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California Energy Commission
Dockets Unit, MS-4
1516 Ninth Street
Sacramento, CA 95814-5512
ATTN: Shawn Pittard, Project Manager

RE: Comments on Preliminary Staff Assessment for Puente Power Project (Docket No. 15-AFC-01)

Dear Mr. Pittard:

The Environmental Coalition of Ventura County, Sierra Club Los Padres Chapter, and Environmental Defense Center ("environmental intervenors") submit the following comments on the Preliminary Staff Assessment ("PSA") for the Puente Power Project ("Puente" or "the project").

The siting of any additional fossil-fueled power plants on California's irreplaceable beaches, at a time when the state is rapidly moving toward ambitious greenhouse gas reduction goals, is shortsighted under any circumstance. NRG's proposal to build the Puente project in an environmental justice community, on a beach uniquely vulnerable to sea level rise, beach erosion, and tsunami risk, is simply reckless. As detailed in this letter, the environmental intervenors believe that the PSA fails to meet California Environmental Quality Act ("CEQA") requirements due to inaccuracies in the project description, understated environmental impacts, and an insufficient analysis of alternatives to the project. In light of these deficiencies, the PSA should be revised and re-circulated.

To assist in responding to the PSA, environmental intervenors retained expert Lawrence E. Hunt, a consulting wildlife biologist with over 30 years of experience in central and southern California, including extensive field work in the coastal dune ecosystems between the Ventura River and Port Hueneme. Mr. Hunt is submitting additional comments, appended to this letter as Attachment A, addressing specific concerns about the project and the PSA. Environmental

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intervenors also retained Lindsey Sears, an expert air modeler, who conducted analysis of the ambient air quality modeling performed by the Ventura County Air Pollution Control District's Preliminary Determination of Compliance ("PDOC"). Her analysis was submitted as part of our comments on the PDOC and also informs these comments.

I. The Puente Power Project PSA is Inadequate Under CEQA

Enacted by the California Legislature in 1971, "CEQA is a comprehensive legislative scheme designed to provide long-term protection to the environment." *Mountain Lion Found. v. Fish & Game Comm'n* (1997) 16 Cal. 4th 105, 112. Under CEQA, "the Legislature declared its intention that all public agencies responsible for regulating activities affecting the environment give prime consideration to preventing environmental damage when carrying out their duties." *Id*.

In addition to its procedural requirements, CEQA also carries a substantive mandate, prohibiting public agencies from approving projects with significant environmental effects if "there are feasible alternatives or feasible mitigation measures available which would substantially lessen the environmental effects of such projects." Pub. Res. Code § 21002. The California Supreme Court "has repeatedly observed that the Legislature intended CEQA to be interpreted to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." *Sierra Club v. County of Sonoma* (1992) 6 Cal. App. 4th 1307, 1315.

Although the CEC's regulatory program has been certified as meeting criteria for conducting environmental reviews independent of some of CEQA's requirements, CEQA's policy goals still apply and the agency must include the same categories of environmental review as an EIR, including a project description, alternatives analysis, mitigation measures, and cumulative effects analysis, among other information. Pub. Res. Code § 21080.5; 14 Cal. Code Regs. §§ 15250, 15251(j), 15252[1]; *Sierra Club v. State Bd. of Forestry* (1994) 7 Cal. App. 4th 1215.

A. The Project Description Inaccurately Includes the Decommissioning and Demolishment of Mandalay Generating Station Units 1 and 2.

The PSA fails to meet one of CEQA's most fundamental requirements, to provide an adequate description of the proposed project. CEQA Guidelines § 15124. An "accurate, stable, and finite project description" has been called the "*sine qua non* of an informative and legally sufficient [PSA]." *County of Inyo v. City of Los Angeles* (1977) 71 Cal. App. 3d 185, 192. An

[1] CEQA's implementing regulations are codified at Title 14 California Code of Regulations 15000 *et seq*.

agency which offers a "curtailed, enigmatic, or unstable project description draws a red herring across the path of public input." *Id*. at 198. Indeed, "only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit 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 193.

As environmental intervenors noted in oral comments at the Thursday, August 21, 2016, PSA Workshop in Oxnard, the project description improperly includes the retirement, decommissioning, and demolishment of MGS Units 1 and 2. PSA, p. 3-9. These actions are already compelled by state and local laws, including the once-through cooling ("OTC") policy and local police powers to abate nuisance. In short, these actions are *not* dependent upon the approval of Puente, and thus should not be included in the project description. The deficiencies of the PSA project description were more recently noted by the California Coastal Commission:

> The PSA assumes that under all alternatives other than the proposed project the existing MGS Units 1 and 2 would remain in place, even after the cessation of operations in 2020. In effect, any alternative other than the proposed project is immediately put at a disadvantage because it is assumed that none of the benefits of the removal of the existing facility would be realized. In conversation with Commission staff, City of Oxnard representatives have stated that, if the MGS Units 1 and 2 were to remain in place following the 2020 shutdown, the City would consider declaring the structures a nuisance under state law and pursue all means of requiring their demolition. The Commission urges the CEC to reconsider its baseline for evaluating project alternatives, taking into account the likelihood that the existing MGS Units 1 and 2 would be removed even in the absence of the P3. (California Coastal Commission 30413(d) Report for the Proposed NRG Energy Center Oxnard, LLC Puente Power Project ("30413(d) Report"), p. 5).

NRG has stated that "it is not the case that there is any existing requirement to shut down MGS Units 1 and 2. … [which] could be retrofit to continue operating with alternative cooling technologies." NRG, Responses to Comments on the P3 PDOC (Sept. 2, 2016), p. 11. While technically true, this statement is misleading. While the Once-Through Cooling Mandate does provide multiple compliance paths, NRG has stated that it does not intend to use any of these alternate compliance paths and "intends to retire (and potentially replace) the plants [MGS 1 and 2] by the SWRCB compliance deadline." California Public Utilities Commission D. 13-02-015 (Feb. 13, 2013) at pp. 70-71. Given that the planned retirement of Mandalay was the premise for

the CPUC's need finding,[2] if alternative solutions to meet generation need in the Moorpark area were developed, there would be no need determination to support a contract for MGS Units 1 and 2. It seems highly unlikely NRG would attempt what would be a very expensive refurbishment and repower of these resources without a contract for the output.

By inaccurately including the decommissioning of these aging facilities in the project description for Puente but no other alternatives that would meet the area's need, the PSA inherently poisons the well for the entire document, including the critical assessment of alternatives to the project. This assessment carries both procedural and substantive implications, because CEQA prohibits agencies from approving projects with significant environmental effects if "there are feasible alternatives or feasible mitigation measures available which would substantially lessen the environmental effects of such projects." Pub. Res. Code § 21002.

B. The PSA Must Be Revised to Fully Describe the Environmental Setting, Including Nearby Undisturbed Wildlife Habitat.

CEQA's requirements are not met if the description of the environmental setting is inaccurate, incomplete or misleading. *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal. App. 4th 713, 729. As stated by the CEQA Guidelines, the environmental setting must be described "*from both a local and a regional perspective*." CEQA Guidelines § 15125 (c) (emphasis added). Indeed, "[k]nowledge of the regional setting is critical to the assessment of environmental impacts," and "[s]pecial emphasis should be placed on environmental resources that are rare or unique to that region and would be affected by the project." *Id*. Substantively, carefully and accurately defining the environmental setting is critical to complying with CEQA, as this setting "will normally constitute the baseline physical conditions *by which a lead agency determines whether an impact is significant*." Guidelines § 15125 (a) (emphasis added); *see San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal. App. 4th 713, 729 (holding that "the description of the environmental setting is not only inadequate as a matter of law but it also renders the identification of environmental impacts legally inadequate and precludes a determination that substantial evidence supports the Board's finding that the environmental impacts on wildlife and vegetation had been mitigated to insignificance.").

Environmental intervenors' September 29, 2015, scoping letter expressed disagreement with staff's conclusion in the Issues ID Report that project description is not a major issue. Docket No. 206231. The PSA, however, continues to describe the project location and site

[2] *See* Cal. Pub. Util. C., D. 16-05-050, Finding of Fact 13 (June 1, 2016). ("The need determination of the Moorpark sub-area in D.13-02-015 depended upon the retirement of Mandalay Units 1 and 2 and Ormond Beach once-through-cooling generation units.")

description as being primarily an industrial area. This overly narrow description improperly masks the fact that, at just a slightly largely scale, the Puente Power Project site is more accurately characterized as a small island of incompatible industrial use largely surrounded by relatively undisturbed wildlife habitat including the dynamic and constantly shifting Santa Clara River mouth and estuary, McGrath Lake, and other associated wetlands, and rare beach dune and coastal sage scrub habitat. McGrath State Beach lies to the immediate north and south of Mandalay and the proposed project site, as well as the Santa Clara Estuary Natural Preserve to the north and Mandalay County Park to the south.

Adjacent areas also include critical habitat designations under the federal Endangered Species Act for the western snowy plover, California least tern, and tidewater goby, as well as Environmentally Sensitive Habitat Areas ("ESHA") dune areas, designated pursuant to the California Coastal Act, that are located to the immediate east, stretching from the River mouth south to residential development at Fifth Street. These coastal dune areas, some of the rarest in California, may support additional rare species, including the state species of special concern coast horned lizard and silvery legless lizard.

Here, the Puente PSA fails to accurately account for the environmental setting of the project area and its surrounding regional area, which in turn undermines the findings of no environmental significance.

C. The PSA Fails to Adequately Disclose And Mitigate All Potentially Significant Environmental Impacts.

CEQA mandates that an EIR or its equivalent disclose "all significant effects on the environment of a proposed project." Pub. Res. Code § 21100(b)(1). The full disclosure and analysis of potentially significant environmental impacts is critical, as CEQA requires public agencies to avoid or minimize environmental damage through the implementation of feasible alternatives and mitigation measures. *See* CEQA Guidelines § 15002(a) (listing "basic purposes" of CEQA to include "inform[ing] governmental decision makers and the public about the potential, significant environmental effects of proposed activities"; "identify[ing] the ways that environmental damage can be avoided or significantly reduced"; and "prevent[ing] significant, unavoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.").

In this case, the Puente Power Project PSA fails to fully disclose and/or properly analyze numerous potentially significant impacts. As explained in detail below, the PSA's deficiencies include inadequate disclosure and/or analysis in relation to air quality, biological resources, land

use and planning, and soils and water (including flooding). In addition, the PSA does not adequately identify and impose all feasible mitigation measures.

1. The PSA Fails to Adequately Disclose and Mitigate the Project's Impact on Air Quality.

a. The PSA Inappropriately Relies on a Non-Approved Ambient Air Quality Model Variation, which Drastically Understates Puente's Air Quality Impacts.

The PSA errs in relying, without sufficient basis, on ambient air quality modeling performed using a EPA "beta option" in the AERMOD program, called Adjusted U*. Environmental intervenors have previously raised our concerns about the use of Adjusted U* to the Ventura County Air Pollution Control District ("the District") and the Commission. *See* Environmental Intervenors' Comments on PDOC (TN #2126351); Sierra Club Letter to Kerby Zozula, VCAPCD (TN #211252). While the District prepared air quality analysis using both the Adjusted U* beta model and EPA's preferred model, the PSA relies solely on the air quality analysis generated using the unapproved beta model. The choice between these two models is not a matter of hair-splitting: Because Adjusted U* reduces expected concentrations of air pollutants so drastically – in many cases, by half[3] – the air quality modeling approach chosen determines whether or not Puente, when operated in concert with nearby facilities, is anticipated to cause or contribute to violations with the national and state air quality standards. The choice of model variant is therefore dispositive of whether or not the project can be legally constructed.

Air quality modeling performed on behalf of the environmental intervenors by Lindsey Sears, an expert air quality modeler, shows that when the air quality impacts of Puente and its neighboring units are modeled using EPA-approved methods, the project is expected to contribute to violations of both national and federal air quality standards. *See* Attachment A to Environmental Intervenors' Comments on PDOC (TN#2126351). As shown in Tables 7 through 9 from Ms. Sears's analysis, which are reproduced below, the combined impacts of Puente and MGS Units 1 and 3 are expected to cause violations of the National Ambient Air Quality (NAAQS) standards for NO_2. This result holds true using all three ozone limiting methods. The facilities' emissions are also expected to cause violations of the California Ambient Air Quality Standards for NO_2 using two of the three ozone limiting methods.

[3] *Compare* PDOC, Appendix G, Tables 5-14 and 5-14, pp. 20-21 with Tables 5-15 and 5-16, pp. 22-23.

Table 7: Normal Operations Tier 1 NO_2 Concentrations - New Equipment and MGS Units 1 and 3						
	AAQS ($\mu g/m^3$)					
Averaging Time	California	National (Primary)	Modeled Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Total Concentration (µg/m3)	Exceeds Standard?
1-hour Max	339	---	469.8	68.6	538.4	YES
1-hour 98th Percentile	---	188	347.5	40.8	388.3	YES

Table 8: Normal Operations Tier 2 NO_2 Concentrations - New Equipment and MGS Units 1 and 3						
	AAQS ($\mu g/m^3$)					
Averaging Time	California	National (Primary)	Modeled Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Total Concentration (µg/m3)	Exceeds Standard?
1-hour Max	339	---	375.8	68.6	444.5	YES
1-hour 98th Percentile	---	188	278.0	40.8	318.8	YES

Table 9: Normal Operations Tier 3 NO_2 Concentrations - New Equipment and MGS Units 1 and 3						
	AAQS ($\mu g/m^3$)					
Averaging Time	California	National (Primary)	Modeled Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Total Concentration (µg/m3)	Exceeds Standard?
1-hour Max	339	---	215.1	68.6	283.7	NO
1-hour 98th Percentile	---	188	178.7	40.8	219.4	YES

The impact of Adjusted U* becomes clear when comparing Ms. Sears's results above to Air Quality Table 24 in the PSA: the Adjusted U*-reliant modeling in the PSA predicts NO_2 values lower than all of Ms. Sears's model runs, and shows no air quality violation caused by the concurrent operation of these three units. PSA, p. 4.1-40, Air Quality Table 24. Ms. Sears's modeling also predicts air quality violations when modeling the impacts of Puente plus MGS Unit 3 only.

The PSA states that the choice of model variant will not change conclusions on the Project's air quality impacts, but this conclusion is incorrectly based on incomplete air quality analysis that includes only Puente, and no other nearby sources with overlapping plumes. PSA, p. 4.1-142. The analysis presented in the PDOC does not show an exceedance of air quality standards under the default model, but this result is because the PDOC improperly excludes the combined impacts of nearby sources, including MGS Units 1 and 2 and McGrath. However, the PSA properly includes these nearby sources in its cumulative air quality analysis. PSA, p. 4.1-54, 55. As the PSA explains, "ambient air quality measurements are not recorded close to the proposed project, thus a local major source might not be well represented by the background air monitoring," and therefore all major sources within six miles should be explicitly modeled. PSA, p. 4.1-54, 55. If the PSA were to update its cumulative air quality analysis to use the

EPA's default model, the results would show that the Project is predicted to violate air quality standards. *See* Attachment A to Environmental Intervenors' Comments on PDOC (TN#2126351).

Because the choice of model is determinative of whether Puente would cause a violation of binding air quality standards, it is not justifiable to state, without analysis, that "the District and Energy Commission staff has concluded that Adjusted U* option improves model performance." PSA, p. 4.1-39. As explained in our comments on the PDOC, it is inappropriate to elevate this model variant to a regulatory standard without following the appropriate procedure for verifying that the default model improves model performance. *See* Environmental Intervenors' Comments on PDOC (TN #2126351), p. 4. The PSA correctly acknowledges that currently "the regulatory application of any of the beta options need formal approval as an alternative model," but then states, without citation or other basis, that this approval process "is applicable for compliance demonstrations in the PSD context and State Implementation Plan development for NAAQS criteria pollutants as well as the specific use for SO2 designations and consent decree modeling," implying that it should not be applicable to this project. PSA, p. 4.1-141.

This argument is unpersuasive for two reasons. First, the PSA appears to be justifying the cursory approval of the beta model based on the assumption that Puente will not require a Prevention of Significant Deterioration (PSD) permit. However, the determination that Puente is not a PSD project was made by the Applicant: Neither the CEC nor the District have presented an independent verification of the Applicant's methods, inputs, or calculations underlying the assertion that a PSD permit was not required. Additionally, the PSA fails to cite any authority for the conclusion that PSD status should determine to the rigor with which state agencies model a project's compliance with air quality regulations.

Furthermore, the PSA does not explain why a beta model intended to improve model performance during low wind speeds is appropriate for a project that will not experience low wind speeds. The PSA mentions repeatedly that low wind speed is not a concern at this site. For example, it states that, "The likelihood of having calm wind conditions at these heights at a California coastal location, combined with operation of a simple-cycle peaking turbine, is very low." PSA, p. 4.11-52. The PSA also specifies that, ""The average wind speed is 3.2 meters per second and dead calm hours occur infrequently, about 2.7 percent of the time." PSA, p. 4.1-5.

The EPA approvals of Adjusted U* mentioned in the PSA cannot credibly be extended to this case. The Donlin Mine concurrence, for example, concerned a surface gold mine in inland Alaska, where long nights and frequently cloudy weather mean wind speeds are usually low. It

is unpersuasive to attest that the rationale applied by the EPA in that case would also apply to a coastal power plant in California. Furthermore, as we have previously commented, the Idaho Ridge and Oak Ridge studies cited as support by the PSA apply to a narrower range of sources and conditions than the studies used to develop AERMOD. These studies are considerably smaller in scope, and are based on input data that are not publicly available and held only by EPA and the American Petroleum Institute, a major proponent of the revision.[4]

It is a disservice to the citizens of Ventura County to put forward faulty air quality analysis that does not accurately and fully acknowledge the Puente project's potential impacts on the air residents will breathe every day. The PSA's cumulative air impacts analysis must be revised to use the EPA's approved model, which will demonstrate that approving Puente would result in violations of federal and state air quality standards.

b. <u>The PSA Underestimates Localized Cumulative Air Quality Impacts By Omitting the Impacts of the McGrath Facility from Ambient Air Quality Analysis.</u>

The PSA prudently and appropriately addresses the important issue of Puente's cumulative impacts on local air quality when the Project's emissions combine with the impacts of other nearby air pollution sources. However, the analysis is incomplete because it omits the nearby McGrath facility. The cumulative impacts analysis should be revised to include McGrath.

The PSA's cumulative air impacts analysis recommends including air pollution sources that are within six miles, explaining that as "ambient air quality measurements are not recorded close to the proposed project, thus a local major source might not be well represented by the background air monitoring. When these [local major] sources are included, it is typically a result of there being an existing source on the project site and the ambient air quality monitoring station being more than two miles away." PSA, p. 4.1-54, 55. To that end, the PSA looks at the air pollution from "existing sources that are co-located with or adjacent to the proposed source (such as the existing Mandalay Generating Station)." PSA, p. 4.1-55. It follows from this rule that emissions from the nearby McGrath peaker facility should also be included: According to the PSA, the separation between the Puente stack and the MGS Unit 3 stacks would be approximately 268 meters, while the separation between the P3 stack and the McGrath stack is not much farther away, about 439 meters. PSA, p. 4.11-52. A distance of less than half a kilometer is well within the PSA's proposed six-mile radius for including additional point sources. Emissions from McGrath should be added to the cumulative air dispersion modeling

[4] *See, e.g. Sierra Club Comments on Proposed Rule* (Oct. 25, 2015), available at https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0310-0114.

analysis that currently involves only MGS 1 and 3. The required mitigation should be adjusted accordingly.

c. The PSA Bases its Proposed Mitigation on Calculations that Insupportably Reduce Puente's Expected Run Time.

The PSA violates the precepts of CEQA mitigation analysis by basing the recommended emissions mitigation on an assumption the project will run less – and emit less pollution – than would be allowed under its permit. This insupportable reduction in project run-time is a clear violation of CEQA rules requiring a stable project description throughout the PSA. The expected capacity factor used in the air quality analysis section, and the accompanying mitigation requirements, must be consistent with the rest of the PSA and with Puente's operating permit. The PSA must be revised to require sufficient air quality mitigation for Puente as it will be permitted to operate.

Under CEQA, a Project Description—which serves as the basis for the accompanying analysis of environmental impacts—must remain consistent throughout the PSA; the agency may not analyze a curtailed project in some sections of the document but not in others. *County of Inyo v. City of Los Angeles* (1977) 71 CA3d 185, 198 ("A curtailed, enigmatic or unstable project description draws a red herring across the path of public input."). For example, in *San Joaquin Raptor Rescue Center v. County of Merced*, an environmental impact report for a mine was rejected for making inconsistent statements about the expected post-project level of mining activity. *San Joaquin Raptor Rescue Ctr. v County of Merced* (2007) 149 Cal. 4th 645, 655 ("San Joaquin Raptor"). In that case, the environmental impact report stated that the project's permit allowed it to mine 550,000 tons per year, almost twice the mine's previous capacity, but "such statements [about an increase in capacity] were entirely inconsistent with the assurances elsewhere that there would be no increases in production." *Id*., pp. 655-656.

In the PSA in this case, the Project Description states that Puente "is expected to operate at up to approximately 30 percent capacity factor." PSA, p. 3-1. This expectation is based on the requested air quality permit for Puente, which would allow 2,150 hours of operation each year. PSA, p. 4.1-1. The conclusions about the impacts of Puente's water use, the only other environmental impact that will change based on the extent of Puente's operation, are accordingly based on a 30 percent capacity factor.[5] However, the PSA inappropriately lowers the estimated capacity factor to 10 percent when calculating air quality impacts. PSA, p. 4.1-48. This change has a large impact on the expected emissions from the project, reducing expected particulate

[5] PSA estimates annual water use of 16 acre feet per year. PSA, p. 3-3. While the PSA does not list the source for this number or explain how it was derived, it appears to be drawn from analysis provided in NRG's Application assuming a capacity factor of 30%. Application, p. 2-12.

matter, sulfuric oxide emissions, and nitrous oxide emissions by about half.[6] The reliance on a smaller capacity is inconsistent with CEQA requirements that the project analyzed remain stable throughout the PSA.

In addition, the assumption that Puente will operate at a 10 percent capacity factor is logically inconsistent with statements elsewhere in the PSA that Puente "is proposed as a replacement project for the majority of power currently generated by the existing MGS [Mandalay Generating Station]." PSA, p. 1-2. If Puente replaces the power currently generated by MGS Units 1 and 2, it will automatically operate at over 10% of its capacity: According to the PSA, MGS Units 1 and 2 together generated over 360 gigawatt hours in 2013.[7] If Puente generates 360 gigawatt hours, it would be operating at a *16% capacity factor*.[8] What's more, this estimate ignores the possibility, emphasized throughout the PSA, that Puente "may operate more than a traditional, less flexible peaker unit" due to its fast-start capabilities, and may pick up additional generation currently provided by other older facilities in the area. PSA, p. 4.1-132. The only reliable basis for estimating the extent of how often Puente will run is the legal limit set by its permit.

Under federal law, calculations of worst-case emissions must be based on the facility's permit. For compliance determinations under the National Ambient Air Quality Standards, for example, emissions analysis must be based on the project's maximum potential to emit, defined the "maximum capacity of a stationary source to emit a pollutant under its physical and operational design." 40 C.F.R. §51.165(a)(1)(iii). The agency is required to assume the plant will operate at its maximum capacity every hour of the year, unless its run time is limited by a federally enforceable permit limitation.[9] The estimated worst case emissions used as the basis for air pollution mitigation must be adjusted to reflect Puente's permitted level of operation.

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[6] *Cf.* Air Quality Table 22, PSA, p. 4.1-31 (estimating annual emissions from Puente of 10.68 tons PM, 7.87 tons SO_X, and 32.97 tons NO_X) to Air Quality Table 29 a, PSA, p. 4.1-48 (estimating annual emissions from Puente of 4.2 tons PM, 2.4 tons SO_X, and 17.6 tons NO_X).

[7] PSA, p. 4.1-129, showing MGS 1 output of 162,229 MWh and MGS 2 output of 199,850 MWh.

[8] Puente has a nominal capacity of 262 MW, meaning it would need to operate 1,382 hours to generate 362,079 MWh, or 15.7% of the hours in a year.

[9] See EPA, New Source Review Manual, pp. C.44-45 ("For both NAAQS and PSD increment compliance demonstrations, the emissions rate for the proposed new source or modification must reflect the maximum allowable operating conditions as expressed by the federally enforceable emissions limit, operating level, and operating factor for each applicable pollutant and averaging time."). See also In re: Northern Mich. University Ripley Heating Plant (2009) 14 E.A.D. 283, PSD Appeal No. 08-02 ("The parties do not dispute that worst-case emissions should be employed in the modeling analyses conducted to demonstrate a facility's compliance with the NAAQS and PSD increments.").

d. The PSA Does Not Adequately Identify Emission Reduction Credits.

Under District Rule 26.6.D and CEQA, NRG must calculate emission increases for NOx, PM10, and VOC for Puente to determine if emission reduction credits are required. PSA, p. 4.1-46. NRG has not yet provided a public filing of the proposed offset package, which is necessary for CEC staff to evaluate the adequacy of for CEQA purposes. Accordingly, "information demonstrating that the emission reductions [for PM10] can be feasibly achieved in the targeted quantities remains missing," and "the proposed P3 project has not been fully mitigated for all its impacts." *Id*.

The PSA should have included a discussion of the availability of relevant ERCs in the Ventura County APCD. The deficiency is notable; in the past, there have been general shortages of traditional ERCs in the open market. This discussion, as well as the specific details of NRG's proposed offset package that is not included in the PSA, should be addressed in a revised PSA.

2. The PSA Fails to Adequately Disclose and Mitigate Biological Resource Impacts.

The Puente Power Project is largely surrounded by areas containing some of Ventura County's most significant biological resources, and the project site contains coastal wetlands and, as discussed in Lawrence Hunt's letter, ESHA. As explained in detail below, the PSA fails to adequately disclose and mitigate for the proposed Puente Power Project's impacts on biological resources, as well as coastal resources as specifically addressed and protected under the California Coastal Act.

a. The PSA Fails to Adequately Consider Alternatives to the Puente Power Project as a Means to Avoid Impacts on Coastal Wetlands and Environmentally Sensitive Habitat Areas.

The PSA fails to give adequate consideration to alternatives to Puente as a means to avoid impacts on coastal wetlands and ESHA, both of which are provided substantive protections pursuant to the Coastal Act.[10]

As acknowledged in the PSA, the project would be constructed and directly impact 2.03

[10] Environmental intervenors believe that the most appropriate alternative to the Puente Plant is additional development of preferred resources (efficiency, demand response, renewables, and energy storage). However, Environmental intervenors also agree with the CCC conclusion that the CEC has not adequately explored alternative sites for the siting of a gas-fired peaker plant.

acres of coastal wetlands. As discussed in more detail below, these wetlands also qualify as ESHA. Under the Coastal Act, proposed power plants located in coastal wetlands that also qualify as ESHA can only be approved provided "there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects" Pub. Res. Code § 30233(a).

Despite the fact the Puente project will directly impact rare coastal wetlands and ESHA, and the identification of several alternative sites, the PSA does not provide any explanation of how or why these alternate sites are not feasible, nor does it propose adequate mitigation measures. *See* Attachment A, Lawrence Hunt letter (noting that East 5th Street-Del Norte Blvd. alternative "does not impact ESHA, coastal wetlands, and/or special-status species.").[11] The CEC's failure to adequately consider alternative sites due to coastal wetland and ESHA impacts is also discussed in detail by the California Coastal Commission ("CCC") in its 30413(d) Report, which recommends that "the Energy Commission require that the proposed project be relocated to an alternative site that would not result in direct impacts to or fill of coastal wetlands." 30413(d) Report, p. 13.

b. <u>The PSA Fails to Consider Whether the Project Site Is an Environmentally Sensitive Habitat Area.</u>

The PSA fails to give any careful consideration to the issue of ESHA. ESHA is defined broadly under the Coastal Act "as any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments." § 30107.5 The Coastal Act protects ESHA from both direct and indirect effects. § 30240(a) (ESHA "shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas"); § 30240(b) (development "adjacent" to ESHA "shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with continuance of those habitat and recreation areas."). In sum, "development in ESHA areas themselves is limited to uses dependent on those resources, and development in adjacent areas must carefully safeguard their preservation." *Bolsa Chica Land Trust v. Superior Court* (1999) 71 Cal. App. 4th 493, 506-507 (*citing Sierra Club v. California Coastal Commission* (1993) 12 Cal. App. 4th 602, 611).

[11] Environmental intervenors oppose the Ormond Beach alternative. The Ormond Beach area is considered to be the most important coastal wetland restoration opportunity in southern California, as currently being implemented under the California Coastal Conservancy's Ormond Beach Wetlands Restoration Project, in cooperation with the City of Oxnard, Ventura County, landowners, and the local community. Although the proposed alternative would be sited outside of coastal wetlands and ESHA, it would be directly adjacent to those areas and is incompatible with the larger vision of Ormond Beach restoration and the significant investments already made towards that vision.

The PSA dedicates only one paragraph to its analysis of ESHA. PSA, p. 4.2-6. In this brief discussion, the PSA does not explain what ESHA is, and contains no reference to the Coastal Act or its specific policies and requirements relating to ESHA. Instead, in that sole paragraph, the PSA asserts in conclusory fashion that several ESHA occur "in the vicinity" of the project but that they "do not occur on the site."

As Mr. Hunt's letter notes, although the PSA does acknowledge that the project site contains more than 2 acres of coastal wetlands (as defined by CCC wetlands policy), it does not take the next step to address whether these wetlands are ESHA. This omission is particularly notable given that CCC interpretive guidelines establish a presumption that coastal wetlands are also an ESHA. *Bolsa Chica Land Trust*, 71 Cal. App. 4th at 863 ("The Commission generally considers wetlands, estuaries, streams, riparian habitats, lakes and portions of open coastal waters to be environmentally sensitive habitat areas because of the especially valuable role of these habitat areas in maintaining the natural ecological functioning of many coastal habitat areas and because these areas are easily degraded by human developments . . . Of all environmentally sensitive habitat areas mentioned specifically in the Coastal Act, wetlands and estuaries and afforded the most stringent protection.") (*quoting* CCC Statewide Interpretive Guidelines for Wetlands and Other Wet Environmentally Sensitive Habitat Areas). Even if the site wetlands are not presumed ESHA, Mr. Hunt's letter establishes that they should be so designated. As stated by Mr. Hunt,"[g]iven the known and potential ecological functions that this wetland may serve, which could be significantly enhanced with restoration of surrounding dune habitat, it qualifies as ESHA in the Coastal Zone."

The fact that the existing site is degraded is of no relevance. Section 30240 of the Coastal Act "does not permit its restrictions to be ignored based on the threatening or deteriorating condition of a particular ESHA." *Bolsa Chica Land Trust*, 71 Cal. App. 4th at 507. To the contrary, there "is simply no reference in section 30240 which can be interpreted as diminishing the level of protection an ESHA receives based on its viability," but rather, "under the statutory scheme, ESHAs, whether they are pristine and growing or fouled and threatened, receive uniform treatment and protection." *Id*. at 508. The underlying policy rationale for the Coastal Act's strict protection of ESHAs has particular relevance to the proposed siting of this fourth power plant on the City of Oxnard's beaches:

> [I]f, even though an ESHA meets the requirements of section 30107.5, application of section 30240's otherwise strict limitations also depends on the relative viability of an ESHA, developers will be encouraged to find threats and hazards to all ESHAs located in economically inconvenient locations. The pursuit of such hazards would in turn only promote the

> isolation and transfer of ESHA habitat values to more economically convenient locations. Such a system of isolation and transfer based on economic convenience would of course be completely contrary to the goal of the Coastal Act, which is to protect *all* coastal zone resources and provide heightened protection to ESHAs. *Id*. (emphasis in original).

c. The PSA Fails to Consider the Indirect Effects of Project Light and Noise on Adjacent ESHA.

As acknowledged in the PSA, the Puente site is located within an extensive area of coastal wetlands and dunes that formerly extended for several miles along the Oxnard coastline. However, the PSA fails to adequately consider indirect effects on these adjacent and nearby ESHAs.

The Puente site is located directly adjacent to McGrath State Beach and federally designated critical habitat for the western snowy plover, and less than a mile from the Santa Clara River mouth and estuary. Numerous ESHAs are also adjacent or near the Puente site. *See* CCC 30413(d) Report, p. 15 ("Due to their rarity, sensitivity to disturbance, and presence of special-status species, many of the coastal dune, scrub and riparian habitats surrounding the MGS site meet the Coastal Act and LCP definitions of ESHA, and thus require special protection."). As Lawrence Hunt notes, "the proposed project site is less than 100 feet from habitats that qualify as ESHA in the Coastal Zone." Hunt letter, p. 3.

The construction and operation of Puente will result in significant adverse noise, vibration, and light effects in this habitat, diminishing habitat functions and values. These indirect effects on ESHA were not adequately described in the PSA. The PSA acknowledges that, "[b]right lighting at night could disturb the nesting, foraging, or mating activities of wildlife in the adjacent marshes and make wildlife more visible to predators," and that the lighting could be "disorienting" to birds. PSA, p. 4.2-30. The PSA, however, concludes these indirect impacts and indirect impacts caused by construction, demolition and operation, can be minimized to an extent by shielding and directing lighting onto the work site, and using switch lighting where feasible. PSA, p. 4.2-30. However, the PSA gives inadequate consideration of the operational lighting impacts on wildlife, listing it in Biological Resources Table 8, PSA, p. 4.2-44, but not discussing it under "Operational Impacts." PSA, p. 4.2-32 – 4.2-37.

Lawrence Hunt finds that, "these indirect impacts to special-status wildlife species from noise, lighting, and increased human presence will be ongoing for the life of the project." Hunt letter, p. 3. Moreover, in contradiction with the PSA's findings regarding the indirect biological impacts of Puente's operation, Mr. Hunt finds that "[o]wing to the sensitivity of the coastal dune

habitats to human disturbance and the sensitivity of the wildlife resources found there, long-term, indirect impacts from noise, lighting, and increased human presence could be significant, even with mitigation." *Id*. The CCC's input further demonstrates the inadequacy of the PSA. As stated in the CCC 30413(d) Report, "project construction, operation and demolition activities have the potential to cause adverse indirect impacts to nearby wetlands and ESHA due to dewatering, noise and vibration, and wastewater discharge onto the beach." 30413(d) Report, p. 14.

The PSA must be revised to address indirect ESHA impacts.

d. <u>The PSA Fails to Consider the Puente Power Project's Significant Negative Impacts on Habitat Restoration Plans and Opportunities.</u>

As environmental intervenors have repeatedly emphasized in written and oral comments throughout the CEC process, the existing MGS site and proposed construction site for Puente are surrounded by environmentally important lands and waters, an issue that is not addressed within the PSA. The approval of Puente would further delay the opportunity to utilize and restore to site so that it is compatible with the network of protected lands surrounding it. As stated by Mr. Hunt:

> Restoration of [the wetland and coastal dunes] and surrounding habitats could be an important step in restoring the full spectrum of dunes and coastal wetlands that formerly occurred between the Santa Clara River and the project site, consistent with recommendations and opportunities outlined in Beller *et al*. (2011).

The restoration potential of the Puente and MGS sites is also noted by the CCC. 30413(d) Report, p. 15 ("At present, the California Coastal Conservancy, in partnership with local government and other organizations, is undertaking major habitat restoration efforts in the project area, including along the Santa Clara River floodplain and south of the project site at Ormond Beach."); *id*. ("The beaches and sand dunes within Mandalay State Beach and McGrath State Beach in the vicinity of the project site support both wintering populations and breeding populations of Western snowy plover, and the beaches and dunes immediately in front of the MGS are included in the designated critical habitat for this species."). The PSA does not acknowledge these multifaceted restoration efforts or the negative impact the siting of another power plant on the MGS site would have on the potential to bring the property into a conservation status.

e. The PSA Does Not Adequately Justify the Proposed 2:1 Mitigation Ratio for Destruction of Coastal Wetlands.

In order to mitigate for the loss of approximately 2.03 acre of coastal wetlands, the PSA proposes to mitigate the destruction of these wetland at a 2:1 ratio, with "preference" given to programs within the Santa Clara River/Calleguas River watershed. The PSA attempts to justify this low ratio by describing the wetlands as of "diminished value, form, and function," and further asserts that the wetlands "provide little beneficial value to wildlife" and few of the "positive benefits of a wetland, such as water filtration, foraging, and habitat for wildlife, or water reabsorption."

As noted by Mr. Hunt, the proposed mitigation measures in the PSA "do not adequately mitigate loss" of these coastal wetlands because "loss of jurisdictional wetlands in the Coastal Zone, especially over two acres of wetlands, is locally and regionally very significant" and "mitigation should occur on or immediately adjacent to the project site," among other reasons. Mr. Hunt instead recommends a mitigation ratio of 4:1, which is the standard level of mitigation for loss of coastal wetlands.

A 4:1 coastal wetlands mitigation ratio is also recommended by the CCC in the 30413(d) Report. In rejecting the proposed 2:1 ratio, the CCC "notes that prior to the development of the MGS, the site was part of a major coastal dune and wetlands complex extending between the Santa Clara River Estuary and Mugu Lagoon." 30413(d) Report, p. 14. In contrast, the CCC "requires a mitigation ratio (in many cases starting at about 4:1) to reflect that it usually takes several years for replacement habitat to success and replace the lost functions and values, that performance standards are not always met, and that mitigation usually results in different functions and values than were present in the affected wetland area."). *Id*., p. 13.

f. The PSA Does Not Adequately Disclose the Presence of Special-Status Species.

The PSA does not adequately disclose the presence of special-status species on the Puente site and adjacent areas in several respects. These inadequacies include the overarching improper reliance solely on California Natural Diversity Data Base ("CNDDB") data for species information, which are outdated and "frequency lag in recording observations by local, knowledgeable field biologists." Hunt letter, at 2. As detailed by Mr. Hunt, these inadequacies include the PSA's failure to address whether pond turtles may occupy the Edison Canal, and the

PSA's failure to address the potential presence of coast horned lizards, legless lizards, and two-striped garter snakes on the project site.

g. The PSA Does Not Disclose the Past and Future Take of Endangered Species.

The PSA inaccurately concludes that "[c]onstruction and operation of the proposed project would not result in any impacts to federally-listed species or their critical habitat." PSA, p. 4.2-38. According to expert federal wildlife agency U.S. Fish and Wildlife Service ("FWS"), the project may affect three endangered (Ventura marsh milk-vetch, least Bell's vireo, and California least tern) and one threatened (western snowy plover) species, and may be within the designated critical habitat of the western snowy plover. FWS August 18, 2016 Comments on PSA. Accordingly, FWS "would likely advise the Applicant to obtain an Incidental Take Permit under section 10(a)(1)(b)" of the ESA. *Id.*

As noted by FWS, the "only remaining natural population of Ventura milk-vetch is located approximately 0.6 miles to the southeast of the project" and the project "may alter use of water from the Edison canal and affect the hydrology of the area" where the sole remaining population of this plant exists. FWS also notes that Least Bell's vireos have been observed as close as 0.17 miles from the project site and may be impacted by project construction and operations. In addition to these impacts, FWS notes that the new exhaust stack may provide a perch for predatory raptors targeting snowy plover, and that the existing outfall is within snowy plover critical habitat. Finally, FWS has documented that existing operations at MGS have impacted ESA listed species in the past, a fact that should have been disclosed in the PSA. These impacts include outfall flooding causing the loss of snowy plover eggs on August 6, 2013, and the general reduction of use of nearby suitable breeding habitat by least terns and snowy plovers. The PSA's failure to disclose or address these impacts to endangered and threatened species violates CEQA.

3. The PSA Fails to Adequately Disclose and Mitigate Inconsistencies with Land Use Plans and Policies.

CEQA requires that an EIR or its equivalent "shall discuss any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans. Such regional plans include, but are not limited to, the applicable air quality attainment or maintenance plan or State Implementation Plan, area-wide waste treatment and water quality control plans, regional transportation plans, regional housing allocation plans…" Guidelines § 15125(d). CEQA Guidelines further specify that a project results in significant environmental impacts if it would, among other things, "conflict with any applicable land use plan, policy, or regulation of

an agency with jurisdiction, or that would normally have jurisdiction, over the project." Guidelines, Appendix G, Sections II, IX, XVI. This "includes, but is not limited to, a General Plan, community or specific plan, local coastal program, airport land use compatibility plan, or zoning ordinance." *Id*. The PSA addresses these requirements in the land use section, under the laws, ordinances, regulations, and statutes subsection ("LORS"). As detailed below, the Puente project conflicts with numerous LORS.

a. The Puente Project Conflicts with the City of Oxnard General Plan Prohibition on Power Plant Construction in Designated Coastal Hazard Areas.

On June 7, 2016, the Oxnard City Council voted to adopt a resolution approving a four-part amendment to the "Goals and Policies" section of the City's 2030 General Plan with the intent of designating coastal hazard areas according to the best available science, and prohibiting the construction of power plants within those coastal hazard areas.

The Council's actions implemented prior City land use policies and were the closing action under the "power plant moratorium," which was effective from July 1, 2014 to June 30, 2016. The moratorium was enacted in order to allow the City time to "review and revise applicable provisions of the City's LCP and other City planning policies and land use regulations" in an effort to "properly analyze whether applications for electrical generating facilities in the City's coastal zone are consistent with the policies of the Coastal Act, Coastal Commission Sea Level Rise policies, and the Oxnard 2030 General Plan." In accordance with that intent, the City's 2030 General Plan amendment encompassed the following four facets:

- Update sea level rise information: Outdated estimates of sea level rise were updated to incorporate National Research Council projections that sea level in California may rise 17 to 66 inches for areas south of Cape Mendocino. Text was further amended to reflect that the updated Oxnard shoreline hazards map is derived from The Nature Conservancy's Coastal Resilience Ventura Project;
- Replace and retitle sea level rise map: The updated map shows combined sea level rise with coastal hazards. Under the revised map, much more extensive areas of the City of Oxnard are within hazard areas, including the proposed Puente Power Project site;
- Modify Policy ICS-17.1: This policy text was modified to clarify that all electrical generation and/or transmission

> facilities shall be built in accordance with CCC Sea Level Rise Policy Guidance, as well as PUC and CEC policies and regulations. The policy continues to state a preference for incorporating renewable sources of energy; and
>
> - Add New Policy SH-3.5: This policy addition prohibits the construction of electrical generation facilities, including new facilities of 50 MW or more such as the proposed Puente Power Project, "in areas where the City has documented that the location of such facilities is threatened by seismic hazards, wildfire, flooding, or coastal hazards including tidal inundation, storm wave run-up, beach and dune erosion or retreat, and/or tsunami inundation."

The Staff report accompanying the adopted amendments summarizes the rationale for their adoption as follows:

> Taken together, City staff concludes that coastal hazards risks and emergency response uncertainty over the long operating life of a new large coastal power plant are unacceptable for critical infrastructure regional power plant facilities. In other areas of the City where [a] large power plant could conceivably be developed, there are potential risks from soil liquefaction in areas with high ground water levels, catastrophic flooding due to a dam break along the upper Santa Clara River, risk from aircraft flight patterns around the Oxnard Airport, and/or possible added risk from proximity to earthquake faults. (June 7, 2016 Staff Report)

Thus, contrary to the PSA's conclusion that Puente is consistent with LORS, the project is directly counter to this recent (but long planned) General Plan amendment.[12]

[12] The PSA addresses the June 7, 2016 General Plan amendments in a footnote, noting their enactment and stating that staff "will address any inconsistencies between the P3 and local land use plans arising from approval of the general plan amendment in the Final Staff Assessment." (PSA, p. 4.6-1). Given the central importance of these amendments to the Puente siting process, they should instead be considered in a revised PSA.

b. The Puente Project conflicts with the City of Oxnard General Plan Goal CD-21.

In 1982, Oxnard became one of California's first cities to complete a CCC certified Local Coastal Program ("LCP"). Adopted in 2011, the 2030 General Plan included the goal of updating the LCP in the new "sustainable community" chapter (Goal CD-21). Goal CD-21 contains four implementing policies, three of which directly address coastal power plants and energy production:

- Modify non-coastal dependent uses: An interim measure pending the LCP update, this policy clarifies that fossil fuel, non Coastal-dependent energy facilities are prohibited in the Energy Coastal zone;
- Future use of coastal power plants: Directing that an update to the Oxnard LCP be initiated with "the intent and effect of eventual decommissioning of the SCE Peaker Plant, Mandalay and Ormond Beach power generation facilities"; and
- Coastal zone land use designation changes: An interim measure pending the LCP update, changing land use designations within the Coastal Zone to be consistent with the 2030 General Plan Land Use Map

Since 2011, the City has made extensive progress towards realizing the mandates of CD-21. These pending LCP updates are being conducted in a dynamic and rapidly changing policy environment, and are incorporating Sea Level Rise planning and mapping done in accordance with the CCC's recent Sea Level Rise Policy Guidance. The City's clearly expressed intent to prohibit future coastal power plant construction within Goal CD-21 is not adequately addressed in the PSA.

c. The Puente Project conflicts with the City of Oxnard Coastal Land Use Policies.

Most of the proposed site for the Puente Project is zoned as within the Coastal Energy Facilities sub-zone ("EC") under the Oxnard Coastal Zoning Ordinance. The EC sub-zone is intended to "provide areas that allow for siting, construction, modification, and maintenance of power generating facilities and electrical substations *consistent with Policies 52, 54, 55 and 56 of the Oxnard coastal land use plan*."

- Policy 52: Policy 52 directs that energy-related development is not an allowable use within coastal resource areas and sensitive habitats, including wetlands as defined in the LCP. The Puente Project would be sited within coastal wetlands, and the potential for on-site ESHA has not been adequately assessed. Puente thus violates Policy 52;

- Policy 54: Policy 54 requires that all new energy development be located and designed to minimize adverse effects on public access to the beach. The Puente Project would continue to utilize the existing outfall at MGS, a nonconforming and incompatible use that presents a major obstacle to beach access and a public hazard. Puente thus violates Policy 54

4. The PSA Fails to Adequately Disclose and Mitigate Soil & Water Resource Impacts.

The Puente Power Project will pose numerous risks and impacts to soil and water resources that were not adequately considered in the PSA.

a. The PSA Does Not Adequately Address the Site's Risk to Flooding.

The PSA fails to adequately consider the project site's risk to flooding, as extensively detailed in the CCC 30413(d) Report. Statements within that Report which are counter to, or not adequately addressed within the PSA, include:

- MGS is at an elevation of approximately 12-13 feet above sea level; the project site is at approximately 14 feet above sea level. *See* CCC 30413(d) Report, p. 23. As summarized by CCC staff, the Puente and MGS site "as a whole are located in a relatively low-lying area immediately adjacent to the shoreline and the Pacific Ocean. As a result, the site may be subject to present and future adverse effects from flooding, sea level rise and tsunamis." *Id*., p. 23.

- The project site is not *currently* located within the 2010 FIRM Map 100-year floodplain but is located in the 500-year flood zone. *Id.*, p. 24. The FIRM Map is being updated in September 2016 and this will be the first major update since the 1980s. *Id.*

- The project site is surrounded by dunes and an artificial berm. The acknowledges that "dunes are extremely fragile," and that "the natural processes that impact the beach/dune system are episodic, with periods of little or no change followed by times of intense activity, most obviously during storms when dunes could erode rapidly." PSA, p. 4.10-25. However, the CCC 30413(d) Report concludes these dunes are more erosive than disclosed in the PSA, stating "at a base flood elevation of 20 feet, floodwaters would be expected to spill over into the MGS site via low points in the dune and berm system noted above. Storm conditions capable of producing a coastal base flood elevation of +20 feet would be accompanied by large waves and fast-moving water, potentially leading to the erosion of the beach and fronting dunes and overtopping of the dunes in some locations." *Id.*, p. 24. These waves could erode the protective dunes and or berm, resulting in the potential for flooding of the MGS site. *Id.*

- The CCC asserts that the PSA failure to adequately consider dune structure resulted in significant underestimation of flood risk. *Id.* p. 25 ("When low points in these [dune and berm] features are considered, and the likelihood of erosion during a storm event is taken into account, the project site could be exposed to flooding during a 100-year flood."). The CCC further notes that Dr. David Revell of Revell Coastal indicates "that a 100-year wave erosion event could remove more than 125 feet of the protective dunes and leave the site vulnerable to subsequent storm events . . . Perhaps more crucially, this site-specific assessment [Revell 2015] also concludes that the beach and dunes fronting the MGS site are vulnerable to wave-driven erosion -- which is not directly accounted for in either the FEMA maps or the PSA analysis -- and that such erosion is likely to be a major determinant of the severity of flooding at the site (Revell 2015). *Id.* The PSA does not identify any significant flood risk during a 100-year event even considering climate change, but does not appear to consider Revell's findings. PSA, p. 4.10-26.

- Neither the 2010 FIRM Map or the 2016 Draft Map appear to account for the Edison Canal which provides a pathway for storm surges and floodwaters into the MGS site, although water elevations would be somewhat attenuated by the long distance between the ocean and the project site via the canal. *Id.* p. 24.

- The PSA does not account for TNC modelling of flooding events. *Id.* p. 26 ("In contrast to the existing FIRM and FEMA's draft 2016 map, the Conservancy's model of a 100-year flood event on the Santa Clara River under existing conditions suggests that the project site could be subject to inundation."). As a

result, CCC staff believes that the PSA underestimates "existing, site-specific flood hazards at the project site, including flooding that could occur during a 100-year (1% annual chance of exceedance) or greater event." *Id.* p. 26. Moreover, with regards to sea level rise effects on flooding, CCC "staff notes that this projected maximum wave runup elevation with over 3 feet of sea level rise is lower than the present-day coastal base flood elevation (+20 feet NAVD88) shown on the 2016 draft FEMA flood map (Exhibit 9b)." *Id.* p. 27. Additionally, the CCC finds that if "two feet of sea level rise are added to the 2016 coastal base flood elevation, the 100-year flood zone in 2050 could reach +22 feet, which would almost certainly result in overtopping of the dunes and at least some flooding of the project site, even without accounting for erosion." *Id.* p. 27.

- Finally, "Commission staff believes that, in a number of respects, the analysis contained in the PSA may underestimate the tsunami flooding hazard at the P3 site." *Id.,* p. 32. Given this, the PSA should be revised to address Revell's analysis, the Conservancy's model, and the CCC's evaluation, and find that beach erosion/flooding and tsunami impacts are significant and unavoidable, and focus on alternative locations outside of this hazardous zone.

b. <u>The PSA Does Not Adequately Justify the Puente Project's Reliance on Potable Rather than Recycled Water.</u>

The use of potable water for activities suitable for non-potable water use when a water source of lower quality is available is inconsistent with California Constitution and statutory law Cal. Constitution, Article X, Section 2; Cal. Water Code § 13550 (requiring use of recycled water for non-potable uses if recycled water is available, the cost is reasonable, and other criteria). Here, Puente would use potable water supplied by the City of Oxnard. PSA p.4.10-27. The PSA, however, does not adequately disclose or investigate the potential of utilizing non-potable or recycled water, in violation of CEQA.

Specifically, the project would use an estimated 3.3 acre-feet (1,085,000 gallons) during the 21-month construction period. PSA, p. 4.10-15. During operation, the PSA provides "an estimated water use of less than 20 afy total," with three acre-feet being used for personnel consumption, and the remaining amount used for the combustion turbine inlet air evaporative cooler, service water, and water for combustion turbine washes. PSA, p. 4.10-16.

The PSA notes that a connection to the City of Oxnard's recycled water system is available only 4 miles away from the project site. PSA, p. 4.1-75. However, the feasibility of accessing this water is not discussed at any length, despite the requirements of the Porter-

Cologne Act § 13550 requirements. The PSA's failure to adequately analyze the project's potential reliance on recycled rather than potable water falls short of CEQA's requirements and is a particularly notable error given the extreme drought within southern California, and the fact that the City of Oxnard's municipal water supply comes from the State Water Project or local groundwater, two highly stressed water sources. PSA, p. 4.10-13.

C. The PSA Mischaracterizes the California Public Utilities Commission Findings on the Potential for Preferred Resources to Meet Local Resource Needs.

The PSA mistakenly asserts that "[i]n approving the [Puente] contract, the CPUC has effectively found that preferred resources beyond those procured by Southern California Edison ("SCE") in response to its RFO could not feasibly and reliably be counted on to cost-effectively meet local reliability needs." PSA, p. 6.1-13. The CPUC reached no such conclusion. There is significant additional potential for preferred resource to meet reliability needs for the Moorpark area.

In D.13-02-015, the CPUC authorized SCE to procure between 215 and 290 MW of resources for the Moorpark area through an all-source RFO. Unlike its need finding for the LA Basin, the CPUC did not require a minimum level of fossil fuels to meet Moorpark area reliability needs. *See* CPUC, D.13-12-015, Decision Authorizing Log-Term Procurement for Local Capacity Requirements (Feb. 2013), p. 131 (Ordering Paragraphs 1 & 2). [13] There was no requirement that local need be met though the repower of existing once-through-cooling generation.

In its Application to meet Moorpark area need, SCE sought approval for contracts for the 262 MW Puente facility and 12 MW of preferred resources. The limited amount of preferred resource procurement was not a function of concerns over its feasibility or reliability, but because SCE received few preferred resource bids in its solicitation. This was in large part due to SCE's decision to time the Moorpark RFO with the much larger Western LA Basin RFO. In comparison with the 215-290 MW of any resource sought in the Moorpark RFO, the LA Basin was close to ten times the size, seeking 1,800 to 2,500 MW of resources of which at least 600 MW had to be preferred resources and energy storage. As SCE acknowledged in the CPUC Moorpark proceeding, given its much larger total procurement and preferred resource minimums, "the market was focusing their efforts on the Western LA Basin." *See* CPUC, A.14-11-016, SCE Moorpark Application, Evidentiary Hearing Transcript (May 27, 2015) p. 80:15-28 (SCE, Bryson).

[13] *Available at*: http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M050/K374/50374520.PDF

SCE stated in the Moorpark proceeding, "If we were to launch another RFO for preferred resources, I would expect to receive offers." *Id.* 144:23-25 (SCE, Bryson). Given that SCE has gained significant additional experience in preferred resource and all-source solicitations since the original Moorpark RFO was issued, it is reasonable to expect a preferred resource solicitation that was the focus of market attention to yield a more viable and robust set of offers that serve to meet local reliability need. Indeed, the CPUC approved 263 MW of energy storage resources, more than the capacity of Puente, to help meet LA Basin reliability needs. *See* CPUC Decision 15-11-051, Finding of Fact #17. SCE's Preferred Resources Pilot has also now expanded to include paired solar and storage bids, further increasing market potential and reliability of preferred resource solicitations.[14] Accordingly, the PSA should be revised to clarify that preferred resources could meet much, if not all, of Moorpark area need.

II. Conclusion

Thank you for this opportunity to comment on the PSA for the Puente Power Project. As detailed in this letter, the PSA is deficient under CEQA in a number of fundamental respects. Environmental intervenors believe these deficiencies are fundamental enough to warrant a revision and re-circulation of the document.

Sincerely,

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Attachments:
A: Letter from Lawrence Hunt

[14] *See https://www.sce.com/wps/portal/home/procurement/solicitation/prp-rfo/*

Attachment A

Lawrence E. Hunt
Consulting Biologist

California Energy Commission
1516 Ninth Street
Sacramento, California 95814

2 September 2016

Subject: Comments on Preliminary Staff Assessment (PSA) for Proposed Puente Power Plant Project, Ventura County, California.

Commissioners,

I am a consulting wildlife biologist with over 30 years of field experience in central and southern California. I hold advanced degrees in vertebrate zoology and evolutionary ecology, with an emphasis in herpetology and have conducted extensive field work in the coastal dune systems between the Ventura River and Port Hueneme during research and consulting activities. I have reviewed the Project Description and the Biological Resources sections of the Preliminary Staff Assessment (PSA) for the proposed Puente Power Plant project and have the following comments regarding project-related impacts to biological resources, as identified in the PSA:

ESHA: The PSA documents that 2.03-acres of wetlands occur in the project site and will be removed by the project. Google Earth imagery taken between 1994 and 2016 sheds light on the condition of this wetland over the past 22 years:

- *Sept. 1994:* the area supporting the current 2.03-acre wetland resembles surrounding, disturbed habitats.
- *July 2003 to Dec 2005:* the area has been cleared of vegetation and graded (July 2003); photos taken between this date and Dec 2005 show the area is used to stockpile dredged soil or other material; a small area supporting water within the wetland feature is visible in images taken in 2003 and 2005.
- *July 2006 to Aug 2012Feb 2016:* Soil/material stockpiles have been removed and the site graded to apparent bare soil conditions, similar to that seen in July 2003 photo; SW-NE-oriented road has been graded through the site in image dated Aug 2012.
- *Feb 2016:* the on-site wetland mapped in the PSA appears to have been a constant feature of the site for at least 10 years (2006-2016).

Historically, the project site supported a complex of coastal dunes interspersed with fresh- and brackish wetlands, including wet meadows, alkali meadows, and alkali flats. The present-day 2.03-acre wetland could be a remnant of these historical habitats. Evidence in Beller, et al. (2011) documents that these wetland habitats were historically present on the power plant site (Fig. 6.7, p. 200). The PSA notes that soils on-site consist of interbedded sand, silt, and clay that is poorly drained and is prone to trapping surface water in dune depressions, e.g., McGrath Lake (PSA, p. 4.10-13). Windblown dune sand overlies portions of existing alkali flats in this area (Beller, et al., 2011), and grading to prepare the 2.03-acre site

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to receive stockpiled dredge spoils may have exposed the alkali flats or saline soil underlying the dunes. Alternatively, spoils dredged from the brackish Edison Canal may have enhanced soil salinity at this location. Regardless, the fact that the site currently supports pickleweed (*Salicornia* sp.) indicates that saline conditions persist at this location.

California Public Resources Code 30107.5 defines an "Environmentally Sensitive [Habitat] Area" as, "…any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments." Coastal wetlands are considered ESHA under the Coastal Act, subject to the following proscriptions:

- Section 30240(a): "Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas."
- Section 30240(b): "Development in areas adjacent to environmentally sensitive habitat areas…shall be sited and designed to prevent impacts which could significantly degrade those areas…".
- The Coastal Act requires that development avoids and buffers wetland habitat (minimum 100 feet) to promote the, "…the maintenance and restoration (if feasible) of the biological productivity and quality of wetlands…" (Section 30231).
- Section 30233: "…any wetland fill must be avoided unless there is no feasible less environmentally damaging alternative…".

The 2.03-acre on-site wetland has a moderate to high probability of supporting special-status and non-regulated wildlife because of its proximity to habitat occupied by these species. When it is seasonally flooded by rainfall (p. 4.2-26 in PSA), two native amphibians: western toad (*Anaxyrus boreas*) and Pacific treefrog (*Pseudacris regilla*), and/or the introduced African clawed frog (*Xenopus laevis*) may opportunistically breed here. These amphibians breed in McGrath Lake and two-striped garter snakes (*Thamnophis hammondii*), a California Species of Special Concern, have been observed feeding on their larvae at the southern end of McGrath Lake, less than 500 feet north of the wetlands (L.E. Hunt, pers. observation, 2006). A similar scenario may occur in the on-site wetland in wet years. The on-site wetland also may support aquatic invertebrates that could provide food resources for a number of shorebirds, including western snowy plovers (*Charadrius nivosus nivosus*), a state- and federally-listed species that winters and breeds in foredunes west of the project site.

Although the PSA correctly includes coast horned lizards (*Phrynosoma blainvillii*), legless lizards (genus *Anniella*), and two-striped garter snakes (*Thamnophis hammondii*), in its analysis of impacts to special-status wildlife, they rely solely on the California Natural Diversity Data Base (CNDDB) to provide information on the nearest occurrence of these species to the project site. CNDDB records frequently lag in recording more recent observations made by local, knowledgeable field biologists. For example, western pond turtles (*Actinemys marmorata*) inhabit McGrath Lake and move between riverine habitats near the mouth of the Santa Clara River and this feature (Hunt, pers. observ.). Pond turtles also could disperse through the power plant site when moving between McGrath Lake and the Edison Canal. More importantly, female pond turtles leave aquatic sites and disperse hundreds or thousands of feet into upland habitats to nest, which could bring them into the proposed project area. Coast horned lizards have a high potential of occurring in the project site. They have been observed in dune habitats, including heavily disturbed, ruderal sites, several hundred feet north, south, and east of the project site (Hunt, pers. observation, 1985-2006). Legless lizards occur in sandy soils within a few feet of the

northern and southern boundaries of the project area (Hunt, pers. observation, 1985-2008). I have commonly found lizards here by overturning concrete and asphalt chunks (remnants of former roads) that overlie sandy, loose soils in mule-fat scrub, dune scrub, myoporum thickets, ice plant mats, and grassland, all habitats that occur in the proposed project area. Legless lizards have a high likelihood of occurring on-site in all but the most compacted soils. Two-striped garter snakes have been observed feeding on amphibian larvae along the southern edge of McGrath Lake (Hunt, pers. observation, 2008), a distance of less than 500 feet from the project site. Given the home range, dispersal ability, and the fact that it routinely traverses upland habitats when moving between wetlands, this species has a high likelihood of occurring on-site.

The 2.03-acre wetland feature provides potential habitat for several rare wildlife species that are declining throughout their range. Moreover, the feature is imbedded in a gradient of coastal habitats ranging from sandy beach to foredune to stabilized dunes, habitats that have all but disappeared from coastal California. Given its known and potential ecological function in a local and regional context of coastal dune and wetland emplacement, this 2.03-acre wetland qualifies as ESHA in the Coastal Zone.

INDIRECT IMPACTS TO BIOLOGICAL RESOURCES. The PSA considers noise, vibration, and lighting impacts to biological receptors during project construction and operation to be potentially significant, but mitigable to less than significant levels. However, the proposed project site is less than 100 feet from habitats that qualify as ESHA in the Coastal Zone, which is inconsistent with the Local Coastal Plan. These indirect impacts to special-status wildlife species from noise, lighting, and increased human presence will be ongoing for the life of the project. Owing to the sensitivity of the coastal dune habitats to human disturbance and the sensitivity of the wildlife resources found there, long-term, indirect impacts from noise, lighting, and increased human presence could be significant, even with mitigation.

HABITAT RESTORATION AND WETLAND LOSS: The PSA notes that the dunes within which the proposed project site is imbedded are “extremely fragile” (PSA, p. 4.10-25). They are created through a dynamic system of sand accretion and erosion that, over time, creates a west to east gradient of increasing dune age, stability, and vegetational complexity. This developmental process has been so significantly altered by anthropogenic activities that the largest and oldest dune remnants in this system are now all but cut off from their source (the beach) by Harbor Boulevard and agricultural and industrial expansion (including the existing power plant). Conserving the more or less representative, albeit truncated, range of dune types that remain west of Harbor Boulevard, including those surrounding the project site, is important.

Beller et al. (2011) describe the diversity of coastal dune and wetland habitats that occurred along this portion of the coast and adjacent Oxnard Plain prior to development: coastal dune fields supporting a mosaic of freshwater marsh/lakes, wet meadows, alkali meadows, and alkali flats. The 2.03-acre wetland and open space surrounding it could feasibly be restored as a seasonally-inundated wetland within a coastal dune field (e.g., soils underlying proposed project site consist of interbedded layers of sand, silt, and clay, per PSA, p. 4.10-13). A restored configuration of seasonal wetland and coastal dunes could provide habitat for any or all of the special-status species previously noted. Restoration of this feature and surrounding habitats could be an important step in restoring some semblance of the spectrum of dunes and coastal wetlands that formerly occurred between the Santa Clara River and the project site, consistent with recommendations and opportunities outlined in Beller et al. (2011).

The PSA proposes to mitigate the loss of 2.03 acres of on-site wetlands at a 2:1 ratio through off-site mitigation at an as-yet unidentified location on the Oxnard Plain somewhere between the Santa Clara

River and Calleguas Creek. The impact assessment and proposed mitigation measures in the PSA do not adequately mitigate loss of this feature to less than significant levels because: a) loss of wetlands in the Coastal Zone, especially over two acres of wetlands, is locally and regionally very significant; b) the proposed mitigation ratio of 2:1 is insufficient given the magnitude of the regional loss of this habitat type, and; c) mitigation should occur on or immediately adjacent to the project site. The project site does not appear to be capable of supporting wetland mitigation at the 4:1 ratio typically required for projects in the Coastal Zone, or even at the 2:1 ratio proposed in the PSA. This necessitates off-site mitigation, which inherently diminishes the functional capacity of local wetlands and degrades habitat diversity in the vicinity of the project site. If a 4:1 wetland mitigation effort that does not degrade or destroy existing natural habitats can be implemented in the immediate vicinity of the project site (e.g., off-site, but nearby, such as the dune fields SE of the corner of Harbor Blvd x West 5th Avenue), it may have the potential to retain local wetland habitat quality. However, off-site mitigation beyond the immediate vicinity of the project site results in a net loss of local habitat diversity.

ENVIRONMENTALLY SUPERIOR ALTERNATIVES. The PSA identifies the East 5th St-Del Norte Blvd Project Alternative as one of two environmentally superior alternatives. This alternative does not impact ESHA, coastal wetlands, and/or special-status species. Moving the project eastward to the East 5th St-Del Norte Blvd site places it in existing industrial/agricultural fields with little or no biological value. The other environmentally superior alternative, the Ormond Beach site, is less preferable because it is in closer proximity to sensitive coastal wetland habitats compared to the East 5th St-Del Norte Blvd alternative.

In short, the proposed expansion of the existing Puente Power Plant will continue to degrade locally and regionally important remnants of extremely fragile coastal dune/wetland ecosystems. It cannot be supported when an environmentally superior alternative exists.

Sincerely,

Lawrence Hunt

Lawrence E. Hunt

Literature Cited.

Beller, E., et al. 2011. Historical ecology of the lower Santa Clara River, Ventura River, and Oxnard Plan: an analysis of terrestrial, riverine, and coastal habitats. Prep. for the State Coastal Conservancy. A report of SFEI's Historical Ecology Program, SFEI Publ No. 641. San Francisco Bay Estuary Institute, Oakland, CA. 273 pp.