said Hart.

The complete report is available at http://go.usa.gov/HJtJ.

All of the information and resources the NTSB has released for this investigation can be accessed from the following page: http://go.usa.gov/HSxd.

EXHIBIT
2

Occupational Coccidioidomycosis in California

Outbreak Investigation, Respirator Recommendations, and Surveillance Findings

Rupali Das, MD, MPH, Jennifer McNary, MPH, CIH, Kathleen Fitzsimmons, MPH, Dina Dobraca, MPH, Kate Cummings, MPH, Janet Mohle-Boetani, MD, MPH, Charlotte Wheeler, MD, MPH, Ann McDowell, MPH, Yulia Iossifova, MD, PhD, Rachel Bailey, DO, MPH, Kathleen Kreiss, MD, and Barbara Materna, PhD, CIH

Objective: To describe the investigation of a 2007 occupational coccidioidomycosis outbreak in California, recommend prevention measures, and assess statewide disease burden. **Methods:** We evaluated the worksite, observed work practices, interviewed the workers and employer, reviewed medical records, provided prevention recommendations including risk-based respirator selection, and analyzed statewide workers' compensation claims. **Results:** Ten of 12 workers developed acute pulmonary coccidioidomycosis; none used respiratory protection. We recommended engineering, work practice, and administrative controls, powered air-purifying respirator use, and medical care. Occupational coccidioidomycosis incidence nearly quadrupled in California from 2000 to 2006, with the highest rates in construction and agricultural workers. **Conclusions:** Construction workers are at risk for occupational coccidioidomycosis. The high attack rate in this outbreak was due to lack of awareness, rainfall patterns, soil disruption, and failure to use appropriate controls. Multiple risk-based measures are needed to control occupational coccidioidomycosis in endemic areas.

Coccidioidomycosis, also known as Valley Fever, is a recognized occupational illness. The Centers for Disease Control and Prevention[1] considers workers engaged in soil-disrupting activities, including military personnel participating in training exercises in endemic areas, to be populations at risk for the disease. Published studies[2–6] have documented occupational disease clusters in endemic areas among military personnel, anthropologists, and archaeologists. Increased disease incidence has been reported among agricultural workers in endemic areas.[7] In nonendemic areas, work-related cases of disease have been reported in various occupations, including laboratory and hospital personnel.[7–11] Coccidioidomycosis may cause disability lasting from days to months.[4]

Coccidioidomycosis is caused by the inhalation of airborne fungal spores from either of the two soil-dwelling *Coccidioides* species: *C. immitis*, native to California, and *C. posadasii*, found outside California. The fungus is endemic to certain semiarid areas of California, Arizona, New Mexico, Nevada, and Texas, and of Central and South Americas.[12] In the United States, the southern San Joaquin Valley and southern Arizona have the highest endemicity.[13] Infection in endemic areas is the result of inhalation of spores following soil disruption. Coccidioidomycosis can be a severe illness and result in disability due to pulmonary involvement and disseminated disease; however, most infections are asymptomatic. Influenza-like illness is the most common clinical presentation. Infection generally imparts immunity to reinfection, although rare cases of reinfection have been reported.[14–17]

State and local health departments involved in investigating previous outbreaks of coccidioidomycosis at endemic sites, and the National Institute for Occupational Safety and Health (NIOSH) guidance document regarding control of airborne fungal infectious agents such as *Histoplasma capsulatum* spores,[2,18] recommend wearing a NIOSH-approved, fit-tested respirator at least as protective as a half-mask respirator with a NIOSH-certified N95 particulate filter when engaged in soil-disturbing activities in endemic areas. Nevertheless, consistent state and federal standards for preventing occupational coccidioidomycosis, including respirator use guidelines, are lacking. Although California's recently enacted Aerosol Transmissible Diseases Standard is the first regulation designed to protect workers from aerosol-transmitted infectious diseases in the workplace, it does not apply to *Coccidioides* outside the laboratory setting.[19]

Despite a considerable volume of literature documenting coccidioidomycosis as an occupational risk, outbreaks continue to occur among workers. In November 2007, the San Luis Obispo County Health Department requested the assistance of the California Department of Public Health (CDPH) in evaluating a suspected cluster of coccidioidal pneumonia in a construction crew at the Camp Roberts military base. This National Guard training site is located on the border of San Luis Obispo and Monterey counties. CDPH jointly investigated the cluster with county staff, evaluated factors that contributed to disease, and made recommendations to prevent future occupational exposures at this worksite. The epidemic curve, descriptive epidemiology, clinical aspects, and laboratory data from this investigation have been described and are consistent with the disease due to a single-point-source exposure that occurred at the Camp Roberts construction site.[20] In this article, we describe the occupational aspects of the investigation, present an analysis of statewide claims for occupational coccidioidomycosis, and discuss recommendations for protection of workers, including risk-based respirator-selection decisions.

METHODS

Worksite Investigation

CDPH industrial hygiene, epidemiology, and medical staff visited the construction site, interviewed workers, and reviewed medical records. During the site visit, staff observed work practices, including personal protective equipment used, and interviewed personnel at the military base. Workers were interviewed over the telephone; the survey instrument utilized for the construction crew included work activities and protective measures used at the outbreak worksite.[20] Demographic characteristics of this crew, medical history, and signs and symptoms have been described.[20] Dust levels were not measured at the excavation site and distance from the trench was deemed to be an unreliable method of determining the risk of dust exposure as workers did not remain in any single location for the duration of their work.

From the Occupational Health Branch (Drs Das and Materna, and Ms McNary, Ms Fitzsimmons, and Ms Dobraca) and Infectious Diseases Branch (Ms Cummings, and Drs Mohle-Boetani and Wheeler), California Department of Public Health; San Luis Obispo County Health Department (Ms McDowell), Calif; and National Institute for Occupational Safety and Health (Drs Iossifova, Bailey, and Kreiss), Atlanta, Ga.

Disclosure: The authors declare no conflict of interest.

Address correspondence to: Dr Rupali Das, MD, MPH, Environmental Health Investigations Branch, California Department of Public Health, 850 Marina Bay Parkway, P-3, Richmond, CA 94804 (Rupali.das@cdph.ca.gov).

DOI: 10.1097/JOM.0b013e3182480556

Workplace Recommendations

CDPH provided worksite-specific health and safety recommendations and initial respiratory protection recommendations to the involved employers and workers. Immediately after the cases were reported, we recommended that the crew use half-mask particulate respirators when digging in soil at Camp Roberts. *C. immitis* spores are approximately 5 μm in diameter[4] and adhere to soil particles of a wide size range, which are effectively captured by NIOSH-certified respirator filters. When the high attack rate for this outbreak became apparent, we revised our recommendations by applying a risk-based approach to respirator selection.

We used a simplified exponential dose–response relationship to estimate the spore dose received by workers at this pipeline construction site.[21] We assumed it takes one spore to result in *C. immitis* infection: Infection risk $= 1 - \exp(-D)$, where D is the expected dose in the alveolar region.[22–24] The dose D is a product of several factors including the spore concentration in ambient air:

$$D = C \times B \times T \times \text{days} \times f$$

C, average spore concentration in air (no./m^3); B, inhalation rate (m^3/hr); T, number of hours per day; days, number of days exposed; f, spore deposition fraction in alveolar region.

Finally, we utilized the Federal Occupational Safety and Health Administration's assigned protection factors (APFs) for respirators to estimate the reduction in infection risk provided by each type of respirator.[25] We assumed that the use of respirators would reduce the average spore concentration (and thereby dose) by a factor determined by the APF.

Workers' Compensation Data

To assess the statewide burden of occupational coccidioidomycosis, we analyzed data from the Workers' Compensation Information System, an electronic administrative claims database maintained by the California Department of Industrial Relations. A surveillance case definition was developed by which a coccidioidomycosis-related claim was identified if the date of injury was between January 2000 and December 2007, and the claim had an *International Classification of Diseases, 9th edition*, code for coccidioidomycosis (114 to 114.5 and 114.9) and/or had an injury description with key words indicating exposure to *C. immitis*. Occupation was coded according to the Census 2000 Index of Occupations.[26] Industry was coded according to the 2002 North American Industry Classification System and organized into 2002 Census Industrial Classifications using a crosswalk produced by the Bureau of Labor Statistics for the Current Population Survey.[27] Claim rates by industry and occupation were calculated for California workers 16 years and older, using estimates of employed civilian population from the 2003 Current Population Survey (midpoint of the time interval examined).[27] The California mining industry population was not listed by Bureau of Labor Statistics due its small labor force base. An estimate was calculated by multiplying the percent of California workers in the mining industry by the total estimate of the California-employed civilian population as reported in the 2003 Current Population Survey.[27] Claim rates were not calculated for industries with less than five claims filed from 2000 to 2007. For rate estimates, 95% confidence intervals were calculated using Byar approximation.[28] All calculations and statistical analysis were conducted using SAS version 9.1 (SAS, Inc, Cary, NC) or Microsoft Excel 2003 (Microsoft, Redmond, WA).

RESULTS

Workplace Investigation

In October 2007, a civilian construction crew excavated a 1200-ft long trench to replace a water pipe at Camp Roberts, a California National Guard military base owned by the US Army in San Luis Obispo County, California. The original pipe, located 20 to 50 ft from the replacement pipe, had failed in January 2006, leaking its full contents across the hillside to the flatlands below.

Ten of the 12 crew members developed clinical symptoms consistent with acute pulmonary coccidioidomycosis (attack rate 83%).[20] Eight had serologically confirmed disease; seven had abnormalities on chest radiograph; and one developed disseminated disease. One worker, without evidence of clinical infection more than 40 days after the outbreak, was diagnosed with coccidioidomycosis in March 2008, following his return to work at the outbreak site in February 2008. The 10 ill crew members sought care from at least 21 physicians and lost a total of at least 1660 hours of work. One worker was assigned to light duty for 160 hours, and two workers were on disability 5 months after the outbreak was detected, the last time the authors had contact with affected crew members.

The 12-member crew worked four 10-hour days per week with some variations over a 10-day period in the East Garrison of Camp Roberts. The crew consisted of two pipe layers, three laborers, three earth-moving equipment operators (using excavator, backhoe, and skid steer), one water truck operator, one dump truck operator, and two supervisors. During interviews, the crew reported that they all worked in the same location, excavating the trench, installing the pipe, packing the excavated soil back around the pipe, and backfilling the trench. The trench (1200-ft long × 4-ft wide × 2- to 5-ft deep) was excavated mechanically and was compacted and backfilled both mechanically and manually. The soil was wetted with water to decrease airborne dust levels and to ensure proper soil compaction around the pipe. When sand was encountered, the crew began intensive wetting using two hoses; however, the sandy soil mostly repelled the water.

Of eight workers who reported their perception of the dust level on the "dustiest" day, two reported low dust, two reported moderate dust, and four reported high dust levels. While the company had access to at least one excavator with air conditioning, the crew was not using that excavator at the time of the outbreak at this location. In addition, the crew always used equipment with the windows open, thus bypassing any dust filtration that the enclosed cab could have provided. Although N95 filtering facepiece respirators were available, workers were not specifically advised by the employer to wear them at this site, and none did so. None of the workers reported having received training on prevention of coccidioidomycosis and before the outbreak, none were aware of a risk of coccidioidal infection at this worksite

The outbreak site was an exposed, west-facing hillside with extensive rodent burrows and where cattle grazed until 6 months before the outbreak. Area rainfall was twice the 30-year average during the winter of 2004-2005, normal in the winter of 2005-2006, and lower than expected in the winter of 2006-2007. The 600,000 gallons of water that leaked from the water tank onto the outbreak site in January 2006 greatly increased the water present at the site during the winter of 2005-2006. In addition, the rains during the winter of 2005-2006 extended into April and May, which was later in the season than usual.

During the course of investigating this outbreak, the San Luis Obispo County Health Department notified CDPH of a military instructor at Camp Roberts who was also confirmed to have coccidioidomycosis on the basis of symptoms, chest radiography, and serologic testing (Figure 1). The instructor was not associated with the construction crew but did work in the same general geographical region; illness was diagnosed during the same time period as those considered part of this outbreak (December 2007).

Workplace Recommendations

CDPH made several recommendations for minimizing exposure and risk of future infection at this construction site (Table 1). These multiple controls were intended to be used simultaneously,

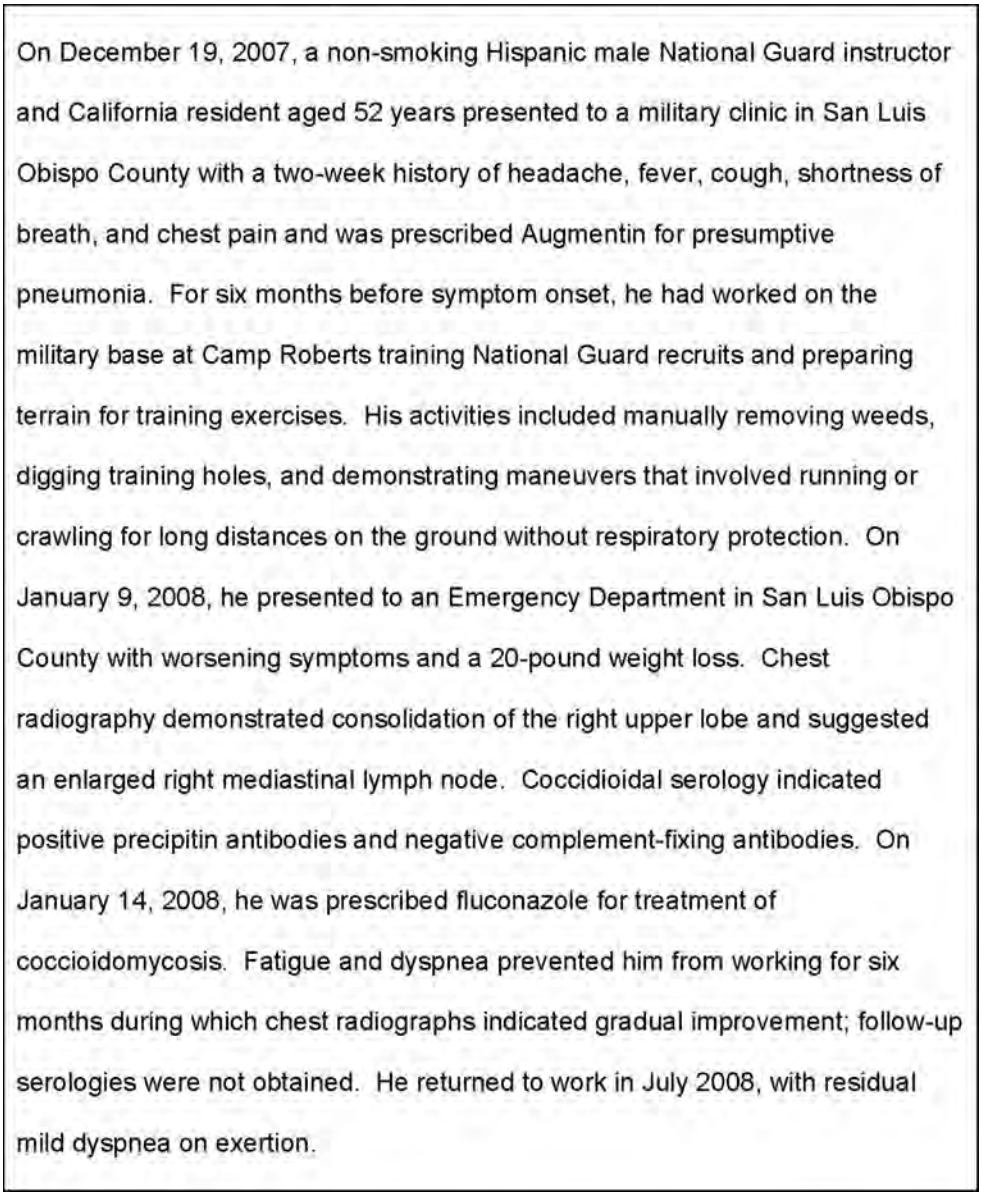


FIGURE 1. Clinical details of military instructor diagnosed with coccidioidomycosis at Camp Roberts.

since any single exposure control method would not have been sufficiently protective to minimize exposure and reduce the risk of infection to an acceptable level. These included using high-efficiency particulate air (HEPA) filtered air-conditioned enclosed cabs on heavy equipment and training workers on ways to prevent exposure, such as the proper use of construction equipment, wearing respiratory protection, and controlling dust at the source by continually wetting the soil. Additional recommendations included improving the Injury and Illness Prevention Program, which is mandatory for all California employers, and the medical surveillance program to identify illness prevention strategies, and improve prompt access to medical care for all work-related illnesses and injuries.[29]

Respirator Selection

On the basis of an attack rate for this outbreak of 83%, the expected dose to the alveolar region, D, is calculated as follows:

$$\text{Infection risk} = 1 - \exp(-D)$$
$$0.83 = 1 - \exp(-D)$$
$$\exp(-D) = 0.17$$
$$D = -\ln(0.17) = 1.77 \text{ spore}$$

The risk reduction afforded by two different types of respirators was assessed. The effect of wearing a respirator is to reduce the inhaled concentration, which in turn reduces the expected inhaled dose (D in the risk equation given earlier). Earlier in this article, we showed that the expected dose is a product of the spore concentration in air, the duration of exposure, the volumetric breathing rate of the worker, and the fraction of inhaled spores that deposit in the pulmonary region.

Negative-pressure half-mask air-purifying respirators equipped with N95, N100, or P100 filters have an APF = 10 and would reduce the average spore concentration (C in the equation given earlier) to one tenth of the ambient concentration. Tight-fitting, full-facepiece powered air-purifying respirators (PAPRs) (and some

TABLE 1. Recommendations Provided by California Department of Public Health to San Luis Obispo County Construction Site Employer to Minimize Dust Exposure and Risk of *Coccidioides* Infection

Type of Control	Principle	Components
Engineering and work practices	Control dust at source or isolate worker from exposure	• Continuous soil wetting • Heavy equipment: HEPA-filtered air-conditioned enclosed cabs with 2-way radios • Wash equipment before movement off-site
Administrative	Increase hazard awareness and knowledge of safe work practices	• Train workers and supervisors: ○ Distribution ○ Symptoms and signs ○ Effective controls, including proper use of equipment
	Implement comprehensive illness prevention program	• Injury and Illness Prevention Plan*
Personal protective equipment and hygiene practices	Prevent inhalation exposure	• Respirators when digging or working near earth-moving machinery: ○ Half-mask or full-face respirator with particulate filter† ○ Powered air-purifying respirator with particulate filter‡ ○ Respirator training, fit-testing, and medical clearance • Lockers, coveralls, and change clothing at worksite
Medical care	Disease recognition and prompt, appropriate treatment	• Contract with local medical clinics ○ Protocol for evaluation, follow-up, and treatment ○ Prompt care • Physician training

*California Code of Regulations, Title 8, Section 3203. Injury and Illness Prevention Program. Available at: http://www.dir.ca.gov/Title8/3203.html.

†Initial recommendation made before completion of investigation.

‡Risk-based recommendation based on attack rate in this incident.

helmet/hood PAPRs) with high-efficiency particulate filters have an APF = 1000 and would reduce the average spore concentration to 1/1000 of the ambient air concentration. This information served as the basis for issuing revised recommendations for the appropriate type of respiratory protection in this endemic area. In a similar high-risk worksite, the use of a PAPR (APF = 1000) with HEPA filters would be estimated to reduce the infection risk to 0.17%, whereas a half-mask air-purifying respirator (APF = 10) with HEPA filters would reduce the risk to 16% (Table 2). As a result, we issued an updated recommendation to wear PAPRs (APF = 1000) equipped with HEPA filters when engaging in soil-disrupting activities at this site.

TABLE 2. Calculated Risk of Coccidioidal Infection Based on Type of Respirator Used

Respirator Type	Assigned Protection Factor	Infection Risk (%)*
Half-Mask Respirator (elastomeric or filtering facepiece N95)	10	16
Powered Air-Purifying Respirator	1000†	0.17

*Risk of infection at construction site with exposure scenario similar to that described in this article.

†Some powered air-purifying respirators (PAPRs) have an assigned protection factor (APF) of 1000; however, some have a lower APF. The wearer must obtain information from the manufacturer about the APF for each specific PAPR they intend to wear. (California Code of Regulations, Note 4 in Title 8, Section 5144, Respiratory Protection, Table 1—Assigned Protection Factors.)

Workers' Compensation Data

During the 8-year period 2000 to 2007, 461 unique coccidioidomycosis claims were identified, and the average annual claim rate was 0.35 per 100,000 workers. Median claimant age was 41 years (range, 18 to 70 years). More than 78% of claimants (n = 360) were male. The largest group of claimants worked in service occupations (n = 133), although the highest claim rates occurred in the occupational categories of farming, fishing, and forestry, and construction and extraction (Table 3). The number and rate of occupational coccidioidomycosis cases nearly quadrupled from 2000 to 2006, but this increase was not sustained in 2007 (Figure 2).

When we categorized workers' compensation data by industry, as opposed to occupation, we obtained slightly different results. From 2000 to 2007, the public administration industry had the highest number of claims due to coccidioidomycosis, whereas the mining, quarrying, and oil and gas extraction industry had far fewer claims but the highest rate (Table 4).

DISCUSSION

The disease outbreak among construction workers described in this article and the analysis of workers' compensation claims data illustrate that, despite known risk factors, occupational coccidioidomycosis remains an important concern in California. The high attack rate at this worksite was most likely a result of general lack of awareness regarding coccidioidomycosis and its endemicity at this site, resulting in inadequate worker training; inability to adequately assess the presence of the organism in soil; rainfall patterns and tank leakage that may have facilitated fungal growth; considerable soil disruption in a geographic area endemic for *C. immitis*; and failure to use appropriate control strategies, including respiratory protection. Recommendations for disease prevention in occupational settings are based on these factors.

In 1942, Shelton[30] reported that coccidioidomycosis could be acquired at Camp Roberts, a "hitherto unknown endemic focus." In 2000, the US Geologic Survey[31] still considered this a "suspected endemic region." Nevertheless, in 2007, neither the National Guard, the lessee of this property, nor the employer of the construction

TABLE 3. Number of Cases, Percentage,* and Estimated Average Annual Rate† of Coccidioidomycosis-Related Claims Submitted to the Workers' Compensation Insurance System by Occupation Category, California, 2000 to 2007

Occupation Category (COC)	No. (%)	Rate	95% CI
Farming, fishing, and forestry (600–613)	23 (5)	1.24	0.79–1.87
Construction and extraction (620–699)	78 (17)	1.11	0.88–1.38
Service (360–465)	133 (29)	0.64	0.54–0.76
Production, transportation, and material moving (770–975)	46 (10)	0.30	0.22–0.41
Management, professional, and related (001–354)	100 (22)	0.21	0.17–0.26
Installation, maintenance, and repair (700–769)	7 (2)	0.14	0.05–0.30
Sales and office (470–593)	13 (3)	0.04	0.02–0.06
Unknown	61 (13)	–‡	–‡
Total	461 (100)	0.35	0.32–0.39

*Percentages may not add to 100 because of rounding.
†Per 100,000 civilian workers aged 16 years or older with 95% CI; denominator data from Current Population Survey employed civilian population estimates, 2003.
‡Annual rate and 95% CI could not be calculated because denominator data could not be determined for the category.
CI, confidence interval; COC, 2000 Census Occupation Codes.

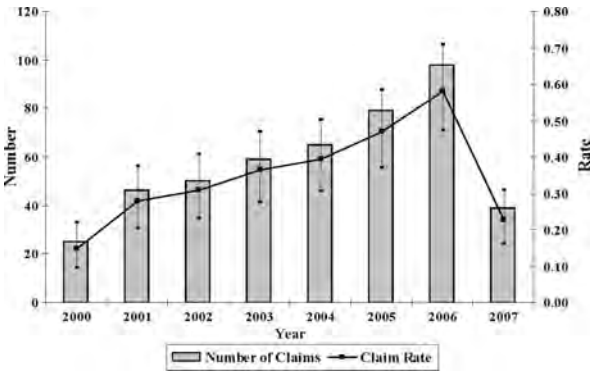


FIGURE 2. Number and estimated rate* of coccidioidomycosis-related workers' compensation claims† by year, California, 2000 to 2007 ($n = 461$). *Per 100,000 civilian workers aged 16 years or older with 95% confidence interval; denominator data from the Current Population Survey employed civilian population estimates. †Data are derived from our analysis of the Workers' Compensation Information System, an electronic administrative claims database maintained by the California Department of Industrial Relations.

crew knew that previous outbreaks had occurred in this region. The diagnosis of coccidioidomycosis in a military instructor at Camp Roberts during the same time period as the outbreak suggests that the risk of the disease was more widespread than at just the construction site and that *Coccidioides* species may have been sporadically present throughout the entire military base.

California regulation requires employers to establish worksite- and hazard-specific Illness and Injury Prevention Plans.[29] Because the endemicity of *Coccidioides* species at Camp Roberts was unrecognized, workers were not provided with training about the risk of disease at this worksite or of work practices to reduce the probability of its occurrence. From 2000 to 2007, surveillance data showed that the rate of coccidioidomycosis in San Luis Obispo County was in the highest quintile of the state, 14.5 to 150.0 cases per 100,000 population.[32] This supports the assertion that *C. immitis* should be considered endemic to this area and that education on the etiology and prevention of the disease should be disseminated to employers, workers, and communities.

Coccidioidomycosis is on the list of National Notifiable Diseases, although not all states have made it reportable.[33] Arizona and California are among the states where coccidioidomycosis is a reportable condition. From 1997 to 2007, the incidence rate increased 281% in Arizona.[13] In California, the numbers of cases and the incidence rate more than tripled from 2000 to 2006.[32] Reported coccidioidomycosis cases in California increased from 816 in 2000 (incidence rate, 2.4 per 100,000 population) to 2981 in 2006 (8.0 per 100,000 population). Postulated factors accounting for rising disease incidence include climate change; migration patterns, including movement of susceptible populations to endemic areas; and new construction in endemic areas.[13,34]

Our finding of the near quadrupling of coccidioidomycosis incidence in California workers' compensation claims from 2000 to 2006 reflects trends in the general population and among military personnel in California for the same time period.[5,32] The significance of the decreased incidence in 2007, in both the general population and among workers, is unknown at this time. The highest rates of coccidioidomycosis were observed among agricultural and construction workers, who are likely to have the greatest dust exposure, and in the mining industry, which involves considerable soil disruption. The high numbers of cases observed in public administration may have been due to the inclusion of the public safety industry, which in California has experienced several recent large outbreaks of coccidioidomycosis in prisons.[35–37] The distribution of coccidioidomycosis among occupational groups is consistent with historical reports of the highest disease rates among construction and agricultural workers in California.[4]

Although the overall pattern of coccidioidomycosis incidence obtained from our analysis of workers' compensation claims reflects population trends, both the overall numbers and the rates among workers are much lower than those in the general population for the same time period. This is most likely because the disease is not recognized as work-related except in outbreak situations; it is also possible that work-related coccidioidomycosis is underreported by workers and/or physicians, or that occupational exposure accounts for a small proportion of cases.

Our examination of workers' compensation data showed that occupational incidence rates decreased in 2007, the year this outbreak occurred. Local issues and weather patterns may have played a role in this outbreak. *C. immitis* thrives during wet periods after droughts, and disease incidence is correlated with rainfall in recent previous seasons.[38,39] Heavy rainfall 2 years before this outbreak and leakage of the water tank at the site during the previous winter may have contributed to fungal growth. Interestingly, Zender and Talamantes[40] found that precipitation and other weather patterns (such as wind) explain a much smaller proportion of coccidioidomycosis incidence in California (4%) compared with Arizona (75%). These authors have therefore suggested that human soil-disrupting activity, such as digging in endemic areas, is the most important determinant of coccidioidomycosis incidence in California. Nevertheless, soil sampling is unreliable for predicting the presence of *C. immitis* spores. Even in endemic areas, spores are unevenly distributed, and false-negative results may lead to an inappropriate

TABLE 4. Number of Cases, Percentage,* and Estimated Average Annual Rate† of Coccidioidomycosis-Related Claims Submitted to the Workers' Compensation Insurance System by Industry Category, California, 2000 to 2007

Industry Category (CIC/NAICS)	No. (%)	Rate	95% CI
Mining, quarrying, and oil and gas extraction (0370-0490/ 21)	9 (2)	6.91	3.15–13.12
Public administration (9370-9590/ 92)	181 (39)	3.07	2.64–3.56
Agriculture, Forestry, Fishing, and Hunting (0170-0290/ 11)	25 (5)	1.00	0.65–1.48
Construction (0770/ 23)	67 (15)	0.75	0.58–0.95
Transportation and utilities (0570-0690, 6070-6390/ 22, 48-49)	26 (6)	0.45	0.29–0.65
Professional and business services (7270-7490, 7570-7790/ 54, 55-56)	31 (7)	0.20	0.13–0.28
Education and health services (7860-8470/ 61-62)	45 (10)	0.18	0.13–0.24
Manufacturing (1070-3990/ 31-33)	14 (3)	0.09	0.05–0.15
Other industries‡	13 (3)	–§	–§
Unknown	50 (11)	–§	–§
Total	461 (100)	0.35	0.32–0.39

*Percentages may not add to 100 because of rounding.

†Per 100,000 civilian workers aged 16 years or older with 95% CI; denominator data from Current Population Survey employed experienced civilian population estimates, 2003.

‡All major CIC industry categories had claims, but major industries with less than five claims were excluded from rate analysis.

§Annual rate and 95% CI could not be calculated because denominator data could not be determined for the category.

CI, confidence interval; CIC, 2002 Census Industrial Classification; NAICS, 2002 North American Industry Classification System.

sense of security. Moreover, the assay method is expensive, time-consuming, and not available commercially.[3,12,41,42]

The excavation and replacement of the damaged water line at this National Guard training site involved considerable soil disruption. The crew's attempts to control dust through wetting were inadequate because the sandy soil failed to absorb water. Occupational risk factors, such as job title and duties, were not associated with disease risk or severity.[20]

In spite of the inability to quantify exposure, the high attack rate reflects that workers had a sufficient dose of *C. immitis* spores over the course of their work at the site to cause clinical illness. Similarly, high attack rates have been reported in previous occupational outbreaks involving soil-disrupting activities.[43–45] The high attack rate is in part due to several properties exhibited by *C. immitis* spores: easy dispersion, respirability, and infectivity. Spores are 2 to 5 μm in diameter and are able to reach terminal bronchioles and alveoli.[4,46] In animals, 10 spores are sufficient to cause infection.[46] It has been suggested that human illness could be caused by a single spore.[22]

The high attack rate and low human infectious dose were important considerations in developing respiratory protection recommendations for this worksite. Use of PAPRs with an APF of 1000 and HEPA filters would reduce the calculated risk of infection to 0.17%; half-mask respirators equipped with filters would result in an unacceptably high risk of 16%. Since the pattern of distribution of *C. immitis* is unpredictable, it is prudent to expect that spores may be present in soil throughout the Camp Roberts site. Consequently, CDPH recommended workers at Camp Roberts (including military personnel) wear PAPRs with HEPA filters anywhere on the site when manually digging in soil or working in dusty conditions unless in an enclosed cab with HEPA air filtration.

A PAPR, available with a loose-fitting hood, helmet, or tight-fitting, full facepiece, also provides eye protection in dusty work and is more comfortable than half-mask respirators for breathing, communication, and temperature and humidity inside the facepiece. These features might increase worker compliance with respirator use in dusty construction settings.[47] Nevertheless, since personal protective equipment is the least effective measure in reducing exposure to hazards, and since there are many potential barriers to respirator use in construction, CDPH recommended that a respiratory protection program at this worksite be part of a multifaceted approach to reducing the risk of coccidioidomycosis.[48] These include engineering, work practice, administrative controls, and medical care (Table 1).

Engineering and work practice controls consist of dust-suppression measures during construction in endemic areas: continuous soil wetting, avoiding outdoor construction during unusually windy conditions, and using enclosed heavy equipment cabs with HEPA filtered air-conditioning.[4,31] During the incident at Camp Roberts, soil wetting was attempted but was ineffective in controlling dust, demonstrating that any single measure may be inadequate to control exposure to *Coccidioides* spores. Because occupational coccidioidomycosis has been attributed to airborne exposure to spores contained in resuspended dust, equipment and vehicles should be cleaned before transport off-site, and clothing and shoes should be removed before leaving the worksite.[3] Administrative controls include development and adherence to an injury and illness prevention program that acknowledges hazards and implements mitigation methods, including provision of worker and employer training. When working in endemic areas, workforces should receive annual training about coccidioidomycosis symptoms, high-risk activities, dust-control methods, and respiratory protection. Finally, ensuring prompt access to medical care is essential. Because of the public health impact of coccidioidomycosis and because local health care providers vary in their knowledge of this disease, public health authorities should support programs to educate providers on its recognition, diagnosis, management, and prevention in workers. To date, therapeutic options remain limited and, despite considerable research, a preventive vaccine is not available.[49] Health care providers in endemic areas should consider coccidioidomycosis in the differential diagnosis of influenza-like symptoms, particularly in persons with soil-disturbing occupations or persons who have moved or traveled to endemic areas.

There are several historical recommendations for reducing the risk of infection due to *C. immitis* spores during soil-disrupting activities, including spraying the ground with oil.[4,50] But there is insufficient evidence demonstrating that this latter method is effective; moreover, potential adverse effects on human health and the environment are unknown. Skin testing has also been proposed as a method to allow only workers with evidence of previous infection access to endemic areas.[4] Nevertheless, there is currently no commercially available skin test for past coccidioidal infection. Finally, restricting the work force to "resident labor" has been recommended as a screening method to reduce occupational infection. This proposal was based on the presumption that residents of endemic areas were more likely to have had subclinical infection and therefore be immune to reinfection. In the outbreak described in this article, many workers were from endemic areas, but nonetheless developed coccidioidomycosis, suggesting that workers from endemic areas are not necessarily immune and remain at risk for being infected.[20]

Occupational coccidioidomycosis remains an important concern in some parts of the United States. Infection risk is highest in workers engaging in soil-disrupting activities such as construction and agriculture. A multitude of controls should be utilized to reduce exposure to dust-containing spores of soil-dwelling *Coccidioides* species. In addition to engineering, work practice, and administrative controls, quantitative risk-based calculations provide a framework for making informed decisions for selecting respiratory protection. We have used these calculations to demonstrate that the use of PAPRs (APF = 1000) with HEPA filters at the site of this outbreak would likely reduce the infection risk to a level that is more acceptable than that associated with half-mask elastomeric or filtering facepiece respirators with N95, N100, or P100 filters. Occupational coccidioidomycosis may be better controlled in endemic areas by implementing the multifaceted measures described in this article.

ACKNOWLEDGMENTS

The authors acknowledge the contributions of Matt Frederick, Robert Harrison, MD, MPH, and Duc Vugia, MD, MPH, California Department of Public Health, and Martha Jones, PhD, California Division of Workers' Compensation.

REFERENCES

1 Centers for Disease Control and Prevention. Coccidioidomycosis. Technical information. 2008. Available at: http://www.cdc.gov/nczved/divisions/dfbmd/diseases/coccidioidomycosis/technical.html. Accessed July 8, 2011.

2. Centers for Disease Control and Prevention. Coccidioidomycosis in workers at an archeologic site—Dinosaur National Monument, Utah, June–July 2001. *MMWR Morb Mortal Wkly Rep*. 2001;50:1005–1008.
3. Schmidt RT, Howard DH. Possibility of *C. immitis* infection of museum personnel. *Public Health Rep*. 1968;83:882–888.
4. Schmelzer LL, Tabershaw IR. Exposure factors in occupational coccidioidomycosis. *AJPH*. 1968;58:107–113.
5. Lee R, Crum-Cianflone N. Increasing incidence and severity of coccidioidomycosis at a naval air station. *Mil Med*. 2008;173:769–775.
6. Standaert SM, Schaffner W, Galgiani JN, et al. Coccidioidomycosis among visitors to a *Coccidioides immitis*–endemic area: an outbreak in a military reserve unit. *J Infect Dis*. 1995;171:1672–1675.
7. Johnson WM. Occupational factors in coccidioidomycosis. *J Occup Med*. 1981;23:367–374.
8. Gehlbach SH, Hamilton JD, Conant NF. Coccidioidomycosis: an occupational disease in cotton mill workers. *Arch Intern Med*. 1973;131:254–255.
9. Albert BL, Sellers TF Jr. Coccidioidomycosis from fomites: report of a case and review of the literature. *Arch Intern Med*. 1963;112:253–261.
10. Wilson JW, Smith CE, Plunkett OA. Primary cutaneous coccidioidomycosis; the criteria for diagnosis and a report of a case. *Calif Med*. 1953;79:233–239.
11. Stevens DA, Clemons KV, Levine HB, et al. Expert opinion: what to do when there is *Coccidioides* exposure in a laboratory. *Clin Infect Dis*. 2009;49:919–923.
12. Baptista-Rosas RC, Hinojosa A, Riquelme M. Ecological niche modeling of *Coccidioides* spp. in western North American deserts. *Ann N Y Acad Sci*. 2007;1111:35–46.
13. Laniado-Laborin R. Expanding understanding of epidemiology of coccidioidomycosis in the Western hemisphere. *Ann N Y Acad Sci*. 2007;1111:19–34.
14. Kirkland TN, Fierer J. Coccidioidomycosis: a reemerging infectious disease. *Emerg Infect Dis*. 1996;2:192–199.
15. Salkin D. Clinical examples of reinfection in coccidioidomycosis. *Am Rev Respir Dis*. 1967;95:603–611.
16. Salkin D, Said A. Reinfection with coccidioidomycosis. *Clin Infect Dis*. 1993;17:1066.
17. Sorensen RH, Cheu SH. Accidental cutaneous coccidioidal infection in an immune person. A case of an exogenous reinfection. *Calif Med*. 1964;100:44–47.
18. National Institute for Occupational Safety and Health. *Histoplasmosis: Protecting Workers at Risk*. DHHS (NIOSH) Publication No. 2005–109. Cincinnati, OH: US Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health; 2004. Available at: http://www.cdc.gov/niosh/docs/2005-109/. Accessed September 1, 2011.
19. California Code of Regulations, Title 8, Section 5199. Aerosol Transmissible Diseases. Available at: http://www.dir.ca.gov/title8/5199.html. Accessed September 1, 2011.
20. Cummings KC, McDowell A, Wheeler C, et al. Point-source outbreak of coccidioidomycosis in construction workers. *Epidemiol Infect*. 2010;138:507–511.
21. Nicas M, Sun G. An integrated model of infection risk in a health-care environment. *Risk Anal*. 2006;26:1085–1096.
22. Galgiani JN. Coccidioidomycosis. *West J Med*. 1993;159:153–171.
23. Nicas M, Hubbard A. A risk analysis for airborne pathogens with low infectious doses: application to respirator selection against *Coccidioides immitis* spores. *Risk Anal*. 2002;22:1153–1163.
24. Centers for Disease Control and Prevention. *Biosafety in Microbiological and Biomedical Laboratories*. DHHS Publication No. (CDC) 21–112:171. 5th ed. Washington, DC: US Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health; 2009. Available at: http://www.cdc.gov/biosafety/publications/bmbl5/index.htm. Accessed September 1, 2011.
25. 29 Code of Federal Regulations. Section 1910.134. Respiratory Protection. Available at: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=12716. Accessed September 1, 2011.
26. US Census Bureau. Census 2000 Classified Index of Occupations. 2000. Available at: http://www.census.gov/hhes/www/ioindex/ioindex.html. Accessed July 15, 2011.
27. Bureau of Labor Statistics. CPS industry classification. Beginning January 2003. Available at: http://www.bls.census.gov/CPS_INDUSTRY_CLASSIFICATION.htm. Accessed July 15, 2011.
28. Breslow NE, Day NE. Statistical methods in cancer research. Volume II—The design and analysis of cohort studies. *IARC Sci Publ*. 1987:1–406.
29. California Code of Regulations, Title 8, Section 3203. Injury and Illness Prevention Program. Available at: http://www.dir.ca.gov/title8/3203.html. Accessed October 23, 2011.
30. Shelton RM. A survey of coccidioidomycosis at Camp Roberts. *JAMA*. 1942;118:1186–1190.
31. Fisher FS, Bultman MW, Pappagianis D. Operational guidelines for geological field work in areas endemic for coccidioidomycosis (Valley Fever). US Geological Survey Open-File Report 00–348 Version 1.0. 2000. Available at: http://geopubs.wr.usgs.gov/open-file/of00-348/. Accessed July 8, 2011.
32. Centers for Disease Control and Prevention. Increase in coccidioidomycosis—California, 2000–2007. *MMWR Morb Mortal Wkly Rep*. 2009;58:105–109.
33. Centers for Disease Control and Prevention. Nationally notifiable infectious conditions, 2011. 2011. Available at: http://www.cdc.gov/osels/ph_surveillance/nndss/phs/infdis2011.htm. Accessed August 19, 2011.
34. Ampel NM. What's behind the increasing rates of coccidioidomycosis in Arizona and California? *Curr Infect Dis Rep*. 2010;12:211–216.
35. De Perio M, Niemeier R. Letter of December 4, 2009, from M. de Perio and R. Niemeier. Division of Surveillance, Hazard Evaluations, and Field Studies, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Department of Health and Human Services, to Nikki Baumrind, California Department of Corrections and Rehabilitation, Sacramento, California. HETA No. 2009–0061; 2009.
36. Pappagianis D. Coccidioidomycosis in California state correctional institutions. *Ann N Y Acad Sci*. 2007;1111:103–111.
37. Yuan J, Wheeler C, Mohle-Boetani JC, Vugia DJ. *CA EPI 06–02 Coccidioidomycosis Outbreak at a State Prison—2005*. To the Record, California Department of Public Health, Infectious Disease Branch, 2007.
38. Park BJ, Sigel K, Vaz V, et al. An epidemic of coccidioidomycosis in Arizona associated with climatic changes, 1998–2001. *J Infect Dis*. 2005;191:1981–1987.
39. Comrie AC. Climate factors influencing coccidioidomycosis seasonality and outbreaks. *Environ Health Perspect*. 2005;113:688–692.
40. Zender CS, Talamantes J. Climate controls on valley fever incidence in Kern County, California. *Int J Biometeorol*. 2006;50:174–182.
41. Greene DR, Koening G, Fisher MC, Taylor JW. Soil isolation and molecular identification of *Coccidioides immitis*. *Mycologia*. 2000;92:406–410.
42. Sutton DA. Diagnosis of coccidioidomycosis by culture: safety considerations, traditional methods, and susceptibility testing. *Ann N Y Acad Sci*. 2007;1111:315–325.
43. Crum N, Lamb C, Utz G, Amundson D, Wallace M. Coccidioidomycosis outbreak among United States Navy SEALs training in a *Coccidioides immitis*–endemic area—Coalinga, California. *J Infect Dis*. 2002;186:865–868.
44. Petersen LR, Marshall SL, Barton-Dickson C, et al. Coccidioidomycosis among workers at an archeological site, northeastern Utah. *Emerg Infect Dis*. 2004;10:637–642.

45. Werner SB, Pappagianis D, Heindl I, Mickel A. An epidemic of coccidioidomycosis among archeology students in northern California. *N Engl J Med*. 1972;286:507–512.
46. Converse JL, Reed RE. Experimental epidemiology of coccidioidomycosis. *Bacteriol Rev*. 1966;30:678–695.
47. Doney BC, Groce DW, Campbell DL, et al. A survey of private sector respirator use in the United States: an overview of findings. *J Occup Environ Hyg*. 2005;2:267–276.
48. Weinberg JL, Bunin LJ, Das R. Application of the industrial hygiene hierarchy of controls to prioritize and promote safer methods of pest control: a case study. *Public Health Rep*. 2009;124(suppl 1):53–62.
49. Hector RF, Rutherford GW, Tsang CA, et al. The public health impact of coccidioidomycosis in Arizona and California. *Int J Environ Res Public Health*. 2011;8:1150–1173.
50. Smith CE, Beard RR, Rosenberger HG, Whiting EG. Effect of season and dust control on coccidioidomycosis. *JAMA*. 1946;132:833–838.

EXHIBIT
3

San Diego solar manufacturer in jeopardy

By Morgan Lee (/staff/morgan-lee/) 4:17 p.m. Dec. 19, 2014

Soitec solar equipment at Newberry Springs.

Solar manufacturer Soitec is scrambling to salvage crucial contracts for its San Diego factory, after San Diego Gas & Electric announced the end of its business relationship with the France-based company.

The Department of Energy contributed $25 million to the factory's construction in 2012 with the goal of boosting a promising solar technology and creating skilled U.S. jobs.

The Rancho Bernardo assembly line employs 250 people. Employees were told this week that it's likely the facility would go into cost-cutting mode in January, a representative for Soitec said.

To underwrite its factory in the Rancho Bernardo area of San Diego, Soitec had lined up contracts to supply 305 megawatts of its signature solar trackers to utility-scale solar plants, mostly in the Imperial Valley and southeastern San Diego County. Amid permitting delays and shifting economics for solar technology, nearly all of the contracts have fallen through or face uncertainty.

Soitec Vice President Clark Crawford said the company is "working to obtain a meeting with SDG&E to find a viable path forward to preserve the power purchase agreements which will maintain the long-term viability of our factory."

SDG&E, a key partner in contracts underwriting Soitec's $200 million investment in an assembly line in the Rancho Bernardo area of San diego, announced in a statement Friday that "we no longer have a direct business releationship with Soitec.

SDG&E said it had taken "unprecedented action to work with Soitec, amending contracts, extending milestone deadlines and seeking additional California Public Utilities Commission approvals. ... But Soitec has historically not been able to meet the extended deadlines and other milestones in the contracts."

Soitec's facility in San Diego has supplied solar equipment to 1 megawatt solar plant in Newberry Springs and a roughly 5 megawatt facility in Borrego Springs, and has otherwise kept active equipping new solar farms overseas in China, South Africa and other countries.

Soitec's concentrated photovoltaic technology differs from the common silicon panel seen on residential rooftops and big solar farms. It uses a lens to focus light on a highly efficient cell no bigger than a ladybug. The lenses and cells are bundled into panels the size of a double garage door, then mounted on trackers that follow the sun.

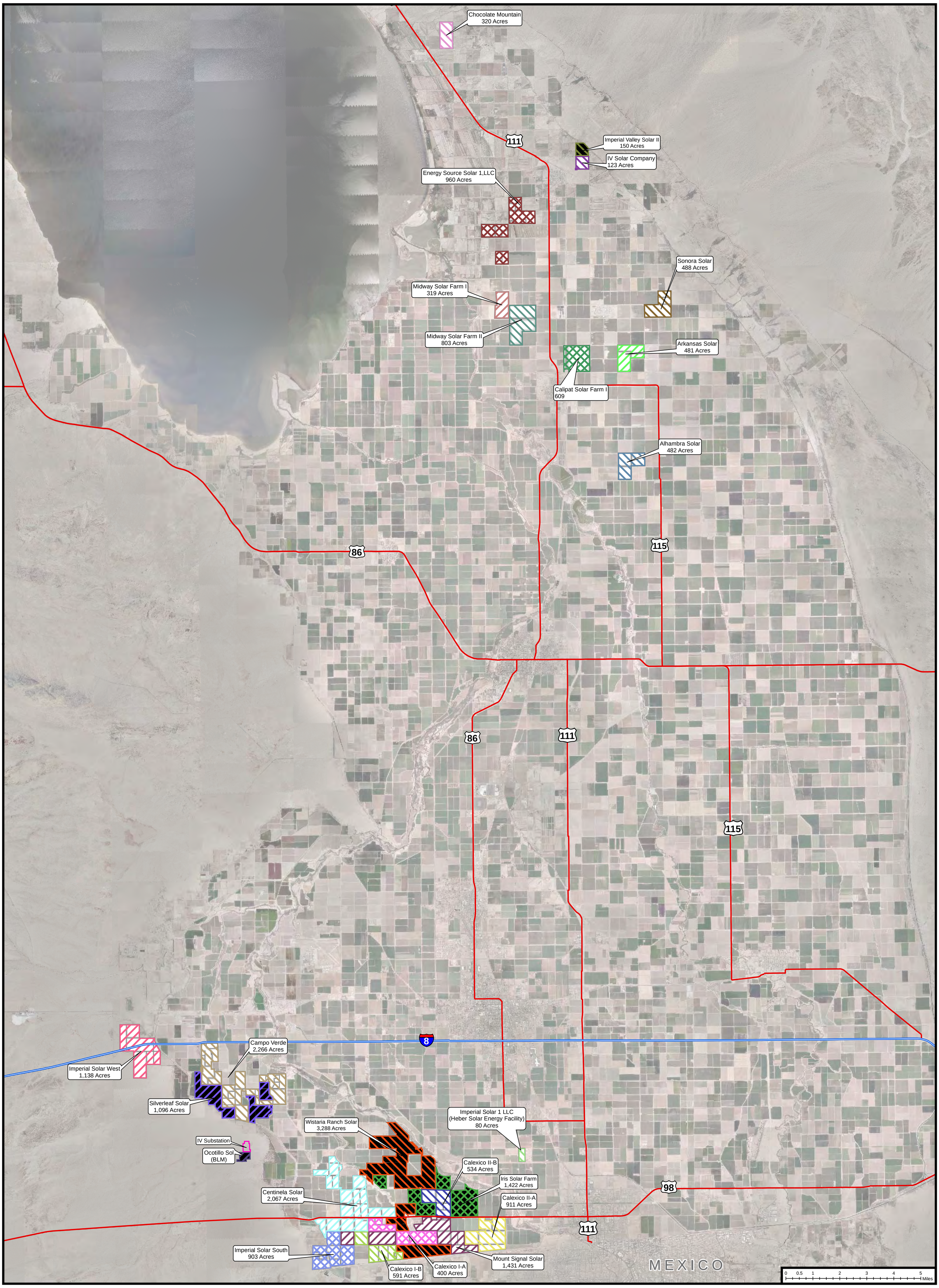
In August, a peer review of the Energy Department grant to Soitec raised concerns about the company's ability to compete with less-expensive conventional solar panels. The cheapest technology — not necessarily the most energy efficient — is likely to prevail, the experts said.

Engineers at SDG&E embraced concentrated photovoltaic solar technology because it provides a steadier electricity supply throughout the day, helping cope with high power demands late on summer days.

Soitec's first difficulties in Southern California emerged when solar contractor Tenaska backed out of using Soitec technology at facilities in the Imperial Valley, scrapping a 150 megawatt commitment.

Soitec is going through a lengthy permitting process for several of its own solar power plants at Boulevard. Faced with delays, Soitec attempted recently to transfer obligations for 150 megawatts of power purchasing agreements with SDG&E to a project in the Imperial Valley by an unnamed developer. That deal is now up in the air, without a guaranteed buyer for the solar energy.

EXHIBIT
4



Imperial County Solar Farm Projects

UPDATED: February 26, 2013

Sources: IC Assessors, IC PLanning Dept., Aerial: NAIP 2010. created by DN

Interstate
US Highways
IV Substation

Project Status
Approved
In Process

Solar Projects
Alhambra Solar
Arkansas Solar
Calexico I-A
Calexico I-B
Calexico II-A
Calexico II-B
Calipat Solar Farm I
Campo Verde
Centinela Solar
Chocolate Mountain
Energy Source Solar 1, LLC
IV Solar Company
Imperial Solar 1 LLC
Imperial Solar South
Imperial Solar West
Imperial Valley Solar II
Iris Solar Farm
Midway Solar Farm I
Midway Solar Farm II
Mount Signal Solar
Ocotillo Sol
Silverleaf Solar
Sonora Solar
Wistaria Ranch Solar
Sol_Prjt_sites_current

N

EXHIBIT
5

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

FILED
12-22-14
04:59 PM

Application of Soitec Solar Industries LLC for Modification of Resolution E-4613.	Application 14-12-008 (Filed December 5, 2014)

RESPONSE OF SAN DIEGO GAS AND ELECTRIC COMPANY (U 902 E) TO APPLICATION OF SOITEC SOLAR INDUSTRIES LLC FOR MODIFICATION OF RESOLUTION E-4613

AIMEE M. SMITH

101 Ash Street, HQ-12
San Diego, California 92101
Telephone: (619) 699-5042
Facsimile: (619) 699-5027
amsmith@semprautilities.com

Attorney for
SAN DIEGO GAS & ELECTRIC COMPANY

December 22, 2014

TABLE OF CONTENTS

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans.	Rulemaking 12-03-014 (Filed March 22, 2012)

RESPONSE OF SAN DIEGO GAS AND ELECTRIC COMPANY (U 902 E) TO APPLICATION OF SOITEC SOLAR INDUSTRIES LLC FOR MODIFICATION OF RESOLUTION E-4613

I. INTRODUCTION

Pursuant to Rule 16.4(f) of the Rules of Practice and Procedure of the California Public Utilities Commission (the "Commission"), San Diego Gas & Electric Company ("SDG&E") provides this response to the *Application of Soitec Solar Industries LLC for Modification of Resolution E-4613* (the "Application") filed by Soitec Solar Industries LLC ("Soitec"). The Application requests modification of Resolution E-4613, in which the Commission approved certain amendments to a power purchase agreement ("PPA") between SDG&E and CSolar IV West, LLC. ("Tenaska"). Specifically, Soitec proposes in the Application that the Commission modify Resolution E-4613 to impose solely upon SDG&E a mandate to procure up to 150 MW from concentrating solar photovoltaic ("CPV") resources. Soitec's Application is entirely lacking in merit and should be rejected.

As discussed in more detail below, Soitec's application should be denied on the grounds that: (i) the record of the underlying proceeding does not support adoption of the procurement mandate proposed by Soitec; (ii) an advice letter proceeding approving a specific contract is not the proper forum for consideration of the proposed procurement mandate; (iii) the Application is an improper collateral attack on Decisions ("D.") 14-11-042 and D.14-04-004; and (iv) the harm

purportedly caused to Soitec arises from a contract amendment approved in Resolution E-4446 rather than from the amendment approved in Resolution E-4613, thus Soitec has failed to seek modification of the proper Resolution. In addition, SDG&E urges the Commission to closely scrutinize the factual claims made by Soitec in the Application in order to ensure the accuracy of the evidentiary record.

While SDG&E challenges the reasonableness of and need for the procurement mandate proposed by Soitec, it remains supportive of Soitec as a market participant in California. It has continued to encourage Soitec to present opportunities to SDG&E, inviting Soitec to bid into SDG&E's current all-source request for offers ("RFO") for capacity. SDG&E notes that Soitec has in fact indicated an interest in participating in SDG&E's all-source capacity RFO; Soitec submitted its bidder registration for the all-source RFO on December 17, 2014.

II.
BACKGROUND

The factual background of the transaction at issue in the Application is somewhat complex. Indeed, the PPAs for Soitec-related transactions – which include the PPA between SDG&E and Tenaska (the "Tenaska PPA") and five PPAs between SDG&E and five separate Soitec subsidiaries (together, the "Soitec PPAs") – have been amended to accommodate Soitec a total of 24 times. A complete understanding of the facts underlying the Application may be of assistance to the Commission in considering the relief requested by Soitec. Accordingly, SDG&E sets forth below a detailed description of Soitec's role in the transaction and the impact of its actions on the timeline of the transaction, and more generally of Soitec's conduct as a market participant in California.

The PPA between SDG&E and Tenaska (the "Tenaska PPA") is a 25-year agreement for generation from a new 96-150ac megawatt ("MW") solar facility to be constructed in Imperial County, California.[1/] The Tenaska PPA originally contemplated construction of the project using CPV panels manufactured in San Diego County. While Soitec was not a party to the Tenaska PPA, it was the understanding of SDG&E (and presumably Tenaska and Soitec) at the time the Tenaska PPA was entered into that Soitec (which is currently the only local manufacturer of CPV panels in the San Diego area) would likely supply the CPV panels for the project. This was not, however, a requirement under the Tenaska PPA.

SDG&E entered into the Tenaska PPA in March, 2011. Shortly thereafter, SDG&E separately entered into five PPAs with five separate Soitec subsidiaries ("Soitec PPAs") to develop, construct and operate electric generating facilities utilizing CPV technology.[2/] The Tenaska PPA and Soitec PPAs were the result of bilateral negotiations occurring at the same time as negotiation of other PPAs from SDG&E's 2009 Renewable Portfolio Standard ("RPS") RFO. These PPAs were evaluated and compared against the other PPAs from SDG&E's 2009 RPS RFO to ensure that price, terms and conditions were comparable to the then-current market conditions.

Shortly after execution of the Tenaska PPA and the Soitec PPAs, SDG&E submitted the PPAs to the Commission for approval.[3/] While the advice letters seeking approval were before the Commission, changes in market conditions resulted in a significant drop in renewable energy

---

[1/] The original Tenaska PPA along with its First Amendment was approved in Resolution E-4446 adopted on December 15, 2011.

[2/] The Soitec PPAs are five separate 25- year agreements for generation from new solar facilities to be constructed in Boulevard and Borrego Springs, California using CPV panels manufactured by Soitec. The projects are: LanEast, LanWest, Desert Green, Rugged and Tierra Del Sol. The Soitec PPAs along with their First Amendments were approved in Resolution 4439 adopted on November 10, 2011.

[3/] Approval of the Tenaska PPA was requested in Advice Letter 2257-E, E-A and E-B. Approval of the Soitec PPAs was sought in Advice Letter 2270-E, E-A.

prices from the levels bid into SDG&E's 2009 RPS solicitation. In response to this price drop, and at the Commission's urging, SDG&E invited its counterparties, including Tenaska and Soitec, to re-price their PPAs in order to improve the likelihood of Commission approval.

In the first amendment to the Tenaska PPA, SDG&E and Tenaska agreed, *inter alia*, to: (i) reduce the pricing for Tenaska's project built with locally-sourced CPV panels by 2%; (ii) a provision permitting Tenaska to change the technology used to build the project to standard PV panels in the event the local CPV panel supply was not commercially available; and (iii) a price reduction of 20% if Tenaska elected to build its project with standard PV panels rather than CPV panels. Thus, while the price for the project using CPV was reduced, it was still much higher than the price of the project using standard PV technology.[4/] The Commission approved the Tenaska PPA with these modifications in Resolution E-4446 adopted on December 15, 2011.[5/]

In 2012, Tenaska informed SDG&E that the project construction timeline would be delayed due to difficulties in negotiations between Soitec and Quanta Power Group ("Quanta"), the engineering, procurement, and construction ("EPC") contractor proposed by Soitec. Soitec and Quanta had been unable to reach agreement on the terms of an equipment supply agreement, without which the CPV panels could not be installed and construction of the project could not be completed. In response, in order to provide necessary time and flexibility to Tenaska, SDG&E and Tenaska entered into a second amendment to the Tenaska PPA to extend the commercial operation deadline and other milestone dates and to require Tenaska to use diligent efforts to

---

[4/] Indeed, a peer review of the Energy Department grant to Soitec raised concerns regarding the high cost of CPV technology and the company's ability to compete against lower-cost standard PV technology. U.S. Department of Energy Report, *SunShot Initiative: 2014 Peer Review Report*, August 2014, pp. 238-239, available at: http://energy.gov/sites/prod/files/2014/09/f18/2014_sunshot_peer_review_report.pdf.

[5/] The Soitec PPAs were similarly modified to reduce the contract price by 2-4%. The Commission approved the Soitec PPAs with the reduced pricing in Resolution E-4439 adopted on November 10, 2011.

negotiate an EPC contract using CPV technology. SDG&E submitted this second amendment to the Commission for approval in Advice Letter 2487-E in June, 2013.

Later in 2013, while Commission approval of Advice Letter 2487-E was still pending, Tenaska notified SDG&E that given Soitec's continuing failure to reach agreement with Quanta on an equipment supply agreement, Tenaska intended to exercise its election to change the project technology to 100% PV panels. Instead of moving away from CPV technology, SDG&E and Tenaska worked to amend the PPA to include a target 67 MW quantity of CPV panels to be used in constructing the project. In order to compensate Tenaska for the higher costs of Soitec CPV panels, the PPA was further amended to provide additional value (effectively increasing the contract price) for the portion of the project built with Soitec CPV panels and to further reduce the PPA pricing if the project were to be constructed with fewer than the target 67 MW of CPV panels. The PPA thus incented the use of CPV panels, but contemplated the possibility that CPV technology would not be used by Tenaska to construct the project. These PPA modifications were effected through an amended and restated second amendment to the PPA, which also provided additional time for completion of the project. SDG&E withdrew the original second amendment (proposed in Advice Letter 2487-E) and submitted the amended and restated second amendment to the Commission for approval in Advice Letter 2487-E-A, which was approved by the Commission in Resolution E-4613.

In January of 2014, Quanta sought to withdraw from the negotiation process with Soitec, but ultimately re-engaged.[6/] Finally, in March, 2014, after attempting unsuccessfully to negotiate with Soitec for over 16 months, Quanta notified Tenaska that it was not able to reach an acceptable equipment supply agreement with Soitec and that it was terminating negotiations on

[6/] See Attachment A hereto - Correspondence dated April 14, 2014 from Barton Ford, CSolar IV West, LLC, to Edward Randolph, Energy Division Director, California Public Utilities Commission ("Tenaska Letter").

the CPV EPC Contract.[7/] Following receipt of this notice, Tenaska notified SDG&E that it would build the project with 100% standard PV technology.[8/] Tenaska observed that "[t]his has been a complicated, difficult process for everyone, and all three parties have tried hard to get to an EPC contract that can work . . . [b]ut it has become clear that the schedule no longer works."[9/] It noted further that "Quanta is not willing to commit to the necessary construction schedule unless Soitec posts substantial additional security in order to cover the Soitec default exposure for the compressed schedule . . . Soitec is not willing or is not able to post the additional security that is required."[10/] Thus, as permitted under the Tenaska PPA, Tenaska elected to construct its project using only standard PV panels and no Soitec CPV panels with a 25% price reduction.

As the volume of PPA amendments would tend to indicate, the pattern of delay by Soitec in negotiating its equipment supply agreement presented a significant challenge to timely completion of the Tenaska project. In late 2012, around the time concerns regarding Soitec's delay in finalizing an equipment supply agreement initially came to light, the target date for completion of the Soitec equipment supply agreement was March 21, 2013. This target date was successively pushed back to May, June, July, October, November, December of 2013 then January, February and March of 2014 to accommodate Soitec.[11/] Soitec's failure to reach agreement with Quanta had a domino effect on other contract milestone dates – *e.g.*, the target financial closing date was delayed by a year – which jeopardized completion of the project.

In detailing the challenges related to the negotiations with Soitec regarding the equipment supply agreement, Tenaska pointed out to the Commission that "[t]hroughout the three year period since the PPA was signed SDG&E has been extremely proactive in seeking to assist and

---

[7/] *Id*., Attachment 1.
[8/] *Id*., Attachment 3.
[9/] *Id*., Attachment 5, p. 2.
[10/] *Id*.
[11/] See Attachment A hereto - Tenaska Letter, note 2.

encourage [Tenaska] to be successful in its efforts to incorporate Soitec's technology in the project."[12/] SDG&E's accommodation of Soitec is also demonstrated by the support and flexibility it provided to Soitec in the context of the five Soitec PPAs approved in Resolution E-4439. In 2013, Soitec requested an amendment to the Soitec PPAs to permit Soitec to move its projects from the Boulevard area to the Imperial Valley, as well as to provide for an extension of certain dates in the PPAs. SDG&E agreed to this request and amended the Soitec PPAs in the second and third amendments to incorporate these modifications, and to require the use of Soitec CPV panels in the projects. These amendments were approved by the Commission in Resolution E-4637.

In early 2014, Soitec again approached SDG&E seeking amendments to the four PPAs located in Boulevard, California. In this case, Soitec stated that it was nearing completion on negotiations with a third party to take assignment of the PPAs for construction in Imperial County, but that additional time was necessary to permit Soitec to complete the negotiations. In February 2014, SDG&E and Soitec entered into the fourth amendment to the four Soitec PPAs to provide more time to Soitec to complete its assignment. In March 2014, Soitec sold its Desert Green project to Invenergy and SDG&E consented to that sale under the terms of the Desert Green PPA.

At the time SDG&E and Soitec entered into the fourth amendment to the four Soitec PPAs, SDG&E advised Soitec that it did not wish to consider any further amendments to the PPAs. Notwithstanding this, Soitec requested in August 2014 that SDG&E amend its PPAs a fifth time to extend deadlines, assign the four PPAs to a different third party for construction in Imperial Valley and relocate at least one of the projects to Blythe. SDG&E indicated that the level of modifications requested by Soitec would require further approvals by the Commission

[12/] *Id*., p. 2.

and that SDG&E was not willing to pursue such approvals unless Soitec was willing to reset the pricing provisions to reflect current market conditions. Soitec indicated that it was not willing to amend the PPAs in this fashion and was not willing to subject itself to further Commission scrutiny.

Shortly thereafter, in September 2014, Soitec requested SDG&E's consent to Soitec's assignment of its four PPAs to a new third-party developer (Soitec's fourth potential assignee). Under the third and fourth amendments to the Soitec PPAs, the deadline for completion of this assignment was September 30, 2014. Although Soitec had not finalized its arrangements for a complete unconditional assignment by this date, SDG&E nevertheless consented to the conditional assignment to this new third-party developer. Under the terms of the conditional assignment – which was agreed to and executed by Soitec and the new third party developer, and consented to by SDG&E – the third party developer had the right to voluntarily terminate any of the four PPAs. It elected to terminate one of the four PPAs on November 28, 2014 in lieu of posting additional credit support for that PPA. In addition, under the conditional assignment, the PPAs would automatically terminate if the third-party developer was unable to release the new project site from other unrelated PPAs by December 19, 2014. The third-party developer did not meet this condition and the remaining three PPAs have now terminated.

The significant effort undertaken by SDG&E to assist Soitec and to facilitate construction of CPV solar resources is clear. As recently as this month, SDG&E offered its public support for Soitec's projects, submitting letters to San Diego County Board of Supervisors and the County Planning Commission urging the expeditious issuance of Major Use permits for the Soitec

projects located in Boulevard.[13/] In addition, in a December 4 communication to Soitec, SDG&E noted its commitment to the development of renewable projects in San Diego County and brought to Soitec's attention the issuance of SDG&E's all-source RFO for capacity. Thus, Soitec continues to have opportunities to compete in California; its ability to do so, however, remains contingent upon its ability to offer a competitively priced product[14/] and commercially reasonable equipment supply arrangements. Absent this, SDG&E does not believe that Soitec can successfully participate in the development of new CPV facilities.

III.
DISCUSSION

A. The Record Related to Approval of the Tenaska PPA does not Support Adoption of Soitec's Proposed Procurement Mandate

The Tenaska PPA, as originally submitted to the Commission, contemplated construction of a 96 to 150 MWac project with 100% CPV technology. Soitec argues that Resolution E-4613, which approved, *inter alia*, an amendment to the Tenaska PPA that reduced the project's reliance on CPV technology, should now be modified to require "procurement of electricity from [CPV] technology in a quantity at least equivalent to the CPV capacity that was expected to be deployed in the original [PPA]."[15/] In other words, Soitec proposes that the Commission modify Resolution E-4613 to impose solely upon SDG&E a mandate to procure up to 150 MW from CPV resources. Soitec's proposal to impose a technology-specific mandate on SDG&E must be

---

[13/] See Attachment B hereto – Correspondence dated December 4, 2014 from James P. Avery, SDG&E, to Chairwoman Dianne Jacob, San Diego County Board of Supervisors; Correspondence dated December 4, 2014 from James P. Avery, SDG&E, to Chairman Peder Norby, San Diego County Planning Commission. SDG&E's support for these projects was offered prior to the termination of the related PPAs on December 19, 2014.

[14/] As noted above, a peer review of the Energy Department grant to Soitec identified the ability to achieve competitive pricing as a key challenge faced by Soitec. *See, supra*, note 4.

[15/] As discussed in Section II hereof, Resolution E-4613 approved amendment of the Tenaska PPA to include a target 67 MW quantity of CPV panels to be used in constructing the project.

rejected. The record developed in connection with Commission approval of the Tenaska PPA is not adequate to support a finding by the Commission that imposition of a technology-specific mandate such as that proposed by Soitec would serve the public interest.

As Soitec notes, it was anticipated that the Tenaska project using 100% CPV technology would provide economic and employment benefits in the San Diego area, and bring valuable resource diversity to SDG&E's renewable portfolio.[16/] These benefits arising from use of CPV technology were considered by the Commission in the context of an analysis of the total benefits and obligations associated specifically with the Tenaska PPA. The Commission's evaluation of whether the proposed PPA was in the public interest was based upon consideration of several factors including consistency with SDG&E's RPS Procurement Plan, consistency with SDG&E's Least-Cost, Best-Fit ("LCBF") requirements, cost reasonableness, and project viability.[17/] While the Commission found that, taken as a whole, the Tenaska PPA was reasonable and in the public interest, it did not consider any evidence or reach any determination regarding the reasonableness of any potential transaction outside of the Tenaska PPA; its finding of reasonableness was specific to the transaction presented. It certainly did not consider or seek to address the question of whether the benefits associated with use of CPV technology are so great that a procurement-specific mandate related to such technology should be adopted.

While Soitec claims that its proposed procurement mandate would "help save jobs, boost the San Diego economy, and promote technological diversity in California," it provides no analysis, much less verifiable evidence, regarding the costs associated with imposition of the proposed mandate on SDG&E, its impact on system reliability or other relevant considerations. Because it is required under Rule 16.4(b) to limit its factual allegations to those that can be

---

[16/] Application, p. 2.
[17/] *See* Resolution E-4446, p. 6.

supported by the record in the proceeding,[18] it is unable to provide this analysis since none was presented in connection with the advice letters seeking approval of the Tenaska PPA and subsequent amendments. Plainly, the record related to approval of the Tenaska PPAs is not adequate to support Commission adoption of Soitec's proposal to modify Resolution E-4613 to adopt a technology-specific mandate for SDG&E. Accordingly, Soitec's proposal must be rejected.

B. The PPA Approval Process is Not the Proper Forum for Consideration of the Proposed Procurement Mandate

Commission General Order ("G.O.") 96-B makes clear that the advice letter process is appropriate only for "requests that are expected neither to be controversial nor to raise important policy questions."[19] As discussed above, the focus of the PPA advice letter approval process is limited to consideration of a specific proposed transaction. Nevertheless, Soitec presents its proposal for adoption of a new SDG&E-specific procurement mandate – a request that is both controversial and certain to raise important policy questions – in an advice letter proceeding. Plainly, this is not the appropriate procedural vehicle for presentation of Soitec's proposal. Thus, the Application should be rejected.

The RPS rulemaking proceeding is the proper forum for issues related to the Commission's continuing administration and oversight of the RPS program.[20] In its RPS proceeding, the Commission has previously considered proposed technology-specific mandates, including, most recently, Senate Bill ("SB") 1122,[21] which requires the investor-owned utilities ("IOUs") to procure mandated quantities of RPS-eligible generation from facilities using

---

[18] Rule 16.4(b) requires that " . . . Any factual allegations must be supported with specific citations to the record in the proceeding or to matters that may be officially noticed . . ."
[19] G.O. 96-B, §5.1.
[20] *Scoping Memo and Ruling of Assigned Commissioner*, issued July 8, 2011 in R.11-05-055, p. 2.
[21] Senate Bill ("SB") 1122, (Stats. 2012, Ch. 612).

specified types of bioenergy. As is clear from the Commission's prior consideration of RPS procurement mandates, adoption of a technology-specific mandate requires careful consideration of a variety of issues including the specifics of the pricing mechanism and whether it complies with federal and state law, as well as other factors such as the overall benefit to ratepayers, relative cost, potential market impacts and viability of the proposed technology.

Similarly, the Commission's Long-Term Procurement Plan ("LTPP") proceeding is intended to "ensure a reliable and cost-effective electricity supply in California through integration and refinement of a comprehensive set of procurement policies, practices and procedures underlying long-term procurement plans."[22/] The LTPP proceeding considers the long-term capacity needs of the IOUs. To the extent resources relying on CPV technology are able to provide local or system capacity, a technology-specific mandate such as that proposed by Soitec might be considered in the LTPP proceeding.

Evaluation of Soitec's proposal in a forum that allows deliberate and comprehensive consideration of the myriad issues raised in connection with such a request is critical. It is not clear, for example, exactly what benefits would be conferred on ratepayers by a generic mandate to procure CPV resources. Soitec claims that the proposed procurement mandate would "restore the quantity of Soitec CPV panels that Soitec assumed would be deployed in the Project . . .," and further that the proposal would "help save jobs, boost the San Diego economy, and promote technological diversity in California."[23/] Thus, it appears that Soitec's proposal is intended at least in part to benefit its own market position. This would be an important area of inquiry since the Commission's obligation is to further the public interest rather than to provide an advantage to particular market participants.

[22/] *Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge*, issued May 14, 2014 in R.05-05-055, p. 2.

[23/] Application, pp. 7-8.

With regard to Soitec's assertion that the proposal to mandate procurement of CPV technology would provide economic benefits to the San Diego region, while it is possible that this would be the case, it would be necessary to explore the extent of the benefit provided and whether the cost associated with deployment of the CPV technology is justified by any such benefit.[24/] Finally, it is not clear what rationale, if any, exists to support imposition of the proposed mandate solely on SDG&E, particularly given SDG&E's current lack of RPS need.[25/] If, as Soitec claims, the procurement mandate would promote technological diversity statewide, allocation of the cost of such procurement solely to SDG&E ratepayers is unreasonable.

Because Soitec improperly presented its proposal in the context of the Tenaska PPA advice letter proceeding, it is not possible to explore these and other important issues. In addition, by offering its proposal in the context of a PPA-specific Resolution, and failing to serve either the RPS service list or the LTPP service list, Soitec effectively excluded many stakeholders who would be affected by adoption of Soitec's proposal. Given Soitec's flawed and improper procedural approach, the Application should be denied.

C. The Application is an Improper Collateral Attack on D.14-11-042 and D.14-04-004

i. Collateral Attacks on Commission Decisions are Prohibited

The Commission has defined a collateral attack as "an attempt to invalidate the judgment or order of the Commission in a proceeding other than that in which the judgment or order was rendered."[26/] Section 1709 of the Public Utilities Code establishes that "[i]n all collateral actions or proceedings, the orders and decisions of the commission which have become final shall be conclusive." Under Commission Rules of Practice and Procedure, parties may challenge a

---

[24/] SDG&E notes that the Tenaska PPA remains in effect and that SDG&E ratepayers will continue to derive anticipated benefits therefrom.

[25/] *See* D.14-11-042, *mimeo*, Conclusion of Law ("COL") 18, Ordering Paragraph ("OP") 17.

[26/] D.07-04-017, *mimeo*, p. 8.

Commission determination by filing an application for rehearing or a petition for modification.[27/] Collateral attacks on Commission decisions, however, are prohibited.[28/] The California Supreme Court has observed that the "conclusiveness arises by operation of law. It is the order and not the reasons for it that establishes its effectiveness."[29/]

ii. The Application is an Improper Collateral Attack on D.14-11-042

In the Commission's recently-adopted RPS Plan decision, D.14-11-042, the Commission concluded that SDG&E is not required to issue a solicitation for RPS procurement during the next procurement cycle. It found that based on SDG&E's current levels of RPS procurement and lack of RPS need, "it is reasonable to approve of SDG&E's request not to hold a 2014 solicitation."[30/] While SDG&E remains obligated to undertake procurement of small projects through its Renewable Auction Mechanism ("RAM") and Renewable Market Adjusting Tariff ("Re-MAT") programs, the decision expressly finds that SDG&E is not obligated to undertake other RPS procurement during the time period covered by the 2014 solicitation cycle (*i.e.*, 2015).[31/]

While Soitec had the opportunity to present its technology-specific procurement mandate proposal in the phase of the RPS proceeding that addressed SDG&E's draft RPS Plan, and to file comments on the proposed decision that approved SDG&E's request to refrain from RPS procurement during the next procurement cycle (other than RAM/Re-MAT procurement), it did not elect to do so. Instead, it now seeks through a separate proceeding to impose an RPS

[27/] *See* Rules 16.1 and 16.4.

[28/] *See, e.g.* D.08-04-063, D.07-10-015, D.07-04-017, D.07-03-047.

[29/] *People v. Western Air Lines, Inc.*, 42 Cal.2d 621, 632-633 (1954) .

[30/] D.14-11-042, *mimeo*, COL 18.

[31/] *Id*. at OP 17. This authorization to not hold a solicitation only applies for the next solicitation cycle (one year); the Commission will revisit SDG&E's need to conduct an RPS solicitation in its future decision on SDG&E's 2015 RPS Plan. *Id*.

procurement requirement on SDG&E that stands in direct conflict with the findings and action ordered in D.14-11-042.

It is clear that Soitec's proposal to require SDG&E to procure up to 150 MWac from a CPV resource is "an attempt to invalidate the judgment or order of the Commission in a proceeding other than that in which the judgment or order was rendered."[32/] Thus, the Commission should reject as a collateral attack on D.14-11-042 Soitec's attempt to relitigate the settled issue of whether SDG&E is required to undertake (non-RAM/Re-MAT) RPS procurement during the next procurement cycle and deny the Application.[33/]

iii. The Application is an Improper Collateral Attack on D.14-04-004

In D.14-03-004, issued in Track 4 of the LTPP proceeding, the Commission ordered SDG&E to issue an all-source solicitation for 500-800 MW of long-term local capacity, including at least 25 MW from energy storage resources and 175 MW from preferred resources.[34/] Soitec did not elect to participate in Track 4 of the LTTP and did not present its proposal to require SDG&E to procure up to 150 MWac of capacity from CPV resources. Instead, it now seeks to impose this procurement mandate through a separate advice letter proceeding.

It is clear that Soitec's proposal to mandate procurement of up to 150 MWac of capacity from CPV resources is a collateral attack on D.14-03-004 – it is an attempt to invalidate the Commission's order in Track 4 of the LTPP, which did not include this mandate, through

---

[32/] *See* D.07-04-017, *mimeo*, p. 8.

[33/] While Soitec remains free to submit bids into SDG&E's RAM/Re-MAT programs, the RPS Plan decision did not adopt a specific mandate to procure CPV resources within these programs. Thus, to the extent Soitec's proposed procurement mandate is intended to apply to RAM/Re-MAT, it is inconsistent with and a collateral attack on D.14-11-042.

[34/] D14-03-004, *mimeo*, OP 2.

modification of an unrelated Resolution.[35/] In addition, Soitec's proposal is untimely as it relates to SDG&E's Track 4 all-source RFO for capacity. In accordance with its Commission-approved Track 4 procurement plan, SDG&E issued its all-source capacity RFO on September 5, 2014, with bids due on January 5, 2015. Accordingly, while Soitec is free to bid resources into the all-source solicitation, its proposal to impose a procurement mandate at this point is infeasible and improper. The Commission should find that Soitec's Application is an improper collateral attack on D.14-03-004 and deny it on that basis.

D. The Harm Purportedly Caused to Soitec Arises from Contract Revisions Approved in Resolution E-4446 Rather than Resolution E-4613 Identified in the Application

Rule 16.4(e) of the Commission's Rules of Practice and Procedure requires a petitioner who was not a party to the proceeding in which modification is sought to "state specifically how the petitioner is affected by the decision and why the petitioner did not participate in the proceeding earlier." Soitec, which did not participate in the advice letter proceeding that approved the Tenaska PPA and its subsequent amendments, provides the following explanation for its failure to participate in the underlying proceeding: "the Amended PPA approved by [Resolution E-4613] contemplated using CPV panels in the project, thereby creating demand for panels manufactured by Soitec. Soitec thus had no reason to protest or respond to SDG&E's Advice Letters."[36/] Soitec's explanation exposes a significant flaw in the rationale it presents in the Application to justify modification of Resolution E-4613.

Soitec suggests in the Application that modification of Resolution E-4613 is necessary to offset the harm caused by Tenaska's decision to change the project technology used to build the project from Soitec's CPV panels to 100% standard PV panels. However, the harm purportedly caused to Soitec is not the result of the contract revision approved by the Commission in

---

[35/] *See* D.07-04-017, *mimeo*, p. 8.

[36/] Application, p. 9.

Resolution E-4613. As discussed above, Resolution E-4613 approved amendment of the Tenaska PPA to include a target 67 MW quantity of CPV panels to be used in constructing the project. Soitec admits that it had no reason to protest or respond to this contract revision since it contemplated that CPV panels would be used in the Tenaska project.[37/]

The harm purportedly caused to Soitec arises from Tenaska's exercise of the provision in the Tenaska PPA that allows Tenaska to change the project technology from CPV technology to PV technology. It was exercise of this right by Tenaska that resulted in elimination of CPV technology from the project and frustration of Soitec's "expectation that there would be 305 MW of CPV panels deployed in projects under contract to SDG&E, **including the 150 MW project that has now been converted to the PV-only Project through the Amended [Tenaska] PPA**."[38/] The provision permitting Tenaska to convert the technology from CPV to PV was not approved by the Commission in Resolution E-4613. Rather, it was approved in Resolution E-4446.

Resolution E-4446 approved the first amendment to the Tenaska PPA (the "First Amendment"), in which SDG&E and Tenaska agreed, *inter alia*, to amend the PPA to include a provision permitting Tenaska to change the technology used to build the project to standard PV panels in the event the CPV panel supply was not commercially available.[39/] Thus, the modification proposed by Soitec is relevant to the action taken in Resolution E-4446 and Soitec's Application should have sought modification of that Resolution, if any. Soitec did not, however,

---

[37/] *Id.*
[38/] Declaration of Clark Crawford attached to Application, p. 1-2, Par. 7 (emphasis added).
[39/] *See* Tenaska PPA Section 2.4(c).

submit a protest to SDG&E's Advice Letter submitting the First Amendment for Commission approval.[40/] Nor did Soitec submit a protest to the Commission draft Resolution approving the First Amendment, which was ultimately approved as Resolution E-4446.

While the modification sought in Soitec's Application properly relates to Resolution E-4446, the issuance date of Resolution E-4446 was December 15, 2011, which means that Soitec is well outside the one-year window for seeking modification of a Commission order established in Rule 16.[41/] Requests for modification outside this one-year window must "explain why the petition could not have been presented within one year of the effective date of the decision."[42/] Even if, *assuming arguendo*, the Application correctly identified Resolution E-4446 as the Commission Resolution requiring modification, the Application would be improper inasmuch as Soitec cannot establish that it was not possible for it to identify the potential harm that could arise from the First Amendment at the time it was approved in Resolution E-4446. It is clear that the issue presented by Soitec was a foreseeable outcome of the Commission's approval of the First Amendment. Any reasonable reading of the Tenaska PPA as amended by the First Amendment would have revealed the possibility that Tenaska could at some point exercise its right to eliminate CPV technology from the project. Thus, Soitec cannot claim that the issue it raises now was only recently made evident.[43/]

Plainly, Soitec's Application is procedurally flawed. The Resolution it seeks to modify is not the source of the concerns it raises in the Application. In addition, Soitec fails to demonstrate that it was not possible for it to raise its concerns regarding the potential harm

---

[40/] Advice Letters 2257-E, E-A and E-B.
[41/] *See* Rule 16.4(d).
[42/] *Id*.
[43/] *See, e.g.*, D.14-12-023, *mimeo*, p. 63.

caused by the First Amendment at an earlier point, in compliance with the Commission's Rules of Practice and Procedure. Accordingly, the Application should be denied.

E. The Commission Should Closely Scrutinize the Factual Claims Included in the Application

As discussed above, the evidentiary record developed in connection with approval of the Tenaska PPA does not establish the need for a procurement mandate such as that proposed by Soitec. Similarly, the record of the underlying advice letter proceeding does not establish that Soitec was harmed by Tenaska's exercise of its right to eliminate CPV technology from the project. The only factual evidence presented to the Commission regarding the harm caused to Soitec is contained in the Declaration of Clark Crawford attached to the Application. The claims offered by Mr. Crawford are not, however, entirely consistent with statements made by Soitec in other forums concerning the impact of Tenaska's decision. Accordingly, SDG&E recommends that the Commission carefully examine the statements made by Soitec to ensure a factually accurate record.

In a Soitec French financial report dated May 13, 2014, for example, Soitec reported that it had 173 employees and 20 contract workers at its San Diego manufacturing facility as of March 31, 2014.[44/] In the Application, however, Soitec inflates this number, claiming that it has "hired 250 people to date to work at its facility in San Diego."[45/] In addition, in a Soitec financial report filed *after* Tenaska's elimination of CPV technology from its project, Soitec reported that it had 47 MWPEAK of projects under construction, 267 MWPEAK of projects with PPAs (a portion of this amount relates to the assigned Soitec PPAs that have now been terminated), and

---

[44/] See Attachment C hereto - *Soitec Reference Document and Annual Financial Report 2013-2014*, p. 54.

[45/] Application, pp. 6-7; Declaration of Clark Crawford, p. 1-2, Par. 10.

approximately 300 MWPEAK of projects with a reasonable probability of PPAs.[46/] The projections included on Soitec's financial report do not support the premise of the Application – *i.e.*, that the challenges experienced by Soitec are the result of elimination of CPV technology from the Tenaska project.

Given the disparities between the factual assertions made in the Application and statements made by Soitec in its financial reports, the Commission should closely scrutinize the claims made by Soitec in the Application to ensure the accuracy of the Commission's evidentiary record.

IV.
CONCLUSION

For the reasons set forth herein, the Application should be denied.

Dated this 22nd day of December, 2014 in San Diego, California.

Respectfully submitted,

/s/ Aimee M. Smith
AIMEE M. SMITH

101 Ash Street, HQ-12
San Diego, California 92101
Telephone: (619) 699-5042
Facsimile: (619) 699-5027
amsmith@sempratilities.com

Attorney for
SAN DIEGO GAS & ELECTRIC COMPANY

[46/] See Attachment D hereto – *Soitec 2014-2015 Financial Report H1 Results*, dated November 19, 2014 at 15.

ATTACHMENT A

Correspondence dated April 14, 2014

CSOLAR IV WEST, LLC

14302 FNB Parkway
Omaha, Nebraska 68154-5212
402-691-9500
FAX: 402-691-9526

April 14, 2014

Mr. Edward Randolph
Director, Energy Division
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Re: Comments made at April 10, 2014 California Public Utilities Commission Meeting Regarding the 150 MW Power Purchase Agreement (as amended, the "PPA") between San Diego Gas & Electric Company ("SDG&E") and CSolar IV West, LLC ("CSOLAR")

Dear Mr. Randolph,

At the conclusion of your short report on the technology selection for the CSOLAR PPA, there were some questions and comments from certain Commissioners, and then a request by Commissioner Picker that you report briefly at the CPUC meeting on May 1 if there are any new developments.

In order to enable a more complete basis for any update on this subject, CSOLAR provides the following information.

1. PPA Terms Relevant to Conversion to 100% Standard PV Technology. Your prepared statement indicated that the PPA allowed Tenaska to switch to 100% standard PV technology (rather than a mix of PV technology and Soitec's CPV technology[1]) under very limited circumstances. The relevant PPA provision is Section 2.4(c).

Section 2.4(c) permits CSOLAR to construct the project with 100% standard PV panels if it provides notice that CSOLAR has not been able to enter into financeable "EPC Contracts" or Soitec has not entered into an equipment supply agreement with the "CPV EPC Contractor," by November 30, 2013 or such later date, if any, determined by CSOLAR to be reasonably practicable.

On March 28, 2014 Quanta Power Group, the prospective CPV EPC Contractor with whom Soitec had been working for over 16 months, notified CSOLAR that it was unable to reach an acceptable equipment supply agreement with Soitec and was terminating negotiations with CSOLAR on the CPV EPC Contract. Copies of this notice to CSOLAR and Quanta's separate notice to Soitec are attached.

Following receipt of Quanta's notice terminating negotiation of the CPV EPC Contract, CSOLAR provided the notice to SDG&E under Section 2.4(c) that it would build the project with 100% standard PV technology. This notice is also attached.

Quanta's termination of negotiations on March 28, 2014 was not the first time that Quanta dropped out of the project.[2] Two months earlier, on January 27, 2014, Quanta also gave notice that it would not proceed further

[1] The PPA does not specify that the CPV modules must be manufactured by Soitec but this letter refers to Soitec for ease of reference.

[2] When Quanta began working with Soitec and CSOLAR in late 2012 as the prospective CPV EPC Contractor the target date for completion of the Soitec equipment supply agreement was March 21, 2013. This was successively pushed back

with the project. See the attached e-mail from Quanta of the same date. However, SDG&E was able to persuade Quanta to reconsider this, and Quanta then continued to work with Soitec and CSOLAR for two months before the security issue mentioned below caused Quanta to exit again. Throughout the three year period since the PPA was signed SDG&E has been extremely proactive in seeking to assist and encourage CSOLAR to be successful in its efforts to incorporate Soitec's technology in the project.

2. Is there a Contractual Dispute between CSOLAR and Soitec? Commissioner Florio asked if there was an underlying contractual dispute between Tenaska and Soitec. You responded that you believed it was much more a dispute of economics and not a contractual dispute. This was partially correct.

Neither CSOLAR nor any other affiliate of Tenaska has a contractual relationship with Soitec. This question wasn't asked, but we also do not have a contractual dispute with SDG&E. Our determination to proceed with the construction of a 100% standard PV project under the current circumstances is clearly provided for under the PPA and there is no basis on which the exercise of this right can be disputed in good faith.

However, the main underlying issue between Quanta and Soitec was not a question of economics. (The economic issue with the Soitec's technology was resolved through certain pricing enhancements approved by the CPUC in the Amended and Restated Second PPA Amendment.) As indicated in the attached March 28 notice from Quanta to Soitec the primary issue was Soitec's inability or unwillingness to post security in the amount and at the time necessary in Quanta's judgment to adequately protect Quanta from the consequences of a default by Soitec under the equipment supply agreement. This was a risk issue for Quanta rather than an economic issue, and Quanta's increasing exposure to a Soitec default was due primarily to schedule compression caused by multiple delays rather than by economics. CSOLAR attempted to bridge the gap between Quanta and Soitec by contributing a $15 million price increase to help address the security issue. But Quanta and Soitec were still unable to reach agreement. See the attached March 20 and March 28 e-mails to Carol Brown.

3. What is the Effect of CSOLAR Exercising its Right Under PPA Section 2.4(c) to Build the Project using 100% Standard PV Technology? Several Commissioners commented that the project's expected use of CPV technology was an important rationale for approving the higher price in the PPA. These comments seemed to overlook the fact that under the PPA CSOLAR will receive a substantially lower price per MWH as a result of CSOLAR's exercise of its right under Section 2.4(c).

The price difference between CPV and PV results from (1) the PV price per MWH being lower than the CPV price per MWH in the original PPA; (2) a very substantial reduction in the PV price in the First Amendment to the PPA as compared with a much more modest reduction in the CPV price in that amendment; (3) a further reduction in the PV price under the Amended and Restated Second Amendment that applies if CSOLAR exercises its right under Section 2.4(c) to convert the project to 100% PV[3]; and (4) pricing "enhancements" for CPV in the Amended and Restated Second Amendment that are not applicable for an all PV project.

As a result of these pricing provisions in the original PPA, the First Amendment and the Amended and Restated Second Amendment, CSOLAR's exercise of the conversion right under Section 2.4(c) will now cause the price

---

to May, June, July, October, November, December of 2013 then January, February and March of 2014. It is understandable that Quanta eventually decided that it was not going to reach a satisfactory resolution with Soitec. A summary of some of the reasons for the more recent delays is included in the attached March 12, 2013 e-mail to Jim Avery of SDG&E.

[3] SDG&E insisted on this decrease in order to ensure that CSOLAR would be economically incented to use CPV rather than PV technology.

to be reduced substantially from the price per MWH that would have applied if CSOLAR were able to build the project with a substantial CPV component.

To be clear, the value of the project for Tenaska would be materially greater if Soitec technology could be used. The reduced PPA price that will now apply to MWHs produced using standard PV technology as compared with the much higher price that would have applied to MWHs produced with CPV technology, produces a materially worse result for Tenaska, economically, even after taking account of the fact that the cost of PV technology is much lower than Soitec's CPV technology. CSOLAR had a powerful incentive to use CPV technology in the project if that were feasible. Unfortunately, it was not.

SDG&E can verify that Tenaska had a strong incentive to succeed with Soitec technology, if possible. A major purpose of the pricing changes in the Amended and Restated Second Amendment that the Commission approved on December 5 of last year was to ensure that Tenaska's financial incentives favored Soitec CPV technology, and the amendment did achieve that purpose.

Finally, it was apparent that there is a great deal of disappointment on the part of the Commissioners over the current situation. CSOLAR is also disappointed, as its economics have been adversely affected by the inability to use Soitec technology. CSOLAR is now attempting to deliver to its customer SDG&E a PV project as is required under the terms of the PPA. Our actions have been appropriate and are entirely consistent with our rights and obligations under the PPA. We would welcome the opportunity to discuss these matters with you.

Please feel free to contact me if you have any questions about the information provided above.

Very truly yours,

Barton D. Ford
Vice President
bford@tenaska.com
(817) 462-1033

CC:

President Michael R. Peevey
Commissioner Mike Florio
Commissioner Carla J. Peterman
Commissioner Michael Picker
Commissioner Catherine J.K. Sandoval
Ms. Carol Brown, Chief of Staff to President Peevey

ATTACHMENTS

1. March 28, 2014 E-Mail from Chris Laursen (Quanta) to Bart Ford (CSOLAR)
2. March 28, 2014 E-Mail from Chris Laursen to Andre-Jacques Auberton-Herve (Soitec) and Bart Ford
3. March 28, 2014 Notice to SDG&E pursuant to PPA Section 2.4(c)
4. January 27, 2014 E-Mail from Chris Laursen (Quanta) to Nicholas Borman (CSOLAR)
5. March 12, 2014 E-mail from Bart Ford to James Avery (SDG&E)
6. March 20, 2014 E-Mail from Bart Ford to Carol Brown (President Peevey's Chief of Staff)
7. March 28, 2014 E-Mail from Bart Ford to Carol Brown

1. March 28, 2014 E-Mail from Chris Laursen (Quanta) to Bart Ford (CSOLAR)

From: Laursen, Christian [mailto:CLaursen@quantapower.net]
Sent: Friday, March 28, 2014 10:49 AM
To: Ford, Barton
Subject: IV West - Negotiations with Soitec

Bart,

With great disappointment I must advise that Quanta has been unable to reach an acceptable agreement on the ESA with Soitec for the IV West project. We therefore have no choice but to terminate our negotiations with Tenaska for the EPC contract.

Regards,
Chris

2. **March 28, 2014 E-Mail from Chris Laursen to Andre-Jacques Auberton-Herve (Soitec) and Bart Ford**

From: Laursen, Christian [mailto:CLaursen@quantapower.net]
Sent: Friday, March 28, 2014 10:50 AM
To: Andre-Jacques AUBERTON-HERVE
Cc: Ford, Barton
Subject: Re: Soitec Answer 27th of March 2014

Andre,

Quanta has carefully reviewed your latest proposal. We find that the key gaps remain, in particular the timing of the posting of security. Soitec's position on security, which you have indicated as final, would leave Quanta exposed to significant unsecured financial losses in the event of a Soitec default, which is unacceptable.

I am very disappointed that the repeated delays in reaching agreement on this project over the last 16 months, and subsequent schedule compression, has resulted in a project risk profile that is significantly greater than originally planned, and it has become clear that the parties are unable to agree on an acceptable allocation of this heightened risk.

Quanta has notified Tenaska that we are unable to reach an acceptable contractual agreement with Soitec, and are therefore terminating negotiations on this project.

Regards,
Chris

3. **March 28, 2014 Notice to SDG&E pursuant to PPA Section 2.4(c)**

CSOLAR IV WEST, LLC

March 28, 2014

San Diego Gas & Electric Company
8330 Century Park Court Cp33A San
Diego, California 92123-1530
Attn: Contract Administration
Facsimile: (858) 650-6190

Re: Notice Pursuant to Section 2.4(c) of the CSOLAR IV West Power Purchase Agreement

Reference is made to that certain Power Purchase Agreement, as amended by that certain First Amendment to Power Purchase Agreement, made as of October 1, 2011 and by that certain Amended and Restated Second Amendment to Power Purchase Agreement, made as of October 28, 2013 (as so amended, the "PPA"), each between San Diego Gas & Electric Company, a California corporation ("Buyer") and CSOLAR IV West, LLC, a Delaware limited liability company ("Seller"). Capitalized terms used herein but not otherwise defined herein shall have the meanings given in the PPA.

Pursuant to Section 2.4(c) of the PPA, Seller provides Notice to Buyer that as of the date of this Notice Seller was not able to achieve, on terms reasonably acceptable to Seller, the objectives set forth in the definition of Diligent Efforts. Accordingly, Seller provides Notice to Buyer that the Project will be constructed using 100% PV Panels.

For your reference, the definition of "Diligent Efforts" is as follows:

'"Diligent Efforts' means (a) attempting to complete financeable EPC Contracts and (b) if the EPC Contracts are executed by all parties thereto and an equipment supply agreement between the CPV EPC Contractor and the supplier of concentrating solar photovoltaic electric generating units has been executed by both parties thereto, in each case on or prior to November 30, 2013 or such later date, if any, as determined by Seller to be reasonably practicable, and if the CPUC has approved this Second Amendment on or prior to the CPUC Approval Deadline Date, seeking debt and equity commitments for such a Project (a portion of which is

comprised of concentrating solar photovoltaic electric generating units), in each case in a manner consistent with the experience and reputation of Seller and its affiliates as a leading developer of utility scale power projects and with due consideration to any suggestions made by Buyer pursuant to Section 2.2(a)."

CSOLAR IV WEST, LLC
A Delaware limited liability company

By: _____
Name: Barton D. Ford
Title: Vice President

4. January 27, 2014 E-Mail from Chris Laursen (Quanta) to Nicholas Borman (CSOLAR)

From: Laursen, Christian [mailto:CLaursen@quantapower.net]
Sent: Monday, January 27, 2014 3:14 PM
To: Borman, Nicholas
Cc: Jones, Andy; Gaëtan Borgers; Mark Richards; Wisenbaker, Randall; RT Weber; McCann, John
Subject: Re: CSolar West Revised Proposal dated 01-23-2014

Nick/Andy,

Confirming our discussions on Friday, Quanta wishes to advise Tenaska that we are formally ending our pursuit of this project. We do not believe it is in our best interest to continue expending resources between now and June, given what we believe are our limited chances of success.

Please call if you wish to discuss.

Chris

5. March 12, 2014 E-mail from Bart Ford to James Avery (SDG&E)

From: Ford, Barton
Sent: Wednesday, March 12, 2014 10:51 AM
To: 'Avery, James'
Cc: Case, Steve (SCase@semprautilities.com); dbaerman@semprautilities.com; 'Roberts, Ted - E&FP'; Stallmeyer, James; Van Dyke, Greg
Subject: RE: IV West Project

Dear Jim,

Further to my email of March 5, this email is an additional update of where we now stand on our IV West project EPC contract and related activities.

To set the context, when we entered 2013, the target for completion of the Quanta EPC contract was March 31, 2013 and the target financial closing date was June 1, 2013.

As we entered 2014, the target financial closing date had moved back twelve months, to June 1, 2014. However, it is clear now that because of a number of disruptions in the effort to complete the EPC contract, June 1, 2014 is no longer achievable. The recent disruptions in the EPC contract negotiation schedule have included:

- Quanta withdrawing from the process in January and then re-engaging at the urging of SDG&E
- Soitec's replacement of its lead negotiator a few weeks ago
- Soitec's changes in position on the amount of security that it would post to Quanta
- A shift by Quanta from reliance on block 1 testing to reliance on the testing of Soitec's other projects once it became clear that there was no time to wait for results of block 1 testing in order to proceed with construction of subsequent CPV blocks
- Very significant delays in the testing of Soitec's Newberry Springs and Touwsrivier projects
- Soitec's position that, notwithstanding its commitment to Quanta last summer to indemnify, and to provide security for the indemnification obligation to, Quanta for a certain amount of losses should a "switch" be required due to Soitec's default and termination, this indemnity and related security would not apply if a switch were to occur because of a default and termination resulting from testing failures at Soitec's Touwsrivier or Newberry Springs projects
- An increase in PV panel pricing which has made it necessary for Quanta to increase the EPC contract price for a "switch" by an additional $9 to $10 million, and

- Due to the passage of time and other factors, Quanta's change in the dates that it would guarantee for completion in the case of a "switch" at the worst possible time.

On March 10 Quanta advised Soitec and Tenaska that they are again withdrawing from the project, this time as a result of Soitec's inability or unwillingness to post security in an amount necessary to protect Quanta against losses that Quanta would incur should Soitec default under its Equipment Supply Agreement.

This has been a complicated, difficult process for everyone, and all three parties have tried hard to get to an EPC contract that can work, including by having spent 2-1/2 weeks in person in three party meetings over the past five weeks. But it has become clear that the schedule no longer works. Quanta is not willing to commit to the necessary construction schedule unless Soitec posts substantial additional security in order to cover the Soitec default exposure for the compressed schedule, and as noted above Soitec is not willing or is not able to post the additional security that is required.

Even assuming that the EPC contract schedule issues could have been resolved immediately through a decision by Soitec to post additional security to Quanta (or by Quanta agreeing not to require the additional security), the best case schedule for EPC contract execution is late March (as compared with the November 30, 2013 target date in Amended and Restated Second Amendment, which we executed in late October 2013), and the best case financial closing date if we were to continue pursuing the hybrid approach would be August 1, 2014. August is beyond the financial closing condition precedent deadline date in the PPA, and in any case if we were to continue incurring the interconnect construction costs and other project costs necessary to stay on the required project completion schedule our balance sheet development cost exposure would be more than $50 million by August. A cost exposure in this amount prior to financial closing is not acceptable to Tenaska given the continuing uncertainty that we will be successful financing CPV technology.

The effort that Tenaska has engaged in over the past 12 months has not been without cost. During this past year, interest rates and PV panel prices have gone up significantly, and the price discount that we agreed to in the Amended and Restated Second Amendment for a conversion to 100% PV hurts our economics for a 100% PV project. Our estimate is that the total PPA revenue reduction, including not just the discount but also the underlying difference between PV pricing and CPV pricing, will be well in excess of $[REDACTED] million over the 25 year term of the PPA for the same amount of production.

At this point, we see no realistic prospect for obtaining a satisfactory EPC contract from Quanta, and we are turning our attention to the contracting for a full PV project.

Please let me know if you would like to discuss.

Bart

6. March 20, 2014 E-Mail from Bart Ford to Carol Brown (President Peevey's Chief of Staff)

-------- Original message --------
From: "Ford, Barton"
Date:03/20/2014 1:27 PM (GMT-08:00)
To: "Brown, Carol A."
Cc: "Picker, Michael" ,Raul DeLaRosa ,":" ,Patricia Eckert ,"Olberg, Delette"
Subject: CSolar West Project - Proposed Resolution of Security Impasse

Dear Carol,

Thank you for your time last Thursday to discuss our IV West project. I am attaching some additional background information regarding the efforts that Tenaska has undertaken over the past three years to use Soitec technology and the risks that we now face.

Following up on our call, our senior management group met on Monday and Wednesday to discuss whether there is anything further we can do to address the impasse between Soitec and Quanta on credit/security issues and Quanta's withdrawal from negotiations.

There is a total gap of $15 million between the security requested by Quanta and the amount proposed by Soitec. The timing of the posting of this security is also at issue. The security is to assure the payment of Soitec's liability to Quanta in the event that a "switch" to PV is required due to Soitec's default under the Soitec Equipment Supply Agreement (ESA). The large liability in this situation is a result of the fact that Quanta must commence construction of subsequent CPV blocks without knowing whether earlier CPV blocks are going to pass their acceptance testing, raising the possibility of the need for large amounts of CPV equipment to be ripped out and replaced after Quanta has already paid for it.

We are prepared to help resolve the impasse by offering to bridge the gap by covering the $15 million that Soitec is unable or unwilling to provide,. The general terms of our offer are summarized in the attached "Proposed Resolution of Security Impasse". Our plan of action is to authorize Soitec to see if they can use this $15 million offer to resolve the security issue with Quanta and induce Quanta to resume negotiations. I will keep you advised of Soitec's progress with Quanta, assuming that Soitec is willing to try to resolve the issue with Quanta on this basis.

Regards,
Bart
Barton D. Ford
Vice President, Development
Tenaska, Inc.
1701 E. Lamar Blvd., Suite 100
Arlington Texas 76006
(817) 462 1033
bford@tenaska.com

7. March 28, 2014 E-Mail from Bart Ford to Carol Brown

From: Ford, Barton [mailto:bford@tnsk.com]
Sent: Friday, March 28, 2014 10:20 AM
To: Brown, Carol A.
Cc: Picker, Michael; Dellosa, Joel <JDellosa@semprautilities.com> (JDellosa@semprautilities.com); Nancy.McFadden@gov.ca.gov; Olberg, Delette
Subject: RE: CSolar West Project - Proposed Resolution of Security Impasse

Carol,

We received formal notice this morning that Quanta has terminated discussions with respect to the CSOLAR West project as they could not reach agreement with Soitec regarding the timing of security posting (notwithstanding our offer to contribute $15 million to the solution) and other issues.

Accordingly, we have notified SDG&E under the terms of our PPA that we were not able to enter into an acceptable EPC contract for a project that would include 67 MW of CPV technology. This triggers the conversion of the project to 100% PV.

We have spent many millions of dollars and many thousands of hours to try to be successful with Soitec content in the project. I am sorry that we were not able to do that but at this point we must proceed with a project that we are able to do.

Delette and I plan to be in California next week. Please let us know if you would like to meet to talk about this further.

Regards,

Bart

ATTACHMENT B

Correspondence dated December 4, 2014

James P. Avery
SVP—Power Supply
San Diego Gas & Electric Company
8315 Century Park Court
San Diego, CA 92123

December 4, 2014

Peder Norby, Chairman
County of San Diego
Planning & Development Services
5510 Overland Avenue, Suite 110
San Diego, CA 92123

Re: SDG&E Supports Permitting of Soitec's Rugged and Tierra del Sol CPV Projects in Boulevard

Dear Chairman Norby:

Soitec submitted two projects in early 2012 for review and approval of San Diego County to issue Major Use Permits for the projects near Boulevard utilizing Soitec's concentrating photovoltaic technology. The Tierra Del Sol and Rugged Solar projects are expected to go to public hearing soon, nearly two and a half years after their application was submitted.

These projects have been undergoing environmental review and preparation of an Environmental Impact Report (EIR) by the County of San Diego pursuant to the California Environmental Quality Act (CEQA).

SDG&E submits this letter of support for the expeditious approval of these projects. The Soitec projects, along with other San Diego County renewable energy projects, will provide numerous local benefits including:

- Help California utilities, including SDG&E, achieve the State's renewable energy goals of providing 33% renewable energy to our customers by 2020.
- Improve air quality through the offset of greenhouse gas emissions in California.
- Provide local jobs for the engineering, procurement, and construction of the projects.
- Provide local benefits to the Boulevard area.

Additionally, SDG&E has issued its 2014 All Source Request for Offers ("RFO") to solicit bids in accordance with Decision (D.) 14-03-004 – Decision Authorizing Long-Term Procurement for Local Capacity Requirements due to Permanent Retirement of the San Onofre Nuclear Generation Station (the "Track 4 Decision"). Expeditious approval of these projects may allow them to be considered in SDG&E's RFO, in which all bids are due January 5, 2015.

SDG&E has seen incredible progress with our renewable energy contract portfolio. SDG&E is dedicated to meeting the state's clean energy goals and delivered more than 23 percent renewable energy last year and expects to be the first investor-owned utility to reach 33 percent early next year, six years ahead of schedule.

SDG&E has made significant progress in siting renewable energy projects in the Imperial Valley and transporting clean energy to our customers in San Diego and Southern Orange Counties utilizing the Sunrise Powerlink. Development of renewable projects in San Diego County should be just as prevalent.

Sincerely,

James P. Avery
SVP—Power Supply
San Diego Gas & Electric Company

James P. Avery
SVP – Power Supply
San Diego Gas & Electric Company
8315 Century Park Court
San Diego, CA 92123

December 4, 2014

The Honorable Chairwoman Dianne Jacob
San Diego County Administration Center
1600 Pacific Highway, Room 335
San Diego, CA 92101

Re: SDG&E Supports Permitting of Soitec's Rugged and Tierra del Sol CPV Projects in Boulevard

Dear Chairwoman Jacob:

Soitec submitted two projects in early 2012 for review and approval of San Diego County to issue Major Use Permits for the projects near Boulevard utilizing Soitec's concentrating photovoltaic technology. The Tierra Del Sol and Rugged Solar projects are expected to go to public hearing soon, nearly two and a half years after their application was submitted.

These projects have been undergoing environmental review and preparation of an Environmental Impact Report (EIR) by the County of San Diego pursuant to the California Environmental Quality Act (CEQA).

SDG&E submits this letter of support for the expeditious approval of these projects. The Soitec projects, along with other San Diego County renewable energy projects, will provide numerous local benefits including:

- Help California utilities, including SDG&E, achieve the State's renewable energy goals of providing 33% renewable energy to our customers by 2020.
- Improve air quality through the offset of greenhouse gas emissions in California.
- Provide local jobs for the engineering, procurement, and construction of the projects.
- Provide local benefits to the Boulevard area.

Additionally, SDG&E has issued its 2014 All Source Request for Offers ("RFO") to solicit bids in accordance with Decision (D.) 14-03-004 – Decision Authorizing Long-Term Procurement for Local Capacity Requirements due to Permanent Retirement of the San Onofre Nuclear Generation Station (the "Track 4 Decision"). Expeditious approval of these projects may allow them to be considered in SDG&E's RFO, in which all bids are due January 5, 2015.

SDG&E has seen incredible progress with our renewable energy contract portfolio. SDG&E is dedicated to meeting the state's clean energy goals and delivered more than 23 percent renewable energy last year and expects to be the first investor-owned utility to reach 33 percent early next year, six years ahead of schedule.

SDG&E has made significant progress in siting renewable energy projects in the Imperial Valley and transporting clean energy to our customers in San Diego and Southern Orange Counties utilizing the Sunrise Powerlink. Development of renewable projects in San Diego County should be just as prevalent.

Sincerely,

James P. Avery
SVP—Power Supply
San Diego Gas & Electric Company

ATTACHMENT C

Soitec Reference Document and Annual Financial Report 2013-2014

REFERENCE DOCUMENT | **2013-2014**

REFERENCE DOCUMENT AND ANNUAL FINANCIAL REPORT 2013-2014

Summary

The Chairman must prepare a report on the internal control and management procedures existing in the Company, and also giving the other information required by article L. 225-37 of the French Commercial Code concerning corporate governance procedures which he must ask the Board of Directors to approve.

We must:

– inform you of our remarks on the information in the Chairman's Report on the internal control and risk management procedures for preparing and processing accounting and financial information; and

– certify that this report contains the other information required by article L. 225-37 of the French Commercial Code, although we do not have to verify the accuracy of this additional information.

We performed our work according to professional standards applicable in France.

Information on the internal control and risk management procedures for preparing and processing accounting and financial information.

Professional standards require that diligences be undertaken to assess the genuineness of the information on the internal control and risk management procedures for preparing and processing the accounting and financial information in the Chairman's Report. These diligences involve, in particular:

– examining the internal control and risk management procedures when preparing and processing the accounting and financial information, underlying the information presented in the Chairman's Report, and existing documentation;

– examining the work which enabled this information and the existing documentation to be prepared;

– deciding whether the major deficiencies in internal control and risk management when preparing and processing the accounting and financial information we may have found during our assignment were properly documented in the Chairman's Report.

Based on these works, we have no comments to make on the information on the Company's internal control and risk management procedures for preparing and processing the accounting and financial information in the Report of the Chairman of the Board of Directors, established in accordance with article L. 225-37 of the French Commercial Code.

Other information

We certify that the Report of the Chairman of the Board of Directors includes the other information required by article L. 225-37 of the French Commercial Code.

Neuilly-sur-Seine and Meylan, May 13, 2014

The Statutory Auditors

PRICEWATERHOU.S.ECOOPERS Audit
Philippe Willemin

Cabinet Muraz Pavillet
Christian Muraz

17. Employees

17.1. Number of employees

Workforce on March 31, 2014

The employees are distributed over the various geographic zones as follows:

– EUROPE

o Bernin (Soitec S.A.)/Paris sud (Soitec Specialty Electronics S.A.S.)/ Montbonnot (Altatech Semiconductor S.A.S.): activity Electronics;

o Paris centre (Soitec Solar France S.A.S.): activity – Solar Energy ;

o Freiburg and its subsidiaries (RSA and Chile): activity - Solar Energy.

– ASIA

o Singapore, Japan, South Korea, China and Taiwan: activity Electronics.

– UNITED STATES

o Peabody (Soitec U.S.A Inc.) and Phoenix (Soitec Phoenix Labs Inc.): activity - Electronics and Lighting;

o San Diego: activity - Solar Energy.

As of March 31, 2014, the total number of employees was 1,291 of which 68 were of a temporary nature. The average age is 39.5 years.

The workforce breaks down as follows:

Workforce status	France Bernin Paris centre and sud/ Montbonnot	Europe Freiburg and subsidiaries	Asia China Singapore Japan Korea Taiwan	U.S.A Peabody Phoenix	U.S.A San Diego	Group Total
Workforce as of 03/31/2014	929	134	12	43	173	1,291
- temporary	29	19	-	-	20	68
Average age	39.0	36.7	44.0	44.8	42.6	39.5
Turnover rate	5.1 %	11.9 %	25.9 %	16.5 %	16.3 %	8.4 %
Workforce variations for 2013-2014	(156)	(88)	(99)	(13)	34	(322)
- operators	(50)	(60)	(15)	(4)	26	(103)
- technicians & employees	(56)	(10)	(29)	(1)	11	(85)
- engineeurs & management	(50)	(18)	(55)	(8)	(3)	(134)
- new hires	17	8	-	5	92	122
- resignations	34	16	14	6	16	86
- Employment plans (PSE)	53	27	82	-	5	167
-lay-offs	5	-	-	-	12	17
Distribution by category						
- Operators	25 %	9 %	0 %	7 %	47 %	25 %
- Technicians & employees	34%	29 %	8 %	30 %	17 %	31 %
- Engineers & management	41 %	62 %	92 %	63 %	35 %	44 %
Distribution by activity						
- Administrative staff	17%	19 %	25 %	12%	16 %	17 %
- Sales & Marketing	3 %	13 %	67 %	14 %	5 %	5 %
- R&D	20 %	26 %	0%	26 %	1 %	18 %
- Production	60 %	41 %	8%	49 %	79 %	60 %

Evolution of the Soitec workforce

The workforce decreased by a total of 322 employees compared to the fiscal year ended March 31, 2013, a decline of 20%.

ATTACHMENT D

Soitec 2014-2015 Financial Report H1 Results

2014-2015 H1 Results

André-Jacques Auberton-Hervé, Chairman and CEO
Olivier Brice, CFO
Bastian Warkus, SVP Finance & Strategy

November 2014

November 19th, 2014

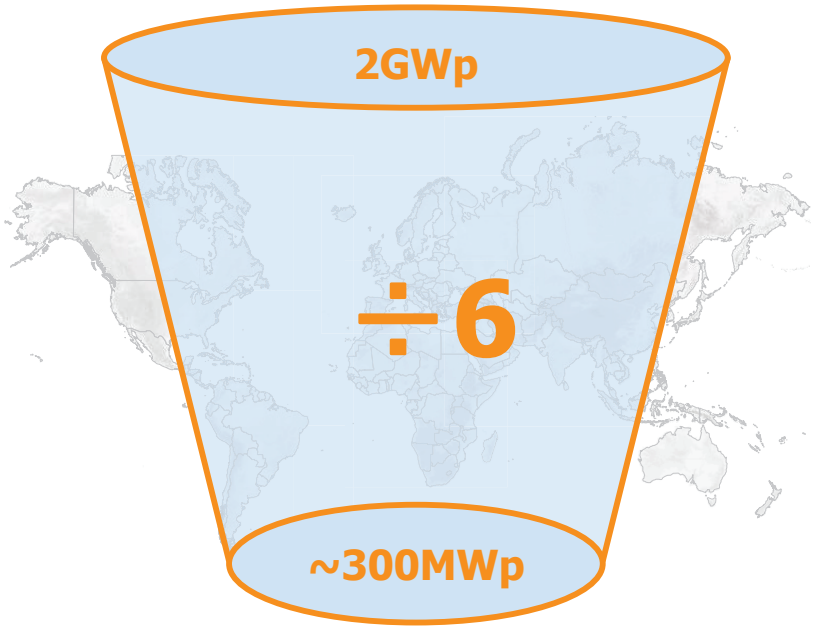
Solar

Large pipeline of projects with PPAs in place and further in development

Project	MWp	Region	COD	Project developed by Soitec	Project developed by third party
Construction					
Touwsrivier	44	South Africa	2014	✓	
Alcoutim	1.3	Portugal	2014		✓
ESTCP	1.1	US	2014	✓	
Tabuk	1.1	KSA	2014		✓
Pipeline					
CRE 1 Megasol	2.1	France	2015		✓
CRE 1 Calisanne	4.1	France	2015		✓
CRE 1 Aigaliers	3.1	France	2015		✓
CRE 1 Signes	1.8	France	2015		✓
CRE 2	>50	France	TBC		✓
Southlight 1	37	US	2016		✓
Southlight 3	58	US	2016		✓
Southlight 4	104	US	2016		✓
Desert Green	7	US	2014		✓

Early to mid-stage projects

Select projects under assessment for co-development with reasonable probability that an offtake agreement can be secured



Advanced pipeline

Projects with executed PPA

A large pipeline backed by PPA to be constructed over the next 2 years and further projects in development

COD: Commercial Operation Date

VERIFICATION

I am an employee of the respondent corporation herein, and am authorized to make this verification on its behalf. The matters stated in the foregoing **RESPONSE OF SAN DIEGO GAS AND ELECTRIC COMPANY TO APPLICATION OF SOITEC SOLAR INDUSTRIES LLC FOR MODIFICATION OF RESOLUTION E-4613** are true of my own knowledge, except as to matters which are therein stated on information and belief, and as to those matters I believe them to be true.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct to the best of my knowledge.

Executed this 22nd day of December, 2014, at San Diego, California

/s/ Victor Vilaplana
Victor Vilaplana
Vice President - Electric & Fuel Procurement

EXHIBIT
6

SunShot
U.S. Department of Energy

SunShot Initiative
2014 Peer Review Report

August 2014

Message from the Director

In 2011, the U.S. Department of Energy (DOE) launched the SunShot Initiative to drive down the costs of solar power to $0.06 per kilowatt hour by 2020 so that solar can compete with traditional energy generation. To achieve these goals SunShot continually challenges the solar community to develop innovative projects, new solutions, and pursue aggressive research and development targets.

Since its inception, the SunShot Initiative has relied on the expertise of the leaders in industry, academia, and the national laboratories. Before awards are made, the program enlists the help of experts to select projects through a competitive merit review process and then after awards are made for a biannual peer review to assess each project's progress towards the SunShot goals. During both of these times, we rely on experts in the field to provide independent feedback, which is critical to the success of the program.

To independently review the entire SunShot portfolio, the SunShot Initiative held a Peer Review on May 19-22, 2014 in Anaheim, California. The reviewers included leaders in the solar field, members of the National Academy of Sciences, and National Academy of Engineering, as well as senior leaders from Fortune 500 Companies. The reviewers independently reviewed each project to assess how the projects work together to achieve SunShot goals. To ensure the highest level of integrity, the review was conducted independent of program influence, and a third party collected the results for analysis.

I am pleased to share this report, which contains the review results. As you will see in this document, projects focus on different areas of the SunShot mission, and each project plays an important role in achieving that mission. Each project's review scores are consolidated into a summary for each of the five focus areas that make up the SunShot Initiative.

Finally, I would like to extend a very special thank you to each reviewer, awardee, and researcher who participated in the 2014 SunShot Peer Review. This review would not have been possible without everyone's participation.

Thank you,

Director
Solar Energy Technologies Office, SunShot Initiative
U.S. Department of Energy

EXECUTIVE SUMMARY

DOE's Solar Energy Technologies Office (SETO) works to accelerate the market competitiveness of solar energy by targeting cost reductions and supporting increased solar deployment. In 2011, DOE announced the department-wide SunShot Initiative—a collaborative national effort that aggressively drives innovation to make solar energy fully cost competitive (subsidy-free) with traditional energy sources before 2020. In support of this crucial goal, the SETO pivoted its focus to fulfilling the SunShot vision and began continuously evaluating opportunities to further support cost reductions. Through SunShot, DOE supports efforts by private companies, universities, and national laboratories to drive down the cost of utility-scale solar electricity to about $0.06 per kilowatt hour (kWh) and distribute solar electricity to at or below retail rates.

In May 2014, the SunShot Initiative held a peer review to receive unbiased expertise from industry, government agencies, nonprofit organizations, utilities, and consultants on how each program (Balance of System, Concentrated Solar Power, Photovoltaics, Systems Integration, and Technology to Market) is performing, as well as the SunShot Initiative as a whole. Participating reviewers analyzed, scored, and provided feedback on 251 projects within the SunShot portfolio. These reviewers considered the following questions and directives when evaluating a project:

1. Rate the project's relevance to Program goals.
2. Rate this project's impact to relevant Program goals.
3. How appropriate is the project's funding level compared to the goals of the project?
4. Rate this project's approach(es) to achieve project goals.
5. What are the project's main strengths and weaknesses?

After completing project evaluations, the reviewers divided into groups by program to discuss how projects within their assigned area were performing. A separate group, referred to as the Steering Committee, evaluated the SunShot Initiative in totality. Specifically, both the separate review groups and the Steering Committee discussed the following questions:

1. How would you rate the quality and impact of the portfolio as a whole for this review area? What are the portfolio's strongest and weakest aspects?
2. Is the portfolio funding properly proportioned relative to the program goals? What areas are not funded sufficiently (if any)? What areas have received too much funding (if any)?
3. How should the portfolio direction or composition shift in the next 2-5 years to continue to lead and advance the field?

All comments from the reviewers and Steering Committee were compiled and then released without attribu-tion in this report. These comments begin on page 14. Each project was ranked on a 1–5 scale, with "5" being the highest possible score for a category and "1" being the lowest possible score. The overall average rating for SunShot's reviewed projects was 3.70, which indicates that the program as a whole is funding projects that wisely use taxpayer dollars and are likely to be successful. The Systems Integration program achieved the highest project rating with a mean of 4.19. The reviewers commended the projects' abilities to fulfill objectives. Conversely, the Photovoltaics and Technology to Market programs had the lowest project averages, with both programs having an average score of 3.47. Both programs are performing above average, but a few low-scoring projects are bringing down the entire average. The Balance of System and Concentrated Solar Power programs had project rating averages of 3.72 and 3.74, respectively. The projects of these two programs are on track to meet their goals and identify paths forward to make them more impactful.

In general, the Steering Committee found that, on the part of Primary Investigators and DOE staff, the motivation exists to achieve the $0.06 per kWh for utility-scale photovoltaic power and distributed solar electricity to be at or below retail rate goals. Funding is generally well balanced; however, slightly more funding is required for soft costs and public education activities.

PROJECT: 5739 SOITEC SOLAR INDUSTRIES

SANFAB

FUNDING INFORMATION $25.0M | Scaling Up Nascent Photovoltaics AT Home | 09/2012–04/2014

Project Description

Soitec is an international industrial manufacturing company that develops and manufactures semiconductor materials and concentrating photovoltaic (CPV) power plant technology. SUNPATH is assisting with building a highly automated 280-megawatt-peak (MWp) factory in San Diego (also known as SANFAB) for the production of its CPV modules, which have efficiencies of approximately 30%, compared to the 15%–20% efficiency of non-concentrating flat-plate PV modules.

Individual Reviewer Comments

- Co-location of a U.S.-based research and manufacturing footprint will shortcut cycles of learning significantly. In addition, the project having significant investment from partners illustrates commitment to the technology. Progress toward factory build-out has also been demonstrated, and the thermodynamic efficiency of the CPV approach is much higher than simple flat-plate PV technologies.
- Project strengths include high automation, lean approach, quality systems approach, deployed products, project pipeline filled, and milestones completed. The technology is well-understood and proven.
- The project is funded at around $110 million with a $91 million cost share. The funding level is very strong for the proposed project and will help ensure a successful launch of the manufacturing facility and the CPV module product.
- The project objective is to deploy a 280-MWp factory to supply PV systems in high direct normal irradiation regions, creating domestic jobs and spurring the CPV industry. In these regards, the project will prove to be impactful to the program goals.
- The aim of the project is to deploy a 280-MWp solar module factory in the United States to make Fresnel lens, high-magnification CPV modules with efficiencies approaching 30%. A high degree of automation, manufacturing tools based on existing industry (printed circuit board and automotive), and a lean/quality focus will allow low-cost manufacturing. Therefore, the project goals are relevant to the SUNPATH program goals.
- The approach is straightforward to fit out and operate the factory. Application of manufacturing principles for high-volume products should prove beneficial in reducing cost of goods manufactured (COGM). Results to date demonstrate that the factory fit out and ramp has been very well executed. Therefore, the approach is appropriate for the goals of the project.
- A robust, continuous-improvement and cost-reduction plan/roadmap would strengthen the likelihood of a sustainable and profitable future. Ongoing reliability monitoring would also prove beneficial.
- Absent data from the narrative and poster make it difficult to review the progress toward the deliverables. Cost compression progression and performance milestones are unclear.
- Substantial funding outlay by both the U.S. Department of Energy (DOE) and project team seems heavy for 280-MWp capacity compared with GTM figures of less than 20 million U.S. Dollar/100 MWp for conventional crystalline silicon plants.

- There are concerns over program goals of ramping proprietary technology for an individual corporation's interests in lieu of demonstrating merit of technology. Please clarify.
- The lesson learned from the Solyndra experience was that cost efficiency trumps thermodynamic efficiency any day. Although the Solyndra thermodynamic efficiency was similarly very high, in the end, they could not compete with the lesser thermodynamic efficient, but lower-cost flat-plate PV products.
- This proposal would have been much stronger if it had included cost projections showing that Soitec will not experience a similar fate. The authors have not addressed whether their high-volume production will lead to levelized costs of energy that support the SunShot goals. Further, developers of simple PV products forecast additional future cost reductions beyond today's prices. Soiotec must show that its projected future costs are not only lower than today's flat-plate PV prices, but also competitive with tomorrow's prices as well.
- The author seems to rely on the sunk costs of the DOE's prior investments as justification for continued funding. However, absent cost projections, the viability of this investment cannot be judged.