ADAMS BROADWELL JOSEPH & CARDOZO

A PROFESSIONAL CORPORATION

ATTORNEYS AT LAW

601 GATEWAY BOULEVARD, SUITE 1000 SOUTH SAN FRANCISCO, CA 94080-7037

TEL: (650) 589-1660 FAX: (650) 589-5062 rkoss@adamsbroadwell.com

July 27, 2010

SACRAMENTO OFFICE

520 CAPITOL MALL, SUITE 350 SACRAMENTO, CA 95814-4721

TEL: (916) 444-6201 FAX: (916) 444-6209

DOCKET
09-AFC-8

DATE JUL 27 2010

RECD. JUL 27 2010

California Energy Commission Attn Docket No. 09-AFC-8 1516 Ninth Street, MS-4 Sacramento, CA 95814-5512

Re: Genesis Solar Energy Project; 09-AFC-8

Dear Docket Clerk:

DANIEL L. CARDOZO

THOMAS A. ENSLOW

TANYA A. GULESSERIAN

JASON W. HOLDER

MARC D. JOSEPH

ELIZABETH KLEBANER

RACHAEL E. KOSS LOULENA A. MILES

ROBYN C. PURCHIA

FELLOW AARON G. EZROJ

OF COUNSEL THOMAS R. ADAMS ANN BROADWELL GLORIA D. SMITH

Enclosed are an original and copy of Second Opening Brief of California Unions for Reliable Energy.

Please docket the original, conform the copy and return the copy in the envelope provided.

Thank you for your assistance.

Sincerely,

/s/

Rachael E. Koss

REK:bh Enclosures

STATE OF CALIFORNIA California Energy Commission

In the Matter of:

The Application for Certification for the GENESIS SOLAR ENERGY PROJECT

Docket No. 09-AFC-8

SECOND OPENING BRIEF OF CALIFORNIA UNIONS FOR RELIABLE ENERGY

July 27, 2010

Rachael E. Koss
Tanya A. Gulesserian
Marc D. Joseph
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080
(650) 589-1660 Voice
(650) 589-5062 Facsimile
rkoss@adamsbroadwell.com
tgulesserian@adamsbroadwell.com

Attorneys for the CALIFORNIA UNIONS FOR RELIABLE ENERGY

TABLE OF CONTENTS

I.	INTR	ODUCTION	1
II.	COLO	AND WATER RESOURCES; THE PROJECT'S PROPOSED USE OF DRADO RIVER MAINSTREAM WATER VIOLATES LORS AND RESULT IN SIGNIFICANT UNMITIGATED IMPACTS	1
	A.	The Project's Proposed Use of Lower Colorado River Mainstream Water Without an Entitlement is Illegal	2
	В.	The Commission Itself Would Violate the Law it if it Authorizes the Project's Use of Lower Colorado River Mainstream Water Without an Entitlement	5
III.		AND WATER RESOURCES: FAILURE TO PREPARE A WATER LY ASSESSMENT VIOLATES LORS AND CEQA	6
	A.	The Project's Water Demand	7
	B.	The Project's Water Supply	7
IV.	UNA	AND WATER RESOURCES: THE PROJECT WILL RESULT IN NALYZED AND UNMITIGATED SIGNIFICANT OFFSITE IMPACTS EGETATION	7
	A.	The Project Will Cause Hydrological Impacts to Downstream Vegetation that Have Not Been Adequately Analyzed or Mitigated	9
	В.	The Project Will Cause Significant Impacts to Downwind Vegetation from Erosion and Soil Mobilization that Have Not Been Adequately Analyzed or Mitigated	12
V.	CON	CLUSION	14

I. INTRODUCTION

In its review and approval of the Genesis Solar Energy Project ("Project"), the Commission must fulfill the requirements of the Warren-Alquist Act and CEQA. The Warren-Alquist Act requires a finding that a project complies with all LORS. CEQA requires that all potential environmental impacts be analyzed and that all significant impacts be mitigated, including impacts from mitigation measures themselves. The proposed Project fails on both counts. The Commission's approval of the Project would violate the Warren-Alquist Act. Further, the environmental review is inadequate and cannot be relied on by the Commission in approving the Project.

The Commission cannot approve the Project if the Project relies on groundwater pumped from onsite wells without requiring the Applicant to obtain a legal entitlement to pump lower Colorado River mainstream water. Pumping lower Colorado River mainstream water without an entitlement violates LORS. The Commission must require the Applicant to obtain an entitlement in order to ensure that Project pumping is lawful.

The Commission cannot approve the Project since the RSA does not include a Water Supply Assessment ("WSA"), as required by State law. Both the Water Code and CEQA require the Commission to prepare and include a WSA in the environmental review document. Therefore, should the Commission approve the Project absent a WSA, the Commission would violate the Water Code, CEQA and the Warren-Alquist Act.

The Commission cannot approve the Project because there are significant unanalyzed and unmitigated impacts from installation of the Project's western solar array on downstream and downwind vegetation. Specifically, the hydrological effects of the western portion of the installation will result in significant impacts to vegetation south of the Project that have not been adequately analyzed and mitigated. Staff's conclusions regarding offsite impacts to vegetation and its proposed mitigation for those impacts are unsupported. In addition, the Project's western solar array will cause erosion and soil mobilization resulting in significant impacts to downwind vegetation that have not been disclosed, adequately analyzed or mitigated. The RSA failed to adequately analyze and mitigate significant impacts to downstream and downwind vegetation, and therefore failed to satisfy the basic requirements of CEQA.

II. SOIL AND WATER RESOURCES: THE PROJECT'S PROPOSED USE OF COLORADO RIVER MAINSTREAM WATER VIOLATES LORS AND WILL RESULT IN SIGNIFICANT UNMITIGATED IMPACTS

Genesis Solar, LLC's ("Applicant") Application for Certification ("AFC") states that the Project is located in the Chuckwalla Valley Groundwater Basin ("CVGB"). (Exh. 1, p. 5.4-1.) The AFC also states that the Project would use groundwater from onsite wells during construction and for operation of the power plant. (Exh. 1, p. 5.4-10.) Staff concluded that wells extracting water in the CVGB are extracting water from the Colorado River. (Exh. 402, p. 28.) The U.S. Geological Survey ("USGS"), the Colorado River Board and the Metropolitan Water District concur that the CVGB is hydraulically connected to the Colorado River and wells extracting water in the CVGB are considered to be extracting water from the Colorado River.

(Exh. 400, pp. C.9-47-48; Exh. 546, p. 2; Exh. 532.) Staff finds that the Project's groundwater pumping will result in a significant impact by inducing flow from the Colorado River. (Exh. 400, pp. C.9-47-48, 75, 117; Exh. 402, p. 31.) The RSA allows the Project to use groundwater for construction and operation provided that the Project replaces the Colorado River water pumped by the Project, but the RSA does not require the Applicant to obtain an entitlement to Colorado River water. (Exh.400, pp. C.9-48, 117-119.) Using Colorado River water without an entitlement is illegal. Under the Warren-Alquist Act, the Commission must find that using Colorado River water without an entitlement violates LORS, even with the RSA's replacement scheme. Further, if *the Commission permits* the Project as proposed, *the Commission* is also subject to suit in federal court. Finally, in any event, the RSA fails to adequately mitigate the Project's significant impacts caused by inducing flow from the Colorado River, as required by CEQA. A discussion of the LORS violations follows, however a discussion of the RSA's failure to adequately mitigate significant impacts will be presented in a future brief.

A. The Project's Proposed Use of Lower Colorado River Mainstream Water Without an Entitlement is Illegal

The Project proposes to pump groundwater from wells located in the CVGB. (Exh. 1, pp. 5.4-1, 5.4-10.) Substantial evidence shows a hydraulic connection between the CVGB, the PVMGB and the adjudicated Colorado River. (Exh. 400, pp. C.9-47-48; Exh. 402, pp. 26-31; Exh. 532, p. 3; Exh. 546, p. 2.) The CVGB outflows to the Palo Verde Mesa Groundwater Basin ("PVMGB"). (Exh. 400, p. C.9-22; Exh. 48.) Staff concluded that a "reduction in the outflow from the CVGB to the PVMGB will be made up at least in part by inflow from the Colorado River." (Exh. 402, p. 31.) The USGS determined that the CVGB and PVMGB lie within a groundwater basin tributary to the Colorado River. (Exh. 400, p. C.9-47.) The USGS indicated that the CVGB and PVMGB are hydraulically connected to the Colorado River. (Exh. 400, p. C.9-47; Exh. 546, p. 2.) USGS determined that wells drawing groundwater within the CVGB and PVMGB are considered to be pumping Colorado River water. (Exh. 400, p. C.9-47.) The Metropolitan Water District agrees that the Project proposes to pump groundwater from a groundwater basin that is hydrologically connected to the Colorado River. (Exh. 532, p. 3.) The Colorado River Board also concurs that the Project is located within an area considered to be hydraulically connected to the Colorado River, and consequently, groundwater pumped from wells located on the Project site would be replaced by Colorado River water. (Exh. 546, p. 2.) Thus, the Staff and every expert agency agree: pumping groundwater for the Project is pumping Colorado River water.

The Applicant did not provide *any* evidence of the amount of water in the CVGB originating from storage, natural recharge, or the Colorado River. (Exh. 400, p. C.9-47.) Yet, the Applicant is adamant that the Project would not pump Colorado River water. (Exh. 60, pp. 6-13.) The Applicant attempts to muddle the record with California water law arguments without providing *any* authority for its argument. (Exh. 60, pp. 7-8.) The Applicant states, without providing any citations, that "under California water law, a landowner may pump groundwater from beneath their own lands for use on their property. No other LORS regarding use of this groundwater apply to this project." (Exh. 60, p. 8.) The Applicant also relies on the Blythe Energy Project cases to claim that "groundwater use does not constitute a LORS issue, and does not pose a significant environmental impact." (Exh. 60, p. 8.) The Applicant is simply

wrong. In reality, the situation is as clear as day—Staff determined that the Project's proposed groundwater pumping would induce flow from the Colorado River (Exh. 402, p. 31), and the law requires the Applicant to obtain an entitlement to pump lower Colorado River mainstream water. (*Arizona v. California* (2006) 547 U.S. 150, 156; 43 U.S.C. § 617(d); Exh. 541, p. 1; Exh. 419, pp. 40916, 40921, Exh. 532, p. 3.) "An entitlement is an authorization for an individual or entity to put Colorado River water to beneficial use pursuant to: (1) a right decreed by the United States Supreme Court; (2) a contract with the United States under Section 5 of the BCPA; or (3) a reservation of water by the Secretary." (Exh. 535, p. 2.)

Based on substantial evidence in the record, Staff correctly concluded that "all groundwater production at the [Project] site could be considered Colorado River water." (Exh. 400, p. C.9-48.) As a result, Staff determined that the Project's groundwater pumping would result in a significant impact by inducing flow from the Colorado River. (Exh. 400, pp. C.9-75, 117; Exh. 402, p. 31.) Staff, however, failed to find that the Project's use of lower Colorado River mainstream water without an entitlement would violate LORS. (Exh. 400, p. C.9-79.)

The "Law of the River" mandates that wells that draw water from the mainstream of the lower Colorado River by underground pumping *must* have an entitlement. The "Law of the River" is a body of laws, regulations and contracts that control use of Colorado River water including (but not limited to):

- Kansas v. Colorado (1907) 206 U.S. 46 (U.S. Supreme Court adopts the doctrine of equitable apportionment of benefits for rivers flowing between states);
- Wyoming v. Colorado (1922) 259 U.S. 419 (U.S. Supreme Court rules that the doctrine of prior appropriation can be applied between states where each of the states adheres to that doctrine);
- 1922 Colorado River Compact (70 Cong. Rec. 324) (1928) (apportioned 7.5 million acre-feet per year of Colorado River water to both the upper and lower basins of the Colorado River);
- 1928 Boulder Canyon Project Act (43 U.S.C. § 617) (authorized the apportionment of 7.5 million acre-feet per year of Colorado River water to the lower basin states and directed the Secretary of the Interior to function as the sole contracting authority for lower Colorado River water);
- California Limitation Act of 1929 (Ch. 16, 48th Session; Statutes and Amendments to the Codes, 1929, pp. 38-39) (California agrees to limit its use of Colorado River to 4.4 million acre-feet per year);
- *Arizona v. California* (1931) 283 U.S. 423 (U.S. Supreme Court holds that the Boulder Canyon Project Act is a valid exercise of congressional authority);
- 1931 California Seven Party Agreement (Exh. 540) (allocated 4.4 million acrefeet per year of Colorado River water among seven California agencies);
- 1944 Treaty on the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande;
- Colorado River Storage Project Act of 1956 (43 U.S.C. 620 et seq.);
- *Arizona v. California* (1964) 376 U.S. 340 (enjoined the Secretary of the Interior from delivering water outside the framework of apportionments defined by the

law and mandated the preparation of annual reports accounting the uses of water in the lower basin);

- Colorado River Basin Project Act of 1968 (43 U.S.C. 1552 et seq.);
- Minute 242 to the 1944 Treaty;
- Colorado River Basin Salinity Control Act of 1974 (43 U.S.C. 1571 et seq.);
- Regulations providing for Offstream Storage of Colorado River Water and Development and Release of Intentionally Created Unused Apportionment in the Lower Division States;
- Quantification Settlement Agreement of 2003;
- Colorado River Water Delivery Agreement of 2003;
- *Arizona v. California* (547 U.S. 150) (U.S. Supreme Court Consolidated Decree consolidating *Arizona v. California* (1964) 376 U.S. 340, amended February 28, 1966 (383 U.S. 268), supplemented January 9, 1979 (439 U.S. 419), April 16, 1984 (466 U.S. 144) and October 10, 2000 (531 U.S. 1.));
- Agreement Concerning Colorado River Management and Operations (2007); and
- Record of Decision on Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead (2007).

Pursuant to the "Law of the River," any diversion or consumptive use of lower Colorado River mainstream water without an entitlement is illegal. (*Arizona v. California* (2006) 547 U.S. 150, 156; 43 U.S.C. § 617(d); Exh. 541, p. 1; Exh. 419, pp. 40916, 40921.) Consumptive use of the mainstream includes "water drawn from the mainstream by underground pumping." (*Arizona v. California*, 547 U.S. at 153; Exh. 541, p. 3.) The Consolidated Decree also requires the United States to account for all lower Colorado River mainstream water use. (*Arizona v. California*, 547 U.S. at 164; Exh. 541, pp. 1, 3.)

The Project proposes to pump groundwater in the CVGB which has been determined to be hydraulically connected to the PVMGB and to the adjudicated and fully apportioned Colorado River. (Exh. 400, pp. C.9-22, 47-48; Exh. 402, pp. 26-31; Exh. 546, p. 2.) Thus, "wells extracting water in the [CVGB] and [PVMGB] are extracting water from the 'river aquifer'." (Exh. 402, p. 28.) Consequently, unless and until substantial evidence shows that the Project will not pump lower Colorado River mainstream water, the "Law of the River" requires the Project to obtain an entitlement to pump groundwater from onsite wells. (*Arizona v. California*, 547 U.S. at 156; 43 U.S.C. § 617(d).) The record does not contain substantial evidence that shows that the Project will not pump lower Colorado River mainstream water. The Applicant did not provide evidence of the amount of water in the CVGB originating from storage, natural recharge, or the Colorado River. (Exh. 400, p. C.9-47.) There is also no evidence in the record that indicates that the Applicant has such an entitlement (or that the Applicant intends to obtain one). Thus, the Project's proposed use of lower Colorado River mainstream water is illegal.

Staff failed to find that the Project's proposed use of lower Colorado River mainstream water violates LORS. Rather, Staff states that "there is no LORS in effect regarding withdrawal of groundwater that is connected to the Colorado River." (Exh. 402, p. 31.) Although Staff recognizes that "[i]n cases where water is drawn from the river aquifer, an entitlement is required from the USBR," Staff concludes that the Project will only require an entitlement if the U.S.

Bureau of Reclamation adopts the accounting surface rule. (Exh. 400, p. C.9-80.) Existing federal law clearly contradicts Staff's conclusion.

Staff ignores the "Law of the River," the body of laws and regulations outlined above that requires an entitlement for any diversion or consumptive use of lower Colorado River mainstream water. (*Arizona v. California*, 547 U.S. at 156; 43 U.S.C. § 617(d).) Staff's justification for not finding a LORS violation—the absence of the accounting surface rule which is merely a tool used to evaluate facts—does not negate federal law.

The accounting-surface method was developed in the 1990s by the U.S. Geological Survey, in cooperation with the Bureau of Reclamation, to identify wells outside the flood plain of the lower Colorado River that yield water that will be replaced by water from the river. This method was needed to identify which wells require an entitlement for diversion of water from the Colorado River and need to be included in accounting for consumptive use of Colorado River water as outlined in the Consolidated Decree of the United States Supreme Court in *Arizona v. California*.

(Exh. 541, p. 1.) The accounting surface method is just a tool used by the Bureau of Reclamation to satisfy federal law requiring the United States to account for all consumptive use of Colorado River water. (Exh. 535, p. 2; *Arizona v. California*, 547 U.S. at 164; Exh. 541, pp. 1, 3.) However, the absence of a rule adopting this particular tool as a regulation is irrelevant because it does not nullify existing federal law that requires lower Colorado River mainstream water users to have an entitlement. (*Arizona v. California* (2006) 547 U.S. 150, 156; 43 U.S.C. § 617(d); Exh. 541, p. 1; Exh. 419, pp. 40916, 40921.) Nor does it nullify existing federal law which establishes that consumptive use of the mainstream includes "water drawn from the mainstream by underground pumping." (*Arizona v. California*, 547 U.S. at 153; Exh. 541, p. 3.) Thus, Staff's argument fails. The Commission must require the Applicant to obtain an entitlement to Colorado River water for proposed Project groundwater pumping. Anything less is a violation of the law.

B. The Commission Itself Would Violate the Law if it Authorizes the Project's Use of Lower Colorado River Mainstream Water Without an Entitlement

If the Commission permits the Project as proposed, authorizing the Project's use of lower Colorado River mainstream water without an entitlement, the Commission itself will violate federal law. *Arizona v. California* enjoins the State of California "[f]rom diverting or *purporting to authorize* the diversion of water from the mainstream the diversion of which has not been authorized by the United States for use in [California]" and ["[f]rom consuming or *purporting to authorize* the consumptive use of water from the mainstream in excess of the quantities permitted under" the Decree. (*Arizona v. California*, 547 U.S. at 159-160 (emphasis added).)

There is nothing in the record that indicates that the Applicant is authorized by the United States to use Colorado River mainstream water. Moreover, California was apportioned 4.4 million acre-feet of Colorado River water per year. (*Id.* at 156.) Other entities in California are already using all of California's apportionment of Colorado River water. (Exh. 532, p. 4.) Thus,

the Commission cannot authorize the Project's use of Colorado River water as it would exceed the 4.4 million acre-feet allotted to California by the Decree.

The Commission is prohibited by federal law from approving the Project's proposed groundwater pumping unless the record shows that the Applicant has a legal entitlement to Colorado River water. It does not. Consequently, if the Commission approves the Project as currently proposed, the Commission is subject to suit in federal court.

III. SOIL AND WATER RESOURCES: FAILURE TO PREPARE A WATER SUPPLY ASSESSMENT VIOLATES LORS AND CEQA

The Commission failed to include a water supply assessment ("WSA") for the Project, as required by State law. (See *Center for Biological Diversity v. County of San Bernardino* (May 25, 2010, D056652, D056648) __Cal.App.4th __ (hereafter *Center for Biological Diversity*).) A WSA must be prepared for any project that meets the definition of "project" under Section 10912 of the Water Code. Subsection 10912(a)(5) defines a "project" as an industrial plant occupying more than 40 acres of land. Interpreting subsection 10912(a)(5), the court in *Center for Biological Diversity* required preparation of a WSA for a composting facility. It rejected the applicant's assertion that section 10912 only applies to "large scale buildings located on large square footage or plots of land." (*Center for Biological Diversity, supra,* __Cal.App.4th.) The open-air composting facility qualified as a project because *it met the acreage threshold*, even if the structures on the site were small. (*Id.*)

When a WSA is required for a project, an agency must assess the project's water demand and supply. This information must be specific enough to "assist local governments in deciding whether to approve the projects." (*O.W.L. Foundation v. City of Rohnert Park* (2008) 168 Cal.App.4th 568, 576.) In *Center for Biological Diversity*, the court found that the information about the availability of water for the proposed composting facility was "pure speculation." (*Center for Biological Diversity, supra*, __ Cal.App.4th.) There was no indication that the County had determined a water source was actually available. (*Id.*)

The proposed Project is an industrial solar energy plant on approximately 1,880 acres. (Exh. 400, pp. B.1-1-5.) Thus, it meets the definition of a project under the plain language of the Water Code. A WSA must be prepared before the Project is approved. The Water Code requires the Commission to include the WSA in the environmental review document. (Wat. Code, § 10911, subd. (b).) CEQA also requires compliance with the Water Code. (Pub. Resources Code, § 21151.9.)

The Project's proposed water demand and supply must be discussed in a WSA. (Wat. Code, § 10910.) Determining a project's water demand is essential to an adequate analysis of a project's impacts. (*Id.*) In addition, determining a project's water supply allows the agency to assess what water supply entitlements, water rights or water service contracts are necessary for the project to receive the water. (*Id.* at § 10910, subd. (d).)

A. The Project's Water Demand

The Water Code's requirements for a WSA compel specific information regarding the amount of water the Project will need for: (1) construction; (2) maintenance (i.e. mirror washing); and (3) fire control. While the RSA provides general information about how much water the Project may need for construction, the RSA completely fails to provide *any* specific water amount for the Project's mirror washing during Project operation and fire control needs. (Exh. 400, p. C.9-5.)

The RSA must accurately describe the amount of water the Project will need for operation. The record does not contain any evidence, discussion, or information regarding the amount of water required for mirror washing during operation or for fire control. Thus, the RSA's determination that the Project will require 1,605 acre-feet/year ("AFY") of water for a wet-cooled project and 202 AFY of water for a dry-cooled project is not supported by substantial evidence. (Exh. 400, pp. C.9-7, 66.)

B. The Project's Water Supply

The RSA states that groundwater will be pumped from onsite wells to satisfy the Project's water demand. (Exh. 400, p. C.9-5.) However, the RSA fails to provide any evidence that onsite wells are a reliable water source for the Project. As discussed above, the Applicant must obtain a legal entitlement to pump groundwater from onsite wells because Project pumping will induce flow from the Colorado River. (Exh. 400, pp. C.9-48, 75, 117; Exh. 402, p. 31; *Arizona v. California* (2006) 547 U.S. 150, 156; 43 U.S.C. § 617(d).) There is no evidence that the Applicant has an entitlement to pump Colorado River water. Thus, the availability of water for Project construction and operation is speculative. A WSA must identify existing water supply entitlements, water rights or water service contracts relevant to the identified water supply. A WSA must also describe what additional entitlements are necessary for the proposed Project to obtain the water.

The Commission must require preparation of a WSA for the Project as the Commission has prepared for the Imperial Valley Solar Project. If the Commission approves the Project without preparation of a WSA, the Commission will violate State law.

IV. SOIL AND WATER RESOURCES: THE PROJECT WILL RESULT IN UNANALYZED AND UNMITIGATED SIGNIFICANT OFFSITE IMPACTS ON VEGETATION

CEQA requires that significant environmental impacts of a proposed project be adequately investigated and discussed. (*Cadiz Land Co., Inc. v. Rail Cycle, L.P.* (2000) 83 Cal.App.4th 74, 92.) CEQA guidelines require "a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences . . . [t]he courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure." (*County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 955, quoting CEQA Guidelines §

15151; see also Berkeley Keep Jets Over the Bay Com. v. Bd. of Port Commrs. (2001) 91 Cal.App.4th 1344, 1367.)

Commission Staff must assess the environmental impacts of the Project and determine whether mitigation is required, and set forth this analysis in a report written to inform the public and the Commission of the Project's environmental consequences. (20 Cal. Code Reg. §§ 1744(b), 1742.5(a)-(b).) Staff's analysis must reflect the "independent judgment" of the Commission. (14 Cal. Code Regs. § 15084(e).) Before approving a project, the Commission must conclude that Staff's report has been completed in compliance with CEQA, that the Commission has reviewed and considered the information in the report prior to approving the project, and that Staff's report reflects the Commission's independent judgment and analysis. (14 Cal. Code Regs. §15090(a); see Pub. Res. Code § 21082.1(c)(3).)

The Commission must determine whether sufficient substantial evidence is in the record to support its findings and conclusions. (Pub. Res. Code §§ 21080, 21081.5.)

"Substantial evidence" is defined as:

[F]act, a reasonable assumption predicated upon fact, or expert opinion supported by fact. Substantial evidence is not argument, speculation, unsubstantiated opinion or narrative, evidence that is clearly inaccurate or erroneous...

(*Id.* § 21080(e).) California courts have made clear that "substantial evidence" is not synonymous with "any" evidence. (*Newman v. State Personnel Board* (1992) 10 Cal.App.4th 41, 47.) As defined by the courts, substantial evidence means evidence of "ponderable legal significance, reasonable in nature, credible and of solid value." (*Lucas Valley Homeowners Ass'n v. County of Marin* (1991) 233 Cal.App.3d 130, 156-7.)

This requirement also applies to expert opinions. Expert opinion does not constitute substantial evidence when it is "based on speculation and conjecture, and accordingly...not supported by substantial evidence in light of the whole record." (See, e.g., Friends of the Old Trees v. Department of Forestry and Fire Protection (1997) 52 Cal.App.4th 1383, 1399, fn. 10; Coastal Southwest Dev. Corp. v. California Coastal Zone Conservation Commission (1976) 55 Cal.App.3d 525, 532.) It does not include argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly inaccurate or erroneous. (Id.) Additionally, "opinion testimony of expert witnesses does not constitute substantial evidence when it is based upon conclusions or assumptions not supported by evidence in the record." (Hongsathavij v. Queen of Angels/Hollywood Presbyterian Med. Ctr. (1998) 62 Cal.App.4th 1123, 1137.) These requirements ensure that members of the public and interested agencies will have an opportunity to review and comment on significant impacts and proposed mitigation and identify any shortcomings. This public and agency review has been called "the strongest assurance" of the adequacy of an environmental review document under CEQA. (Sundstrom v. Mendocino County (1988) 202 Cal.App.3d 296, 308.)

Installation of the Project's western solar array will result in unanalyzed and unmitigated significant impacts to offsite vegetation. Specifically, the hydrological effects of the western

portion of the installation will result in significant impacts to vegetation south of the Project that have not been adequately analyzed and mitigated. Staff's conclusions regarding offsite impacts to vegetation and its proposed mitigation for those impacts are unsupported. In addition, the Project's western solar array will cause erosion and soil mobilization resulting in significant impacts to downwind vegetation that have not been disclosed, adequately analyzed or mitigated. Since the RSA failed to adequately analyze and mitigate significant impacts to downstream and downwind vegetation, the RSA failed to satisfy the basic requirements of CEQA described above.

A. The Project Will Cause Hydrological Impacts to Downstream Vegetation that Have Not Been Adequately Analyzed or Mitigated

The Project proposes to divert water flow channels using a series of dissipaters. (Exh. 402, p. 25.) According to the RSA, water flow diversion "will change both the extent and physical characteristics of the existing floodplain within the Project site and downstream of the Project site." (Exh. 400, p. C.9-56.) Specifically, "[c]ertain downstream areas will receive more flow than under existing conditions, while other areas may no longer receive any surface flow beyond what may be the result of direct precipitation." (*Id.*, p. C.9-58.) Staff therefore assumes that "all 21 acres of the ephemeral washes occurring downstream of the Project boundaries would be adversely affected by the proposed Project." (*Id.*, p. C.2-72.) As mitigation for significant impacts to washes and vegetation downstream of the Project, the RSA proposed offsite mitigation at a ratio of 0.5:1, half the ratio proposed for impacts to onsite washes and vegetation. (*Id.*) Staff's theory for providing half of the mitigation for offsite washes and vegetation is that,

while the wash-dependent vegetation downslope of altered drainages would eventually be lost, that loss would be slow and gradual. Staff anticipates that wash-dependent vegetation downstream of the Project deprived of flows would continue to provide habitat for years and possibly decades after the Project is constructed, although eventually it would die (if deprived of flows) or be indirectly affected by erosion and sedimentation along reaches below the stormwater channel discharge points.

(*Id.*, pp. C.2-72-73.) Staff provided *no analysis* to support its significance finding and *no substantial evidence* to support its finding that the proposed mitigation will reduce impacts to a level below significance. Consequently, the Project's impacts to downstream vegetation remain significant and unmitigated.

According to the RSA, "the drainage report does not provide sufficient information to establish the post-Project flooding conditions or to determine the potential impacts to vegetation downstream." Rather than conduct an independent investigation and analysis of the extent of the proposed Project's potentially significant impacts on downstream vegetation, Staff merely assumed that the Project would significantly impact downstream vegetation. (*Id.*, p. C.2-72.) While CURE agrees that the Project will significantly impact downstream vegetation, Staff's failure to adequately investigate and discuss the Project's environmental impacts in order to sufficiently inform decisionmakers and the public of the Project's consequences is in and of itself a violation of CEQA. (*Cadiz Land Co., Inc., supra,* 83 Cal.App.4th at 92; *County of Amador*,

supra, 76 Cal.App.4th at 954; Berkeley Keep Jets Over the Bay Com., supra, 91 Cal.App.4th at 1367.)

Moreover, it is impossible to determine whether Staff's assumption regarding significant impacts to downstream vegetation reflects the severity and significance of such impacts. Specifically, the RSA's assumptions may underestimate significant impacts to downstream vegetation. Consequently, the RSA's claimed effectiveness of proposed mitigation for downstream vegetation is unsupported, unknown and unknowable.

Only "where substantial evidence supports the approving agency's conclusion that mitigation measures will be effective, courts will uphold such measures against attacks based on their alleged inadequacy." (Sacramento Old City Assn. v. City Council (1991) 229 Cal.App.3d 1011, 1027 (SOCA), citing Laurel Heights Improvement Association v. Regents of the University of California (1988) 47 Cal.3d 376, 407.) The RSA's conclusions regarding the effectiveness of mitigation measures in reducing impacts to downstream vegetation are unsupported.

Absent substantial evidence showing that Staff's proposed mitigation will be effective, the Commission cannot find that the proposed mitigation will be adequate to reduce the Project's impacts to downstream vegetation to less than significant levels. The Commission's ability to make required findings depends upon an impact analysis and mitigation measures tailored to actual impacts. One of the three possible findings that a lead agency may make regarding an identified impact is "that changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the effect. . . ." (Pub. Res. Code § 21081(a); 14 Cal. Code Reg. § 15091(a).) Such a finding must be supported by substantial evidence in the record. (Pub. Res. Code § 21081.5; 14 Cal. Code Reg. § 15091(b).) Where an agency's finding concerning the effectiveness of a mitigation measure is not supported by substantial evidence or defies common sense, courts have declined to defer to the agency's finding. (*Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1117.)

In this case, the record does not contain substantial evidence that could support a finding "that changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the effect[s]" on downstream vegetation. The record merely shows that Staff "expects" (without any supporting evidence) "that while the wash-dependent vegetation downslope of altered drainages would eventually be lost, that loss would be slow and gradual," thereby requiring half of mitigation proposed for onsite vegetation. (Exh. 400, p. C.2-72.) Equally unconvincing is Staff's statement (again, without any supporting evidence) that it "anticipates that the wash-dependent vegetation downstream of the Project deprived of flows would continue to provide habitat for years and possible decades after the Project is constructed." (*Id.*, pp. C.2-72-73, emphasis added.) Staff's unsupported assumptions are pure speculation and do not constitute substantial evidence.

On the contrary, CURE provided substantial evidence that the Project would result in significant impacts to downstream vegetation that were not adequately analyzed (Exh. 509, pp. 1-2). Dr. Okin testified that extensive research shows that water diversions cause significant decreases in plant density (specifically Sonoran creosote bush scrub) and increases in mortality of vegetation because the vegetation communities rely on overland flow for survival. (*Id.*) If the

flow is diverted, vegetation downstream of the Project will experience reduced growth and shrub mortality. (*Id.*, p. 2.)

Staff responded to Dr. Okin's testimony (yet again, without any supporting evidence) that "[w]hile we do not expect the system to perfectly mimic natural conditions we expect the revised [drainage] plan to reduce impacts to less than significant levels." (Exh. 402, p. 25.) Staff's unsupported assumptions and idealistic expectations are pure speculation and do not constitute substantial evidence.

The Applicant also responded to Dr. Okin's testimony. The Applicant's rebuttal to Dr. Okin stated in full:

We disagree with the Opening Testimony of Greg Okin and provide the following rebuttal as it relates to "Hydrological impacts on vegetation south of the Project".

In the testimony of Mr. Okin, it is stated that "it is my opinion that the Project's diversion of flow from small ephemeral channels would result in significant offsite impacts to vegetation that have not been adequately addressed by the RSA". Presumably this opinion is based on the cited reference with the written testimony of Mr. Okin.

We feel the cited reference is a study that is not specifically relevant to the facts surrounding the Genesis project and therefore we feel that the opinion of Mr. Okin should not be considered.

The discharge from the drainage channels, as previously submitted and addressed in the RSA and demonstrated in the FLO 2D modeling, has been designed to spread the storm flows to adequately mitigate impacts to offsite vegetation.

(Exh. 63, p. 2, emphasis added.) The Applicant provided no substantive evidence to rebut Dr. Okin's showing that the Project will result in significant impacts to downstream vegetation. Furthermore, at the evidentiary hearing Dr. Okin explained very clearly why the cited study is directly applicable to the Project. Specifically, the study was conducted along the flank of the nearby Coxcomb Mountains where the climate, soils and vegetation are similar to that of the Project site. (July 13, 2010 Tr., p. 64.) Both locations "are on varnished alluvial fans with significant pavements, and both have linear disturbance to surface... hydrology, which will cut out sheet flow, and sheet flow appears to be what's necessary for sustenance of vegetation." (*Id.*, pp. 64-65.) Clearly, the study *is* "specifically relevant to the facts surrounding the Genesis project." The Applicant's simple remark carries no weight.

Substantial evidence shows that the Project will significantly impact downstream vegetation. Neither the Applicant nor Staff provided substantial evidence that shows otherwise. Moreover, Staff's assumptions that half of the mitigation proposed for onsite vegetation impacts will effectively mitigate offiste vegetation are baseless. Thus, the Commission does not have substantial evidence to support a finding that the proposed measures will effectively mitigate significant impacts to downstream vegetation.

B. The Project Will Cause Significant Impacts to Downwind Vegetation from Erosion and Soil Mobilization that Have Not Been Adequately Analyzed or Mitigated

The Project will require mass grading of approximately 1,800 acres of land. (Exh. 400, p. C.9-44.) The eastern portion of the Project's solar array will be located on an aeolian surface, while the geomorphic surface of the western portion of the solar array will be located on an alluvial surface. (Exh. 400, Soil & Water, Figure 6.) Although Staff conceded that "the fine sand and dust beneath the gravel surface is vulnerable to wind erosion following mechanical disturbance of grading," Staff concluded that "[t]here should not be a downwind impact from eroded sand (indeed, a major focus of the RSA has been on the potential for the project to cut off sand supplies to downwind habitat areas which are sand-dependent.)" (Exh. 402, p. 25.) It appears that Staff failed to distinguish the very different geomorphic surfaces of the Project site when it concluded that the Project would not result in downwind effects on vegetation.

The Applicant also seems to have overlooked the important differences related to the geomorphic surfaces on the Project site. At the evidentiary hearing, the Applicant asked Dr. Okin, "[c]an you explain to me how simultaneously the project can create a sand shadow but also create sand leaving the site?" (July 13, 2010 Tr., p. 69.) Dr. Okin explained that

the reason is because the project straddles two geomorphic surfaces. The geomorphic surface on the ...east is an active aeolian land surface. And the concern on the active aeolian surface is whether or not the project will limit sand movement, which is required for the fringe-toed lizard. On the west side of the project...the geomorphic surface is an alluvial surface with various degrees of pavement development...Those surfaces on the western side, the alluvial surfaces, are incredibly stable if undisturbed. However, they're very easily disturbed. In fact...there's a study that's currently in press around Las Vegas showing that the most delicate area for dust emission is actually the alluvial surface...because the pavement actually protects a huge amount of material underneath that is wind erodible. So it's possible on the east wide where you have an active aeolian surface that you might cut off the aeolian sediment transport. On the west side you have the potential of actually creating a new aeolian source where there wasn't one."

(*Id.*, pp. 69-70.) Thus, Staff's analysis of the potential for the portion of the Project that will sit on an aeolian surface "to cut off sand supplies to downwind habitat" is unrelated to the analysis of the potential for another (much larger) part of the Project that will be located on a very different geomorphic surface to cause significant impacts to downwind vegetation from increased aeolian activity. More importantly, Staff's skirt of the issue does not constitute substantial evidence.

CURE, on the other hand, provided substantial evidence that the Project would indeed cause significant impacts to downwind vegetation. Dr. Okin testified that "even minor disturbances" of desert pavements "such as that caused by a single vehicle pass, leads to significant decreases in...the wind speed at which particle movement is initiated and increases the total amount of aeolian flux observed." (Exh. 509, p. 3.) The Project proposes substantially more disturbance than a single vehicle pass—the Project will mass grade approximately 1,800 acres. According to Dr. Okin, the Project's "large-scale disturbance that is to occur on the Qal

and Qsr geomorphic surfaces in the western portion of the Project will lead to extensive new aeolian activity. Given the predominant southwestern wind direction, this will mean that a plume of sand, eroded from the disturbed area, will begin to extend from the southern edge of the Project." (*Id.*, p. 4.) Dr. Okin published three studies which show that this type of sand plume significantly impacts downstream vegetation. Specifically, the windblown sand can

abrade, damage, and/or kill offsite vegetation, and the removal of fine-particles during transport (i.e. "winnowing") leaves the deposited soil with lower water-holding capacity, cation-exchange capacity, and lower levels of critical nutrient elements...The result is a downwind area with reduced vegetation cover, reduced soil fertility, shifting sands, and lower probability of establishment of new vegetation.

(*Id.*) Substantial evidence shows that the Project's proposed western solar array will cause significant impacts to downwind vegetation. Staff's conclusion that "[t]here should not be a downwind impact from eroded sand" is unsupported and contradicted by substantial evidence in the record.

Not only did the RSA fail to adequately disclose and analyze the Project's significant impacts to downwind vegetation, but the record contains no evidence that Staff's proposed mitigation for erosion control and dust suppression will reduce impacts to downwind vegetation to a level below significant.

Staff concludes that two conditions of certification (Soil & Water-1 and -14) will mitigate potential impacts related to wind erosion. Specifically, Staff purports that a not-yet-developed Drainage Erosion and Sedimentation Control Plan will identify soil treatments including "chemical based dust palliatives, soil bonding, and weighting agents" to control erosion. (Exh. 402, pp. 25-26.) In addition, Staff states that the Applicant will be required to develop a closure and decommissioning plan that will address long-term impacts from erosion. (*Id.*, p. 26.) The record contains no evidence that these plans will in fact mitigate the Project's significant impacts to downwind vegetation, or that long-term significant impacts are even mitigable.

Staff also argues that the solar arrays "will to some extent act as wind fences" and the Applicant's proposal to construct a wind fence "should intercept the vast majority of sand being eroded from the graded areas and prevent it from passing downwind." (Exh. 400, p. 25, emphasis added.) There is no evidence in the record that these measures will mitigate the Project's significant impacts to downwind vegetation.

On the contrary, CURE provided evidence that the RSA's proposed mitigation for erosion and fugitive dust emissions, including windbreaks, vegetation and chemical dust suppressants or soil stabilizers, will not reduce impacts to downwind vegetation to a level below significant. First, substantial evidence shows that windbreaks do not significantly reduce wind in their lee because, as the distance from the windbreak increases, the effect of the windbreak decreases, becoming minimal at a distance of about five times the height of the windbreak. (Exh. 509, p. 6.) Second, substantial evidence provided by Dr. Okin's own research in the Mojave Desert illustrates that vegetation is highly unlikely to reduce wind erosion of disturbed areas. (*Id.*) In Dr. Okin's study, soils were disturbed for agricultural purposes and, after agriculture was abandoned on the fields, vegetation grew back to cover several times that found

prior to disturbance. (*Id.*) However, the fields with significant vegetation cover remained the source for blowing sand plumes downwind. (*Id.*) Thus, substantial evidence shows that, even if permanent vegetation recovers on disturbed areas, it is highly unlikely that wind erosion will be reduced in the decades following the Project. (*Id.*) Furthermore, substantial evidence shows that vegetation recovery in the California desert takes up to 3,000 years. (*Id.*; July 13, 2010 Tr., p. 67.) Finally, substantial evidence shows that chemical dust suppressants will not effectively limit wind erosion. At the evidentiary hearing, Dr. Okin testified that even with soil compaction and soil stabilizers, the Project site "will almost certainly…have more aeolian activity" with Project implementation because soil stabilizers only last one or two years and only have an efficacy rate of 80 to 90 percent. (July 13, 2010 Tr., pp. 71-73.) The result is for one or two years there would be

an improvement over the disturbed state, but it's not an improvement over the original state. The original state – these alluvial surfaces, if undisturbed, produce no dust; in fact, they're a sink for dust. But that means when you disturb it, there's a mantle of dust underneath. So you disturb it, now it's no longer protected, it becomes a massive dust source.

(*Id.*, p. 74.) Consequently, "when you go from the undisturbed surface to the disturbed surface, you go from basically something with zero flux to something with very high flux to go up several orders of magnitude." (*Id.*) So, for example, if aeolian activity increases two orders of magnitude as a result of the Project, even if a soil stabilizer was 90 percent effective, "you are still one order of magnitude above what you were before." (*Id.*, pp. 75-76.)

Staff failed to support its conclusion that the Project would not result in downwind impacts to vegetation from eroded sand. Staff also failed to support its conclusion that proposed mitigation for erosion control and dust suppression will reduce impacts to downwind vegetation to a level below significant. Conversely, CURE provided substantial evidence that the Project will cause significant impacts to downwind vegetation and Staff's proposed mitigation for erosion control and dust suppression will not reduce the impacts to a level below significant. Consequently, the Commission cannot find "that changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the effect. . . ." (Pub. Res. Code § 21081(a); 14 Cal. Code Reg. § 15091(a).

V. CONCLUSION

The Commission cannot approve the Project as proposed. Federal law prohibits the Commission from approving the Project without first requiring the Applicant to obtain an entitlement to Colorado River water. If the Commission fails to require an entitlement, it is subject to suit in federal court. The Commission will also violate State law if it approves the Project without first requiring the preparation of a Water Supply Assessment for the Project. Finally, the Commission does not have substantial evidence to support a finding that the Project's impacts on downstream and downwind vegetation will be mitigated to a less than significant level.

Respectfully submitted Dated: July 27, 2010

s/

Rachael E. Koss Tanya A. Gulesserian Marc D. Joseph Adams Broadwell Joseph & Cardozo 601 Gateway Boulevard, Suite 1000 South San Francisco, CA 94080 (650) 589-1660 Voice (650) 589-5062 Fax rkoss@adams broad well.comtgulesserian@adamsbroadwell.com

Attorneys for the CALIFORNIA UNIONS FOR REIABLE **ENERGY**

PROOF OF SERVICE

I, Bonnie Heeley, declare that on July 27, 2010 I served and filed copies of the attached **Second Opening Brief of California Unions for Reliable Energy**. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at www.energy.ca.gov/sitingcases/genesis. The document has been sent to both the other parties in this proceeding as shown on the Proof of Service list and to the Commission's Docket Unit electronically to all email addresses on the Proof of Service list and by either depositing in the U.S. Mail at South San Francisco, CA with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list to those addresses NOT marked "email preferred," via personal service or via overnight mail as indicated.

I declare under penalty of perjury that the foregoing is true and correct. Executed at South San Francisco, CA on July 27, 2010.

/s/	
Bonnie Heeley	

CALIFORNIA ENERGY COMMISSION Attn: Docket No. 09-AFC-8 1516 Ninth Street MS 4 Sacramento, CA 95814-5512 docket@energy.state.ca.us	Ryan O'Keefe, Vice President Genesis Solar LLC 700 Universe Boulevard Juno Beach, Florida 33408 Ryan.okeefe@nexteraenergy.com EMAIL ONLY	Scott Busa/Project Director Meg Russell/Project Mgr Duane McCloud/Lead Engr NextEra Energy 700 Universe Boulevard Juno Beach, FL 33408 Scott.busa@nexteraenergy.com Meg.Russell@nexteraenergy.com Daune.mccloud@nexteraenergy.com VIA EMAIL ONLY Kenny Stein, Environmental Srvs Mgr Kenneth.Stein@nexteraenergy.com VIA EMAIL ONLY
Mike Pappalardo Permitting Manager 3368 Videra Drive Eugene, OR 97405 Mike.pappalardo@nexteraenergy.com	James Kimura, Project Engineer Worley Parsons 2330 East Bidwell St., #150 Folsom, CA 95630 James.Kimura@WorleyParsons.com	Tricia Bernhardt/Project Manager Tetra Tech, EC 143 Union Blvd, Suite 1010 Lakewood, CO 80228 Tricia.bernhardt@tteci.com
Kerry Hattevik, Director West Region Regulatory Affairs 829 Arlington Boulevard El Cerrito, CA 94530 Kerry.hattevik@nexteraenergy.com	Scott Galati Galati & Blek, LLP 455 Capitol Mall, Suite 350 Sacramento, CA 95814 sgalati@gb-llp.com	California ISO e-recipient@caiso.com VIA EMAIL ONLY

Allison Shaffer/Project Mgr. Bureau of Land Management Palm Springs South Coast Field Office 1201 Bird Center Drive Palm Springs, CA 92262 Allison_Shaffer@blm.gov	James D. Boyd Commissioner/Presiding Member California Energy Commission 1516 Ninth Street Sacramento, CA 95814 jboyd@energy.state.ca.us	Robert Weisenmiller Commissioner/Associate Member California Energy Commission 1516 Ninth Street Sacramento, CA 95814 rweisenm@energy.state.ca.us
Kenneth Celli, Hearing Officer California Energy Commission 1516 Ninth Street Sacramento, CA 95814 kcelli@energy.state.ca.us	Mike Monasmith Siting Project Manager California Energy Commission 1516 Ninth Street Sacramento, CA 95814 mmonasmi@energy.state.ca.us	Caryn Holmes, Staff Counsel California Energy Commission 1516 Ninth Street Sacramento, CA 95814 cholmes@energy.state.ca.us
Jared Babula, Staff Counsel California Energy Commission 1516 Ninth Street Sacramento, CA 95814 jbabula@energy.state.ca.us	Jennifer Jennings Public Adviser's Office California Energy Commission 1516 Ninth Street Sacramento, CA 95814 publicadviser@energy.state.ca.us	Tanya A. Gulesserian Marc D. Joseph Rachael E. Koss Adams Broadwell Joseph & Cardozo 601 Gateway Boulevard, Suite 1000 South San Francisco, CA 94080 tgulesserian@adamsbroadwell.com rkoss@adamsbroadwell.com
Michael E. Boyd, President Californians for Renewable Energy, Inc. (CARE) 5439 Soquel Drive Soquel, CA 95073-2659 michaelboyd@sbcglobal.net	Alfredo Figueroa 424 North Carlton Blythe, CA 92225 lacunadeaztlan@aol.com	Tom Budlong 3216 Mandeville Cyn Rd. Los Angeles, CA 90049-1016 tombudlong@roadrunner.com
Larry Silver California Environmental Law Project Counsel to Mr. Budlong VIA EMAIL ONLY larrysilver@celproject.net	Lisa T. Belenky, Sr. Attorney Center for Biological Diversity 351 California St. #600 San Francisoc, CA 94104 lbelenky@biologicaldiversity.org	Ileene Anderson Public Lands Desert Director Center for Biological Diversity PMB 447, 8033 sunset Blvd. Los Angeles, CA ianderson@biologicaldiversity.org
Robin Mayer Staff Counsel California Energy Commission 1516 Ninth Street Sacramento, CA 95814-5512 rmayer@energy.state.ca.us		