



BEST BEST & KRIEGER
ATTORNEYS AT LAW

Indian Wells
(760) 568-2611

Los Angeles
(213) 617-8100

Ontario
(909) 989-8584

Riverside
(951) 686-1450

18101 Von Karman Avenue, Suite 1000, Irvine, CA 92612
Phone: (949) 263-2600 | Fax: (949) 260-0972 | www.bbklaw.com

Sacramento
(916) 325-4000

San Diego
(619) 525-1300

Walnut Creek
(925) 977-3300

Washington, DC
(202) 785-0600

Scott C. Smith
(949) 263-6561
scott.smith@bbklaw.com

September 24, 2015

VIA MAIL AND EMAIL SOCRE.CEQA@ENE.COM

Andrew Barnsdale, CPUC Project Manager
California Public Utilities Commission
RE: SOCRE Project
c/o Ecology and Environment, Inc.
505 Sansome Street, Suite #300
San Francisco, CA 94111

Re: SOCRE Recirculated Draft Environmental Impact Report

Dear Mr. Barnsdale:

This firm serves as special counsel to Corporation of the Presiding Bishop of The Church of Jesus Christ of Latter-day Saints (the "CPB"). On behalf of CPB, we provide the following comments on the Recirculated Draft Environmental Impact Report ("RDEIR") prepared by the California Public Utilities Commission ("CPUC") for the South Orange County Reliability Enhancement Project ("SOCRE").

CPB is informed and believes that the City of San Juan Capistrano will be submitting comments on the RDEIR. CPB: (i) agrees with the City of San Juan Capistrano's comments in relation to the RDEIR's impact on property owned by CPB (particularly with regard to the proposed project's impacts related to road closures on Vista Montana Road and La Pata Avenue), (ii) incorporates those comments as though fully set forth herein, and (iii) urges the CPUC to not adopt the proposed project for all of the same reasons set forth in the City of San Juan Capistrano's comment letter on the RDEIR.

CPB appreciates your careful consideration and attention to these comments.

Sincerely,

Scott C. Smith
of BEST BEST & KRIEGER LLP

cc: Eric Robinson (Kirton McConkie)



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Sacramento
(916) 325-4000

San Diego
(619) 525-1300

Walnut Creek
(925) 977-3300

Washington, DC
(202) 785-0600

Alisha M. Winterswyk
(949) 263-6565
alisha.winterswyk@bbklaw.com

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Andrew Barnsdale, CPUC Project Manager
California Public Utilities Commission
RE: SOCRE Project
c/o Ecology and Environment, Inc.
505 Sansome Street, Suite #300
San Francisco, CA 94111

Re: SOCRE Recirculated Draft Environmental Impact Report

Dear Mr. Barnsdale:

On behalf of the City of San Juan Capistrano ("City"), Best Best & Krieger LLP hereby provides comments on the Recirculated Draft Environmental Impact Report ("RDEIR") prepared by the California Public Utilities Commission ("CPUC") for the South Orange County Reliability Enhancement Project ("SOCRE"). Although the City appreciates the CPUC's responsiveness and the meaningful changes that are found in the RDEIR, particularly the addition of Alternative J (the environmentally superior alternative), the City believes that the environmental analysis remains inadequate, as explained more fully below.¹

Section 4.4: Biology

Although the RDEIR now concludes that the proposed project will have a significant and unavoidable impact on biology because the project will conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, the RDEIR still does not include details on the alignment or exact location of the transmission lines. (See e.g., RDEIR at 2-76 to 2-77.) That is, the RDEIR makes a conclusory significant and unavoidable impact finding without fully describing or analyzing the proposed project's impact. This is unacceptable under CEQA because an EIR must be prepared with a sufficient degree of analysis to provide decision-makers with the information needed to make an intelligent judgment concerning a project's impacts. (14 C.C.R., § 15151.) It is inadequate under CEQA to make a conclusory determination of significance when essential information regarding the proposed project's impacts and mitigation is still yet to be determined. (See *City of Maywood v. Los Angeles Unified School District* (2012)

¹ The City has attached its previous comments, dated April 10, 2015, on the Draft EIR to this letter as Exhibit A and incorporates them into this comment letter.
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Andrew Barnsdale, CPUC Project Manager
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208 Cal.App.4th 362, 391 [an EIR's impact findings are legally inadequate if there is no evidence or other information in the record showing that the issue was studied].)

For example, the RDEIR states that “[p]otential conflicts with the Prima Deschecha Landfill Conservation Easement *cannot be determined until the construction disturbance limits of the proposed project have been delineated* in relation to the conservation easement boundary and the applicant's existing ROW.” (RDEIR at 2-77 [italics added].) Further, the “CPUC is *in the process of gathering additional information* pertaining to the boundaries and allowable use in each [right of way] easement.” (RDEIR at 2-77 [italics added].) The RDEIR explains that “[m]easures to avoid, minimize, and mitigate potentially significant impacts to less than significant levels *cannot be evaluated* until the Talega Conservation Easement is recorded and additional consultation between the applicant and the wildlife agencies occurs. Therefore, impacts under this criterion are being treated as significant and unavoidable *until additional information is gathered*.” (RDEIR at 2-77 [italics added].) Deferring analysis of the proposed project's impacts and mitigation violates CEQA. (14 C.C.R., § 15126.4(a)(1)(B); *California Clean Energy Comm. v. City of Woodland* (2014) 225 Cal.App.4th 173, 195 [agency could not rely on future report on urban decay with no standards for determining whether mitigation required].) Without more details, the public is deprived of its right to understand and comment on the nature of the project's impacts and the effectiveness of potential mitigation measures. As a result, the RDEIR is inadequate.

Section 4.5: Cultural Resources

The City appreciates that the RDEIR now more fully evaluates the proposed project's impact on the historic former utility structure in the City. The City agrees with the State Historic Resources Commission's recommendation that the building be eligible for the National Register of Historic Places and the RDEIR's conclusion that the proposed project would have a significant impact on the former utility structure. (RDEIR at 2-98.) But when approving a project with significant environmental effects, CEQA requires that an agency adopt feasible mitigation measures to avoid or reduce a project's significant environmental effects. (Pub. Resources Code, §§ 21002, 21081(a).) The RDEIR's Cultural Resources section lacks any mitigation measures, or even a discussion of potential mitigation measures, regarding the proposed project's significant impact on the historic former utility structure. This is inadequate under CEQA.

The City firmly believes that mitigation measures or changes to the proposed project can be incorporated to reduce or avoid this significant impact, evident by the fact that numerous alternatives proposed in the RDEIR avoid the significant impact to the former utility structure. To the extent that substantial work *must* occur near the former utility structure, such work could be designed around the former utility structure, keeping this cultural resource completely intact. (See Exhibit B to this letter, Rebuttal Testimony of Dariush Shirmohammadi on Behalf of the City of San Juan Capistrano (June 24, 2015) at p. 6 [demonstrating that repurposing the former

utility structure as a 138 kV substation could be done while keeping the historic utility structure intact[.]) Keeping in mind that any new construction of larger/taller buildings overwhelming the historic former utility structure or even partial demolition of the structure would significantly impact the structure's integrity as a historical resource.

Section 4.10: Land Use and Planning

Similar to the City's comments above regarding the RDEIR's Cultural Resources section, the City welcomes the RDEIR's revision to the Land Use and Planning section to account for the City's building height limit of 35 feet. (RDEIR at 2-144.) But the City objects to the RDEIR's conclusion that this impact is "unavoidable" because of the proposed project's "design." (RDEIR at 2-144.) As previously explained, CEQA requires that an agency adopt feasible mitigation measures to avoid or reduce a project's significant environmental effects. (Pub. Resources Code, §§ 21002, 21081(a).) It is not enough for the RDEIR to simply state that the proposed project's impact will be significant without exploring potential mitigation measures or project changes that can reduce or avoid this impact. For example, it would seem feasible to design any necessary structures to less than 50 feet in height through better use of space or to expand the building's footprint horizontally, rather than vertically. (See Exhibit B to this letter, Rebuttal Testimony of Dariush Shirmohammadi on Behalf of the City of San Juan Capistrano (June 24, 2015) at p. 4 [demonstrating that a 230 kV/138 kV transformer need be no more than 17 feet tall].)

The City is also concerned about the RDEIR's deficient analysis of the proposed project's physical division of an established community and associated traffic impacts (these same concerns extend to alternatives B4, C1 and G, which have identical impacts). According to the RDEIR, the proposed project would result in partial or complete closure of Vista Montana and La Pata Avenue for approximately eight months during construction. (RDEIR at 2-141.) Without any analysis, except to say that "other nearby roads ... would be available as detours," the RDEIR concludes that impacts associated with these closures during the construction period would be less than significant. (RDEIR at 2-142.) This analysis is inadequate and incorrect. The RDEIR does not disclose the impact that partial or complete closure of Vista Montana would have on access to approximately 140 homes (the Rancho San Juan neighborhood) and San Juan Hills High School, both of which rely exclusively on Vista Montana for access, or how the closure would divide these homes and the high school from the rest of the community. The RDEIR also fails to explain that there is *not* a currently viable alternative access route for these 140 homes and the high school. That is, contrary to the RDEIR's statement, there are no nearby roads "available as detours" because Vista Montana is the *only* vehicular access point to the residences and the high school. Full or partial closure of this stretch of roadway for any period of time would significantly divide the established neighborhood and high school from the City, including from emergency vehicles, and would also create significant traffic impacts. The RDEIR is required to disclose and mitigate these impacts.

Chapter 5: Comparison of Alternatives

The alternatives section has been supplemented and improved with the addition of Alternative J. But the alternatives discussion remains inadequate because it is rife with conclusory statements that are not supported by substantial evidence. “To facilitate CEQA’s informational role, the EIR must contain facts and analysis, not just the agency’s bare conclusions or opinions.” (*Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 404.)

For example, alternatives B4, C1 and G fail to adequately describe traffic impacts to Calle San Diego or Camino Capistrano. These alternatives note that there will be “partial closures of Calle San Diego and Camino Capistrano,” but the true impact of a partial closure cannot be known without more detail as to what a partial closure entails (e.g., 25%, 50%, 75%, etc.). The impacts of a 95% road closure would obviously be significantly different than the impacts from a 5% road closure. It is unclear what, if any, assumption is being made for these alternatives. If a closure percentage has been assumed for study and impact assessment purposes, that percentage must be added as a mitigation measure and condition of approval to ensure that the assumed closure percentage is not exceeded. Absent such a restriction, there is no basis to support an impact analysis that is based on that closure percentage.

The RDEIR also insufficiently analyzes each proposed alternative’s impact on numerous other resource areas, such as agriculture, biological resources, geology and soils, etc. For example, the RDEIR states that “Alternative F would increase impacts on agriculture, biological resources, cultural resources, geology and soils, and GHGs as a result of building a transmission line through a less disturbed and accessible ROW.” (RDEIR at 2-168.)² But no other evidence is offered to support this conclusion. Concluding that these impacts would be greater simply because the alternative involves “a less disturbed and accessible ROW” is not sufficient. The RDEIR’s conclusions must be explained and supported by substantial evidence so that the public can understand how the conclusions were reached. “Without meaningful analysis of alternatives in the EIR, neither the courts nor the public can fulfill their proper roles in the CEQA process.” (*Laurel Heights Improvement Assn., supra*, 47 Cal.3d at 404.)

Selection of Environmentally Superior Alternative

The RDEIR concludes that Alternative J is the environmentally superior alternative (other than the No Project alternative). (RDEIR at 2-173.) The City would like to remind the CPUC of CEQA’s requirements regarding an environmentally superior alternative, namely: “a project may not be approved as proposed if feasible alternatives or mitigation measures would substantially

² Contradicting itself, the RDEIR, in the immediately following paragraph, states that Alternative F’s “[i]mpacts on biological resources would be similar to the proposed project” and that “Alternative F would reduce the proposed project’s cultural resources [impacts] ... to less than significant.” (RDEIR at 2-168.)

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lessen the project's significant environmental effects." (*Citizens for Quality Growth v City of Mt. Shasta* (1988) 198 Cal.App.3d 433, 440.)

CEQA makes clear that if a project will result in significant environmental impacts that will not be avoided or substantially lessened by mitigation measures, as is the situation with the proposed project here, the lead agency must consider the environmentally superior alternatives identified in the EIR, unless it finds that the environmentally superior alternatives are "infeasible." (Pub. Resources Code, § 21081(a)(3); 14 C.C.R., § 15091(a)(3).) This requirement stems from the Legislature's statutory declaration, which states:

[I]t is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects.

(Pub. Resources Code, § 21002.) Findings of infeasibility must be specific and supported by substantial evidence in the record. (14 C.C.R., § 15091(a); Pub Resources Code, § 21081.5.)

Here, the RDEIR explains that "Alternative J is potentially feasible, would meet all of the basic project objectives, and would reduce each of the potentially significant effects of the proposed project." (RDEIR at 2-23.) As an environmentally superior alternative, the proposed project may not be selected over Alternative J unless Alternative J is found to be infeasible, and that finding is supported by specific and substantial evidence.

Although San Diego Gas & Electric (SDG&E) alleged in its Second Supplemental Testimony, dated September 14, 2015, that certain design flaws with Alternative J render it infeasible, the design flaws highlighted by SDG&E can be rectified, making Alternative J entirely feasible from an engineering perspective. To this end, the City offers the following straightforward design changes:

- Southern California Edison Company's Santiago to SONGS 230 kV line would be looped into the proposed new SDG&E Trabuco 230 kV switchyard via a single 230 kV double circuit line whereby one circuit becomes part of the Santiago to Trabuco 230 kV line and the other circuit becomes part of the Trabuco to SONGS 230 kV line; and
- The Trabuco 230 kV switchyard would be built using a Breaker And A Half (BAAH) configuration with double 230 kV buses, six 230 kV breakers and two 392 MVA 230/139 kV transformers.

Even assuming Alternative J remains infeasible—an outcome that the City does not believe can be supported by substantial evidence after incorporation of the above design changes—there are other feasible alternatives to the proposed project that would have fewer environmental effects,

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and therefore must be selected over the proposed project (absent a detailed and substantially supported finding of infeasibility). One example being Alternative F, which “would reduce the proposed project’s cultural resources, transportation and traffic, and cumulative impacts to less than significant.” (RDEIR at 2-168.)

Finally, the City reminds the CPUC that, to the extent that the CPUC adds any new information to the EIR that deprives the public of a meaningful opportunity to comment on substantial adverse project impacts or feasible mitigation measures or alternatives that are not adopted, recirculation is required. (14 C.C.R., §15088.5(a).)

The City appreciates your careful consideration and attention to these comments.

Sincerely,



Alisha M. Winterswyk
of BEST BEST & KRIEGER LLP

cc: Hon. Mayor Reeve
Hon. Mayor Pro Tem Patterson
Hon. Councilmember Allevato
Hon. Councilmember Ferguson
Hon. Councilmember Perry
Keith Till, Interim City Manager
Charles View, Development Service Director
Jeff Ballinger, City Attorney

Andrew Barnsdale, CPUC Project Manager
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Exhibit A

City's Comment Letter on DEIR (April 10, 2015)

April 10, 2015

Andrew Barnsdale, CPUC Project Manager
California Public Utilities Commission
c/o Ecology and Environment, Inc.
505 Sansome Street, Suite #300
San Francisco, CA 94111

Re: Comments on the Draft Environmental Impact Report

Dear Mr. Barnsdale:

In accord with the Notice of Availability of Draft Environmental Impact Report (“DEIR”) on San Diego Gas and Electric Company’s (“SDG&E”) South Orange County Reliability Enhancement Project (“SOCRE” or the “Project”), the City of San Juan Capistrano (the “City”) submits the following comments.

The City’s significant interest in the Project has been made known from the commencement of SDG&E’s regulatory process to achieve approval of the Project.¹ As proposed, the Project calls for a complete rebuild of the Capistrano Substation which is located in the heart of the City near the City’s core downtown and within well-established residential communities. The proposed new 230 kV line runs straight through the City, including through several well-used parks and community trails. The City has significant interest in protecting the safety and welfare of its residents and is seeking to ensure that the Project ultimately approved by the Commission does not impose severe negative impacts on the resident of San Juan Capistrano. To this end, the City has been willing, and continues to be willing, to work with SDG&E to secure a solution which meets SDG&E objectives, as set forth in Section 1.2.1 of the DEIR, while also protect the interests of its residents.

The City notes that the DEIR has concluded that the Project is not the environmentally superior option, but rather the that it has significant unavoidable impacts in the areas of Air Quality, Transportation, and Cumulative Impacts. While the City agrees with the DEIR’s conclusions with respect to significant unavoidable impacts with respect to the Project, it submits that there are certain deficiencies in the DEIR’s analysis which, when corrected, could result in additional findings of significant unavoidable impacts. A discussion of those deficiencies are appended to this letter.

¹ See Protest of the City of San Juan Capistrano, A. 12-05-020 (June 21, 2102).

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Moreover, the City submits that while the DEIR appropriately identified alternatives to the Project, the DEIR's assessment of certain of those alternatives is cursory at best, with the lack of underlying analysis to support the conclusions reached. Certain of these alternatives merit much more consideration and analysis as they appear to meet the purpose of project without placing a burden on the community of San Juan Capistrano that it should not be expected to bear for the need to increase capacity for the expanding inland areas of Orange County.

Finally, as referenced above, the City is willing to continue discussions with stakeholders regarding the appropriate solution for the Project. In this regard, the City reserves the right to submit supplemental comments on the DEIR to reflect the status and results of such ongoing discussions.

Very truly yours,

GOODIN, MACBRIDE,
SQUERI & DAY, LLP



By: Jeanne B. Armstrong

Counsel for the City of San Juan Capistrano

cc: Service List, A. 12-05-020

3638/001/X171005.v1

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT

The Draft Environmental Impact Report ("DEIR") is fundamentally inadequate and conclusory in nature regarding the environmental impacts of San Diego Gas & Electric Company's ("SDG&E" or the "Applicant") South Orange County Reliability Enhancement Project ("Project"). The DEIR contains insufficient information to fully assess the impacts of the Project on the residents of the City of San Juan Capistrano (the "City"). In this regard, there are several areas in the DEIR in which the determination of significance of and impacts to various environmental receptors is based on reports and plan which have yet to be prepared and will not be prepared until after the DEIR and Project are approved. Such deferral makes it impossible to determine, for comparison purposes, the impact of the Project vis-à-vis other alternatives, and whether certain environmental impacts of the Project can actually be mitigated below a level of significance as determined in the DEIR.

SECTION 2.0 - PROJECT DESIGN

The design of the new substation incorporates two new large steel framed, metal-sided buildings to house the switch gear, operating buses and breakers. One of those buildings is designed to stand fifty feet tall and the other is 45 feet tall.¹ In addition the EIR indicates there are other structures exceeding 35 feet in height at the substation. The City of San Juan Capistrano has a maximum building height of thirty five feet for all districts, with the specific exception for hotel structures. *See* Municipal Code Title 9, Section 3 which sets forth the following development standards for industrial districts, such as where the new substation will be located:

Table 3-7

Development Standards for Industrial Districts

District	Min. Lot Area	Min. Street Frontage ¹	One Story			Two Story			Floor Area Ratio		
			Min. Front Yd ²	Min. Side Yd. ^{2,3}	Min Rear Yd. ^{2,4}	Min. Front Yd. ²	Min. Side Yd. ^{2,3}	Min. Rear Yd. ^{2,4}	1st Flr/Lot Area	% 2nd Flr to 1st Flr	Bldg Hgt
CM	7,200 sq. ft.	60 ft.	20 ft.	5 ft.	25 ft.	20 ft.	10 ft.	25 ft.	0.30	75%	35 ft.
IP	15,000 acres	100 ft.	20 ft.	10 ft.	20 ft.	20 ft.	10 ft.	20 ft.	0.30	75%	35 ft.
A	10.0 acres	200 ft.	150 ft.	20 ft.	50 ft.	150 ft.	20 ft.	50 ft.	0.10	75%	35 ft.

¹ DEIR, pp. 2-12 and 2-13.

Moreover, Title 9, Chapter 3 establishes single-family design standards applicable to *all* districts where single-family dwellings are permitted. Such dwellings are subject to the development standards for that district as well as the requirement that the exterior sides be covered with wood, stucco, masonry, or other material of similar texture and durability (metal siding is not be permitted). Similarly, the City's General Design Principal 2 from the adopted Design Guidelines establishes that buildings must relate to surrounding development patterns in scale, orientation, height and bulk. The design of the new substation which incorporates two new large steel framed, metal-sided buildings to house the switch gear, operating buses and breakers conflicts with the design standards set forth in the City's municipal codes.

SECTION 4.1 - AESTHETICS

Impact AE-3

The DEIR determines that the replacement of the Capistrano Substation with the new substation will not be a significant degradation of the existing visual character of the area once appropriate mitigation is applied.²

As recognized by the DEIR, "because impacts on visual quality can be subjective, the design of the proposed San Juan Capistrano Substation could result in a significant impact on some viewers."³ The DEIR, however, then determines that the implementation of MM AES-1 would mitigate such impacts to less than significant as it will "ensure that the new building and wall are consistent with the design standards of the City of San Juan Capistrano and that proposed project facilities visible from Camino Capistrano are aesthetically consistent with their surroundings."⁴ This statement ignores the fact that, as mentioned above, the new substation buildings will exceed the City's allowable height limitation set forth in in Title 9, Chapter 3 of the Municipal Code. Given this fact, the wall designed to mask the substation, will not serve that purpose and therefore finding that "the proposed project facilities visible from Camino Capistrano are aesthetically consistent with their surroundings" is incorrect.

Moreover, the City would clarify that, although as represented in the DEIR, the Applicant met with members of the City of San Juan Capistrano Architectural Design Review Committee with regards to the design of the wall to surround the proposed substation, the City has in no manner endorsed the final design of the wall.

Impact AE-4

In discussing whether the proposed Project would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area the DEIR acknowledges that the operation of the proposed Project would result in a modification of the lighting at the

² DEIR, p. 4.1-28.

³ DEIR, p. 4.1-29.

⁴ *Id.*

proposed San Juan Capistrano Substation in comparison to the existing substation.⁵ While the DEIR describes the types of lighting which will be used at the new substation, the DEIR fails to provide any analysis of the light and glare impacts of the new substation on the adjacent residential and recreational land uses. Absent such analysis, there is no basis for the conclusion reached in the DEIR that operation of the new substation would not create a new source of substantial light or glare. Moreover, the DEIR fails to acknowledge Municipal Code Section 9-3.529, which establishes the lighting standards applicable in all zoning districts, and determine whether the operation of the proposed Project complies with these standards. These deficiencies in the DEIR must be corrected .

SECTION 4.5 - CULTURAL RESOURCES

Historical Significance of Substation Building

As noted in the DEIR, the 1918 building at the San Juan Capistrano Substation has been placed on the City's Buildings of Distinction List. This list is comprised of structures and sites "which are potentially eligible for inclusion on the City's Inventory of Historic and Cultural Landmarks when they meet all listing criteria and/or have Building owner concurrence to be added to the Inventory." The City has also adopted a Historical and Cultural Landmark Ordinance (Section 9-6 2.327) which requires City approval for any damage to a resource listed on the City's Inventory of Historic and Cultural Landmarks. Because the City had not placed the historic substation building on the Inventory of Historic and Cultural Landmarks, there is an implication in the DEIR⁶ that the building has not reached a level of historical significance to the City. This is not correct. By practice, the City does not list a building on the Inventory without a request from the property owner. The City has not received such a request from SDG&E.

Impact CUL-1:

The finding in the DEIR that, with mitigation, there will be no substantial adverse change in the significance of a historical resource⁷ is incorrect with respect to the existing San Juan Capistrano Substation building, which would be demolished as part of the proposed project.⁸ Specifically, the determination that "the demolition of the former utility structure would not be considered a significant impact under CEQA because this structure is not a historic resource as defined by CEQA"⁹ is not adequately supported

Section 15064.5 (a) of the CEQA Guidelines regarding the determination of the significance of impacts to archeological and historical resources provides the following:

⁵ DEIR, p. 4.1-38.

⁶ DEIR, p. 4.5-12.

⁷ DEIR, p.4.5-16.

⁸ California Code of Regulations, Title XIV, Division 6, Chapter 3 Section ,15064.5(b)(1) states that demolition of a historical resource is an substantial adverse change.

⁹ DEIR, p. 4.5-16.

For purposes of this section, the term "historical resources" shall include the following:

(3) Any object, *building*, structure, site, area, place, record, or manuscript which a lead agency determines *to be historically significant or significant* in the architectural, engineering, *scientific, economic*, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, *a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources including the following:*

(A) *Is associated with events that have made a significant contribution to the broad patterns of California's history* and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; *or*

(D) Has yielded, or may be likely to yield, information important in prehistory or history.¹⁰

Thus for the substation building to be considered a historical resource under CEQA it needs only to meet one of the four elements listed under Section 15064.5. The Historic Property Evaluation of the Capistrano Substation contained in Appendix M-1 to the DEIR ("Historic Evaluation") determined that the building is in fact "associated with events that have made a significant contribution to the broad patterns of our history."¹¹ Specifically, the Historic Evaluation found that:

[T]he development of gas and electric services throughout the county can be considered significant, as the utilities helped to move the general population into the "modern age" and provided added services that permitted various areas to support larger populations. This particular building is associated with the regional connection between San Diego and Los Angeles and the merging of utilities provided by Southern California Edison and the San Diego Gas & Electric Company (and its predecessors). As such, McKenna et al. concludes that the building can be associated with events contributing to the broad patterns in our history.¹²

¹⁰ California Code of Regulations, Title XIV, Division 6, Chapter 3, Section 15064.5(a)(3) (emphasis added).

¹¹ DEIR, Appendix M-1, p. 32.

¹² *Id.*

The error in the Historical Evaluation comes in its determination that despite the fact that the substation building is associated with an historic event, this criterion only stands if the resource has maintained integrity, as defined by the by the National Register of Historic Places and the California Register of Historical Resources.¹³ The Historic Evaluation determines that the substation building does not meet this definition of integrity.¹⁴ Setting aside whether that determination is in fact accurate, the defect in the analysis is that for the purposes of determining whether a building is a historic resource under CEQA, the “fact that a resource is not listed in, or determined to be eligible for listing in, the California Register of Historical Resources [or] not included in a local register of historical resources does not preclude a lead agency from determining whether the resource may be a historical resource.”¹⁵ Given the findings of the Historic Evaluation as to the importance of the substation building to the modernization of Southern California, the California Public Utilities Commission, as lead agency under CEQA can designate the substation as an historic resource under CEQA. In such instance, the demolition of the substation, as proposed by the Project, would be considered a significant impact under CEQA which could not be mitigated. The DEIR must be modified to reflect this determination.

SECTION 4.8 - HAZARDS AND HAZARDOUS MATERIALS

Electromagnetic Fields

As acknowledged in the DEIR “after several decades of study regarding potential public health and safety risks associated with EMFs from power lines, research results remain inconclusive.”¹⁶ Given the potential risk, however, from placing high voltage transmission lines through densely populated communities, significant consideration should be given to alternatives which move those lines away from residential centers. Especially when those alternatives have been demonstrated to have environmental impacts that are no more significant than those of the proposed Project.

Impact HZ-2

Impact HZ-2 discusses the potential release of hazardous materials or wastes generated by the Project which would have a significant impact of the public and the environment. The DEIR determines that with mitigation this impact is less than significant.¹⁷ There is insufficient information for the DEIR to reach such conclusion.

The DEIR states that the Applicant would address the potential hazard to the public or the environment which is presented through the routine transport, use, or disposal of hazardous

¹³ DEIR, Appendix M-1, p. 33.

¹⁴ DEIR, Appendix M-1, p. 34.

¹⁵ California Code of Regulations, Title XIV, Division 6, Chapter 3, Section 15064.5 (a)(4).

¹⁶ DEIR, p. 4.8-5

¹⁷ DEIR, p. 4.8-20.

material through the implementation of APM HAZ-2 -2 -- the development of a Hazardous Material Containment Plan “which would provide hazardous materials transportation security plans, hazardous materials and waste management procedures, hazardous materials and waste shipping procedures, hazardous waste minimization plans, and a field guide for emergency incidents.”¹⁸ In this plan, the Applicant “would also detail the site-specific hazardous waste handling, recycling, transportation, and storage procedures.”¹⁹ The DEIR concludes that implementation of these procedures *should* prevent significant hazardous from occurring during routine construction and operations despite the fact that “*the exact contents of these plans are not available at this time and therefore, their comprehensiveness cannot be assessed and impacts could remain significant.*”²⁰

The DEIR sidesteps the fact that the contents of Hazardous Material Containment Plans are not available by superimposing Mitigation Measure HAZ-1, which is designed to add specificity to APM HAZ-2 . The fact remains, however, that the Applicant has not yet developed its Hazardous Material Contamination Plan. Therefore, there is no basis for the DEIR’s conclusion that with the implementation of APM HAZ-2 and MM HAZ-1 “the potential impacts associated with hazardous waste management would be less than significant.” This finding is based on pure conjecture. The DEIR does not provide sufficient information, analysis or findings from which decision makers and the public can reasonably evaluate the Project’s potential impact on the public and the environment through the potential release of hazardous material. A DEIR cannot defer analysis of reasonably foreseeable impacts. The DEIR must be revised to include the required Hazardous Material Contamination Plan so as to make a reasoned determination regarding the significance of the impact and devise any additional mitigation measures to address such potential impacts.

Impact HZ-3

The same deficiency exists in the DEIR’s examination of Impact HZ-3, *i.e.*, emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school. The DEIR determines that the implementation of APM HAZ-1, APM HAZ-2, and APM HAZ-5 “would reduce the risk of releases but not prevent significant impacts that may still occur from upset and accident conditions involving the release of hazardous materials.”²¹ The DEIR concludes, however, that the “[i]mplementation of MM HAZ-1 would further prevent the potential to release hazardous materials and would reduce impacts from the handling of hazardous materials to less than significant levels.”²² As discussed above, while MM HAZ-1 provides some specificity to the Hazardous Materials Contamination Prevention Plan which the Applicant committed to preparing, the Plan has not yet been prepared. Any findings of significance based on the contents of such plan are pure conjecture. The DEIR must be revised to include the required Hazardous

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.* (emphasis added).

²¹ DEIR, p.4. 8-23.

²² *Id.*

Material Contamination Plan so as to make a reasoned determination regarding the significance of the impact and devise any additional mitigation measures to address such potential impacts.

SECTION 4.11 - NOISE AND VIBRATION

Impact NV-4

The DEIR determines that, with mitigation, any substantial temporary or periodic increase in ambient noise levels in the project vicinity will be less than significant.²³ There is insufficient information for the DEIR to reach this conclusion.

Specifically, in discussing the construction activity to be performed at San Juan Capistrano Substation and the transmission and distribution line construction to occur in the City, the DEIR states:

Although distance to the closest sensitive receptors would change during the construction period, these *temporary increases in noise levels would create severe impacts on the existing ambient noise levels and would be noticeable and significant*. Implementation of MM NV-1 and MM NV-5 would reduce potential noise impacts on residents located in close proximity of the proposed substation, transmission, and distribution lines segments to below severe levels (see Figure 4.11-1)²⁴

MM NV-5 requires the Applicant to prepare a Noise Control Plan. As this plan has not yet been prepared (and will not be prepared until after Project approval) there is no basis for a conclusion that this Plan will effectively mitigate the severe impacts on the existing ambient noise levels noted in the DEIR. The DEIR does not provide sufficient information, analysis or findings from which decision makers and the public can reasonably evaluate the Project's potential impact on the public and the environment through the increased noise levels. A DEIR cannot defer analysis of reasonably foreseeable impacts. The DEIR must be revised to include the required Noise Control Plan so as to make a reasoned determination regarding the significance of the impact and devise any additional mitigation measures to address such potential impacts.

Moreover, the City of San Juan Capistrano General Plan Noise Element and Chapter 8 and 9 of the Municipal Code establish Goals, Policies and Regulations regarding noise. The DEIR is inadequate as it fails to address the proposed Project's noise impacts in relation to the Goals and Polices of the General Plan. The DEIR must be revised to include this analysis so as to make a reasoned determination regarding the significance of the impact and devise any additional mitigation measures to address such potential impacts.

²³ DEIR, p. 4.11-25

²⁴ *Id.* (emphasis added).

SECTION 4.13 - PUBLIC UTILITIES AND SERVICES (including Parks)

Impact PS-1

As part of the proposed Project, new 230 kV transmission towers will be placed in four of San Juan Capistrano community parks -- El Camino Real, Junipero Serra, Arroya and Russell Cook and numerous multi-purpose trails including Forster Ridgeline Trail, Pico and Cristianitos Trails²⁵ The DEIR determines that construction and operation of those transmission structures will not have a substantial adverse impact on the community parks or trails based on the following, which is the entirety of the DEIR's analysis of the issue:

Construction of the proposed project would temporarily restrict access to portions of Arroyo Park, Russell Cook Park, El Camino Real Park, and the Junipero Serra Park. The applicant would implement APM-PS-1 through APM-PS-3 to ensure that pedestrian and bicycle access would not be completely restricted during construction and that park facilities and roadways are returned to pre-construction conditions at the end of construction. Construction of the proposed project would not result in the need to restrict access to the entire park; however, the change in access to the existing parks may indirectly cause increased demand for other local non-restricted parks. Due to the quantity of city, county, and state parks in the area and the relatively temporary nature of construction associated with the proposed project, direct impacts to access to parks would be less than significant.²⁶

As detailed below this cursory "analysis" does not factor in the specific impacts to the parks or trails in question . Moreover the analysis the DEIR does provide is deficient as it is based on conflicting statements and insufficient information.

Application of City's General Plan

While the DEIR, acknowledges that the City of San Juan Capistrano General Plan establishes a number of goals designed to maintain and improve recreational opportunities within the City, it only singles out one as applying to the proposed Project with respect to recreation: Parks and Recreation Element Policy 1.9. -- Utilize existing public utility easements for recreation and open space.²⁷ This is a significant misrepresentation. The General Plan includes numerous other Goals and Policies that apply to the proposed Project including:

Parks & Recreation Goal 1: Provide, develop, and maintain ample park and recreational facilities that provide a diversity of recreational activities.

²⁵ See DEIR, Table 4.14-1.

²⁶ DEIR p. 4.13-10 - 4.13-11.

²⁷ DEIR, p. 4.14-4.

Parks and Recreation Policy 1.5: Operate and maintain public park and recreational facilities in a manner that ensures safe and convenient access for all members of the community.

Parks and Recreation Policy 2.1: Develop and expand the existing trails network that supports bicycles, pedestrians, and horses, and coordinate linkages with those networks of adjacent jurisdictions.

Conservation and Open Space Goal: Preserve and enhance open space resources.

Conservation and Open Space Policy 1.1: Identify remaining areas which should be preserve and enhanced as open space resources.

Conservation and Open Space Policy 2.3: Develop open space uses in an ecologically sensitive manner.

The DEIR is deficient in its failure to account for the impact of the proposed Project on the applicable goals and policy's contained in the City's General Plan.

Access to the Parks

The proposed Project calls for the placement of a 230 kV transmission structure as well as two 12 kV distribution poles and a 12 kV underground segment in Juniper Serra Park. The DEIR states that construction of this segment would take approximately 6 weeks, requiring a 6-week closure of Serra Park.²⁸ This statement conflicts with the DEIR's findings that impact to access parks would be less than significant with the implementation of APM-PS-1 which states that "Construction within existing public parks would not completely restrict access through the parks."²⁹ The DEIR provides no analysis of impacts caused by complete closure of this park for six weeks.

Demolition of Park Facilities

The DEIR states that "[c]onstruction of the transmission line would physically impact the private park/Community Area near Transmission Line Segment 1A, El Camino Real Park, and Junipero Serra Park by demolishing portions of the parks during construction."³⁰ The DEIR concludes that with the implementation of APM PS-2, in which the Applicant would "return recreational facilities that are physically impacted during construction to an approximate pre-construction state and would replace any public damaged or removed equipment, facilities, and infrastructure" the impact would be less than significant. However, it is impossible to determine from the schematics and aerial maps provided in that DEIR which portion of the parks would be demolished and thus need to be rebuilt. Absent such information it is impossible to determine

²⁸ DEIR, p. 2-23.

²⁹ DEIR, p. 4.13-9.

³⁰ *Id.*

the impact such will have on both the use of the park during construction as well as the future use.

Portions of Parks Impacted

In addition to Junipero Serra and El Camino Parks, Arroya Park and Russell Cook Park will have new 230 kV transmission structures installed as a result of the proposed Project. With respect to all four of these parks, it cannot be determined from the information provided in the DEIR exactly which portions of these parks would be disturbed. Moreover, the DEIR does not contain any information regarding whether the Applicant has operating protocol which may prohibit certain activities from occurring directly below the 230 kV lines. Given the deficiency in information, a proper assessment of the impacts cannot be made. The conclusion reached in the DEIR that the proposed Project would not have a substantial adverse impact on these community parks is based on inadequate data.

SECTION 4.15 - TRANSPORTATION

Impact TT-1

In its assessment of Impact TT-1 -- conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system -- the DEIR determines that full road closures of Camino Capistrano, Via Pamplona, and Calle San Diego would significantly impact roadway segment operations, even with mitigation, but finds that the partial lane closures along Via Pamplona, Calle San Diego and Via Montana would not significantly degrade roadway segment operations.³¹ The DEIR does not contain sufficient analysis to render the latter determination.

First, the DEIR states that for "Camino Capistrano, Via Pamplona, and Calle San Diego, there are no further details on the number of lanes that would be closed for construction," therefore, "for the purposes of this analysis, partial closures were assumed to remove half the capacity of the roadway."³² This same assumption was apparently also used for the partial closure of Vista Montana.³³ This assumption is pure conjecture. Construction activity could remove more than half of the capacity of the various roadways at issue. The DEIR contains no impact analysis of such scenarios.

Second, the analysis of Existing Average Daily Traffic and Level of Service with and without the proposed Project, the results of which are set forth in Table 4.15-5, is deficient. This table provides the Level of Service (LOS) based on Average Daily Traffic capacity which is not indicative of the actual level of service. To determine the actual impact of the proposed Project on the roadways in question, the LOS should be calculated for the morning and afternoon peak traffic hours, particularly in the vicinity of each impacted school. It should be noted that the City

³¹ DEIR, p. 4-15.19.

³² DEIR, p. 4-15.18.

³³ DEIR, p. 4-15.19 (note 3 to Table 4.15-5).

of San Juan Capistrano General Plan Circulation Element (“Circulation Element”) requires that peak hour intersection data be used to establish the performance criteria for evaluation of volumes and capacities on the City’s street network. The DEIR must be modified to correct this deficiency.

Third, the DEIR failed to adequately address the unique congestion concerns associated with designated “Hot Spots” in the Circulation Element. A “Hot Spot” designation implies certain exceptions to the standard performance criteria and/or requires a *different* traffic analysis. With respect to School Hot Spots the Circulation Element requires traffic impact studies to address *specific traffic impacts at the affected locations*. The DEIR acknowledges the Circulation Element’s Hot Spot designations, but determines that the segment analysis performed by LLG “satisfies the City of San Juan Capistrano General Plan requirement that a traffic analysis be completed for designated Hot Spot areas.”³⁴ This determination is erroneous. As noted above, the LLG LOS segment analysis is deficient as it failed to assess volumes at peak times of the day. Moreover, the analysis performed did not address “specific traffic impacts” at the affected locations, such as schools. For example, Vista Montana is the only access to the San Juan Hills High School. There is no analysis of how lane closures will impact students arriving and leaving school. Traffic analyses which address the specific traffic impacts at each Hot Spot location along the Project route must be completed.

Impact TT-6

Impact TT-6 discusses potential for the Project to conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities and determines that, with appropriate mitigation, impacts of the Project would be less than significant. This finding is not substantiated by the DEIR.

The proposed Project area is served by both Metrolink and Amtrak which provide commuter rail service along the San Luis Obispo Rail (“LOSSAN”) Corridor. The rail station in San Juan Capistrano is served by both Metrolink and Amtrak. As described in the DEIR, transmission Line Segment 1a and 12-kilovolt (kV) Segment A would cross the LOSSAN Corridor utilized by Metrolink and Amtrak both underground and overhead.³⁵ The DEIR does not address any potential disruptions in rail service resulting from the construction under and over the tracks and the impact of such disruptions on local traffic flow. The failure to discuss the impact of the Project on the performance of rail transportation in the Project area must be rectified.

Deficient Mitigation

The DEIR appropriately provides that all traffic control plans would be developed, reviewed, and approved by the authority having jurisdiction of the specific roadways being impacted.³⁶ In this regard, the City will have approval authority over the traffic control plans

³⁴ DEIR, p. 4.15.19

³⁵ DEIR, p. 4.15-6

³⁶ DEIR, p. 4.15-17.

which impact the roadways in its jurisdiction. Accordingly, the City has identified certain elements which the DEIR directs the Applicant to incorporate into its traffic control plans which would render such plans deficient under the City's review. The DEIR must be modified to correct these deficiencies.

First, the DEIR does not direct SDG&E to prepare the traffic control plan in conformance with the latest edition of Manual on Uniform Traffic Control Devices (MUTCD). The DEIR should be modified to require that the plan conform with MUTCD. Second, the DEIR provides that SDG&E shall provide notification of lane closures to drivers and nearby residents at least 48 hours in advance.³⁷ Forty-eight hours is not adequate time for drivers to determine alternative routes to avoid lane closures, thus potentially compounding the impact created by the lane closure. SDG&E should be directed to provide 72 or more hours' notice. Moreover, the Traffic Control Plan should describe the outreach efforts to the community and schools for notification of street and lane closure. Third, the DEIR provides that applicant must submit its Traffic Control Plan to the City for review at least 30 days prior to commencing work within city boundaries.³⁸ Thirty days is insufficient time for City review of the plan to assure that all impacts on its residents are mitigated to the extent possible

CHAPTER 5 - COMPARISON OF ALTERNATIVES

Chapter 5 of the DEIR presents the required Alternative Analyses and Determinations. A summary of the findings of these analyses is presented in Table 5-1. "Based on the analysis presented in this chapter, both Alternative B1 and Alternative D were found to be an Environmentally Superior Alternative compared to the proposed project and to the other alternatives."³⁹ The DEIR contains insufficient information to render this determination, as inadequate analysis of the environmental impacts of certain of the alternatives was performed.

The DEIR explains its methodology for comparing the alternatives as follows:

Resource areas that are generally given more weight in the comparison of alternatives presented in this chapter are those with long-term or widespread impacts. Impacts associated with construction (i.e., temporary or short-term impacts), those that would remain localized, or those that can be easily mitigated to less than significant levels are given less weight.⁴⁰

The DEIR, however, provides insufficient analysis for the alternatives to make these comparisons, as illustrated below with respect to Alternative F.

³⁷ DEIR, p. 4.15-26.

³⁸ *Id.*

³⁹ DEIR, p. 5-19.

⁴⁰ DEIR, pp. 5-1 -5-2.

The DEIR determines that, in comparison to the proposed Project, “Alternative F would increase impacts on agriculture, biological resources, cultural resources, geology and soils, and GHGs.” The sole basis for this determination is that a new transmission line would be built through a less disturbed and accessible ROW.⁴¹ There are, however, no studies to support this statement. Nor are there any analysis to determine whether these impacts could be mitigated to less than significant.

The description of Alternative F provides that construction of this alternative would necessitate that the existing ROW (100-foot wide) would need to be increased by approximately 20 feet.⁴² In other words, there already is a transmission corridor running between the Taledga and Mission Viejo substations. Given this fact, absent study to support the contrary, impacts on agriculture, as such are defined under CEQA,⁴³ should not occur. There is no basis for the DEIR to conclude that that Alternative F will have more impact on agriculture than the Project.

Similarly, the DEIR’s determination that Alternative F would have more of an impact on cultural resources and biological resources than the proposed Project have no support in the document. With respect to the former, it is important to note that in undertaking the screening process to identify alternatives to the Project, Alternative F was identified as an alternative which would have less of an impact on cultural resources than the proposed Project.⁴⁴ Now, without any additional analysis, based on the fact that the ROW used will be 20 feet wider than the existing ROW, the DEIR determines that the impact on cultural resources will be greater. This conclusion is not supported. Similarly, with respect to biological resources, while the Screening Report indicated that “potentially significant effects on biological resources could occur because aerial imagery indicates that the route traverses several miles of forested and undeveloped land,”⁴⁵ the report also indicated that survey data addressing biological resources had not yet been collected along the route at the time the screening report was prepared.⁴⁶ There is no indication in the DEIR that such surveys were ever performed.

3638/001/X171190.v1

⁴¹ DEIR, p. 5-17.

⁴² *Id.*

⁴³ *E.g.*, (a) Convert farmland to non- agricultural use;(b) Conflict with existing zoning for agricultural use or a Williamson Act contract; or (c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of Forest Land to non-forest use. *See* Appendix G of California Environmental Quality Act Guidelines.

⁴⁴ Appendix B, p. 3-36.

⁴⁵ *Id.*

⁴⁶ *Id.*

Andrew Barnsdale, CPUC Project Manager
September 24, 2015
Page 8

Exhibit B

Rebuttal Testimony of Dariush Shirmohammadi on Behalf of the City of San Juan Capistrano
(June 24, 2015)

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**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

In The Matter of the Application of SAN DIEGO GAS
& ELECTRIC COMPANY (U 902 E) for a Certificate
of Public Convenience and Necessity for the South
Orange County Reliability Enhancement Project

Application 12-05-020

**REBUTTAL TESTIMONY OF
DARIUSH SHIRMOHAMMADI
ON BEHALF OF
THE CITY OF SAN JUAN CAPISTRANO**

June 24, 2015

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**TESTIMONY OF DARIUSH SHIRMOHAMMADI
ON BEHALF OF
THE CITY OF SAN JUAN CAPISTRANO**

I. INTRODUCTION

Q. Please state your name, affiliation, business address and qualifications.

A. My name is Dariush Shirmohammadi. I am the Chief Consultant with Shir Power Engineering Consultants, Inc. My business address is Shir Power Engineering Consultants, Inc., 10208 Cielo Drive, Beverly Hills, CA 90210-2035. I presented my qualifications as part of my May 26, 2015 testimony in this proceeding.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to respond to the testimony of Robert Sparks on behalf of the California Independent System Operator (CAISO) regarding the ability of the DEIR Alternative F to meet the SDG&E South Orange County Reliability Enhancement Project (SOCREP) reliability objectives. As part of this response, I will present additional information regarding the DEIR Alternative F which further demonstrates that this alternative is the overall superior alternative for meeting all the SOCREP objectives.

II. ADDRESSING SOCREP OBJECTIVES

Q. Could you again recite the fundamental needs of the SDG&E system that is driving the SOCREP?

A. As noted in SDG&E's PEA and CPUC application, in the 2010-2011 CAISO transmission planning document, and as repeated in my May 26, 2015 testimony, the drivers behind the SOCREP were three fold:

- The nearly 12.5% load growth on the SDG&E's South Orange County load during the next 8 years resulting in various NERC reliability criteria violations. This is the primary driver behind the development of the SOCREP.
- The addition of a second 230 kV power source, in addition to the Talega 230 kV Substation, for the SDG&E South Orange County transmission loop.

- 1 • The rebuilding of the Capistrano Substation to address its non-standard 138 kV
2 bus/breaker configuration and general aging of the facilities within the substation.

3 Q. Does the SDG&E SOCREP alternative address all of these drivers?

4 A. Yes. However, the SDG&E SOCREP alternative seems to have a much more ambitious
5 goal in mind. The SDG&E SOCREP alternative effectively converts the Capistrano
6 Substation into a bulk transmission substation that can meet the needs of the CAISO
7 controlled 230 kV and above transmission system, rather than the more limited needs of
8 the SDG&E's South Orange County transmission loop. As part of its upgraded based on
9 the SDG&E SOCREP alternative, the 230 kV Capistrano Substation will have
10 transmission equipment, capabilities and functionality that that is comparable with those
11 of the Talega 230 kV Substation. Thus, it appears that the primary goal of the SDG&E
12 SOCREP alternative is to solve a non-existent bulk transmission system problem more
13 than addressing the specific needs of the SDG&E South Orange County transmission loop
14 as targeted in this proceeding.

15 Q. What is wrong with SDG&E having a more ambitious goal for its SOCREP alternative?

16 A. There is nothing wrong with achieving a more ambitious goal provided that:

- 17 • There is actually a bulk transmission problem that would be solved by the
18 proposed transmission plan; none exists in the area that would rely on the SDG&E
19 SOCREP alternative;
- 20 • Meeting the more ambitious plan would not significantly raise the cost of the
21 transmission upgrade. Per my May 26, 2015 testimony, the SDG&E SOCREP
22 alternative is at least \$58.8M more expensive than the DEIR Alternative F which
23 addresses all the SOCREP needs at a significantly lower cost and with lower
24 impact; and
- 25 • Meeting the more ambitious plan would not have a significantly higher impact on
26 the urban community that surrounds the Capistrano Substation. This highly
27 populated urban community will face significant and permanent disruptions to
28 their life both in the process of converting the current Capistrano Substation into a

1 major bulk transmission substation and in the process of operating it as a major
2 bulk transmission substation.

3 In summary, it is critical to emphasize that the primary reason for SOCREP
4 implementation to meet SDG&E's South Orange County load in light of its projected load
5 growth and is not intended to serve any bulk system needs. As presented in my May 26,
6 2015 testimony in this proceeding, the DEIR Alternative F specifically enhances the
7 transmission capability into those areas of the SDG&E South Orange County transmission
8 loop that face the largest load growth and, therefore, best addresses this primary objective.
9 The DEIR Alternative F also effectively meets the other SOCREP objective and does so at
10 significantly lower cost and lower impact than the SDG&E SOCREP alternative.

11 **III. MORE DETAILS ON DEIR ALTERNATIVE F**

12 Q. Does the SOCREP DEIR present the Alternative F in sufficient detail for the Commission
13 to select this project alternative?

14 A. Yes, for the purpose of Commission approval, the DEIR Alternative F is presented in
15 adequate details. For the purpose of a detailed design that would be used for actual
16 implementation, however, more planning level and design work is needed by SDG&E
17 engineers.

18 Q. Do you have any suggestions on the detailed planning/design of the DEIR Alternative F?

19 A. Yes, on a basic level:
20 • The 138 kV line from the upgraded 230 kV Rancho Mission Viejo Substation to
21 Talega Substation should be tapped into the existing Talega to Pico 138 kV line to
22 form a three terminal 138 kV line arrangement. This important refinement to the
23 DEIR Alternative F will allow the SDG&E South Orange County transmission
24 loop to meet the entire SDG&E South Orange County load even under the highly
25 unlikely event that the Talega Substation experiences a complete outage, a
26 scenario emphasized by SDG&E as part of its SOCREP filing in this proceeding.
27 I should also note that under the SDG&E SOCREP alternative, part of the SDG&E
28 South Orange County load that is met via the San Mateo Substation will be lost if

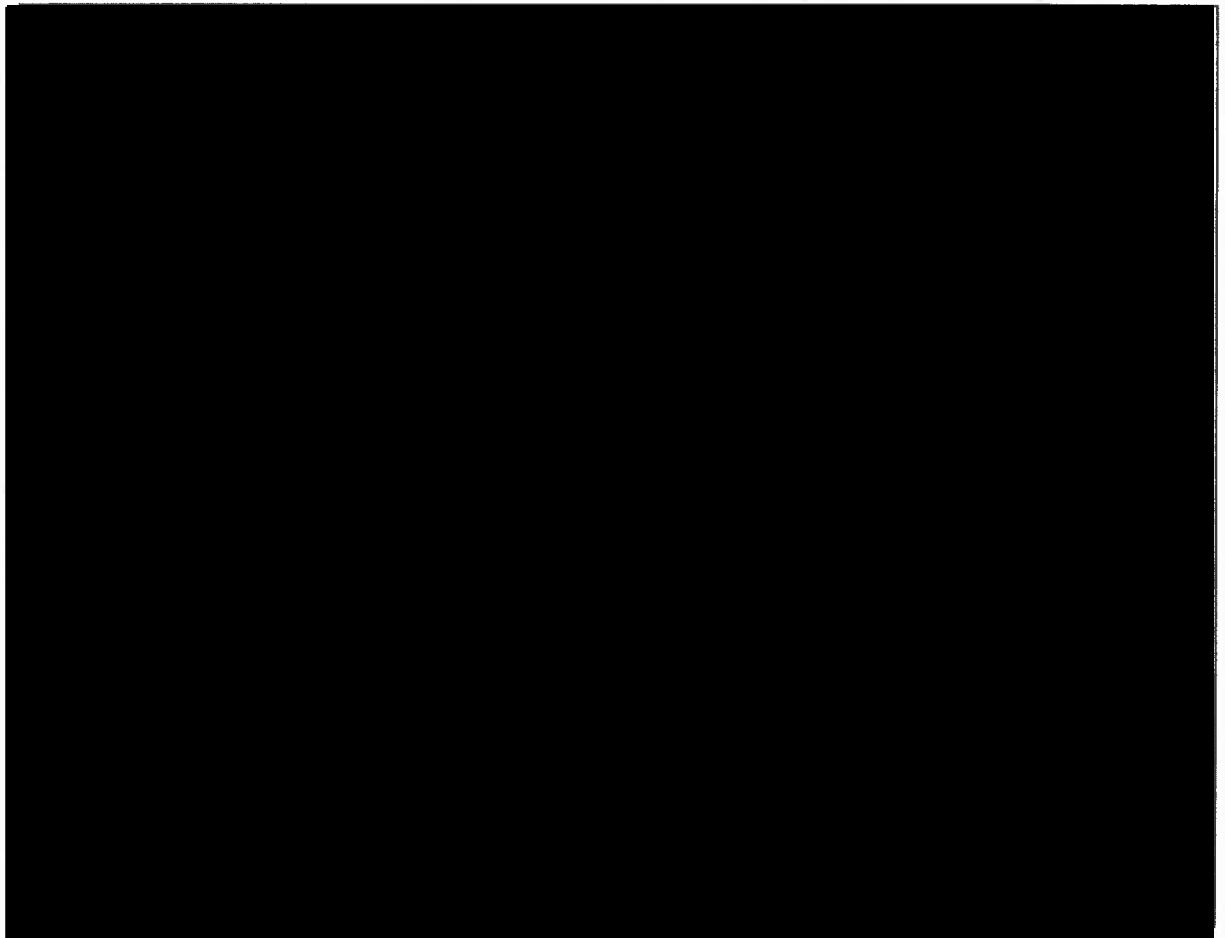
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the Talega Substation experiences a total outage; an event which will not occur under DEIR Alternative F.

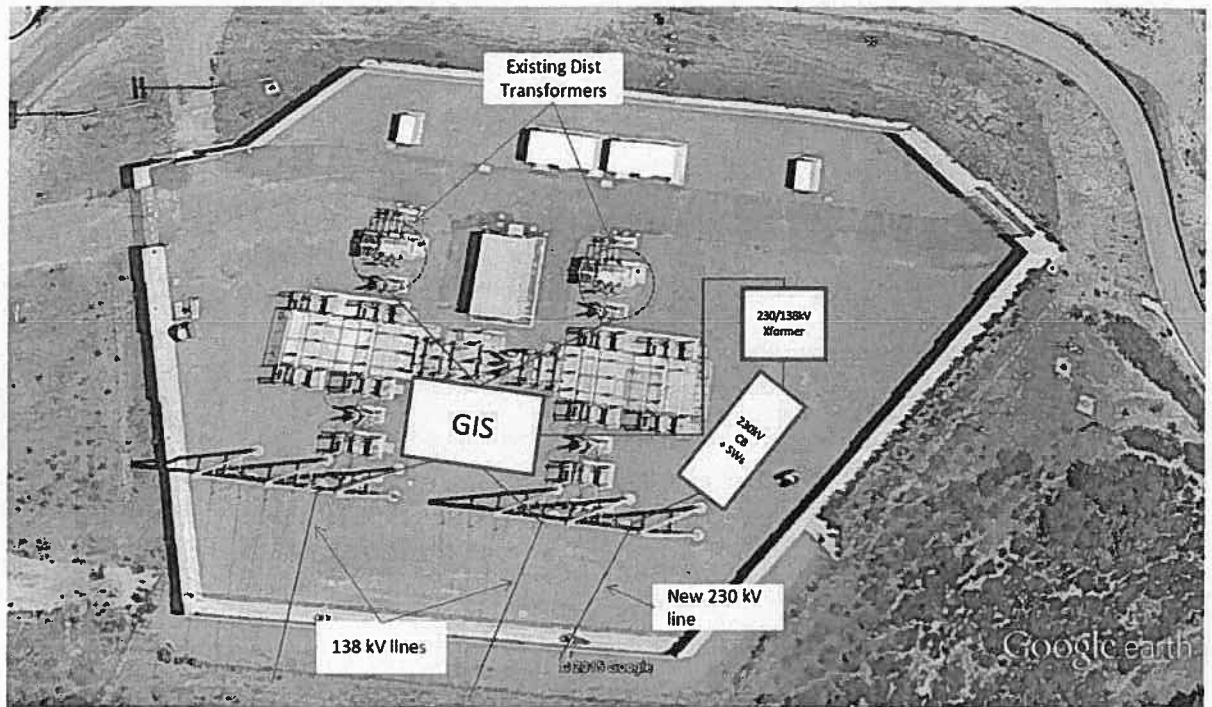
- The DEIR Alternative F requires the upgrading of the Rancho Mission Viejo Substation from 138 kV to 230 kV. This can be done within the available open space with a proper design. A high level single line diagram and a potential general configuration for the 230 kV Rancho Mission Viejo Substation is presented below. The single 230/138 kV transformer in the 230 kV Ranch Mission Viejo Substation would have to have a rating of 450 MVA or more. The size of the 4-breaker ring bus 138 kV GIS building presented in the schematic diagram is 57 feet long, 36 feet wide and 17 feet high and, as a result, it can readily fit within the available open space in the Rancho Mission Viejo Substation. Such a 138 kV class 4-breaker ring bus GIS building is already constructed in the United States by a major GIS manufacturer.¹

¹ For this portion of my testimony I consulted with Mr. Arun Arora, a world class GIS expert. Mr. Arora's CV is appended to this testimony as Attachment 1.

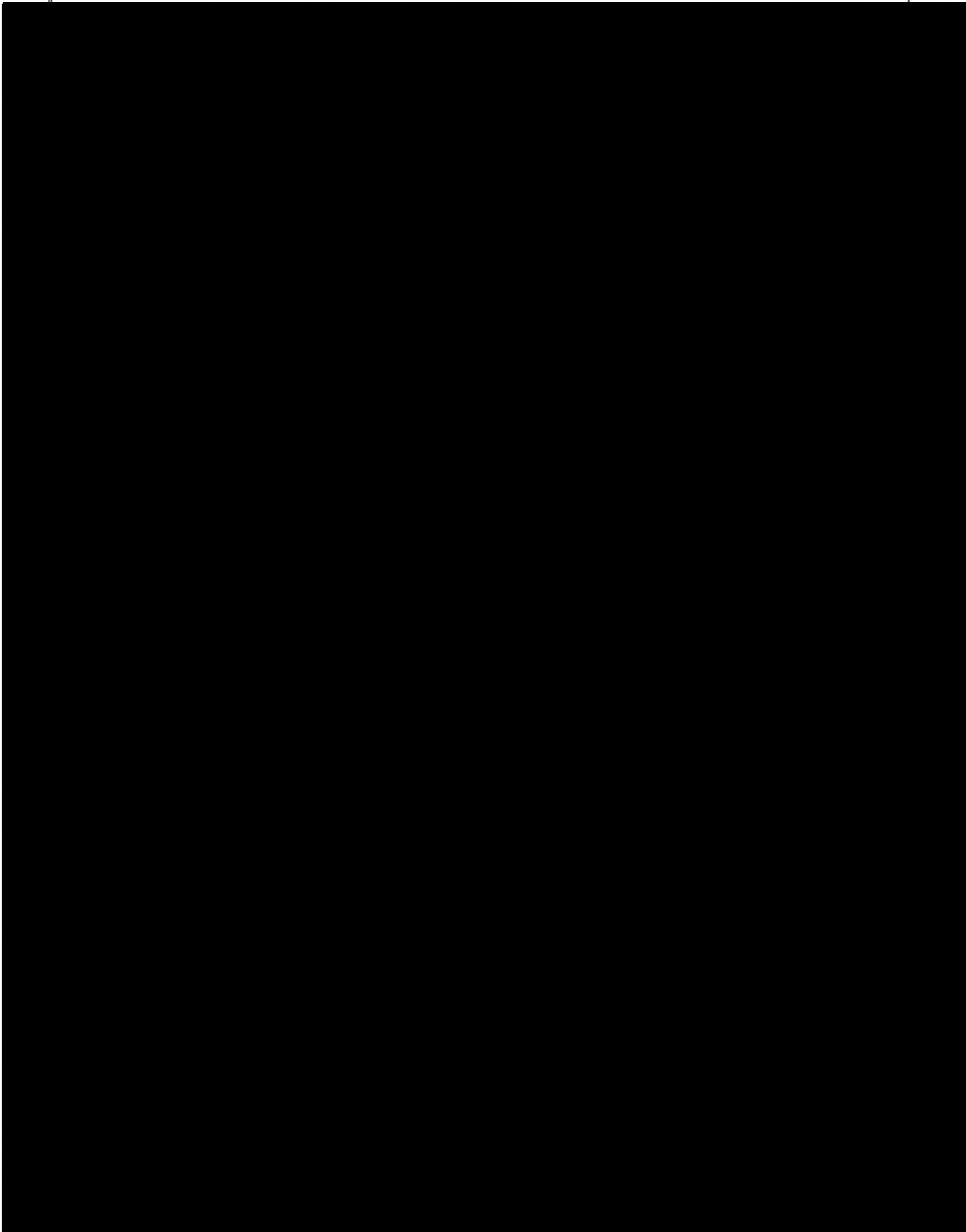
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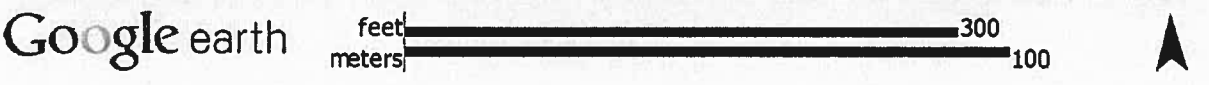
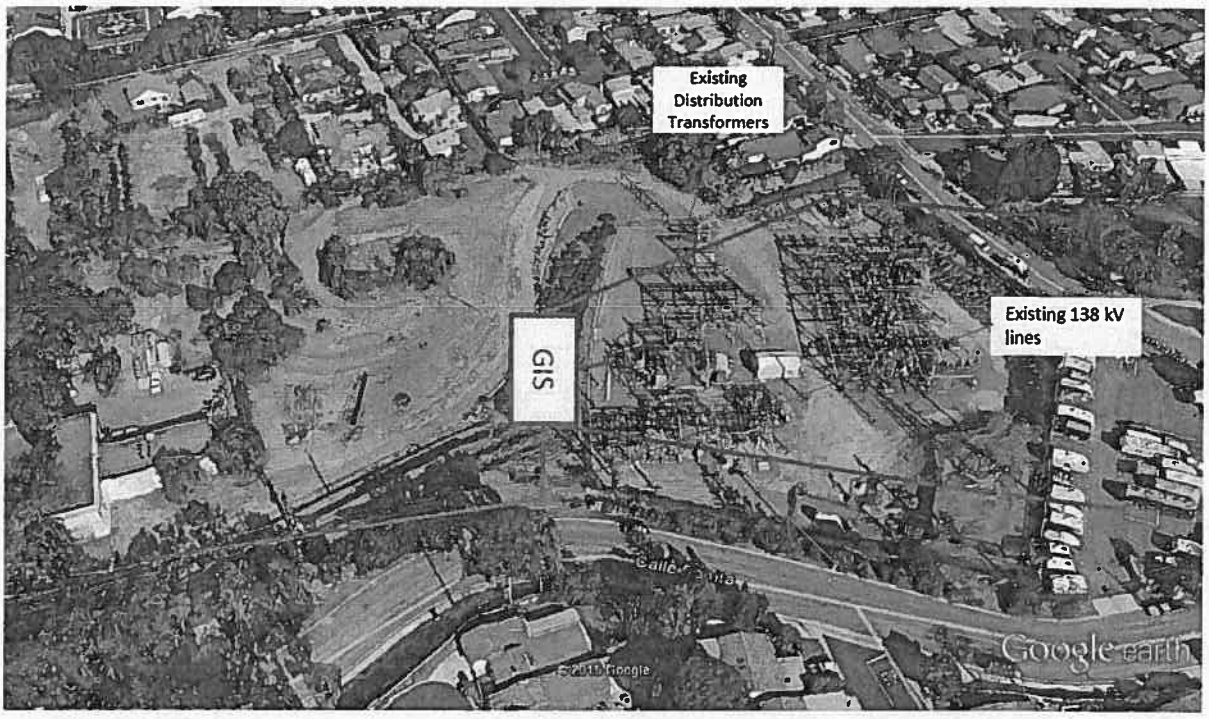
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- As I noted in my May 26, 2015 testimony, the DEIR Alternative F should include a rebuild of the Capistrano Substation as a 138 kV substation. The rebuilt 138 kV facilities at the Capistrano Substation under the DEIR Alternative F can be readily housed within the current open space in Capistrano Substation east of the historic building which is located at the western end of the substation ground. The high level single line diagram and a potential general configuration for an upgraded 138 kV Capistrano Substation is presented below. The 4-breaker ring bus 138 kV GIS building for the upgraded 138 kV Capistrano Substation would have the same dimensions as the proposed GIS building for the Rancho Mission Viejo Substation.



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IV. CAISO’S CONCERNS WITH THE DEIR ALTERNATIVE F

Q. In his May 26, 2015 testimony, Mr. Robert Sparks, on behalf of the CAISO, raised questions regarding the reliability of the DEIR Alternative F when compared to the SDG&E SOCREP alternative. Mr. Sparks specifically states: “Alternative F does not provide an electrically equivalent new 230 kV transmission source in South Orange County when compared to the SOCRE project. In terms of system power flow performance and reliability, the new Rancho Mission Viejo Substation would be inferior to the new Capistrano Substation proposed in the SOCRE project.” Do you agree with that statement?

A. When it comes to the three specific SOCREP objectives, namely, meeting SDG&E’s South Orange County load growth, adding a second 230 kV source to the SDG&E South Orange County transmission loop and replacing non-standard bus/breaker configuration and aging and non-earthquake resistant equipment at the Capistrano, the DEIR Alternative F is equally or even more effective (as shown above in the case of total loss of the Talega Substation) than the SDG&E SOCREP alternative. Furthermore, as made clear in my

1 May 26, 2015 testimony, the DEIR Alternative F can be achieved at a significantly lower
2 cost and at lower impact on the populated areas of San Juan Capistrano community living
3 in the vicinity of the Capistrano Substation.

4 Q. In his testimony, Mr. Robert Sparks, also presents study results which show some
5 “reliability concerns” with the DEIR Alternative F. Do you agree with his assessment in
6 this area?

7 A. No. I disagree with Mr. Sparks’ assessments on multiple grounds as I will present below.

8 Q. In discussing his purported reliability concerns, Mr. Spark states that: “Rancho Mission
9 Viejo Substation is only one bus away from the Talega Substation, cascading impacts can
10 occur at Rancho Mission Viejo Substation during contingencies at the Talega Substation.
11 The loss of the Talega 138 kV substation (Category D event) would also trip one of the
12 two 138 kV lines out of the Rancho Mission Viejo Substation. This would result in
13 cascading outages on the remaining 138 kV line and lead to interruption of all load service
14 in the south Orange County area, except the distribution load served by the Rancho
15 Mission Viejo Substation.” Do you agree with him?

16 A. No. In his testimony Mr. Sparks has not considered the fact that, under the DEIR
17 Alternative F, the Rancho Mission Viejo to Talega 138 kV line could be implemented to
18 bypass the Talega Substation 138 kV bus by directly tapping into the Talega to Pico 138
19 kV line forming a three terminal 138 kV line configuration – three terminal 115 class lines
20 are not uncommon in the SDG&E service territory. So the loss of “Talega 138 kV
21 substation (Category D event)” would not lead to tripping of this line out of the Rancho
22 Mission Viejo Substation and cascading e outages as stated in Mr. Sparks’ testimony and no
23 load will be lost as a result (although, it should be noted that the NERC/WECC/CAISO
24 reliability criteria do allow controlled loss of load under Category D contingencies). Finally,
25 I would like to remind the Commission that under the SDG&E SOCREP alternative, the load
26 served via the San Mateo Substation will actually be lost if Talega Substation experiences a
27 total outage, while no load drop would be expected with a properly implemented DEIR
28 Alternative F.

1 Q. In his testimony Mr. Spark states that: "As shown in Table B-3A in Appendix A, the 138
2 kV line between Talega and Laguna Niguel would need to be upgraded in addition to the
3 Alternative F improvements. Also, to avoid cascading outages, an additional 138 kV line
4 may be needed between the Rancho Mission Viejo, Margarita, and Trabuco Substations
5 because upgrading the existing 138 kV lines out of the Rancho Mission Viejo Substation
6 may not be feasible or adequate to address the identified contingency concerns." Do you
7 agree that this is a reliability concern?

8 A. No. First, I have already addressed his concern about cascading outages, or lack thereof,
9 in my testimony above. Second, Table 3 of Mr. Sparks' May 26, 2015 testimony
10 (reproduced below), which is the basis for all of CAISO's concerns with the DEIR
11 Alternative F, shows only five scenarios whereby DEIR Alternative F would cause
12 "reliability concerns," all of which are due to Category C or Category D contingencies.
13 Yet, as I will explain below, none of these five reliability concerns are actually valid.
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Table 3. Summary of Reliability Concerns

Alternatives			Pre-contingency of all facilities in-service			One Element out of service for maintenance at Talega	
Group #	ID	Name	Cat. B	Cat. C	Cat. D	Cat. B	Cat. C
1	A	No Project	0	26	2	4	53
2	B1	Reconductor Laguna Niguel–Talega 138-kV Line	0	2	2	4	53
	B2	Use of Existing Transmission Lines					
	B3	Phased Construction of Alternatives B1 and B2					
	B4	Rebuild South Orange County 138-kV System					
	E	New 230-kV Line Operated at 138 kV					
3	C1	SCE 230-kV Loop In to Capistrano in GIS	4	56	0	0	0
	C2	SCE 230-kV Loop In to Capistrano Alt Route					
	D	SCE 230-kV Loop In to Reduced-Footprint Substation at Landfill in GIS					
4	F	230-kV Rancho Mission Viejo Substation	0	2	1	0	2
	G	138-kV San Luis Rey–San Mateo Line & Sub Expansion	0	4	1	0	2
SOCRE Project			0	0	0	0	0

- Q. Can you explain why CAISO’s reliability concerns presented under “Pre-contingency of facilities in-service” in CAISO’s Table 3 above are not applicable to the DEIR Alternative F?
- A. Table B-3A in Mr. Sparks testimony (reproduced below) presents the specific operating conditions that CAISO considers NERC reliability criteria violations and forms the basis for the information presented in Table 3 under the “Pre-contingency of facilities in-service” classification.

**Table B-3A Thermal Overloads in the SDG&E South Orange County area
With Alternative F: 230-kV Rancho Mission Viejo Substation
2024 Summer Peak Case In CAISO 2014-2015 TPP**

ID	Overloaded Facility	Contingency	Category	Category Description	Thermal Loading (% over applicable rating)
24SP-1	22841 TA TAP 138 22396 LAGNA NL 138 1	line_7002_Line CAPSTRNO 138.0 to PICO 138.0 Circuit— line_7007_Line R.MSNVJO 138.0 to MARGARTA 138.0 Circuit	C	L-1-1	108.16
24SP-2	22841 TA TAP 138 22396 LAGNA NL 138 1	line_7004_Line CAPSTRNO 138.0 to TRABUCO 138.0 Circuit— line_7002_Line CAPSTRNO 138.0 to PICO 138.0 Circuit	C	L-1-1	101.64
24SP-3	SDG&E's South Orange County Service Area	Loss of Talega West/East 138 kV Buses plus BK #60/61/62/63)	D	Loss of substation (D8)	Load drop for the area

The above table points to overloads for two Category C contingencies on a transmission tap line that is non-existent in the SDG&E South Orange County transmission loop today and will be non-existent in the SDG&E South Orange County transmission loop under the DEIR Alternative F in the future. As a result, I would first question the meaningfulness of this overload condition. Second, even if this overload was somehow real, it could be readily addressed with proper implementation of the DEIR Alternative F, such as the 138 kV line from the 230 kV Rancho Mission Viejo Substation bypassing the Talega 138 kV bus and directly tapping into the Talega to Pico 138 kV line.

- Q. What about the Category D contingency of losing the Talega Substation East and West 138 kV buses as noted in Table B-3A above?
- A. As I noted in my testimony above, the DEIR Alternative F, with proper implementation of the Rancho Mission Viejo to Talega 138 kV line (i.e., bypass of the Talega 138 kV bus), will allow the entire SDG&E South Orange County load to be served via the 230 kV Rancho Mission Viejo Substation even if the entire Talega Substation is lost let alone under the limited contingency presented in Table B-3A above. So this reliability concern is also unwarranted.

1 Q. In Table 3 of Mr. Sparks' testimony, as presented above, he also identifies two Category
 2 C reliability concerns for the DEIR Alternative F under the classification "One element
 3 out of service for maintenance at Talega." Can you explain why you consider these
 4 reliability concerns are not valid?

5 A. Yes. Table 4 of Mr. Sparks' testimony (reproduced below) presents the operating
 6 conditions that constitute these two reliability concerns classified in some greater detail
 7 for all the DEIR alternatives, including the DEIR Alternative F.

8 **Table 4. Load Serving Capabilities under Maintenance Conditions**

Alternatives			Under maintenance condition followed by one of the forced Outages at Talega Substation		
Group #	ID	Name	load serving capability	limiting facility	typical worst event
			MW		
1	A	No Project	0	NA	
2	B1	Reconductor Laguna Niguel-Talega 138-kV Line	0	NA	Talega 138 kV West out of service followed by Talega 138 kV East Bus outage
	B2	Use of Existing Transmission Lines			
	B3	Phased Construction of Alternatives B1 and B2			
	B4	Rebuild South Orange County 138-kV System			
	E	New 230-kV Line Operated at 138 kV			
3	C1	SCE 230-kV Loop In to Capistrano in GIS	670*	Talega Tap-L. Niguel 138 kV	Break Failure at Capistrano (CB_CP138BT "CP-TR/LNL/PI")
	C2	SCE 230-kV Loop In to Capistrano Alt Route			
	D	SCE 230-kV Loop In to Reduced-Footprint Substation at Landfill in GIS			
4	F	230-kV Rancho Mission Viejo Substation	350	TL13838 (R. M. Viejo-Margarita)	Talega 138 kV West out of service followed by Talega 138 kV East Bus outage
	G	138-kV San Luis Rey-San Mateo Line & Sub Expansion	180	TL13833/32 (San Mateo-L. Niguel)	
SOCRE Project			850	SONGS-Capistrano 230 kV Line	SONGS-Talega 230 kV Line

2 * Estimated by assuming that TL13834 (Capistrano-Trabuco) was upgraded along with the three alternatives
 3 in Group #3, otherwise load serving capability would be limited to 450 MW due to limitations on TL13834.

26 As noted in Table 4, above, one of the two operating conditions for the DEIR Alternative
 27 F with "reliability concern" occurs due to the maintenance outage of the Talega 138 kV
 28 west bus followed by the forced outage of the Talega 138 kV east bus. The second

1 operating condition is the mirror image of the first scenario, i.e. the maintenance outage of
2 Talega 138 kV east bus followed by the forced outage of the Talega 138 kV west bus.
3 These two operating conditions would not rise to the level of a reliability concern for the
4 DEIR Alternative F.

5 Q. Can you please explain why these two operating conditions will not rise to the level of a
6 reliability concern for the DEIR Alternative F?

7 A. Yes. As I have noted several times in my testimony, the DEIR Alternative F, with proper
8 implementation of the Rancho Mission Viejo to Talega 138 kV line (bypassing the Talega
9 138 kV bus), will allow the entire SDG&E South Orange County load to be served via the
10 230 kV Rancho Mission Viejo Substation even if the entire Talega Substation is lost let
11 alone under this limited contingency condition which will take out only part of the Talega
12 Substation.

13 Moreover, even without proper implementation of the DEIR Alternative F, this
14 condition could be completely averted by scheduling the maintenance outage during the
15 times when the SDG&E South Orange County load is less than 350 MW – per CAISO’s
16 own June 17, 2015 data response to the city of San Juan Capistrano, “*If the load level is*
17 *below 350 MW when this maintenance work is performed then this reliability concern can*
18 *be avoided.*”² As the load duration curve (reproduced below) from Mr. Sparks’ May 26,
19 2015 testimony shows the duration of time whereby the SDG&E South Orange County
20 load is below 350 MW is about 8500 hours in one year allowing ample time to perform
21 this maintenance outage during a time of low enough load to avoid this condition.³

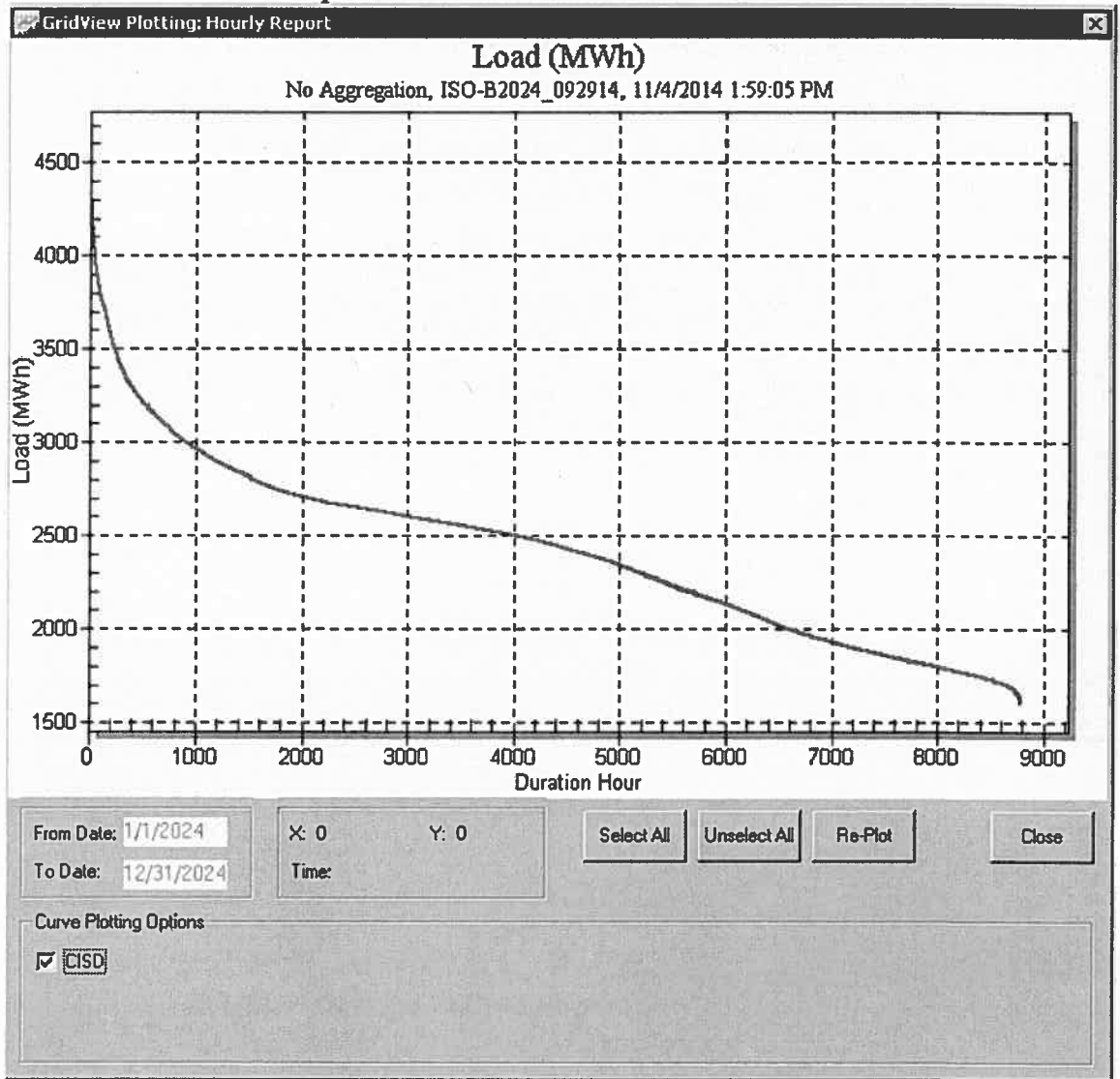
22 Finally, NERC/WECC/CAISO reliability criteria do allow for controlled load
23 shedding under Category C contingencies, even if for some very odd reason, the maintenance
24 outage of the Talega 138 kV east (or west) bus is scheduled during peak load condition.

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26 ² This data response is appended as Attachment 2.

27 ³ This assessment assumes that the SDG&E South Orange County load duration curve generally
28 follows SDG&E’s general load duration curve.

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Figure 5. SDG&E's 8760-hour load duration curve used in the CAISO production simulation data base in Gridview



1 Q. In your May 26, 2015 testimony, you stated that the cost of implementing the DEIR
 2 Alternative F would be at least \$58.8M less than the cost of SDG&E SOCREP alternative.
 3 In making that statement, you “very conservatively assumed that the 230 kV upgrade of
 4 the Ranch Mission Viejo Substation plus 138/12 kV rebuild of Capistrano Substation will
 5 cost as much as the 230 kV upgrade and complete rebuilding of the Capistrano
 6 Substation.” Can you provide additional support for this statement?

7 A. Yes. Below I present a list of major transmission level substation equipment that will be
 8 needed under the SDG&E SOCREP alternative and under the DEIR Alternative F:

Major Substation Item	SDG&E SOCREP Alternative	DEIR Alternative F	Notes
No. of 230/138 kV transformers	2	1	The 230/138 kV transformer for the DEIR Alternative F will be at the 230 kV Rancho Mission Viejo Substation
No. of 230 kV breakers	9 gas breakers	1 air breaker	The 230 kV breaker for the DEIR Alternative F will be at the 230 kV Rancho Mission Viejo Substation
No. of 138 kV gas breakers	24	8	The 138 kV breakers for the DEIR Alternative F will be both at the Rancho Mission Viejo and Capistrano substations

19 This table illustrates that significantly less equipment will be needed to upgrade the
 20 Rancho Mission Viejo and Capistrano Substations under the DEIR Alternative F than
 21 what is needed to upgrade the Capistrano Substation from a 138 kV to 230 kV under the
 22 SDG&E SOCREP alternative. This is expected to make the DEIR Alternative F even less
 23 expensive than the \$58.8M I had presented in my May 26, 2015 testimony when
 24 compared to the SDG&E SOCREP alternative.

25 Q. Does this conclude your testimony?

26 A. Yes.

ATTACHMENT 1

PERSONAL EXPERIENCE PROFILE
Arun Arora

Confidential

Summary

Experience in large and complex power projects on total turnkey basis covering steam, gas fired, hydro and diesel power plants including power trains and switchyards. Designed, supervised, managed installation tested and commissioned personally turnkey AIS and GIS substations on worldwide basis, in 20 countries.

In 1986 implemented the first U.S. turnkey 230kV GIS Substation including all infrastructure in a record time of 12 months for BPA. Proposed, clarified technical details and executed the largest single 275 kV GIS turnkey project with two GIS substations, each with 14 bays in Scotland, UK in 1991 for ICI, valued over \$110 million. As Technical Coordinator of the largest turnkey substation order in the value of \$110 million, completed three GIS and two AIS substations in six months in 1999-2000 for ComEd (Exelon), Chicago.

Proposed, provided all technical clarifications until receiving order and managed the very first 115kV GIS Substation for Orange & Rockland Utilities, NY in 2002-03.

Proposed, provided all technical clarifications during the negotiations and booked the order for the 345kV GIS Substation Brayton Point for the National Grid, MA in 2003.

Developed concept and negotiated the 69/12 kV GIS Park Substation (both voltages GIS) for the City of Anaheim, CA, the first underground GIS substation in the nation on a turnkey basis in 2004.

Conducted the largest energy plan study for U.S. AID for Indonesia in 1995-96 which was accepted for implementation and is currently followed.

I enjoyed full confidence of customers and excellent working relationship with all the customers without any exception.

Year Experience

Total of 48
years _____

Education

Degree	Year	Specialization	Location
BSEE	1959	Electrical Engineering	Agra University, India
	1961-77	Technical and Management	Nuremberg & Mannheim,

		Courses	Germany
	1978-2003	Technical, Management and GIS Technology	North Brunswick, NJ and Golden, CO, USA

Affiliation

- IEEE, Life Senior Member
- CIGRE (USA & France), WG Member
- VDE/VDI, Germany
- Present Chair IEEE/PES GIS Subcommittee K0
- Past Vice-Chair IEEE/PES GIS Subcommittee of Substation Committee
- Past Chair of IEEE/PES GIS Standards
- Past Chair of published IEEE Turnkey Substation Guide, Std 1267-1999
- Past Secretary/Vice Chair IEEE/PES Princeton, NJ Section
- Past GIS Instructor at Marquette University, Wisconsin
- Past Member IEEE/SPD Committee on Surge Arresters

Professional Experience

2007 to Present

Independent consultant advising appropriate GIS application for their particular need. Managing IEEE/PES GIS Subcommittee with presently 9 active GIS working groups, involving revision and harmonization of GIS standards and guides, GIL and MV GIS Application Guides, SF6 Handling Guide, GIS/GL/SF6 Tutorials and Panel Sessions and GIS Users Group Meetings. Presently I am reviving the earlier proposed guidelines for AIS/GIS comparison.

2003 to 2007: Siemens Power Transmission and Distribution, Inc.

Function: Senior Technical Consultant, HVS Substations Division, West Coast

Introduced Siemens GIS technology and turnkey capabilities nationwide, displayed 138 kV GIS bay to all major utilities in the West. Helped users develop GIS substation concepts with specifications, layouts and budgetary costs.

Played key role in booking \$78 million order to Siemens for the very first U.S. underground 69 kV and 12 kV GIS Park Substation for the City of Anaheim, CA valued over \$19 million in GIS equipment...

Helped develop 115 kV GIS substation at Chevron-Texaco Refinery in Richmond, CA and secured the order.

Helped develop several HV and MV GIS projects in the U.S. and Canada ranging from 12 kV to 500 kV..

2000 – 2003: Alstom T&D Inc. (now Areva T&D Inc.)

Function: Business Development Manager/ Regional Manager/ HV& MV GIS Marketing Manager for U.S.A. / Key Account Manager/ GIS Project Manager

- All T&D products and services: Increased business volume for standard products from \$1M to \$3M in about a years time. Introduced Alstom HV & MV GIS in the country. Booked the very first blanket orders for DTBs from Tri-State GT, Powder River, Colorado Springs Utilities for multi year equipment supplies.
- Booked first 138kV GIS from Orange & Rockland Utilities, NY: Over \$ 1M
- Booked first 345kV GIS order for Brayton Point Substation from National Grid, MA: Over \$10.5M
- Booked first statcom order from North-East Utilities, CT: Over 16.5M

1997 - 2000

ABB High Voltage Technologies, Zurich, Switzerland

Function: Business Development Manager

- Development of substation business of value over \$30M for Philippines
- Development of Energy Trading project in Ukraine with annual revenue of \$12M
- Development of GIL based on flexible technology
- Development of FACTS devices and power quality mitigation devices with successful applications of DVR in Singapore and Israel at \$1M each.
- Development of Innovative Substation Concepts
- Development of optimized transit substation concepts leading to first order of over \$7.5m from Malaysia
- Technical Coordinator of five total turnkey substations in six months for Commonwealth Edison, Chicago, order value \$110M

1991 - 1996

Fichtner Engineering Inc., Golden, CO

Function: President & CEO/ Division Director T&D/ Division Marketing Manager

- As a part of a highly reputable German international consulting engineering group of companies provided Design, Engineering, System Studies, SCADA/EMS/RTU, Project Management, Construction Supervision, Testing and Commissioning and Training to utilities, industrial customers and manufacturers. Yearly revenue of nearly \$ 2- 3 M.
- Major customers include Xcel Energy, Tri-State, SWPA(DOE), Colorado Springs Utilities.

- Conducted the largest 15 year energy plan study (\$770,000) for Indonesia incl. +/- 500kV HVDC system, funded by U.S. AID. This study was adopted for all projects which are current now.

1963 - 1991

BBC/ABB Power T&D Company Inc.

- 1978- 1991: North Brunswick, NJ - Product Manager, Electrical Systems Manager Marketing, Technology Transfer Manager for production of live tank and dead tank breakers at Greensburg, PA plant.

Notable orders include;

- Teeside Project for two GIS substations with 28 breaker positions, GSUs, UATs , value \$110M
- Lummus Crest Oklahoma Generating Plant power train and 169 kV switchyard with 10 bays. Order volume \$5M
- St. Nicholas Generating Plant power train and 69 kV switchyard with 6 bays. Order value around \$4M
- BPA, 500kV breakers on on-going basis for Marion, Slatt, and other substations, overall about \$8M. Ponderosa 230kV GIS about \$4M for the first U.S. total turnkey project in 12 months.
- TVA, 500kV breakers on ongoing basis, overall about \$6M
- Alabama Power, 500kV, 230kV breakers, overall all about \$10M
- Georgia Power, 500kV breakers, about \$ 3M
- Commonwealth Edison, 345kV breakers, overall about \$10M
- NSP, 345kV breakers, overall about \$5M
- Otter Tail Power, 345 kV breakers, overall about \$3M
- Basin Electric, 345kV breakers, overall about \$6M
- LADWP, 500/230kV GIS Substation 5/29/2009 equipment \$4M
- AEP, 345kV breakers, 500/138kV Stanley Valley GIS Sub, overall about \$10M

- 1963 – 1977: Mannheim, Germany as Sub-division head for worldwide T&D activities, Project Manager, Resident Engineer and commissioning engineer in Kuwait, Testing & Commissioning Engineer, Libya, Resident Engineer, Iceland for the first 230kV system in the country.
- Average volume of business handled DM 50M per year (about \$ 25M at today's rate of exchange) in about 18 countries worldwide.

1961 - 1963

MAN, Maschinenfabrik Augsburg Nürnberg AG, Nürnberg, Germany

Function: Principal Electrical Engineer

- Design of power trains for power plants and switchyards. Developed standards for requirements. Conducted thermodynamics calculations for power plant steam boilers.

Executed power train order for steam generating plant in Indonesia. Order value about \$1M.

- Order for power plant in Romania executed. Order value about \$0.5M.

1960 – 1961

GEC, General Electric Company (UK), India

Function: Contracts Manager, Substations

- Design, proposals, negotiations, installation, testing and commissioning of industrial substations on turnkey basis.

Brought in a order volume of about half million US\$ at present rate of exchange.

1959 – 1960

KESA, Kanpur Electric Supply Administration, Kanpur, India

Function: Graduate Electrical Engineer Trainee

- Worked in all phase of electric utility system from design, equipment procurement, order, installation, testing, commissioning, operation and maintenance including own manufacturing of parts. Part of the design team of the then largest hydro power plant in India.

Others

- Languages: English, German, basic French, Hindi/Urdu.
- Skills: Management, engineering, project management, installation, testing and commissioning of GIS and AIS substations.
- Awards: Numerous from VDE (Germany) and IEEE/PES.
- Several papers authored and co-authored
- Other: Developed and executed GIS and AIS substations and power train for power plant projects in over 20 countries.
- Senior Life Member of IEEE/PES, GIS Subcommittee K0 Chair
- Introduction of GIS technology in the U.S. starting in the year 1978

ATTACHMENT 2

Request No. 7.

In Table 4 of Mr. Sparks' 5/26/2015 testimony, he presents that the DEIR Alternative F can only meet 350 MW of the load in the SDG&E South Orange County service area if the following two conditions simultaneously occur:

- Talega 138 kV West is out due to maintenance service; and
- Talega 138 kV East Bus outage.

Please explain what specific criteria of NERC/WECC reliability violation this simultaneous occurrence constitutes. Also please explain if this reliability concern could be avoided by planning the maintenance outage of the Talega 138 kV West at times when the load in the SDG&E South Orange County service area is below 350 MW.

ISO RESPONSE TO No. 7.

NERC TPL 003 R1.2.12 requires the assessment of Category C contingencies with maintenance outages represented in the system model utilized for the assessment. If the load level is below 350 MW when this maintenance work is performed then this reliability concern can be avoided.

From: Jack Cheng <jcheng@aqmd.gov>
Sent: Thursday, September 24, 2015 4:29 PM
To: SOCRE CEQA
Cc: Jillian Wong
Subject: Draft Environmental Impact Report (Draft EIR) for the Proposed South Orange County Reliability Enhancement (SOCRE) Project
Attachments: ORC150811-05 - SDGE South OC.PDF

Follow Up Flag:
Flag Status:

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the attached document. The following comments are meant as guidance for the Lead Agency and should be incorporated into the Final EIR. The SCAQMD staff is available to work with the Lead Agency to address these issues and any other questions that may arise. Please contact me if you have any questions regarding these comments.

Jack Cheng - Air Quality Specialist
jcheng@aqmd.gov
(909) 396-2448
South Coast Air Quality Management District
21865 Copley Dr., Diamond Bar, CA 91765

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South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 s www.aqmd.gov

SENT VIA E-MAIL AND USPS:
SOCRE.CEQA@ene.com

September 24, 2015

California Public Utilities Commission
RE: SOCRE Project
c/o Ecology and Environment, Inc.
505 Sansome Street, Suite #300
San Francisco, CA 94111

Recirculated Draft Environmental Impact Report (Draft EIR) for the Proposed South Orange County Reliability Enhancement (SOCRE) Project

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The following comments are meant as guidance for the lead agency and should be incorporated into the Final EIR. In the project description, the lead agency proposes to rebuild, replace, and upgrade substations and transmission lines throughout San Juan Capistrano, San Clemente, and unincorporated Orange County. The construction of the proposed SOCRE project is expected to take 64 months.

In the Air Quality Section, the lead agency quantified the project's construction air quality impacts and compared those impacts with the SCAQMD's recommended regional and localized daily significance thresholds. Based on its analyses, the lead agency has determined that construction air quality impacts will exceed the recommended regional daily threshold for ROG, NOX, PM10, and PM2.5 as well as exceed the recommended localized daily thresholds for PM10 and PM2.5. Even with mitigation measure APM AQ-1, APM AQ-2, and MM AQ-1 the regional and localized construction air quality impacts would remain significant and unavoidable. SCAQMD staff recommends that the lead agency include additional mitigation to further minimize these impacts. Additional details are included in the attachment.

The SCAQMD staff is available to work with the lead agency to address these concerns and any other air quality questions that may arise. If you have any questions regarding this letter, please contact me at jcheng@aqmd.gov or call me at (909) 396-2448.

Sincerely,

Jillian Wong

Jillian Wong, Ph.D.
Program Supervisor
Planning, Rule Development & Area Sources

JW:JC
ORC150811-05
Control Number
Attachment

Attachment

MM AQ-1: Oxides of Nitrogen (NOx) Credits. The emissions of NOx due to construction of the proposed project will be mitigated through the purchase of Regional Clean Air Incentive Market Trading Credits (RTCs) for every pound of NOx emissions in excess of the SCAQMD regional significance threshold of 100 pounds per day. The total amount of NOx RTCs to be purchased will be calculated when the construction schedule is finalized. The applicant will purchase and submit the required RTCs to the SCAQMD prior to the start of project construction. The applicant will also track actual daily emissions during construction according to a monitoring plan that includes records of equipment and vehicle usage.

NOx RTCs used for mitigation might consist of so called “anyway” RTCs, that is, NOx RTCs derived from cutting back operations or from shutting down equipment and, therefore, might not have been used anyway. Because of the reductions in annual allocations achieved to date and the future required shave in NOx annual allocations, it is not likely that facilitates would still have anyway RTCs available. Additionally, the provision is difficult if not impossible to enforce.

The lead agency should first attempt to reduce construction NOx emissions by using off-road construction equipment that meets lower future emission standards, alternative fuels and control technology on the construction equipment.

Furthermore, the lead agency shall purchase the amount of pounds of NOx emission credits needed to mitigate the exceedance of the construction significance threshold for NOx emissions from the construction phase of the project. The offset credits must meet the following criteria:

1. The lead agency must demonstrate that the emission credits were derived from emission reduction project(s) through existing SCAQMD protocols.
2. The credit needs to be current for the time the project takes place meaning the RTCs/Mobile Source Emission Reduction Credits (MSERCs) have not expired before or during the time period when the emissions from the project would occur.

The lead agency is required to retire the entire amount of NOx emissions credits needed to mitigate the exceedance of the construction significance threshold for NOx emissions prior to commencement of the construction project.

Construction Mitigation Measures for Reducing NOx emissions

SCAQMD staff recommends that APM AQ-2 be replaced with the following construction Mitigation Measures:

- All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
- Alternatively, the Lead Agency could rely on the Green Construction Policy¹ used by LA County Metro or the ports of Los Angeles/Long Beach. These policies include provisions to ‘step down’ from Tier 4 equipment to Tier 3 or Tier 2 if specified criteria are met.

¹ Los Angeles County Metropolitan Transportation Authority, July 21, 2011:
<http://www.metro.net/about/search/?q=green%20construction%20policy>

- Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export) and if the lead agency determines that 2010 model year or newer diesel trucks cannot be obtained, the lead agency shall use trucks that meet EPA 2007 model year NOx emissions requirements.
- A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.
- Require the use of electricity from power poles rather than temporary diesel or gasoline power generators.
- Provide temporary traffic controls such as a flag person, during all phases of significant construction activity to maintain smooth traffic flow.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site.
- Reroute construction trucks away from congested streets or sensitive receptor areas.
- Improve traffic flow by signal synchronization.

Additional Construction Mitigation Measures for Reducing PM Emissions

The lead agency should identify and incorporate additional mitigation measures to further reduce PM10 and PM2.5 emissions from construction related activities. Please see SCAQMD Rule 403² – Tables 1, 2, and 3 for additional control PM control measures.

For additional measures to reduce off-road construction equipment, refer to the mitigation measure tables located at the following website:

<http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies>.

² South Coast Air Quality Management District – Rule 403 – Fugitive Dust
<http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf?sfvrsn=4>