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STATE OF CALIFORNIA

Energy Resources Conservation and Development Commission

In the Matter of: APPLICATION FOR CERTIFICATION FOR THE PALEN SOLAR POWER PROJECT	DOCKET NO. 09-AFC-7C

OPENING BRIEF OF INTERVENOR CENTER FOR BIOLOGICAL DIVERSITY AFTER REOPENED HEARINGS

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INTRODUCTION

The Center for Biological Diversity intervened in the original proceeding and this amendment proceeding in order to ensure the conservation of rare and imperiled species and related resources that may be affected by the project including, but not limited to: the threatened desert tortoise and its habitat; Mojave fringe-toed lizard and sand habitats, Yuma clapper rail, other rare and imperiled wildlife species found in this area including resident and migratory birds, golden eagles, and desert kit fox; native plants; soils and water resources. The proposed amendment to the permit for a solar trough project would reconfigure the project footprint and add two 750-foot solar thermal power towers and fields of mirrors. These changes increase the impacts to many resources including Mojave fringe-toed lizard and rare sand habitats, and migratory and avian species. After a PMPD was issued that recommended denying the petition to amend, the petitioner sought to reopen the evidentiary record, the Center opposed reopening the hearings because all of the additional biological information points to impacts being even higher than previously estimated and there was no other substantive information provided that could fairly change the outcome of the Committees earlier recommendation. Nonetheless, the Committee granted the petitioner's request, additional evidence was submitted, and additional hearings were held on July 29 and 30, 2014.[1] Because little has changed after the reopened hearings the Center urges the Committee to again recommend that the petition be rejected and the Center incorporates by reference as though fully set forth herein our earlier briefing on the petition to amend (TN#: 201336, filed 11/26/13).

The petitioner's submissions and testimony at hearing, rather than provide substantive new information on key questions, appeared to be designed to confuse and cloud the issues that led to a recommendation against approving the amendment in the PMPD. Most importantly, the petitioner has also destabilized the project description with a proposed new condition[2] was shown to be illusory on cross examination at hearing. Indeed, the proposed condition created significant confusion and led many members of the public, including both the Deputy Director of Siting for the Commission and the

[1] The Center reserves the right to provide corrections to the transcripts for a full 30-day period after each of the "final" version of each transcript was provided to the parties.

[2] This proposed condition was provided by the petitioner on July 18, 2014 as part of rebuttal testimony and no staff analysis has ever been provided. At hearings on July 30, 2014 the proposed condition was discussed and appeared to be changing even as the hearings progressed. Because the Project Description remains unstable, the Center reserves the right to provide additional factual evidence and testimony up to and including during the Commission's hearing on this petition.

Assistant Field Supervisor for the U.S. Fish and Wildlife Service ("USFWS"), to mistakenly believe the petitioner was only seeking to build one tower at this time.[3] At the hearing it became clear that is not the case and the petitioner is seeking a permit for two towers, only one of which *may* have storage.

Should the Commission accept this illusory condition it would render the CEQA review per se inadequate as the Commission has failed to provide a stable project description and therefore has failed to inform the public and decisionmakers regarding the potential impacts of the proposed project. Similarly, regarding alternatives, the petitioner now asserts that no alternatives are feasible—not even the currently permitted project. The petitioner's basis for this claim is variously because the alternatives do not utilize the petitioner's proprietary technology or because the petitioner could not meet the deadlines its PPAs (one of which the petitioner now concedes it will not meet and that for at least half the project it would need to negotiate new PPA contacts). Were the Commission to accept the petitioner's assertions, the Commission would be in violation of CEQA as such a position would undermine the baseline analysis used in this amendment process which only analyzed the difference between the permitted solar trough project and the proposed amendment. Moreover, to accept the petitioner's logic would render pointless the entire CEQA review process.

Evidence regarding impacts to avian species continues to show that the proposed power towers requested in the amendment are particularly ill suited to the site and will cause significantly greater impacts than the original project. For example, the proposed towers may result in significant mortality of many avian species in the area including eagles, Yuma clapper rail, willow flycatchers, and many other migratory and resident birds; none of these impacts were anticipated or analyzed for the original permitted project. The new information regarding impacts to invertebrates and potential cascading effect from attraction of avian species to the site (both from the lake effect and to feed on invertebrates) points to additional significant effects that have not been adequately addressed by the Staff or the Commission to date. Among the new submissions by the petitioner are testimony and documents related to deterrence and avoidance that were little more than puffing—the kind of unsubstantiated statements and testimonials that are designed to sell a product.[4] (*See* Exhs. 1140,

[3] *See* TN#:202823; TN#:202896 at 1 ("our understanding that the proposed project has been reduced to one tower and the associated heliostats and utility infrastructure").

[4] Black's Law Dictionary, sixth edition, 1990 ("Puffing. An expression of opinion by a seller not made as a representation of fact. . . . Exaggeration by a salesperson concerning quality of goods (not considered a legally binding promise); usually concerns opinions rather than facts."; citations omitted).

1141.) This is not the type of information or the quality of testimony that is appropriate for the Commission to rely on in making a reasoned decision regarding approval of a project that has the potential to kill thousands of birds including special status and listed species.

As the Center noted in earlier briefing (TN#:201336), the amended site layout significantly increases impacts to rare sand habitat and the Mojave fringe-toed lizard[5] due to changes including removing private lands (that the applicant controls, Exh. 3091) from the project footprint and dropping the re-location of at 160 KV line. As a result the proposed amendment pushes the project footprint further into rare sand habitats on the north east and wastefully includes nearly 200 acres of "unused" lands within the project footprint in the south west that would be fenced off and unavailable to wildlife. The Staff failed to look at any alternative that would avoid rare sand natural communities and avoid or reduce impacts to the Mojave fringe-toed lizard. (Exh. 3050 at 2 [alternative could avoid impacts to MFTL].) For biological resources, cultural resources, and others, the proposed amendment would result in significant direct, indirect and cumulative impacts to resources far beyond those contemplated in the original proceeding. The Center urges the Commission to deny the petition on this basis.

Further, as to mitigation and monitoring requirements the Commission has failed to provide meaningful performance standards and Staff and the petitioner continue to press for deferral of decisions on these critical issues to be made by compliance staff or a "technical advisory committee" operating outside of the public eye. The Staff's position that the Commission should to defer both development and approval of critical minimizations and mitigation measures to be formulated by CEC compliance staff and a technical advisory committee ("TAC") violates the most basic tenets of CEQA. Furthermore, as currently envisioned in the conditions of certification, the TAC would be required to follow California's open meeting laws but the Staff has failed to include those requirements in its proposal to the Commission.[6]

Because there are feasible alternatives to the proposed amendment, including, but not limited to, the original project as approved, solar PV technology at this site, and other project layouts at this site that could substantially avoid many of the significant impacts of the amendment to species, habitats, and other resources, the proposed amendment must be denied in order to comply with the

[5] *See, e.g.,* Exh. 3050 (Muth testimony); Exh. 3061 (Muth Rebuttal; noting compensatory mitigation is insufficient).
[6] Bagley-Keene Open Meeting Act, Government Code §§ 11120-111321.

most fundamental substantive requirements of the California Environmental Quality Act ("CEQA"). (Public Resources Code §§ 21002, 21002.1(b).)

As intervenors in the original permitting process and the amendment process the Center is particularly concerned that the Commission is once again rushing the amendment process through without sufficient identification and analysis of impacts, particularly to avian species. Ironically, the earlier environmental review was rushed to a decision in December 2010 in order to facilitate the now-bankrupt company (STA) in meeting deadlines for public ARRA funding and the 2013 process was rushed to accommodate the petitioner's insistence that funding deadlines for the production tax credit should define the schedule and deadlines in its private contracts with a utility company and for interconnection with the grid – PPAs and LGIAs – although those deadlines can be changed by the parties to the agreements. Now, again in 2014, the petitioner is rushing the process ahead while pressing for a change in the initial PMPD recommendation despite the fact that, if anything, the new data and information on impacts to avian species and invertebrates raises even greater concerns as compared with what was known in 2013 and despite the fact that feasible alternatives exist. Moreover, although the Committee asked for additional information regarding the PPA deadlines and milestones, the petitioner has not submitted any evidence regarding those issues but did state at the pre-hearing conference that all of the milestones except for the on-line date are negotiable.

The environmental review for the amendment has not met the most basic requirements of CEQA and the newly unstable project description has further undermined an already inadequate review regarding: identification and analysis of impacts; consideration of alternatives to avoid impacts and mitigation measures to minimize or reduce impacts to resources; and to provide full and fair *public* review before any decision is made. Nonetheless, even the inadequate environmental review provided to date is more than sufficient to show that, pursuant to CEQA and the Warren-Alquist Act, the Commission cannot fairly make override findings and should not approve the proposed project amendment. In addition, approval of the proposed amendment would violate other laws, ordinances, regulations, and statutes (LORS); and on this basis as well the proposed amendment must be denied.

LEGAL STANDARDS

In addition to the legal standards noted in the Center's November, 2013 brief, the Commission must consider the following legal standards in revisiting its earlier recommendation:

I. Deferred Mitigation and Performance Standards

As the Center has explained before, mitigation measures are to be developed at the beginning of the process and the requirement that any deferred measures be subject to specific, enforceable performance standards. TN#: 201336 at 36-37.) Most importantly, "[f]ormulation of mitigation measures should not be deferred until some future time." (14 C.C.R. § 15126.4(a).) And CEQA review cannot leave the public "in the dark about what land management steps will be taken, or what specific criteria or performance standard will be met." *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 670. The reason for this prohibition is self-evident:

> A study conducted after approval of a project will inevitably have a diminished influence on decisionmaking. Even if the study is subject to administrative approval, it is analogous to the sort of post hoc rationalization of agency actions that has been repeatedly condemned in decisions construing CEQA.

(*Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 307.)

In certain narrow circumstances, an agency may defer selection of mitigation measures from among several different identified mitigation options, but it cannot delay the formulation of those mitigation options to some future, post-CEQA process. (14 Cal. Code Regs. § 15126.4(a)(1)(B) (explaining that the formulation of mitigation may not be deferred, but that "measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way").) The courts have recently reaffirmed that an agency may defer specific detailed formulation of mitigation measures ***only*** where the agency "'(1) undertook a complete analysis of the significance of the environmental impact, (2) proposed potential mitigation measures early in the planning process, and (3) articulated specific performance criteria that would ensure that adequate mitigation measures were eventually implemented.'" *POET, LLC v. State Air Resources Bd.* (2013) 218 Cal. App. 4th 681, 737-40 (quoting *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 95; reiterating that CEQA requires an "agency to commit to specific performance standards" and holding that ARB improperly deferred formulation of mitigation measures); *see also Sierra Club v. County of Fresno* (2014) 226 Cal. App. 4th 704, 754 (finding that even where specific measures were formulated inclusion of a substitution clause with "no specific performance standards to evaluate the effectiveness of the substitute measure" violated CEQA by allowing for the deferred formulation of mitigation measures). ***As detailed below, none of the three***

criteria articulated by the courts have been met here because analysis of significant impacts is incomplete, mitigation measures for many significant impacts have not been formulated or proposed, and the Commission has failed to articulate specific performance criteria to ensure adequate mitigation measures are eventually implemented. As a result, the Commission has failed to comply with CEQA.

II. Override Findings Standard

In order to make an override finding, the Commission must first fully identify and analyze impacts, review a range of alternatives, and formulate mitigation measures. An override finding can only be made *after* the Commission has identified mitigation measures and alternatives. Only then can the Commission review the identified mitigation measures and alternatives for feasibility and weigh any unmitigable significant effects on the environment against the specific overriding benefits alleged for the proposal. (Cal. Pub. Res. Code § 21081; 14 Cal. Code Regs. § 15091(b); Siting Regs. § 1755.) The Commission cannot make any override finding that relies on the alleged benefits of some undisclosed amount of thermal storage in the future because that possibility remains completely illusory as presented by the petitioner and discussed in detail below. Moreover, there are feasible alternatives including the already permitted solar trough project, a PV project on this site, and distributed PV any of which could meet the project objectives with fewer significant impacts to the environment.

III. Open Meeting Act and Advisory Committee to the Commission

The Bagley-Keene Open Meeting Act, Government Code §§ 11120-111321, applies to "state bodies" including the Commission and any "advisory board, advisory commission, advisory committee, advisory subcommittee, or similar multimember advisory body of a state body, if created by formal action of the state body or of any member of the state body, and if the advisory body so created consists of three or more persons." (Gov't Code § 11121(c).) As currently proposed to be created by the Commission as part of the COCs (e.g. BIO-16), the technical advisory committee would be an "advisory committee" subject to all of the requirements of the Open Meeting Act including to publicly notice their meetings[7], prepare agendas and make the available to the public, provide an

[7] Notice for an advisory body can be included in notice for the commission. Gov't Code 11125.1 (c) ("Notice of a meeting of a state body that complies with this section shall also constitute notice of a meeting of an advisory body of that state body, provided that the business to be discussed by the advisory body is covered by the notice of the meeting of the state body, provided that the specific time and place of the advisory body's meeting is announced during the open and public

opportunity for the public to directly address each item on the agenda, and conduct their meetings in public. (*See* Gov't Code §§ 11125, 11125.1, 11125.7, 11123).

ARGUMENT

I. NEW INFORMATION SHOWS IMPACTS TO BIOLOGICAL RESOURCES MAY BE EVEN GREATER THAN EARILER ESTIMATES

A. New Information On Likely Impact to Avian Species Continues to Show Impacts will be Significant and Avian Species will be put at High Risk From the Proposed Amendment

The testimony for the reopened hearings shows that impacts to avian species are likely even higher than considered by Staff. Dr. Smallwood looked at existing data and predicted "Palen will kill 10,787 birds per year (80% CI: 3,573 to 18,000). These fatality rates would equal or exceed the fatalities estimated at the Altamont Pass Wind Resource Area, which has become infamous worldwide as the most dangerous wind project in the world." (Exh. 3140 at 6; *see also* Exh. 3144 at 3, 4 (Smallwood rebuttal; estimates from petitioner are based on survey data not properly adjusted for searcher efficiency or scavenging, one season of preconstruction surveys for bird use is insufficient to predict likely impacts and nearby high bird use areas increase risk); Exhs. 3126 (Anderson: additional data available on migratory pathways shows high use in the project area and noting attraction of birds could increase impacts significantly), 3127 (Flanagan: methods for estimating migratory impacts.)

While Staff and Dr. Smallwood looked at different aspects of the likely impacts to avian species, they largely agree that the impacts to avian species will likely be very high and that the project could cause significant risks to special status species and migratory birds, potentially at a population level. Staff focused largely on the size of the flux fields that put avian species at risk and positing that some collision strikes are actually flux related.[8] Dr. Smallwood did not distinguish between flux related and collision deaths but used the existing data from McCrary and the existing power tower project to extrapolate the likely number of avian deaths overall per megawatt. (Exh. 3140 at 4-7.)

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state body's meeting, and provided that the advisory body's meeting is conducted within a reasonable time of, and nearby, the meeting of the state body.")

[8] Relying on the proposed condition PD-1 which confused the project description—staff filed comments stating that the impacts from the project on biological resources would be reduced to roughly one half. (TN#:202823; entitled "Staff's Comments Regarding a Possible Energy Commission Finding of Overriding Considerations, Roger Johnson, "Construction of only Unit 1 at this time would reduce the impacts to Biological Resources by roughly one-half; impacts to Visual Resources would be only somewhat diminished – depending on viewer location; and other than construction related impacts, the significant impacts to Cultural Resources would not change."). However, when questioned at hearing Mr. Johnson clarified and that his statement that biological resource impacts would be "roughly one half" did not take into account non-linear impacts, was not based on any analysis, and was based on his understanding that only one tower would be built. TR7/30/14 at 199-200.

Extrapolating the numbers from those projects to the proposed amendment, it is likely that the project will kill many thousands of birds from collisions, thermal overload, burning and singing.

The 2014 report from the USFWS Forensics Lab raises questions regarding whether many of the impacted avian species are even found in monitoring because they may be burning up completely.

> Ivanpah employees and OLE staff noticed that close to the periphery of the tower and within the reflected solar field area, streams of smoke rise when an object crosses the solar flux fields aimed at the tower. Ivanpah employees used the term "streamers" to characterize this occurrence.
>
> When OLE staff visited the Ivanpah Solar plant, we observed many streamer events. It is claimed that these events represent the combustion of loose debris, or insects. Although some of the events are likely that, **there were instances in which the amount of smoke produced by the ignition could only be explained by a larger flammable biomass such as a bird**. **Indeed OLE staff observed birds entering the solar flux and igniting, consequently becoming a streamer**.
>
> **OLE staff observed an average of one streamer event every two minutes.** It appeared that the streamer events occurred more frequently within the "cloud" area adjacent to the tower.

(Exh. 3107 at at 22-23 [Kagen et al. 2014; emphasis added].) The report includes a recommendation to: "Suspend power tower operation during peak migration times for indicated species" (*Id.* at 2).[9] The new testimony regarding which sets of dead bird monitoring data should be considered in estimating overall deaths (see, e.g., collected TR7/30/14 at back and forth at hearing regarding use of various months of data) along with the issue of streamers shows that far more must be done to evaluate the likely number of birds killed at the existing power tower sites. Moreover, the accuracy of the monitoring remains in question as there have as yet been no surveyor efficiency trials or scavenging trials conducted which are critical to inform such estimates. (Exh. 3140 [Dr. Smallwood explains need for efficiency and scavenger trials and utilized data from published studies in his estimates); Exh. 1134 at 8 (Erikson; admitting efficiency and scavenger surveys still need to be conducted at ISEGS).

> Other USFWS staff also raised significant concerns regarding impacts to avian species:
> [W]e remain concerned that power tower technology likely has the highest lethality potential across all solar technology types currently used in the California desert. Potential impacts from concentrated solar flux were understated in the processing of these earlier projects, largely because no data were available to make a reasonable

[9] Seasonal curtailment is supported by the Center to protect some avian species although the number of birds that could be saved remains uncertain as it is unclear how many birds are killed by flux vs. collision. (*see, e.g.*, TR7/30/14 at 363 (staff theory that many collisiondeaths may actually be flux related); Exh. 3140 at 15-16 (proportionate estimate).

assessment. These risks are now becoming more apparent as monitoring results are being reported for the operational ISEGS project.

Because of the limited extent of systematic monitoring accomplished to date, the magnitude of risk from concentrated solar flux is not fully understood at this time. However, sufficient data have been collected to infer that significant numbers of birds will continue to suffer flux-related injury and death from multiple physiological effects (Service 2014, California Energy Commission 2014b). and diminished flight capabilities from singed feathers throughout the life of the project. Systematic monitoring at ISEGS has also revealed that several taxonomic groups, such as hummingbirds, are at risk from power tower technology. Furthermore, aerial insectivores and other insectivorous species seem to be particularly vulnerable due to the attractive nuisance caused by the bright glow of the tower and other lighting, as reported by the Service's Office of Law Enforcement in their forensics report (Service 2014). The Service (2014) documented that the higher ambient light levels associated with power tower technology attracts large numbers of insects, which in turn attract insectivorous bird species, and in turn bird-eating raptors, creating death and injury at multiple trophic levels unique among solar technologies.

…

The Service is also concerned about the limited discussion by the applicant and the CEC regarding the likelihood of fatality events to the federally endangered Yuma clapper rail and other sensitive species. For example, two clapper (Ridgway's) rail records exist in the project vicinity, the first from Desert Center (McCaskie 1992, identified as subsp. *levipes*), and the second (*subsp. yumanensis*) a fatality at the Desert Sunlight project (Ironwood Consulting Inc. 2013). Also, numerous records for migrating Empidonax flycatchers of various species on the project site (CEC 2013a) and project vicinity (CEC 2013b, Sandstrom 2014), including willow flycatcher (subspecies not identifiable in the field, except putatively by geography and appropriate habitat in breeding range) (CEC 2013b) have been documented in the project vicinity (nearby Lake Tamarisk). In addition, a yellow-billed cuckoo was killed at the ISEGS project and migration patterns also encompass the project area, with migration records from numerous locales surrounding the project vicinity (Johnson et al. 2008, Clark et al. 2014). Because of the observed mortalities of special status species at other existing solar facilities, an analysis that improves the level of rigor and adequacy for determining the different degrees of vulnerability across all avian taxa and a risk assessment that includes the quantification for take of listed and rare species is warranted.

…

Finally, we concur with CEC staff that the proposed project would have significant impacts to the regional avian community. We are concerned that the significant direct, indirect, and cumulative impacts to the abundance, distribution, and habitat for a wide diversity of avian species (e.g., resident, winter visitors, and migrants) have not been adequately addressed consistent with the issues raised in our November 14, 2013, letter, and as described above. Therefore, we support CEC's December 2013 proposed decision on the Palen project amendment (CEC 2013c).

(TN#:202896 at 2, 3, 4.) The Center agrees and urges the Commission to deny the amendment.

Petitioner's attempts to rebut Staff and Dr. Smallwood's testimony amount to little more than self serving claims that the theories and calculations are too conservative. As Staff acknowledged it is reasonable to be conservative with so many unknowns (TR7/30/14 at 387), and Dr. Smallwood explained that current estimation differences are largely beside the point:

> "If I'm overestimating by even five percent, so what? These are huge numbers, absolutely huge numbers. And what we're doing when we argue over these numbers, which are based on hugely uncertain adjustment factors, we're also glossing over all the chicks that were left in the nests, and these birds died in spring. Glossing over all the social interactions, all the ecological interactions. We're just arguing over numbers which really don't reflect on all the impacts." (TR7/30/14 at 379.)

Interestingly, petitioner asserted in testimony that impacts to birds is independent of the amount of energy actually produced because, as designed, the flux field is always created when the mirrors are on the tower or in standby—virtually during all daylight hours. (TR7/30/14 at 390-92). The only time flux is not created is when all the mirrors are moved to a "safe" position (which is horizontal). This appears to be a very important factor that has not yet been considered by the Commission; ***the flux field at the project site kills birds whether or not any energy is being produced.***

The flux killing birds with or without energy being produced is also relevant to petitioner's claims that curtailment to avoid impacts to birds is infeasible-- on a short-term basis because it takes too long to move the mirrors to the safe position and that on a long-term or seasonal basis because it would be too costly. What about moving all mirrors to the safe position on days the plant is not operating for other reasons? The Commission could certainly require the mirrors to be moved to the safe position on those days and save some birds. This should have been evaluated by staff but was not. And repositioning the mirrors to the "safe" position for birds might change the glare impacts—for better or worse—this issue must be, but has not been, considered fully as well.

Avoidance, minimization, and mitigation measures remain completely undeveloped and are per se inadequate. Both Staff and Petitioners urge the committee to ignore this critical issue and defer any development of mitigation measures to some future time. Petitioner does not claim that impacts to birds can be avoided or mitigated but rather asks the Commission to gloss over the critical analysis of avoidance and mitigation measures and skip to an override. (Exh. 1134 at 11 ["PSH is *willing to proceed with a finding* that avian impacts at the PSEGS are significant and, due solely to uncertainty, may not be fully mitigated."].) The petitioner appears to believe that it determines what findings will

be made and that CEQA allows the Commission to ignore formulation of avoidance, minimization and mitigation measures in the environmental review—that is not the law. CEQA requires that all feasible mitigation measures be adopted, even if significant impacts ultimately remain: "each public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so." (Pub. Res. Code § 21002.1(b).) Indeed, mitigation of a project's significant impacts is one of the "most important" functions of CEQA. *Sierra Club v. Gilroy City Council* (1990) 222 Cal. App. 3d 30, 41. A mere finding that impacts are significant and unavoidable is no substitute for meaningful analysis of impacts or incorporation of feasible mitigation measures or alternatives. *Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners* (2001) 91 Cal.App.4th 1344, 1370-71, (an agency can't "travel the legally impermissible easy road to CEQA compliance . . . [by] simply labeling the effect 'significant' without accompanying analysis.") The Commission must identify and analyze impacts and formulate mitigation measures in the environmental review and then adopt *all* feasible measures to reduce significant impacts to resources. On this basis (as well as those described in the Center's opening brief, TN#: 201336), the environmental review to biological resources remains incomplete.

Deferring formulation of mitigation to be developed by the TAC is not only unlawful, as explained herein regarding the need for mitigation measures or detailed performance standards to be developed before approval, but in addition, as Staff noted population effects are of concern and unaddressed. (TR7/30/14 at 442-43 [Staff noting potential risks to populations; "it will be very difficult to predict whether we're taking out a small number of birds from a giant robust population or small number of birds from a declining barely recovering population."].) As Dr. Smallwood explained that the monitoring being proposed is not designed to assess population impacts and therefore cannot be relied on for adaptive management to avoid such significant impacts to special status species or otherwise. (TR7/30/14 at 443 ["But I want to point out one thing that is important that maybe it's being lost here, is that the data being collected at wind farms, solar farms, they aren't suitable for determining population level affects. They never will be. That's not the kind of data we collect."].) If the project moves forward without this type of analysis it will be impossible for the Commission to know whether the impacts to avian species have tipped the scales and violated additional LORS (including the CESA and ESA which require protection of listed species populations as well as individuals).

B. Deterrent strategies are speculative and impacts have not been evaluated

1. Deterrent strategies proposed are speculative and there is no evidence they will be effective

The petitioner's testimony describing avian deterrent methods that might be considered as part of the mitigation measures provides little information on whether or not these methods will prove to be efficacious. Mr Norris's sincere but unsubstantiated testimony on behalf of the petitioner was entertaining but provided no meaningful evidence as to the efficacy of his "hypersound" invention on bird deterrence and possible unintended effects on birds and other resources. (*See* TR7/30/14 at 403-410.) Similarly, the testimony from Detect on their product, (See, e.g. Exh. 1140) which they admitted has *not* been installed at any existing solar facility (TR7/30/14 at 407), provided no substantive basis for the Commision to find that such methods would be effective in the context of the proposed amendment. As Dr.Smallwood stated at hearing: "I've never seen any data on the system. I don't know of any journal article. This just came out of the blue. I'm always a skeptic when I came out of the **animal** damage control lab at UC Davis. When I was there we had a lot of exclusionary devices, **hazing devices**, and whatnot that was proposed. We would test them in the lab and nothing ever worked on birds. It would be great if it did work. If it did I would imagine it would be all over the Altamont Pass already." (TR7/30/14 at 422 (corrected testimony in bold).) USFWS also notes that such deterrents are speculative:

> We remain concerned that the avian fatality data collected to date at existing solar projects in the Sonoran and Mojave deserts are being interpreted as sufficient to draw conclusions regarding the impacts expected from power tower and other solar technologies. The Service submits, consistent with CEC staff, that the proposed project (as recently reduced to one tower)[10] still has a high probability to kill significant numbers of resident and migratory birds and other wildlife, but that the magnitude and extent of these impacts remains to be determined and first should be grounded in additional, statistically-valid monitoring data from the ISEGS project. While additional minimization measures are presented by the applicant, the literature suggests that there are no proven or reliable deterrents – particularly at this scale – that would lessen the impact to the complex of species and number of individuals throughout the life of the project. Therefore, implementation of any deterrents should be considered experimental and include an appropriate effectiveness monitoring and adaptive management component.

(TN:#202896 at 3). USFWS also notes they recently "empaneled the Solar Avian Mortality Monitoring Product Team (Product Team) to develop monitoring guidelines for solar projects of differing

[10] As explained herein, petitioner's confusing submissions lead FWS to believe that proposal is now only for approval of one tower, which is inaccurate.

technology types" and is "working with U.S. Geological Survey (USGS) to evaluate radar and other imaging technologies that can be used to augment monitoring to address remaining questions about bird behavior responses to power tower technology. These studies may elucidate how mortalities are occurring at the ISEGS project. The Product Team should complete its work this fall and USGS in early 2015." TN#202896 at 3. Clearly it would be both feasible and prudent for the Commission to wait for those results before approving any additional power towers in the California desert.

2. Additional impacts from use of any deterrent strategies have not been evaluated.

Most importantly, neither the Petitioner nor the Staff has yet provided any information or environmental review of the impacts of these methods on other resources as required by CEQA. (CEQA Guidelines § 15126.4(a)(1)(D) ["If a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measures *shall* be discussed . . ." emphasis added]; *Save Our Peninsula Comm. v. Monterey Board of Supervisors* (2001) 87 Cal.App.4th 99, 130 ["An EIR is required to discuss the impacts of mitigation measures."].) CEQA requires that environmental review must analyze the effects of any proposed mitigation measures and their likely efficacy; because the Staff did not adequately discuss the likely impacts of the proffered avian deterrent measures, Staff must revise the environmental analysis and issue a new revised staff assessment.

The proposed project will be detrimental to several rare species. In some instances in the FSA and subsequent staff testimony, adequate information on which to base an impact analysis is lacking. In other instances, and impacts are inadequately analyzed and therefore the analysis of alternatives to avoid the impacts, and measures to minimize or mitigate impacts are also flawed. Unfortunately, particularly as to the impacts to avian species, the Commission has failed in its duty to adequately identify and analyze impacts to biological resources or avoid, minimize and mitigate the direct, indirect, and cumulative impacts to these rare species as required under CEQA.

C. Impacts to Invertebrates Are Likely Significant and Inadequately Addressed.

The Center sponsored testimony from Dr. Pratt on the richness of invertebrate species near the site particularly in the sand dunes (Exh. 3093 at 5-6), and analyzing the potentially significant impacts

to those species.[11] (*Id*., Exhs. 3094-3112, 3142-43.)

> No invertebrate survey has been performed for the proposed Palen Solar Power Project site. To obtain a greater understanding of the effects of the potential solar power project at least a season of invertebrate surveys should be performed, since most insects have a narrow (2 week or so) window of activity that runs from the dead of winter through spring into summer with some insect species waiting until late fall. Because surveys have not yet been conducted the information in my testimony is based on the geography and plants found at the site. It has been estimated that for every plant species there are 10 invertebrate species of which 95% will be insects (Ballmer 1995). Since there are 147 plant species on site (TN-58879) it is likely there will be around 1,500 invertebrate species found at the site. This number could be larger if there are more plant species to be found at the potential power plant site. (Exh. 3093 at 4.)

As Dr. Pratt noted, of great concern is new information suggesting that power towers may actually attract insects to their deaths (Exh. 3093 at 5 (discussing potential for flying insects to be attracted to intense light and concerns that they will be killed if attracted to the towers), and suggested factors to be considered in designing studies to learn more about the invertebrates being killed at the existing power towers (Exh. 3142). Dr. Pratt's concerns extend beyond impacts to invertebrates and note that loss of invertebrates can undermine whole ecosystems:

> Once these desert insects have been attracted to the light concentrated by the heliostats, and the extreme heat and/or solar flux/radiation kills all of them, the loss of flying insects could in time cause a wasteland to occur surrounding the solar project, not only affecting the local birds and lizards in the immediate area but ultimately the diversity of plants on and surrounding the site and in a larger area that could include Joshua Tree National Park and other nearby conservation areas.
>
> There may be many unexpected effects as well. As an example many dragonflies which travel great distances over the deserts may be attracted to and killed by the solar plant. Dragonflies which fly during the day are important predators of mosquitoes and mosquito larvae (as dragonfly larvae) and since mosquitoes are nocturnal they will not be affected by the proposed Palen Solar Power Project and due to the loss of dragonflies, the mosquitoes could dramatically increase in numbers. The diseases carried by mosquitoes could in turn also increase. This could have wider effects than one may think. Some attempt should be made to reduce the mortality to insects and other organisms.

(*Id*. at 6-7.) Similar concerns were raised in the recent report from the Forensics Lab at the USFWS which stated:

> It appears that Ivanpah may act as a **"mega-trap,"** attracting insects which in turn attract insect-eating birds, which are incapacitated by solar flux injury, thus attracting

[11] Intervenor Colorado River Indian Tribes ("CRIT") also provided testimony regarding the cultural importance of invertebrates as did many members of the tribes during public comment.

predators and creating an entire food chain vulnerable to injury and death.

Exh. 3107 at 2 (Kagen et al. 2014; emphasis in original); *see also id.* at 20-21.

Staff acknowledged that there may be impacts to invertebrate species but did not require baseline survey and concluded "potential impact to insects is too speculative to find that the impacts will be significant". (Exh. 2018 at 29-30.) At hearing Staff stated:

> We acknowledge we don't know whether those insects are being wind-blown in there or they're being attracted to the light. But we've been talking to other insect experts, as well, and they say we don't know if they're attracted to the light, but you should be doing a study to see if those are light-attracted insects. That was one of the driving factors which caused us to, you know, suggest we should be doing some monitoring to figure out what's going on in these facilities. I haven't heard anything compelling, any scientific evidence or even a citation, or a paper that says insects won't be attracted to a bright light even during the day. (TR7/30/14 at 289.)

Although Staff proposed a COC, BIO-16b in rebuttal testimony that at least required surveys to study invertebrate impacts because "Staff believes that undertaking attempts to quantify and understand impacts to insects would be valuable, and that insect impacts should be considered when evaluating adaptive management techniques for the project." (Exh. 2018 at 30); at hearing Staff backtracked and stated they would be willing to defer even the question of whether studies must be done to the TAC. (TR7/30/14 at 425.) Staff completely ignored the ecosystem effects that could result from losses of significant numbers of invertebrates. As a result, Staff and the Commission have failed to adequately identify and analyze impacts to this important biological resource and have certainly failed to address alternatives, minimization, or mitigation measures in violation of CEQA.

Nothing in petitioner's testimony shows that impacts to invertebrates will not be significant, although petitioner did sponsor testimony that attempted to cast doubt on whether invertebrates are being attracted to the tower lights but conceded at hearing that the potential for attractions is unknown at this time, "nobody's tested it" (TR7/30/14 at 289). Clearly, the weight of scientific opinion supports the facts that impacts to invertebrates and the potential for attraction and cascading effects throughout the biological resources is a serious concern in need of further investigation. Until more is known, the Commission should not consider approving the proposed amendment and risk creating a mega trap for birds and insects and a wasteland of biodiversity in the Chuckwalla valley ecosystem.

D. Impacts to Sand Habitat and Mojave Fringe-toed Lizard Are Not Avoided

If the Commission were to approve the amendment with the petitioner's condition PD-1 (which

the Center opposes—urging the Commission to instead deny the amendment), there is clearly a high potential that only one tower will be built. Therefore, the Commission is required to consider an alternative with one tower completely avoiding active sand habitat which would significantly reduce impacts to Mojave fringe-toed lizard. Staff should provide a revised alternative for a single tower reconfigured on the landscape to avoid all sand areas.

As detailed below, the condition for storage is illusory and the existence of a PPA appears to be the most important factor in driving whether one or two towers will be built. As a result, the likelihood that any second tower would be build with or without storage appears to be quite small. Therefore, before approving the amendment the Commission must fully consider that it would likely be approving only a single tower—which was one of the alternatives considered (and which the petitioner claimed was infeasible). In testimony on alternatives the Center noted the inadequacy of the reduced acreage alternative formulation because Staff refused to consider a single tower alternative that would avoid significant impacts to sand habitats and Mojave fringe-toed lizard even though the site would accommodate such an alternative. Indeed, in the previous hearing, Ms. Anderson provided testimony (Exh. 3001 and Hearing Transcript 10/29/13) and an alternative (Exh. 3036) which proposes an environmentally superior alternative that removed the proposed two tower development from a majority of the active sand areas and Mojave fringe-toed lizard habitat. (*See also* Exh. 3091[figure submitted by petitioner shows that it does have access to many of the adjacent private lands through options.].) A single tower alternative could certainly be configured to avoid the active sand areas and Mojave fringe-toed lizard habitat and further reduce environmental impacts.

If the Commission now considers approving the amendment knowing that it is highly likely only one tower may be built, it must first insist that tower be redesigned to avoid all impacts to sand habitats and Mojave fringe-toed lizard because such an alternative is clearly feasible.

II. APPROVAL OF THE AMENDMENT WOULD VIOLATE CEQA

A. Petitioner's New Proposed Condition is Both Confusing and Potentially Illusory Rendering the Project Description Unstable

Proposed Condition PD-1 is overly vague and provides no commitment to storage; as such the promise of storage at some future time is illusory. CEQA requires a description of the Project in sufficient detail so that the impacts of the project can be assessed. (14 C.C.R. §15124.) CEQA

requires an accurate, clear and stable description of the Project and its impacts:

> "[A]n 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* (1977) 71 Cal.App.3d 185, 199.) However, "[a] curtailed, enigmatic or unstable project description draws a red herring across the path of public input." (Id. at p. 198.) "[O]nly through an accurate view of the project may the public and interested parties and public agencies balance the proposed project's benefits against its environmental cost, consider appropriate mitigation measures, assess the advantages of terminating the proposal and properly weigh other alternatives … ." (*City of Santee v. County of San Diego* (1989) 214 Cal.App.3d 1438, 1454.)

(*San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 655; *see also Sacramento Old City Assn. v. City Council* (1991) 229 Cal. App. 3d 1011, 1023 [same]; *Stanislaus Natural Heritage Project v. County of Stanislaus* (1996) 48 Cal. App. 4th 182, 201 [same]; *Berkeley Keep Jets Over the Bay Com. v. Board of Port Comrs.* (2001) 91 Cal.App.4th 1344, 1358.)

On August 18, 2014 along with rebuttal testimony, the petitioner in response to Staff's request regarding construction phasing, addressed "project description" and submitted a new proposed condition to Project Description "PD-1" (Exhibit 1166). The proposed conditions states:

> To memorialize PSH's commitment, we suggest the following new condition of certification be incorporated into the Final Decision.
>
> **PD-1** The project owner shall not construct Phase II of the project as shown on Exhibit 1167 until it has filed, and the Commission approves, a Petition For Amendment that incorporates thermal energy storage into the design of Phase II. This condition does not prevent the project owner from proposing other design changes in the Phase II Petition For Amendment, but the Petition must include, at a minimum, thermal energy storage.

(*Id*. at 3). The petitioner also stated: "It is imperative that the Commission grant a license by October 2014, which would authorize Phase I." (*Id*. at 2). The testimony regarding project description, phasing, and the wording of the condition lead many members of the public, staff and others to believe that the petitioner was only seeking approval to build a single tower project and that a new Commission approval and additional hearings would be required for a second tower that would be required to have the second tower approved with storage.

However, at hearing, Staff explained that they believed as the condition is written it is possible that the condition could be approved by staff without a new Committee being assigned and a full public process. (TR 7/30/14 at 39-40, Stora: "It's not uncommon for developers to come in during the construction with petitions to change various things on power plants. And so this would be handled as

any other standard amendment. It would be up to the Committee or to the Committee or to the Commission to decide whether or not it would be handled in this format or we would have a Committee assignment or if it would be a standard staff amendment, where just staff would do it and then present at the full Commission.") The petitioner also clarified that they are seeking full approval of two towers with simply a condition to add storage (TR 7/30/14 at 58[12]), which may or may not be met and, indeed, ***petitioner believes it would retain the option to seek to have the condition removed***. TR 7/30/14 at 128-29 ("A condition that obligates us to either amend a future permit, you know, either in the form of you take out the condition, and that's ultimately the question of the Committee, or you amend the potential license to have some design of energy storage in compliance with whatever commercial agreement might come along. And that's where there is, obviously, some level of uncertainty."), at 133-134 ("the way I look at it, the way I understand the CEC process is you have a condition and you either satisfy that condition, and in this case the project description's condition requires us to bring an amendment. Or you don't satisfy the condition and you ask the Committee for the opportunity to amend the project so that that is still viable. But under the proposal that we are making, the only way we could comply with the project is to have the Commission provide some amendment, either in the form of one or the other. I didn't want to introduce the other as some alternative that we are thinking about, but that's my understanding of the decision tree.")

The proposed PD-1 has confused and clouded the subsequent discussion and comments on the balancing on a possible override for project including from Staff (Deputy Director of the Siting, Roger Johnson) and from the USFWS.[13] At hearing, Roger Johnson confirmed that he believed the proposal was now only for one tower and that a second tower would require storage-- he had not considered that the petitioner could ask for the storage condition to be removed. (TR 7/30/14 at 198-199.)

B. There are Feasible Alternatives to the Proposed Amendment

[12] "It has always been a project with two towers. The one addition that we've added to the amendment is the cost, Project Description number 1. Yeah. Project description number 1, that changes our obligations under a potential license, but otherwise that has always been a two-tower project that we are proposing, a 500-megawatt project that we are proposing."
[13] TN#:202823, Roger Johnson ("The construction of Unit 2 *would only occur* if a storage component – which Staff agrees would be a significant project benefit – were added, *and would only occur after approval of a Petition to Amend which would require a thorough review and analysis by Staff and interested parties*."; emphasis added; "Construction of only Unit 1 at this time would reduce the impacts to Biological Resources by roughly one-half; impacts to Visual Resources would be only somewhat diminished – depending on viewer location; and other than construction related impacts, the significant impacts to Cultural Resources would not change."); TN#:202896 at 1 (USFWS "our understanding that the proposed project has been reduced to one tower and the associated heliostats and utility infrastructure").

Testimony submitted by Staff and the Center shows that there are still feasible alternatives. (TR7/30/14 at 94-95 (noting staff did not submit additional testimony on alternatives after 2013 FSA, Exhs. 200, 2001); Exh. 3133 at 1 [Powers: summarizing "solar PV in any format, either utility-scale PV or large-scale distributed PV on rooftops, is a lower-cost, lower environmental impact alternative than the proposed PSEGS project."], at 2-3, 3-7; Exh. 3146 (rebuttal).) Moreover, the growth of distributed PV along with new inverter technology that will ease grid integration can easily replace the 250 MW from one tower which the petitioner now claims it is committed to building or 500 MW for both towers if the second tower is ever built. (*Id*.) Further, the discussion of storage needs to address the alternative of in-basin storage which would more efficiently help fill the need for energy in peak demand periods. (Exh. 3133 at 1, 7-9, 10.) In sum, because feasible alternatives exist, this project is not needed to meet the Commission's objectives and Commission should deny the petition.

1. ***Feasibility Is Not Solely Dependent on Petitioner's Subjective Assessment***

The petitioner sponsored testimony allegedly showing that all other alternatives are infeasible. (See, e.g., Exh. 1150 [slide providing purely subjective assessment of feasibility based on company's point of view.].). The petitioner asks the Commission to imprudently find that the only feasible alternative is the proposed amendment—not the permitted project and not any other alternative. This presents multiple problems for the Commission.

Nothing in CEQA states that an alternative may be found infeasible solely due to a conflict with one of the applicant's objectives or financing goals, PPA or LGIA. In fact, the CEQA Guidelines expressly provide that a feasible alternative may *impede* achievement of the project objectives to some degree. (*See* 14 C.C.R § 15126.6(a), (b).) For example, as discussed in detail in testimony and earlier briefing (TN#:201336) even if a photovoltaic solar (PV) project on this site does not completely satisfy all of the applicant's stated objectives, that does not render it an infeasible alternative. Indeed, if applicants could thwart consideration of all potentially feasible alternatives simply by stating it is not what they wish to build, CEQA would be rendered meaningless. (*See Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 736-37 (holding that applicant's prior commitments could not foreclose analysis of alternatives). As the Commission has stated:

> A reasonable, feasible alternative must be one that meets most basic project objectives while avoiding or substantially lessening any of the significant effects of the project. [CEQA Guidelines, § 15126.6(a).] Stating project objectives too narrowly or too

> specifically could artificially limit the range of reasonable, feasible alternatives to be considered.
>
> . . .
>
> The evidence leads us to conclude that the Applicant defined its objectives so narrowly as to preclude a reasonable range of alternatives. While it is true that a project's objectives should guide the selection of alternative sites for analysis, when objectives are defined too narrowly, the analysis of alternative sites may be inadequate. (*City of Santee v. County of San Diego* (1989) 214 Cal. App. 3d 1438, 1455.)

Final Commission Decision, Chula Vista Energy Upgrade Project, June 2009 (07-AFC-4) CEC-800-2009-001-CMF ("Chula Vista Decision") at 26 (finding that applicant had not met its duty to analyze a reasonable range of alternatives).

An applicant's *mere assertion* that a condition or alternative will not be feasible for them to build on their preferred timeline does not render an alternative *economically* infeasible either. On the contrary, recent decisions have clarified that a finding of economic infeasibility must be based upon *quantitative, comparative evidence* showing that the alternative would render the project economically impractical. (See, e.g., *Save Round Valley Alliance v. County of Inyo* (2007) 157 Cal.App.4th 1437, 1461-62 [holding that applicant's inability to achieve "the same economic objectives" under a proposed alternative does not render the alternative economically infeasible]; *Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 600 [requiring evidence that comparative marginal costs would be so great that a "reasonably prudent property owner" would not proceed with the project]; *Preservation Action Council v. City of San Jose* (2006) 141 Cal.App.4th 1336, 1356-57 [holding that evidence of economic infeasibility must consist of facts, independent analysis, and meaningful detail, not just the assertions of an interested party].)

Instead of looking at the economics as a whole, the petitioner seeks to have the Commission consider only its own concerns including their ability or inability to fulfill PPA or LGIA deadlines or make the project "financeable" (a term that is not defined and completely unclear).[14] Here, the petitioner provided no quantitative, comparative evidence but only opinion regarding the economic

[14] Oddly, in discussing whether a single tower is financeable, the petitioner claimed that the fully permitted Rice Solar project which has a storage component has been "abandoned". TR7/30/14 at 130. Petitioner's testimony on the relative benefits of salt storage also admitted that the SolarReserve design is superior to what could be designed at Palen with storage which would be more constrained. (TR7/30/14 at 206-207). Petitioner appears to "prove too much" because if a fully permitted power tower with superior and proven storage technology is truly not financeable, why would a power tower with no storage be financeable? However, as it turns out, nothing in the Commission's docket for the Rice project shows it has been abandoned and the company, and SolarReserve, states in a recent article that the project has not been abandoned. http://www.kcet.org/news/rewire/solar/concentrating-solar/has-the-rice-solar-project-been-abandoned.html This also goes to the credibility of many of the witness' unsubstantiated statements regarding financeability.

feasibility of the various alternatives. Oddly, the petitioner relied on their lack of access to proprietary solar trough technology as a basis for claiming the permitted project is infeasible when, in fact, ***petitioner does have access to proprietary trough technology with storage.*** (TR7/30/14 at 122 ["Abengoa, a partner in the Palen Solar Holdings Partnership is the owner of Solana and, therefore, there is access to thattechnology."].) The Commission cannot reject the no project alternative (currently permitted solar trough) solely based on the applicant's statements that it does not wish to build such a project or because it does not have access to the exact same proprietary technology as used in the initial permit.

Furthermore, nothing has been or will be disclosed as to the actual cost to the consumer of the energy that may ultimately be generated from the proposed amended project (TR7/30/14 at 116 ["The cost of the electricity to be sold is confidential."]); thus, a comparison of the benefits to the public is made impossible. In order to fairly compare *economic* feasibility of alternatives, the Commission must disclose what economic metric it will utilize in order to evaluate the proposed project on a level playing field with other alternatives rather the scattershot discussion of economic feasibility provided in the context of the petitioner's proposal which ranges from timing concerns to cost concerns and runs the gamut from PPA deadlines to financing to the feasibility of obtaining proprietary technology. Because *no meaningful economic comparison* has been made between the proposed amendment, the permitted project (no project alternative), the reduced acreage alternative, the PV alternative, or the distributed PV alternative, or other alternatives, the Commission cannot properly analyze *economic* feasibility or infeasibility or use it as the basis for its rejection of alternatives that would avoid or reduce significant impacts to resources.

In sum, the petitioner's narrow interest in constructing only one type of solar project using only one specific technology and its interest in private contracts it has entered into for PPAs or LGIAs cannot be the primary determinant of the feasibility of alternatives. Because there is more than one feasible alternative (including the no project alternative, a reduced footprint alternative, and the PV alternative) that meet most objectives and avoids significant impacts to the environment, ***the Commission cannot approve the amendment and it must be denied.***

In addition, the Commission cannot lawfully adopt the applicant's overly narrow definition of feasibility as being solely what the petitioner desires to construct or subjectively believes is financeable

such that no meaningful alternatives can be considered; to do so would violate CEQA and render meaningless the alternatives analysis which is the heart of the environmental review process.

2. ***If, However, the Commission Finds That the No Project Alternative (the Permitted Solar Trough Project) Is Infeasible, Then the CEQA Analysis Must Be Revised***

First, if the Commission were to find that the No Project Alternative was infeasible, then the environmental review as a whole must be revised to fully address the impacts because the No Project Alternative (a large-scale solar trough project on this site) was used by staff as the baseline for the evaluation of the impacts of the petition to amend rather than the actual, current environmental setting – over 4,000 acres of largely undisturbed and intact desert habitat including a key movement corridor and rare sand dune natural community. (*See* Exh. 2017 at 30 ("Staff only assessed impacts to cultural resources based upon only those impacts that would result from the difference between what was previously licensed and what is now proposed.")[15] As the Supreme Court stated:

> An approach using hypothetical allowable conditions as the baseline results in "illusory" comparisons that "can only mislead the public as to the reality of the impacts and subvert full consideration of the actual environmental impacts," a result at direct odds with CEQA's intent. (*Environmental Planning & Information Council v. County of El Dorado, supra*, 131 Cal. App. 3d at p. 358.) The District's use of the prior permits' maximum operating levels as a baseline appears to have had that effect here, providing an illusory basis for a finding of no significant adverse effect despite an acknowledged increase in NOx emissions exceeding the District's published significance threshold.

(*Communities for a Better Environment v. South Coast Air Quality Management District* (2010) 48 Cal. 4th 310, 322.) So too here, if as petitioner now states, the existing permit to build a trough solar project is infeasible, then the Commission using that prior permit's impacts as a baseline also will have resulted in illusory comparisons, misled the public as to the reality of the impacts, and subverted full consideration of the environmental impacts.

If the previously permitted project is infeasible, then the Staff should have used the existing conditions as the baseline for review, and therefore the FSA is per se inadequate. If Staff had used the

[15] *See also* TN #:210640 at 139, 140 (TR 10/28/13, hearing officer explaining the narrow scope being evaluated in the amendment process; "I want everybody to understand that, the Petitioner is petitioning to amend an already licensed power plant that was to go into this site that was the trough style solar just like Genesis is supposed to be. And what they're trying to do is change from their already approved power plant, which is the trough power plant, to the tower style power plant, it's all towers. So what the Committee is really interested in knowing isn't so much, like we're not -- there will be a power plant there. One of them, it's either going to be troughs or it's going to be this new amended tower." "There is a licensed power plant already at this site. What we're interested in is the difference between the licensed power plant and the proposed modified power plant with the towers.")

existing conditions as the baseline, the significant environmental impacts found and issues at hearing would have been far broader and alternatives may have had a wider range. Petitioner, Staff, and the Commission cannot have it both ways, either the proper baseline was the No Project Alternative which is a feasible permitted project, or the baseline should have been the current conditions on the ground.

Second, if none of the other alternatives evaluated by Staff as part of the environmental review are feasible, then the Commission has failed to comply with one of the most basic tenets of CEQA. The purpose of alternatives analysis in an environmental review document under CEQA is to enable the agency or commission to fulfill the statutory requirement that feasible alternatives that avoid significant impacts of a project must be implemented.

> "[I]t is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects."

(Public Res. Code § 21002.) The statutory language and caselaw are quite clear that the Legislature intended public agencies to utilize CEQA's environmental review process and procedures to make determinations regarding feasible alternatives and mitigation measures based on a robust analysis.

D. The Proposals to Defer Formulation of Mitigation Measures to A Technical Advisory Committee Without Detailed Performance Standards Is Unlawful

1. Mitigation Measures Should Be Formulated Before Approval of the Amendment

Under CEQA, an agency must "mitigate or avoid" the significant environmental impacts of the "projects it carries out or approves whenever it is feasible to do so." (Pub. Res. Code §§ 21002, 21002.1(b); 14 C.C.R. § 15065(c)(3).) To satisfy this requirement, the environmental review "shall describe feasible mitigation measures which could minimize significant adverse impacts" for "each significant effect identified." (14 C.C.R. § 15126.4(a).) As noted above, the Commission has failed to do so here but must do so ***before*** approving the proposed amendment

Where, as here, the Commission has identified one or more significant effects from the proposed amendment, it must make specific findings that the project incorporates alterations that mitigate or avoid such impacts or the *identified* mitigation measures and alternatives are infeasible and the benefits of the project outweigh its significant effect on the environment. (Pub. Res. Code §

21081; 14 C.C.R. § 15091(b).) When making such a finding, the Commission shall (1) adopt a monitoring or reporting program designed to ensure compliance with measures adopted to mitigate or avoid impacts during project implementation, and (2) provide that such measures are fully enforceable through permit conditions, agreements, or similar measures. (Pub. Res. Code § 21081.6(a)-(b).) Because many impacts have not been fully identified and analyzed and mitigation measures have not be identified or formulated, the Commission cannot at this time make the necessary findings to approve the amendment.

2. Detailed Performance Standards Must Be Adopted, If Mitigation Measures Are Not Fully Formulated Before Project Approval

As explained above, an agency may defer specific detailed formulation of mitigation measures ***only*** where the agency "'(1) undertook a complete analysis of the significance of the environmental impact, (2) proposed potential mitigation measures early in the planning process, and (3) articulated specific performance criteria that would ensure that adequate mitigation measures were eventually implemented.'" *POET, LLC v. State Air Resources Bd.* (2013) 218 Cal. App. 4th 681, 737-40 (quoting *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 95). ***None of the three criteria articulated by the courts have been met here because analysis of significant impacts is incomplete, mitigation measures for many significant impacts have not been formulated or proposed, and the Commission has failed to articulate specific performance criteria to ensure adequate mitigation measures are eventually implemented.***

In the 2013 PMPD, the Commission incorporated the words "performance standards" in several places but did not actually provide substantive standards for deferred mitigation (*See, e.g.*, TN#:201434 at 4.2-88.) In the order reopening the hearings and at hearing, the Committee raised the question of performance standards (*see, e.g.*, TR7/30/14 at 438-440, Commissioner Douglas discussing the need for performance standards to outcome based). In written testimony Staff did not propose any performance standards needed for the formulation of many mitigation measures. Petitioner urged the Commission to stray even further afield from the legal requirements and suggests that the performance standards themselves be formulated by the TAC. [16] *See, e.g.*, TR 7/30/14 at 231 ("We believe that any performance standards should be considered by the Technical Advisory Committee prescribed for the

[16] Oddly, while petitioner admits the impacts are unknown and that appropriate mitigation measures have not been formulated, it asserts that a single payment of $1.8 million to be allocated later by the TAC will somehow mitigate for all of the impacts to avian species. *See, e.g.*, TR 7/30/14 at 439 (Galati explaining petitioner's position).

project and ask the TAC assist with the implementation of the BBCS.") Shockingly, Staff at hearing stated that it could be "flexible" on including COCs that allowed the Commission to defer formulation of performance standards to the TAC until after a decision is made. TR 7/30/14 at 423-24 (Huntley, admitting no performance standards have been formulated by Staff and "I think we could adopt language . . . to allow the TAC to have greater authority to decide what those performance structurals are."). As a result, were the Commission to adopt the COCs regarding mitigation measures as suggested by the Staff and petitioner, which would *defer formulation of even the performance standards for mitigation* until after a decision is made, it would be in violation of CEQA.

3. Many Suggested Mitigation Measures are not Feasible, Enforceable, or Fully Funded

To be legally adequate, mitigation measures must be "feasible and enforceable." (*Lincoln Place Tenants Ass'n*, 155 Cal.App.4th at 445.) CEQA requires that mitigation measures are fully enforceable through permit conditions, agreements, or similar measures. (Cal. Pub. Res. Code § 21081.6(a)-(b).) To be feasible, a measure must be "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors." (*Ibid*. (quoting Cal. Pub. Res. Code § 21061.1).) "The purpose of these requirements is to ensure that feasible mitigation measures will actually be implemented as a condition of development, and not merely adopted and then neglected or disregarded. (*Federation of Hillside & Canyon Ass'ns v. City of Los Angeles* (2000) 83 Cal.App.4th 1252, 1261; *see also Lincoln Place Tenants Ass'n v. City of Los Angeles* (2007) 155 Cal.App.4th 425, 443-444 ("[t]he fundamental goals of environmental review under CEQA are information, participation, mitigation, and accountability").)

Where, as here, there is no showing in the record that sufficient mitigation measures have been formulated for significant impacts to several resources including avian species or that sufficient funding is being proposed to carry out the many as yet unidentified mitigation measures, the proposed mitigation is neither feasible nor enforceable. (*See Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1122.)[17] For example, the petitioner suggests that it provide $1.8 million dollars for avian mitigation but does not provide any basis for showing that will be sufficient to mitigate for impacts to

[17] While CEQA does not require that an EIR discuss mitigation funding in every instance, an agency cannot ignore legitimate funding concerns. (*Federation of Hillside*, 83 Cal.App.4th at 1260.) In *Federation of Hillside*, the court struck down an EIR which failed to rebut concerns that the cost of mitigation "far exceed[ed]" the city's ability to pay, required the cooperation of multiple agencies, and did not make development contingent upon the implementation of the mitigation measures. (*Id*. at 1256, 1261.)

likely thousands of special status birds (including ESA and CESA listed birds and golden eagles) and migratory birds that will be killed by the project. Further, even if there may be deterrent strategies to reduce impacts to avian species (which has not yet been shown as discussed above), petitioner has provided no information about the costs of such activities nor has it committed to fully fund all such activities in addition to the funds for mitigation. Once again, the petitioner asks the Commission to rely on an illusory promise of some future possibility of deterrence and eschew its duty to require feasible, enforceable, and fully funded mitigation measures such as those that will clearly be needed for known significant impacts to birds. Because the proposed amendment may "take" species protected under the California ESA, and the Commission has stated that it acts in lieu of the California Department of Fish and Wildlife in approving any take of those species, the Commission must further ensure that all impacts to CESA species are "fully mitigated"; the Commission cannot accept vaguely worded conditions that may, possibly, at some future time provide some mitigation as the petitioner urges.

4. If the Commission Appoints an Advisory Committee, It Must Comply with California's Open Meeting Laws.

As explained above, as envisioned in the COCs the TAC meets the definition of an advisory committee of the Commission and must follow the Bagley-Keene Open Meeting Act requirements. If the Commission adopts the proposed COCs appointing a TAC and approves the proposed amendment, which the Center urges it not to do, at minimum it must ensure that the TAC comply with all of the Open Meeting Act requirements including notice, agendas, and public participation.

E. The Commission Cannot Make the Findings Necessary to "Override" the Project's Significant Impacts Under CEQA.

As explained above and in earlier briefing (TN#:201336), in order to approve the amendment despite its significant environmental impacts, the Commission must find (1) that mitigation measures or alternatives to lessen these impacts are infeasible, and (2) specific overriding benefits of the Project outweigh its significant environmental effects. (Public Resources Code § 21081; Siting Regs. § 1755.) Even assuming for the sake of argument alone, that the identification and analysis of environmental impacts were adequate, which they are not, as explained above and in earlier briefing (TN#:201336), the alternatives analysis in the FSA and additional testimony shows that the no project alternative is feasible, a PV project on this site is feasible, and a reduced footprint alternative is feasible (indeed the petitioner itself now admits that one tower is all that might ever get built if their proposed condition is

accepted). Because any of these alternatives could avoid many of the significant impacts of the proposed amendment and meet the Commission's objectives of increasing renewable energy and fulfilling the RPS, the proposed amendment should be denied.

Moreover, there is still no showing in this record that the alleged benefits of the project outweigh the significant harm the amendment will surely cause. As the Center noted and was clear at hearing, many of the alleged benefits are exceedingly speculative because this tower technology has never been operated at this scale and this same design of a solar power tower project with two 750 foot towers *without storage* has already been rejected by the CPUC as adding no significant benefit and uneconomic. (*See* CPUC Resolution E-4522 [grudgingly approving one power tower of this design without storage (Solar Partners XVII) based on the applicant's allegations that it was necessary step before it could build a power tower with storage (Solar Partners XX) [18].)

In contrast, impacts from the proposed amendment—to birds, invertebrates, desert tortoise, sand habitat and Mojave fringe-toed lizards, cultural resources, visual resources and other resources—are more than considerable. Clearly the speculative, alleged benefits of the proposed amendment as compared to the already permitted solar trough project on this site or a PV project do not outweigh the significant environmental effects. On this record, therefore, the Commission cannot make the findings necessary to "override" the Project's significant environmental impacts under CEQA.

Because the PV alternative and the no project alternative are both feasible, the Commission cannot make the findings required to "override" the amendment's significant impacts. As a result, the record does not contain substantial evidence to support either of the findings necessary to "override" a significant impact under CEQA or the Warren-Alquist Act.

III. THE AMENDMENT SHOULD BE DENIED

A. Possible Future Energy Storage in Phase II Remains Entirely Speculative and Does Not Support Any Change in the Committee's Earlier Proposed Decision to Deny the Petition.

As explained above, the possible future energy storage in Phase II is entirely speculative and the petitioner may even seek to have the condition removed. Storage was a key issue the Committee sought additional information on in weighing benefits. Without storage being firmly committed to and

[18] Available at http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M032/K198/32198829.PDF . Notably, those PPAs which were grudgingly approved by the CPUC appear to have now been terminated. *See* RPS project status table at http://www.cpuc.ca.gov/NR/rdonlyres/EB937AEB-2CBE-44BC-AA25-3A3DE69EC5EE/0/RPS_Project_Status_Table_2014_June.xls (Solar Partners XVII and XX).

designed into the actual permitted project, the Commission cannot rely on the vague possibility of future storage as any sort of "benefit" in balancing the benefits and the impacts of the project. More importantly, the Commission should never reach the stage of considering such balancing as it is clear that feasible alternatives to the project exist including, but not limited to, the permitted project (no project alternative) and a PV alternative at this site. Storage could be amended into these technologies too, which would provide the storage benefits that the Committee is looking for without as many environmental impacts as the proposed amendment.

B. The Commission Cannot "Override" Noncompliance with State & Federal LORS

1. Noncompliance with State LORS

a. Approval of the Amendment Would Violate CEQA

As detailed above and in earlier briefing (TN#:201336), the CEQA review for the proposed project to date is inadequate in many ways and therefore the Commission's approval of this project would violate CEQA.

b. Approval Would Violate CESA and the Fully Protected Species Act

As discussed in earlier briefing (TN#:201336), the Commission has not adequately identified impacts to special status species or evaluated alternatives to avoid impacts to CESA listed species including willow flycatchers and therefore, cannot find that the amendment complies with CESA.

In addition, the project will take eagles and Yuma clapper rail in violation of the fully protected species law, (Cal. Fish & Game Code § 3511). And any take of a golden eagle, which is a fully protected species, is prohibited by California law and the project does not fall within the narrow exception allowing such take under an approved NCCP (Cal. Fish & Game Code § 2835), as no such plan has been approved for this project or in this area. Golden eagles and other raptors are also protected under California law as Birds of Prey (Fish & Game Code § 3503.5), and eagles and other migratory birds are also protected under California law as Migratory Birds (Fish & Game Code § 3513). All of these LORS would likely be violated by approval the amendment. or operation of power towers. Therefore, the Commission should not approve this project which violates state LORS.

2. Approval of the Project Would Violate Federal LORS

The proposed project would have unmitigated impacts to avian species that will also violate the Migratory Bird Treaty Act (16 U.S.C. § 701 *et seq*.), the Bald and Golden Eagle Protection Act (16 U.S.C. § 668 et seq.), and likely other federal laws, ordinances, regulations and standards.

As discussed in the Center's earlier briefing and above, the environmental review shows that the proposed project will have significant impacts to birds, including migratory birds and golden eagles. Therefore, it is impossible for the Commission to find that the project is consistent with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act both of which prohibit take.

C. The Commission Cannot "Override" Noncompliance with State & Federal LORS

"[T]he Commission has consistently regarded a LORS override [as] an extraordinary measure which . . . must be done in as limited a manner as possible." (*Eastshore Energy Center, Final Commission Decision, October 2008 (06-AFC-6) CEC-800-2008-004-CMF*, at p. 453 [quotation omitted].) In order to approve a project that conflicts with LORS, the Commission must make two independent findings: (1) that public convenience and necessity require the project, and (2) that there are not more prudent and feasible means of achieving public convenience and necessity. (§ 25525; Siting Regs. §§ 1752(k), 1755(b).) Neither finding can be made on the record here because the amended power tower proposal is not necessary to meet any public convenience or necessity, including the RPS goals which can be met in other ways, and because a PV alternative on this site, the original solar trough project, or a distributed PV alternative would all be more prudent and feasible means of achieving the RPS goals and achieving public convenience and necessity.

1. Public Convenience and Necessity Do Not Require the Project.

The Applicant has not met its burden of presenting substantial evidence to support a finding that public convenience and necessity require this project. (*See* Siting Regs. § 1748(d).) The phrase "public convenience and necessity," depending on the facts presented, can mean anything from "indispensable" to "highly important" to "needful, requisite, or conducive." (*San Diego & Coronado Ferry Co. v. Railroad Com. of California* (1930) 210 Cal. 504, 511-12.) A more recent decision defines the phrase as meaning "a public matter, without which the public is inconvenienced to the extent of being handicapped in the practice of business or wholesome pleasure or both, and without which the people of the community are denied, to their detriment, that which is enjoyed by others similarly situated." (*Luxor Cab Co. v. Cahill* (1971) 21 Cal.App.3d 551, 557-58.) In *Eastshore*, the Commission stated that its practice is to balance the benefits of each project against the public purposes of the LORS with which it conflicts. (See *Eastshore* at p. 455.) Under any of these tests, public convenience and necessity do not require the amendment, and as a result it cannot be certified.

2. There are more prudent and feasible means of achieving the Commission's goals

While it is undoubtedly true that California must move forward with the development of new sources of clean, renewable energy, there is no reason, and no showing on this record, that this amendment to allow two- 750-foot power towers and the associated mirror fields is needed at this time as many other solar and wind energy projects are being constructed and together with distributed PV programs will easily meet or exceed current RPS requirements. Moreover, there are other proposals proceeding through the Commission's approval process and other federal, state and local approval processes that provide feasible alternatives of achieving the Commission's goals without conflict with LORS particularly regarding impacts to avian species and rare sand habitats, violations of CESA, the fully protected species act, CEQA, and many federal laws.

Alternative renewable energy projects are being proposed, built, and brought on line in many areas of California. While some solar development may be appropriate in this area, the amendment would have significant direct, indirect, and cumulative impacts on the resources of the Chuckwalla Valley and nearby Joshua Tree National Park that are unmitigable for this project but avoidable with feasible alternatives. The Commission cannot rationally approve this highly impactful amendment when other feasible alternatives exist, including the already approved project and a PV alternative on site, that would provide renewable energy at a far lower cost to the environment.

CONCLUSION

The p**e**titioner bears the burden of providing sufficient substantial evidence to support each of the findings and conclusions required for certification of the proposed amendment including any evidence needed for override findings. (*See* Siting Regs. § 1748(d).) In this instance there is insufficient substantial evidence to support the required findings and conclusions in many areas and there is insufficient evidence to support a conclusion that all alternatives are infeasible or to support an override in any area. Therefore, the Commission cannot certify the project amendment or any overrides. In light of the above, the testimony, exhibits and public comment submitted in this matter, the Center urges the Commission to deny the amendment application.

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Respectfully submitted,

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Appendix A: [Reserved] THE CENTER'S PROPOSED CHANGES TO CONDITIONS OF CERTIFICATION will be submitted with Reply Briefing.