



David L. Geier
Vice President – Electric Transmission & Systems Engineering

8330 Century Park Ct
San Diego • CA 92123-1530

September 24, 2015

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

Re: Draft Environmental Impact Report for South Orange County Reliability Enhancement Project
(State Clearinghouse No. 2013011011)

Dear Mr. Barnsdale:

Enclosed please find comments by San Diego Gas & Electric Company (SDG&E) on the Recirculated Draft Environmental Impact Report (RDEIR) prepared by the California Public Utilities Commission (CPUC) for the proposed South Orange County Reliability Enhancement Project (SOCRE Project).

SDG&E appreciates CPUC's analysis and consideration of the SOCRE Project, and its efforts to ensure resources are used appropriately and cost-effectively. SDG&E believes the SOCRE Project as refined offers the most cost-effective way of ensuring reliable service to the more than 300,000 residents and businesses in South Orange County, and therefore that it is the best of all options. However, given the recent questions over whether or not an existing utility structure at the Capistrano Substation will be determined to be eligible for listing in the National Register of Historic Places (NRHP), SDG&E urges the CPUC to include a Capistrano Preservation Alternative in the Final EIR. Should the State Historic Preservation Officer provide the information requested by the Keeper that ultimately leads to a Keeper decision that the utility structure is eligible for listing on the NRHP, the Capistrano Preservation Alternative would mitigate any impacts to cultural resources to below a level of significance. That Capistrano Preserve Alternative (developed by SDG&E in conjunction with an historic preservation architect) is, we believe, important to ensure that the Final EIR includes a reasonable range of alternatives, and it is fully analyzed and discussed in the attachments to this letter.

In addition, SDG&E has taken the CPUC's concerns about ensuring that there is no conflict between the SOCRE Project and any conservation easements entered into by the United States Fish and Wildlife Service (USFWS) seriously, and recently met with the USFWS on that issue. In addition, SDG&E has refined its SOCRE Project to move all permanent structures within the proposed Talega Conservation Easement inside its existing, 50-year-old right-of-way. As a result, the USFWS has confirmed that there is no conflict between the SOCRE Project as refined and any recorded or unrecorded conservation easements. The refinements to the SOCRE Project addressing biological issues are included with the attached exhibits as well.

Assuming conservatively that the utility structure at the Capistrano Substation is determined to be an historical resource, then the only significant impacts associated with the proposed SOCRE Project are to cultural resources and air quality (a temporary, construct-related impact). With the Capistrano Preservation Alternative the only significant impact would be the temporary air quality impact during

construction. In contrast, even if the Alternatives were feasible, which they are not, once all reasonably foreseeable activities necessary for SDG&E to provide its customers with reliable electric service are taken into account, the other alternatives would have the same or greater impacts than the proposed SOCRE Project or the Capistrano Preservation Alternative.

SDG&E urges the CPUC to prepare and certify the Final EIR and approve the proposed SOCRE Project or the Capistrano Preservation Alternative without further delay, for the following reasons:

- The conservative analysis presented in the RDEIR overestimates the significant impacts of the proposed SOCRE Project; there would be no significant impact to biological resources, land use, or traffic, and if there were an impact to an historical resource it could be mitigated to less-than-significant levels through adopting the Capistrano Preservation Alternative.
- None of the Alternatives (other than the Capistrano Preservation Alternative) is feasible. None allows SDG&E to comply with mandatory NERC, WECC and CAISO reliability standards, none protects South Orange County residents and businesses from a long duration outage by providing a redundant second source of power, and most do not rebuild the aging Capistrano Substation, which cannot continue to provide reliable electric service by simply replacing equipment as it fails.
- None of the Alternatives that propose interconnecting SDG&E's system with SCE's system are feasible. No interconnection will be allowed under SCE's FERC-approved tariff until a lengthy study process is complete, necessary Reliability Upgrades are identified, and such Reliability Upgrades are constructed after necessary approvals are obtained. SDG&E and CAISO have warned that such an interconnection will cause loop flows that will impair ratings of important paths between the two systems. SDG&E already has identified NERC violations that would arise from such an interconnection.
- The RDEIR's newly-proposed Trabuco Alternative not only suffers from the infeasibility of an SCE interconnection, the proposed Trabuco Substation design is unreliable, not meeting SDG&E or industry standards. It is not possible to construct a safe and reliable 230/138/12 kV substation in the space allotted by Alternative J, even if all the other defects of the Trabuco Alternative could be solved.
- The RDEIR's conclusion that any of the Alternatives are environmentally superior to the SOCRE Project is based on its underestimating the environmental impacts of building those alternatives, and constructing the reasonably foreseeable activities that would be necessary for SDG&E to provide reliable electric service to its customers if those Alternatives were chosen by the Commission. When those impacts are properly considered, the record will reflect that those alternatives' impacts are the same or greater than the impacts from the SOCRE Project as refined.
- During the years it has taken to complete the Final EIR, customer load in South Orange County has continued to grow, and equipment at Capistrano Substation and Talega Substation have continued to age, increasing the risk of outages. Selecting the Trabuco Alternative (or any other Alternative that requires an SCE interconnection) would delay things much longer, given the necessary steps that it would entail.
- Specific overriding considerations outweigh any potential environmental impacts of the proposed SOCRE Project or the Capistrano Preservation Alternative.

SDG&E appreciates this opportunity to comment on the CPUC's RDEIR for the SOCRE project and looks forward to receiving the Final EIR.

Sincerely,



David L. Geier
Vice President – Electric Transmission &
Systems Engineering
San Diego Gas & Electric Company

cc: Ms. Mary Jo Borak
Ms. Molly Sturkel
Mr. Jason Reiger

DETAILED COMMENTS ON THE RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT

I. INTRODUCTION

Subsequent to circulation of the Draft Environmental Impact Report (DEIR), the State Historic Resources Commission recommended that an existing utility structure at the Capistrano Substation be found eligible for the National Register of Historic Places (NRHP), and the U.S. Fish & Wildlife Service (USFWS) informed Energy Division (which then informed SDG&E) about a proposed, unrecorded conservation easement. These unexpected issues resulted in Energy Division finding new, potentially significant environmental impacts in the Recirculated Draft Environmental Impact Report (RDEIR). SDG&E is pleased to provide solutions to reduce these potential impacts to less than significant. As discussed more fully herein:

- On September 22, 2015, SDG&E was informed that the Keeper of the NRHP declined to make a determination of eligibility of the existing utility structure for listing on the NRHP and instead returned the nomination to the State Historic Preservation Officer (SHPO) for substantive and technical revisions. In particular, the Keeper found that the nomination did not include an adequate analysis of the integrity of the original substation complex of which the utility structure was a part. Notwithstanding that the Keeper has now declined to make a determination of eligibility based on the inadequacy of the nomination, SDG&E has nonetheless elected to provide at Exhibit 1 a Capistrano Preservation Alternative, which, in accordance with CEQA, provides an alternative that would reduce the impact to the potential historical resource (i.e., the existing utility structure) to less than significant by preserving it in conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (SOI Standards). *See* 14 Cal Code Regs. §§15064.5(b)(3), 15126.4(b)(1) (compliance with SOI Standards mitigates impacts to historical resource to less than significant).
- SDG&E is in full compliance with its SDG&E Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) and, with the minor project refinement set forth in Exhibit 2, bringing permanent transmission structures within the conservation easement area inside SDG&E's existing right-of-way, the U.S. Fish and Wildlife Service (USFWS) has agreed that no conflict between the SOCRE Project and recorded and potential conservation easements is expected. Therefore, there is no significant unmitigated impact to biological resources or land use that would result from what the RDEIR viewed as a potential conflict.
- With respect to land use impacts on local height limitations, the Commission's General Order 131-D, CPUC Decision 94-06-014, and numerous court rulings confirm that the CPUC has exclusive jurisdiction over the construction of electric utility facilities, preempting local ordinances. Therefore, the local ordinances cited in the RDEIR are not applicable to the SOCRE Project. CEQA looks only at the consistency of a project to applicable ordinances, which the local height limit ordinance is not.

- With respect to traffic impacts, as stated in SDG&E’s April 10, 2015 Comments on the DEIR, Detailed Comments at 3-4: “SDG&E’s construction and engineering contractors do not expect a full closure of any of these roads during underground construction and SDG&E did not state there would be any full road closures in the Proponent’s Environmental Assessment (PEA). The Project refinements identified in more detail in Attachment A - Minor Project Design Refinements will eliminate the temporary and cumulative traffic impacts.”

As a result, the SOCRE Project’s only significant environmental impact, which is temporary, is to air quality as a result of emissions during construction.

Unfortunately, the DEIR and RDEIR have significant defects that must be corrected for the Final Environmental Impact Report (FEIR) to fully inform the Commissioners and comply with the California Environmental Quality Act (CEQA). The critical defects include:

- Altering SDG&E’s basic project objectives and thereby failing to assess each Alternative by the degree to which it attains such basic project objectives. This error results not only in masking each Alternative’s failure to feasibly attain “most of the basic objectives of the project,” CEQA Guidelines § 15126.6(a), but also fails to inform the Commission about the additional projects that SDG&E would be compelled to pursue to attain these basic project objectives if the Commission were to select an Alternative that does not achieve them. The DEIR and RDEIR changed SDG&E’s basic project objectives to eliminate:
 - Providing a redundant second source of power to SDG&E’s South Orange County (SOC) system, and over 300,000 residents and businesses dependent on it.
 - Compliance with mandatory North American Electricity Reliability Corporation (NERC), the Western Electricity Coordinating Council (WECC) and the California Independent System Operator (CAISO) reliability standards.
 - Rebuilding the more than 60-year-old 138/12 kV Capistrano Substation, which is not only beyond its useful life, but does not meet current standards and is not expected to be able to continue providing reliable electric service with mere replacement of aging equipment.
- Because the DEIR and RDEIR altered SDG&E’s basic project objectives, the Alternatives’ failure to achieve them is not discussed. However, SDG&E remains obligated under Federal Power Act § 215, Federal Energy Regulatory Commission (FERC)-approved tariffs, state law and Commission decisions to achieve these basic project objectives. As a result, if the Commission chooses an Alternative, SDG&E will implement, or seek authorization to implement, additional projects to meet its obligations. These projects are “reasonably expected to occur in the foreseeable future if the [SOCRE Project] were not approved,” and therefore must be discussed in the FEIR under CEQA Guidelines § 15126.6(d) & (e)(2). SDG&E has informed

Energy Division of these reasonably expected projects, but neither the DEIR nor the RDEIR reflect them. In particular:

- None of the Alternatives (other than the Capistrano Preservation Alternative) results in SDG&E complying with mandatory NERC transmission planning standards. SDG&E has informed Energy Division, and does so again in these comments, of the projects that will be necessary to do so under the Alternatives.
- Most of the Alternatives contend that Capistrano Substation will not be rebuilt when, in fact, it must and will be rebuilt unless SDG&E is not permitted to provide its customers with reliable electric service. The DEIR's and RDEIR's failure to reflect this reasonably expected action results in skewing the comparison of environmental impacts and misinforming the Commission.
- Many of the Alternatives do not provide a redundant second source of power to SDG&E's SOC system, thus leaving SOC residents and businesses exposed to the risk of a long term outage. Even the Alternatives that purport to provide a second source fail to include elements necessary to make such source redundant, thus fail to meet this important project objective.

The RDEIR's problems are compounded by its selection of the Trabuco Alternative as the environmentally superior alternative. First, fundamental information is missing or misstated in describing the conceptual design for the Trabuco Alternative. The RDEIR's inaccurate description of the components required to build and operate the Trabuco Alternative necessarily results in an inaccurate assessment of the alternative's environmental impacts. In addition to the unknowns and inaccuracies of the RDEIR's description of the Trabuco Alternative, the RDEIR also fails to disclose that, if the Commission selected the Trabuco Alternative, Capistrano Substation still would have to be rebuilt as a 138/12 kV substation. Also omitted from the RDEIR is any discussion of the interconnection with Southern California Edison (SCE) that the Trabuco Alternative requires. That SCE interconnection alone would demand years of study, would result in new NERC violations, and likely would require additional Reliability Upgrades at significant ratepayer cost and with additional environmental impacts. As a result of these failures in its description and analysis of the Trabuco Alternative, the RDEIR fails to properly inform the Commissioners or the public of the reasonably foreseeable impacts that would result from the Trabuco Alternative. Such errors must be corrected in the FEIR.

For the reasons discussed herein, and in SDG&E's April 10, 2015 Comments on the DEIR, the Alternatives presented in the RDEIR are not feasible. Only the Proposed Project and the Capistrano Preservation Alternative, presented herein, are feasible solutions to the reliability needs for SDG&E's South Orange County electric system. Moreover, as noted above, the SOCRE Project's only significant environmental impact, which is temporary, is to air quality as a result of emissions during construction. When the environmental impacts of the actions that are reasonably expected to occur if the Commission chooses any of the other Alternatives are properly considered, each of the other Alternatives has similar or even more significant impacts.

All of the inadequacies described in this comment letter and its attachments, and in SDG&E's April 10, 2015 Comments on the DEIR and the attachments thereto, can and should be addressed in the FEIR, to avoid adopting a FEIR that is fatally flawed under CEQA.

II. The FEIR Must Include The Fundamental Project Objectives and Assess the Alternatives Against Them, Or A Fully Informed Decision Cannot Be Reached.

It is critical under both CEQA and the CPUC's governing regulations that the Commissioners have the information required to make a full and fair analysis of a SOCRE Project's objectives and the extent to which identified alternatives may feasibly achieve them. Under CEQA Guidelines § 15126.6(a), an alternative must "feasibly attain most of the basic objectives of the project" even if the alternative "would impede to some degree the attainment of the project objectives." Commissioners and the public need to know whether each Alternative achieves the basic project objectives, or where the attainment of the basic project objectives has been sacrificed to some degree to reduce significant environmental impacts.

SDG&E's basic project objectives include: (i) protecting over 300,000 South Orange County residents and businesses from the lengthy electric service outage that would occur if 230 kV or 138 kV service from Talega Substation failed, by providing a redundant second power source to SDG&E's SOC service area; (ii) complying with mandatory NERC, WECC and CAISO reliability standards; and (iii) rebuilding the more than 60-year-old 138/12 kV Capistrano Substation, which is not only beyond its useful life, but does not meet current standards and is not expected to be able to continue providing reliable electric service with mere replacement of aging equipment.

These project objectives, and the SOCRE Project, were developed over three years in the CAISO annual transmission planning process, in which CPUC representatives participated. CAISO identified the SOCRE Project as the best project to address the identified SOC reliability issues in CAISO's 2010-2011 Transmission Plan. The SOCRE Project resolves all identified reliability concerns for SDG&E's SOC system, avoids NERC transmission planning standard violations, complies with CAISO Planning Standards, and avoids the risks of the many scenarios that would result in interrupting customer service without the project in place. This years-long process of study resulted in the Project Objectives included in SDG&E's PEA.

Unfortunately, as set forth below, the DEIR, and now the RDEIR, altered SDG&E's SOCRE Project objectives—and then purport to assess the degree to which the Alternatives attain or do not attain these altered objectives. As set forth below, the most salient alterations to SDG&E's project objectives are: (1) elimination of compliance with mandatory NERC, WECC and CAISO reliability standards; (2) failure to provide for reliable electric service from Capistrano Substation; and (3) failure to provide a redundant second source of power to South Orange County residents and businesses.

As a result of altering SDG&E's project objectives, and thus failing to determine whether Alternatives achieve such project objectives, the DEIR and RDEIR fail to fully inform the Commissioners or the public about the reasonably expected actions under each Alternative. Because SDG&E remains obligated to meet mandatory federal reliability standards adopted under the Federal Power Act § 215, and to provide reliable electric service under the Public

Utilities Code and the Commission's decisions, SDG&E will have to implement, and where required seek Commission authorization to implement, additional projects (at greater expense) to address the issues that would be solved by the SOCRE Project, but not by the Alternatives.

SDG&E identifies below the substantial evidence demonstrating that the Alternatives do not attain most of the basic objectives of the SOCRE Project, and the substantial evidence of the reasonably expected actions if the Commission were to adopt an Alternative in lieu of the Proposed Project or the Capistrano Preservation Alternative.

A. The DEIR's and RDEIR's Elimination of the Project Objective to Protect SOC Residents and Businesses From A Long Term Outage Causes an Inaccurate Assessment of Alternatives' Attainment of This Basic Project Objective, Reasonably Expected Actions Under the Alternatives, and the Alternatives' Reasonably Expected Environmental Impact.

SDG&E's project objectives include: "Provide transmission system reliability: a. Reduce the risk of an uncontrolled outage of all South Orange County load; [and] b. Reduce the risk of a controlled interruption of a portion of the South Orange County load." The DEIR and RDEIR changed these project objectives to "Reduce the risk of instances that could result in the loss of power to customers served by the South Orange County 138-kV System through the 10-year planning horizon; [and] Redistribute power flow of the applicant's South Orange County 138-kV System such that operational flexibility is increased."

SDG&E's PEA and Application explained the risks to SDG&E's SOC customers arising from the fact that SDG&E's distribution substations in South Orange County all are fed only from Talega Substation. Because Talega Substation is the sole source for South Orange County, any outage of 230 kV service or 138 kV service at Talega Substation would cause an outage of electrical service to all of South Orange County until such service could be restored. Depending upon the nature of the damage, such outage could be hours, days or weeks. The potential economic cost of a three-week outage is estimated at \$2.38 billion to \$4.77 billion, and the region would further suffer from social disruption arising from loss of water service, wastewater service, communications, hospitals, etc. SDG&E seeks to avoid such an outcome by providing South Orange County with the same level of redundant electrical service that it provides other major population centers.

The risks of a Talega Substation outage, the potential repair durations, and outages consequences are discussed in Exhibit 3 (Corrected Opening Testimony, Chapters 1-2, Chapter 4, Sections 1, 2, 4 and 5, Chapter 7), Exhibit 4 (Corrected Supplemental Testimony, Chapters 2 and 9), and Exhibit 5 (Corrected Rebuttal Testimony, Chapters 3-4). This material, in addition to SDG&E's PEA, Application, and responses to Energy Division's data requests, constitutes substantial evidence regarding this basic project objective of the SOCRE Project. As set forth therein, and in the PEA and Application, the SOCRE Project mitigates the risks arising from having Talega Substation as the sole source of power to SOC by providing a redundant second source at a rebuilt Capistrano Substation.

The DEIR and RDEIR should, but do not, fully inform the Commissioners and the public whether each Alternative attains this basic project objective. To comply with CEQA, the FEIR

must fully inform the Commissioners and the public, including SOC residents and businesses, whether choosing an Alternative over the SOCRE Project means that SOC residents and businesses will continue to be exposed to a long duration outage risk. Further, because SDG&E is obligated to try to provide reliable electric service to its customers, it is reasonably expected that SDG&E will continue to provide a redundant second source of power to its SOC system to protect its SOC customers. These reasonably expected actions must be reflected in the FEIR.

The No Project Alternative and Alternatives B1, B2, B3 and B4 do not provide a second source of power to SDG&E's network of SOC distribution substations. Their failure to attain this basic project objective is discussed in Exhibit 4 (Corrected Supplemental Testimony, Chapter 3, Section 4, Chapter 4, Section 5). Because of this failure, as explained in SDG&E's Corrected Supplemental Testimony:

In addition, to address the vulnerabilities arising from Talega Substation serving as the sole source of power to SDG&E's South Orange County system, SDG&E would seek authorization to construct a 138 kV transmission line from its San Luis Rey Substation located south of Camp Pendleton to San Mateo Substation located on the northern border of Camp Pendleton. Connection of a 138-kV transmission line at San Luis Rey Substation, located in the city of Oceanside, County of San Diego, would require the addition of two new 230/138-kV transformers. Since the PEA was filed, the generation at San Onofre was unexpectedly retired. This event prompted the CAISO to approve local voltage support equipment to be installed at San Onofre, Talega and San Luis Rey substations. To make room for the new equipment at San Luis Rey, the 138 kV yard is being retired and removed. The addition of new 138/230 kV transformers would require building of a 138 kV yard within the San Luis Rey Substation.

Exhibit 4 (Corrected Supplemental Testimony, Chapter 3, Section 5; accord Chapter 4, Section 6). To comply with CEQA, this information must be presented in the FEIR.

Other RDEIR Alternatives provide a second source of power to South Orange County, but, unlike the SOCRE Project, do not provide a redundant second source that can supply SOC load in the absence of Talega Substation. As a result, such Alternatives do not meet SDG&E's basic project objective and would result in SDG&E undertaking, or seeking authorization to undertake, additional projects to make such a second source redundant (at added expense and with added environmental impacts).

With respect to Alternative D, an interconnection to SCE's transmission system at the Prima Deshecha Landfill, SDG&E's reasonably expected actions include:

Based on analysis done using the 2015 load forecast, the transmission lines listed below will need to be upgraded in order for the new substation at Prima Deshecha Landfill to carry all South Orange County load with Talega Substation out-of-service;

- TL13834 will reach the transmission lines maximum rating of 1145 Amps by 2032 and will need to carry 1221 Amps by 2035.
- TL13837 will reach the transmission lines maximum rating of 569 Amps by 2027 and will need to carry 608 Amps by 2035.

- TL13830 will reach the transmission lines maximum rating of 816 Amps by 2031 and will need to carry 903 Amps by 2035.

Additionally, in order to secure the South Orange County transmission system for the loss of a single element with Talega Substation out of service, more transmission upgrades are needed. When South Orange County load reaches 450 MW (2015 forecasted peak load for 2016 peak load level), the transmission lines listed below will load above emergency ratings;

- The outage of TL13834 will increase flow on TL13816 to 1036 Amps. TL13816 has an emergency rating of 841 Amps. To prevent damage to TL13816, either South Orange County load must be limited to 371 MW or TL13816 must be upgraded. Load would be limited by shedding load before the contingency.

- The outage of TL13834 will increase flow on TL13833 to 985 Amps. TL13833 has an emergency rating of 858 Amps. To prevent damage to TL13833, either South Orange County load must be limited to 388 MW or TL13833 must be upgraded. Load would be limited by shedding load before the contingency.

- The outage of TL13837 will increase flow on TL13846B to 142 MVA (594 Amps). TL13846B has an emergency rating of 569 Amps. To prevent damage to TL13846B, either South Orange County load must be limited to 449 MW or TL13846B must be upgraded. Load would be limited by shedding load before the contingency.

Exhibit 4 (Corrected Supplemental Testimony, Chapter 5, Section 4.B). To comply with CEQA, this information must be presented in the FEIR.

With respect to Alternative F, adding a second source at SDG&E's Rancho Mission Viejo (RMV) Substation (assuming it were feasible to add a 230 kV substation there, which it is not¹), does not provide a redundant second source without additional work. The City of San Juan Capistrano (SJC) sought to reduce the footprint of a rebuilt RMV Substation by using only one transformer, which would be inadequate—even with two transformers, additional work would be required because RMV Substation is not at the load center for South Orange County. Exhibit 5 (Corrected Rebuttal Testimony, Chapter 5, Section 2). As SDG&E explained, SDG&E's reasonably expected actions include:

SJC proposes a variation on DEIR Alternative F which would connect the new RMV 230kV bus directly to San Onofre, thereby removing the common point of failure at Talega Substation. SJC proposes removing TL23007 from Talega and extending it to RMV. This does not constitute a fully redundant source, for the following reasons:

- 1) South Orange County's peak load was over 415 MVA in 2014 and, by 2020 peak load is expected to reach 475 MVA.

¹ Exhibit 5 (Corrected Rebuttal Testimony, Chapter 5, Section 7).

2) An outage of both 230 kV buses at Talega would leave all South Orange County load connected to a rebuilt 230/138/12 kV RMV Substation, which would be served by a single 230 kV line (TL23007) rated at only 456 MVA and which is proposed to have a single 230/138 kV transformer rated at 392 MVA (assuming installation of SDG&E's standard 230/138 kV transformer). Both will overload under heavy summer loading conditions.

3) If the single 230 kV line serving a rebuilt RMV Substation is out of service for any reason and either the 230 kV or 138 kV service at Talega is interrupted for any reason, the rebuilt RMV Substation will not be able to provide the second 230 kV source to South Orange County. The Proposed Project allows for a maintenance outage of one 230 kV line to Capistrano Substation while keeping the other 230 kV line to Capistrano in service.

4) If the 230/138 kV bank at the rebuilt RMV Substation is increased to 450 MVA, as suggested by SJC, it would still be too small and would overload during peak load conditions. It would also require purchase of a second non-standard 450 MVA bank as a spare.

5) An outage of both 138 kV buses at Talega would leave all South Orange County load connected to the rebuilt RMV through two single 138 kV lines (TL13830 and TL13838) rated at 195 MVA and 273 MVA, respectively.

If Talega Substation is unavailable and RMV Substation is the only connection to the 230 kV system as described under SJC's proposed alternative, SDG&E's South Orange County customers will be exposed to rolling blackouts. In order to carry South Orange County load during an outage of either Talega 230 kV service or 138 kV service, at a minimum:

1) Both TL13838 and TL13830 would need to be upgraded, preferably by adding a second circuit from RMV substation to Margarita Substation to Trabuco Substation.

2) A second 230/138 kV 392 MVA bank would need to be installed at the rebuilt RMV Substation.

3) TL23007 would be upgraded or a second 230 kV line would need to be extended from Talega to the rebuilt RMV Substation to provide a second connection to the 230 kV bulk power system.

4) The Talega STATCOM, which was to be decommissioned and removed at the end of its useful life, would instead need to be replaced.

Exhibit 5 (Corrected Rebuttal Testimony, Chapter 5, Section 5). To comply with CEQA, this information must be presented in the FEIR.

The RDEIR's newly added Alternative J, the Trabuco Alternative, also does not provide a redundant second source for South Orange County—both because of its poor design and

because Trabuco Substation is not at the load center for South Orange County. Assuming that it is feasible to timely construct a 230/138/12 kV substation on the space allotted by Alternative J, which it is not, SDG&E would reasonably expect to undertake, or seek authorization to undertake, additional projects to make a rebuilt Trabuco Substation able to serve all SOC load if Talega Substation were out of service. SDG&E discusses all of the flaws of Alternative J in Section V below, and those flaws are specifically addressed in Exhibit 6 (SDG&E's Second Supplemental Testimony, Chapter 4).

B. The DEIR's and RDEIR's Elimination of the Project Objective to Comply with Mandatory Reliability Standards Causes an Inaccurate Assessment of Alternatives' Attainment of This Basic Project Objective, Reasonably Expected Actions Under the Alternatives, and the Alternatives' Reasonably Expected Environmental Impact.

The DEIR replaced the Project Objective of "complying with mandatory NERC, WECC and CAISO reliability standards" with "Reduce the risk of instances that could result in the loss of power to customers served by the South Orange County 138-kV system through the 10-year planning horizon."² This change is troubling, since the CPUC has long accepted that NERC reliability standards set the minimum standard of reliability for California public utility customers, and because the Federal Power Act §215 and the Federal Energy Regulatory Commission (FERC) regulations both require SDG&E to comply with mandatory NERC reliability standards.

The DEIR apparently did so because it inaccurately found that the SOCRE Project is not needed to comply with NERC reliability standards.³ This conclusion, in turn, is based on the Alternatives Screening Report provided as DEIR Appendix B.⁴ Unfortunately, Energy Division appears to have been misinformed about the proper interpretation of NERC Transmission Planning Standard TPL-003-0b. As SDG&E explained in December 19, 2014 comments on the Alternatives Screening Report, *see* Exhibit 7, and in testimony served on Energy Division, *see* Exhibit 3 (Corrected Opening Testimony, Chapter 4, Section 6), Exhibit 4 (Corrected Supplemental Testimony, Chapter 2, Section 4), and Exhibit 5 (Corrected Rebuttal Testimony, Chapter 2), without a project to mitigate overloads, SDG&E would have to take pre-contingency action to interrupt customer service after a single (N-1) outage to avoid exceeding Applicable Ratings under a Category C3 (N-1-1) contingency and thereby violating TPL-003-0b.

The DEIR's and RDEIR's elimination of compliance with NERC reliability standards as a basic project objective has flawed compliance with CEQA in two ways. First, Energy Division has failed to assess whether each Alternative results in SDG&E complying with NERC reliability standards during at least the 10-year planning period. It is important to recognize that it is the Alternative that must be assessed by power flow analysis to determine whether it meets

² DEIR at 1-8.

³ SDG&E notes that, in making this assertion, the DEIR and RDEIR appear to be assessing the need for the project rather than identifying the basic project objectives and assessing whether Alternatives meet such basic project objectives. This goes beyond the scope of environmental review under CEQA entrusted to Energy Division, and enters the scope of issues for which the Commission has held evidentiary hearings are required. If Energy Division wishes to opine on these issues of need for a project, it should serve testimony and be subject to cross-examination.

⁴ DEIR at 1-9

the NERC standards.⁵ Changes to the system changes the flow of energy, and thus a project can mitigate one overload but create other overloads. Therefore, each Alternative must be assessed for NERC compliance. The DEIR and RDEIR fail to do so.

Second, because SDG&E has a legal obligation to comply with the NERC reliability standards, SDG&E must pursue projects that achieve such compliance. Therefore, once it is recognized that Alternatives do not attain compliance, there are reasonably expected actions that SDG&E will take to comply with the mandatory NERC standards. These reasonably anticipated actions must be reflected in the FEIR.

With respect to the No Project Alternative, the Commission's selection of such Alternative would not mitigate any of the NERC violations identified in Exhibit 3 (Corrected Opening Testimony, Chapter 4, Section 6) and Exhibit 4 (Corrected Supplemental Testimony, Chapter 2, Section 4). As explained in SDG&E's Corrected Supplemental Testimony:

To comply with the mandatory NERC Reliability Standards and provide reliable electric service, but not addressing the vulnerability created by having Talega Substation as the sole source of power to SDG&E's South Orange County system, SDG&E would seek to implement the following projects:

- SDG&E has identified upgrades needed to meet NERC standards under the CPUC's No Project Alternative. SDG&E would need to implement projects to upgrade transmission lines; TL13835A, TL13816, TL13836, TL13846A and TL13846C.
- As described in Section 3 above (and to add any transmission lines to Capistrano Substation), SDG&E also would need to proceed with rebuilding Capistrano Substation with space to add a voltage control device at Capistrano Substation.
- Without the SOCRE Project, SDG&E will need to replace the two transformers at Talega Substation and replace the Talega STATCOM with a new dynamic voltage control device to be installed at either Capistrano or Talega substation.

Exhibit 4 (Corrected Supplemental Testimony, Chapter 3, Section 5). The CAISO also identified the No Project Alternative's failure to comply with NERC and CAISO reliability standards, and work that would be necessary to do so if the Commission were to select this Alternative. Exhibit 8 (Corrected CAISO Opening Testimony-Sparks at 14-15). To comply with CEQA, this information must be included in the FEIR and the environmental impacts of these reasonably expected actions be compared to the SOCRE Project's impacts.

With respect to Alternative B1, the Commission's selection of such Alternative would not mitigate any of the NERC violations identified in Exhibit 4 (Corrected Supplemental

⁵ Certain parties that have commented or may comment on the DEIR and/or the RDEIR, including the Office of Ratepayer Advocates and Jacqueline Ayer on behalf of Frontlines, have not conducted any power flow analyses (indeed, do not have the expertise to do so). As a result, such parties cannot properly assess whether a project will change the electric system in such a way to mitigate overloads present in the existing system or whether the changed system will suffer different overloads. In contrast, SDG&E does have that expertise.

Testimony. Chapter 4, Section 2). Even making favorable assumptions about implementation of this Alternative, SDG&E’s Corrected Supplemental Testimony explains:

SDG&E has identified contingencies which would cause transmission equipment to load above the Applicable Rating. Table 4-8 lists four transmission lines that will exceed the maximum Applicable Rating. These are C3 (N-1-1) events, which would require SDG&E to shed load following the first transmission line outage to prevent a violation following the second transmission line outage.

Table 4-8 – Alternative B1: Transmission Lines which will Exceed Emergency Rating.

South Orange County Load Level. (MW)	Based on latest forecast. Year load will be Reached	Transmission Line Outage	Transmission Line Outage	Transmission Line which will meet or exceed its emergency rating
450	2017	TL13831	TL13835	TL13816
475	2020	TL13831	TL13846	TL13836
500	2024	TL13835	TL13836	TL13846C
500	2024	TL13836	TL13846	TL13835C

If the Commission were to select the DEIR Alternative B1, the “Reconductoring Alternative,” SDG&E would need to upgrade these four additional transmission lines to remain compliant with mandatory NERC transmission planning standards. In all, under this Alternative, SDG&E would need to implement projects to upgrade transmission lines TL13816, TL13846C, TL13835C, and TL13836 in addition to the transmission line reconducted as part of Alternative B1 “a 138-kV segment (approximately 7.8 miles long) from Capistrano Substation to Talega Substation”). As set forth in Section 7 below, without preliminary engineering of such project and based solely on comparison to similar projects, SDG&E estimates that such projects would cost from \$64 million - \$79 million.

Exhibit 4 (Corrected Supplemental Testimony, Chapter 4, Section 2). As explained in SDG&E’s Corrected Supplemental Testimony:

To comply with the mandatory NERC Reliability Standards and provide reliable electric service, but not addressing the vulnerability created by having Talega Substation as the sole source of power to SDG&E’s South Orange County system, SDG&E would seek to implement the following projects:

- As described in Section 2 above, SDG&E has identified transmission line upgrades in addition to the upgrade contemplated by DEIR Alternative B1 which are needed to meet NERC standards under this Alternative. SDG&E would need to implement projects to upgrade transmission lines; TL13835A, TL13835C, TL13816, TL13846C, and TL13836. (Not all of these projects require transmission line replacement).

- As described in Section 3 above, SDG&E also would need to proceed with rebuilding Capistrano Substation as a 138/12 kV substation.
- Without the SOCRE Project, SDG&E will need to replace the two transformers at Talega Substation and replace the Talega STATCOM with a new dynamic voltage control device to be installed at either Capistrano or Talega substation.

Exhibit 4 (Corrected Supplemental Testimony, Chapter 4, Section 6). The CAISO also identified the failure of Alternatives B1, B2, B3, B4 and E to comply with NERC and CAISO reliability standards, and work that would be necessary to do so if the Commission were to select this Alternative. Exhibit 8 (Corrected CAISO Opening Testimony-Sparks at 15-16). To comply with CEQA, this information must be included in the FEIR and the environmental impacts of these reasonably expected actions be compared to the SOCRE Project's impacts.

With respect to Alternative D, the Commission's selection of such Alternative would not mitigate the NERC violations identified in Exhibit 4 (Corrected Supplemental Testimony, Chapter 5, Section 4.B). As explained in SDG&E's Corrected Supplemental Testimony:

Furthermore, the connection to SCE at Prima Deshecha Landfill would not remove all NERC violations without additional upgrades. For the overlapping outage of TL13831 and TL13834, TL13833 will load above its Applicable Rating when load rises above 450 MW. The 2015 load forecast shows this happening as early as 2016. For the overlapping outage of TL13834 and TL13838, TL13833 will load above its Applicable Rating when load rises above 482 MW. The 2015 load forecast shows this happening as early as 2021. These scenarios are violations of NERC standard TPL-003-0b. To avoid a violation, the new TL13833 rating needed will exceed 1200 Amps.

Exhibit 4 (Corrected Supplemental Testimony, Chapter 5, Section 4.B). As a result, "SDG&E will need to upgrade TL13833 to meet NERC reliability standards. Exhibit 4 (Corrected Supplemental Testimony, Chapter 5, Section 5). The CAISO also identified the failure of Alternatives C1, C2 and D (all of which interconnect with SCE) to comply with NERC and CAISO reliability standards, and work that would be necessary to do so if the Commission were to select this Alternative. Exhibit 8 (Corrected CAISO Opening Testimony-Sparks at 16-18). This does not include Reliability Upgrades necessary to mitigate the impact of the SCE interconnection on the electric grid. To comply with CEQA, this information must be included in the FEIR and the environmental impacts of these reasonably expected actions be compared to the SOCRE Project's impacts.

With respect to Alternative F, the Commission's selection of such Alternative would not mitigate the NERC violations identified in Exhibit 5 (Corrected Rebuttal Testimony, Chapter 5, Section 3). As explained therein:

SDG&E's power flow analysis found that connecting a 230 kV line to a rebuilt RMV Substation does not meet the project objectives and is at the wrong location for a 2nd 230 kV connection to South Orange County.

In fact, a single 230/138 kV transmission line between RMV Substation and Talega Substation, as proposed by DEIR Alternative F, would not remove violations of all

NERC Category C contingencies. By 2025, South Orange County peak load is expected to exceed 500 MW. The overlapping outage of TL13833 and TL13838 (Category C.3) will result in TL13834 and TL13816 exceeding emergency ratings. Following the outage of TL13833 (or TL13838), non-consequential load will have to be shed (deliberately disconnected) to prepare for the outage of TL13838 (or TL13833). Neither NERC TPL-001-4, nor its predecessors TPL-003-0b and TPL-002-0b, allow non-consequential load to be shed following a single transmission line outage. This situation will get worse. When South Orange County load grows to over 535 MW, assumed to be the year 2030, along with the violation identified in year 2025, TL13838 will be at its emergency limit for the overlapping outage of TL13836 and TL13846.

Exhibit 5 (Corrected Rebuttal Testimony, Chapter 5, Section 3). These lines would have to be upgraded to comply with NERC standards. Exhibit 5 (Corrected Rebuttal Testimony, Chapter 5, Section 9). The CAISO also identified the failure of Alternative F to comply with NERC and CAISO reliability standards, and work that would be necessary to do so if the Commission were to select this Alternative. Exhibit 8 (Corrected CAISO Opening Testimony-Sparks at 18-20). To comply with CEQA, this information must be included in the FEIR and the environmental impacts of these reasonably expected actions be compared to the SOCRE Project's impacts.

The CAISO also identified the failure of Alternative G to comply with NERC and CAISO reliability standards, and work that would be necessary to do so if the Commission were to select this Alternative. Exhibit 8 (Corrected CAISO Opening Testimony-Sparks at 20-21).

The RDEIR's newly added Alternative J, the Trabuco Alternative, also fails to comply with the mandatory NERC reliability standards. Assuming that it is feasible to timely construct a 230/138/12 kV substation on the space allotted by Alternative J, which it is not, SDG&E would reasonably expect to undertake, or seek authorization to undertake, additional projects to allow SDG&E to comply with such standards. SDG&E discusses all of the flaws of Alternative J in Section V below, and those flaws are specifically addressed in Exhibit 6 (SDG&E's Second Supplemental Testimony, Chapter 4).

C. The DEIR's and RDEIR's Elimination of the Project Objective to Rebuild the Aging Capistrano Substation Causes an Inaccurate Assessment of Alternatives' Attainment of This Basic Project Objective, Reasonably Expected Actions Under the Alternatives, and the Alternatives' Reasonably Expected Environmental Impact.

The DEIR changed SDG&E's Project Objective of "Rebuild Capistrano Substation to replace aging equipment and increase capacity" to "Replace inadequate equipment at Capistrano Substation."⁶ But it is physically impossible to replace the inadequate equipment and increase capacity at Capistrano Substation without rebuilding it.

Section 15126.6(e)(2) of the CEQA Guidelines requires an environmental impact report to discuss "what would be reasonably expected to occur in the foreseeable future if the project were not approved." This is necessary to "allow meaningful evaluation, analysis, and

⁶ DEIR at 1-8.

comparison with the proposed project” and to “foster meaningful public participation and informed decision making.” 14 Cal. Code Regs. § 15126.6(d), (f).

The RDEIR discussion of Alternatives repeatedly states that, under such Alternatives, Capistrano Substation will not be expanded, by which the RDEIR means it will not be rebuilt as no environmental impacts are attributed to rebuilding Capistrano under these Alternatives. These statements do not reflect what is reasonably expected to occur in the foreseeable future. As SDG&E repeatedly has informed Energy Division in response to data requests and as set forth in Exhibit 3 (SDG&E Corrected Opening Testimony, Chapter 5), Exhibit 4 (Corrected Supplemental Testimony, Chapter 3, Section 3), Chapter 4, Section 3, Chapter 5, Section 4), Exhibit 5 (Corrected Rebuttal Testimony, Chapter 5, Section 8, Chapter 8, Section 7, Chapter 9, Section 7), and Exhibit 6 (Corrected Second Supplemental Testimony, Chapter 4, Section 6) (all of which was served previously on Energy Division), under all Alternatives to the SOCRE Project, the 138/12kV substation at Capistrano would still need to be rebuilt to provide reliable electric service to SDG&E’s customers served by that substation, primarily in the City of San Juan Capistrano. SDG&E has a legal obligation to provide reliable electric service, and rebuilding Capistrano Substation, at least as a 138/12 kV substation, is a reasonably anticipated action under all Alternatives as well as under the SOCRE Project. As set forth in the above testimony, many of the Alternatives would require expansion of the Capistrano Substation’s 138 kV yard to accommodate a new 138kV line to Capistrano.

Instead of fully informing the Commission and the public of environmental impacts that are reasonably expected to occur from rebuilding Capistrano Substation as is reasonably foreseeable under any of the Alternatives, the DEIR and the RDEIR instead recognize the reality but improperly do not consider the impacts. Both the DEIR and RDEIR state that “if equipment at Capistrano Substation ... fail or would be inadequate to serve customer demand, it is anticipated that the applicant would replace the equipment or facilities pursuant to CPUC General Order 131-D”⁷ Noting the General Order 131-D exemption for substation modification projects within existing boundaries, the DEIR and the RDEIR state that “it is reasonably foreseeable that substation and power line work allowed by General Order 131-D without CPUC approval could occur”⁸ Yet, the DEIR and RDEIR fail to discuss the reasonably foreseeable environmental impacts of such reasonably expected actions in the discussion of the Alternatives’ environmental impacts. This leads to the false impression that those Alternatives can avoid those impacts, which results in their comparing favorably against the SOCRE Project based on a fiction. Unless the FEIR corrects this flaw, the failure to analyze and disclose these reasonably foreseeable environmental impacts resulting from the various alternatives would violate CEQA and deny the decision-makers the full and complete information they deserve and, indeed, require.

⁷ RDEIR at 2-5; DEIR at 3-4.

⁸ RDEIR at 2-6; DEIR at 3-5.

III. Any Significant Project Impact To Cultural Resources Can Be Avoided By Modifying The Reconstruction of the Existing Utility Building.

A. The RDEIR Finds the SOCRE Project Will Have a Significant Impact on a Potential Historic Resource.

SDG&E's Capistrano Substation includes a "1918-constructed building that fronts Camino Capistrano" (an existing utility structure) that the Commission-retained consultant along with two other qualified consultants found not eligible for listing on the NRHP, and thus not an "historical resource" under CEQA. The DEIR concluded that the structure was not an "historic resource" under CEQA, thus the proposed demolition of it as part of the SOCRE Project was not a significant impact.

Several months after the DEIR was released, however, the State Historic Resources Commission (SHRC) recommended that the Keeper of the NRHP find that the existing utility structure is eligible for listing on the NRHP despite SDG&E's objections. The SHRC's recommendation was forwarded to the Keeper of the NRHP on July 17, 2015.

When SHRC determines an historical resource eligible to be listed in the NRHP, the resource receives the same level of consideration under CEQA as if it were actually listed on the Historic Register. Thus, if the utility structure is determined eligible for the NRHP, it will be treated as a historic resource under CEQA. Cal. Pub. Res. Code §21084.1. Based on the SHRC recommendation, the August 2015 RDEIR assumed that the structure would be determined to be eligible for listing on the NRHP and therefore that demolishing "the former utility structure would be considered a significant impact under CEQA."⁹

SDG&E, however, on August 20, 2015, submitted its objection to the proposed determination of eligibility for listing on the NRHP to the Keeper. On September 22, 2015, SDG&E received an "Evaluation/Return Sheet" from the Keeper. That sheet states that the SHRC "request for Determination of Eligibility is being returned for substantive and technical revision," and that, "[i]t is our opinion that the building is eligible for inclusion in the NRHP under Criterion A, but that the documentation submitted is inadequate to fully support this finding and fails to address significant questions brought up by [SDG&E]." See Exhibit 9. Thus, the Keeper of the NRHP declined to make a determination of eligibility of the existing utility structure for listing on the NRHP, and instead returned the nomination to the SHPO for substantive and technical revisions before any final decision can be made. In particular, the Keeper found that the nomination did not include an adequate analysis of the integrity of the original substation complex of which the utility structure was a part.

As a result of the Keeper's return of the SHRC recommendation, the existing utility structure currently has not been found eligible for listing on the NRHP, and thus its demolition would not be a significant impact to a historical resource under CEQA. However, although the Keeper declined to accept the SHRC recommendation, it offered SHRC the opportunity to amend its nomination. Notwithstanding that the Keeper has now declined to make a

⁹ RDEIR at 2-97.

determination of eligibility based on the inadequacy of the nomination, SDG&E has nonetheless elected to provide a Capistrano Preservation Alternative. This provides the EIR with the alternative that CEQA requires – providing an alternative that would reduce the impact to the potential historical resource (i.e., the existing utility structure) to less than significant by preserving it in conformance with the SOI Standards. *See* 14 Cal Code Regs. §§15064.5(b)(3), 15126.4(b)(1). It also provides the information required for the Commission to choose how best to address this issue, depending upon the status of the existing utility structure at the time of the Commission’s decision.

B. CEQA Requires That A Lead Agency Explore Ways to Mitigate Or Avoid Any Significant Impact to Cultural Resources.

SDG&E can avoid any significant impact that may otherwise result from demolishing the utility structure by adopting an alternative that preserves the existing utility structure in accordance with the SOI Standards. Yet the RDEIR identifies a significant impact to the potential historical resource, without exploring ways to avoid or mitigate that impact other than changing the proposed electrical solution for SOC.

Where a project would materially impair an historical resource, the EIR’s “reasonable range of alternatives” should include at least one feasible preservation alternative (unless none exists). Under the CEQA Guidelines, a lead agency must identify potentially feasible measures to mitigate significant adverse changes to the significance of a historical resource. 14 Cal Code Regs. §15064.5(b)(4). Here, if the Keeper ultimately finds that the existing utility structure is eligible for listing on the NRHP, demolition of the utility structure would constitute a significant adverse change to the significance of an historical resource, as the RDEIR recognizes. A discussion of ways to avoid or mitigate that impact therefore is required.

An impact to an historical resource is mitigated to a less than significant level if the mitigation or project alternative follows the SOI Standards. 14 Cal Code Regs. §§15064.5(b)(3), 15126.4(b)(1). Under CEQA, effects on historical resources found in conformance with the SOI Standards are generally considered less than significant, as provided in CEQA Guidelines §15064.5(b)(3). The SOI Standards are a “benchmark” for determining whether a project will have a significant adverse impact. A measure requiring that a historic structure be rehabilitated in accordance with the SOI Standards is presumed sufficient to ensure that the impacts of reuse of the resource will be adequately mitigated. *Citizens for a Sustainable Treasure Island v. City & County of San Francisco* (2014) 227 Cal. App. 4th 1036, 1066.

Following the SHRC determination regarding the existing utility structure, SDG&E identified and retained a historic preservation consulting firm, Chattel, Inc., to determine what would be necessary to avoid significant impact to the existing utility structure, assuming the Keeper finds that the structure is eligible for NRHP listing. In coordination with Chattel, Inc., SDG&E has developed a plan to avoid a significant impact to the existing utility structure in accordance with the SOI Standards. This “Capistrano Preservation Alternative” resolves the RDEIR’s deficiency in failing to propose mitigation or alternatives for the significant impact it identified. The FEIR may and should include the Capistrano Preservation Alternative, set forth in Exhibit 1, incorporated by reference as if fully set forth herein.

Based upon Chattel Inc.'s recommendations, if the Keeper finds the structure eligible for NRHP listing, SDG&E could, and if authorized by the Commission, would construct its project in a manner that avoids significant impact to the existing utility structure.

C. With a Modification, SDG&E'S SOCRE Project Can Be Built Without Significant Impact to the Existing Utility Structure.

In accordance with Chattel, Inc.'s recommendations and in conformance with the SOI Standards, SDG&E has developed the "Capistrano Preservation Alternative." The Capistrano Preservation Alternative would rehabilitate the west wing of the existing utility structure in conformance with the SOI Standards and remove the east wing of the structure (located away from Camino Capistrano, which is less visible from the street and has less architectural detail). By reducing the ultimate distribution capacity of the proposed rebuilt Capistrano Substation from 120 MVA to 90 MVA, the proposed 230/138/12 kV substation could be constructed within SDG&E's existing property. This modification would reduce the number of distribution 138/12kV transformers, 12kV switchgear sections and 12kV capacitors from four to three each. All other elements of the Capistrano Preservation Alternative (new 230kV transmission lines, 138kV power line relocations and undergrounding west of the Capistrano Substation site, and 12kV distribution line relocations) would be the same as the SOCRE Project.

To incorporate the retained portion of the existing utility structure into the rebuilt Capistrano Substation, the Capistrano Preservation Alternative modifies the design, specifications, and layout of the substation compared to the Capistrano Substation design included in the project as originally proposed. The primary modification to the substation design is a reduction in the size of the rebuilt 138/12 kV substation located on the "lower pad" portion of the substation site. The substation site plan for the Capistrano 230/138/12kV Substation under the Capistrano Preservation Alternative is Confidential Attachment A to Exhibit 1.

Substation design modifications in this alternative include:

- Replacing the existing earthen mounds, vegetation and trees along the western edge of the property (between Camino Capistrano and the existing utility structure) with landscaping that returns the existing utility structure's setting to an earlier appearance.
- The substation grade would be raised approximately five feet to accommodate vehicles carrying equipment, requiring building an approximately five-foot tall retaining wall parallel to the northern and eastern walls of the existing utility structure. The retaining wall would be set back a minimum of five feet from the existing utility structure walls, providing a personnel accessway on these sides of the building.
- A masonry wall would be built on the western perimeter of the substation (along Camino Capistrano). It would be approximately 10 feet tall on the inside of the substation and when would vary from approximately 12 feet to 15 feet in height viewed from the exterior, since the substation grade behind the wall is raised by approximately five feet. The lower approximately five feet is the retaining wall, which would be coupled with an upper approximately 10 feet of masonry wall to collectively serve as the substation

security and screen wall. The northern and southern perimeter walls would remain at approximately 10 feet in height, identical to the project as originally proposed.

- The security screen wall would abut the existing utility structure on the north and south sides, terminating approximately four inches from the structure, and creating separation between the existing utility structure and the western perimeter wall.
- The southern and western walls of the retained portion of the existing utility structure would be located outside of the secured substation facility and would be visible from Camino Capistrano. The northern and eastern walls of the existing utility structure would effectively act as part of the substation security wall.
- New steel replacement doors would be installed in the southern, eastern and northern walls of the existing utility structure and would replace the existing doors at these locations. The northern and eastern doors would serve as part of the security wall.
- A driveway access to the existing utility structure would be constructed from the main substation access drive to the structure's southern door.
- The southern driveway's vehicle access gate to the rebuilt Capistrano Substation would be set back approximately 80 feet from Camino Capistrano.
- The northern driveway's access gate would remain (similar to the SOCRE Project) set back approximately 35 feet from Camino Capistrano.
- The northern and southern vehicular access gates would be approximately 30 feet in width, each comprised of a pair of black wrought iron sliding gates, each approximately 15 feet in width.
- Grading and the phased site development, including cut and fill, would be similar to that of substation design for the project as originally proposed.

The west wing of the existing utility structure itself would be retained and rehabilitated per the SOI Standards. The east wing would be removed to provide adequate room for redevelopment of the substation. The northern and eastern walls of the retained portion of the existing utility structure would serve as part of the security wall of the substation, and would only be entered from the exterior (which would be inside the substation security wall). Proposed modifications to the existing utility structure include:

- East Wing Demolition – 12 inches of roof and walls would be retained at the point where the east wing intersects the west wing of the existing utility structure. This work is designed to allow the remaining portion of the roof and wall visually to read as a “ghost” of the east wing once it is removed.
- West Wing Rehabilitation:

- Western Wall –The exterior wall where earthen mounds are to be removed would be repaired and waterproofed. The concrete wall iron jacking would be repaired at locations where steel rebar is exposed at western interior wall. Window rehabilitation would include removal of existing glazing, repairing existing sash and frames, and reglazing with like-kind translucent wire glass. Security bars on all windows would be installed on the interior.
- Northern Wall – Deteriorated, non-original doors, sidelights, and transom window would be replaced to match the original. Doors, sidelights and transom would be constructed of steel rather than wood for increased security. Due to lack of visibility from the street, it is not proposed to include glazing, but rather this door assembly would be constructed exclusively of steel following the original pattern. The northern wall and replacement door would serve as part of the security wall of the substation and would only be accessed from the exterior (i.e., from within the substation).
- Eastern Wall –The interior door at the location of demolished east wing would be replaced with a new exterior door to match the original, but designed for exposure to the elements. Due to the lack of visibility from the street, it is not proposed that glazing be included in either the new exterior door or existing windows, but rather for these assemblies would be constructed exclusively of steel following the original pattern. The eastern wall, windows and replacement door would serve as part of the security wall of the substation and would only be accessed from the exterior (i.e., from within the substation).
- Southern Wall – Deteriorated, non-original doors, sidelights, and transom window would be replaced to match the original. Doors, sidelights and transom would be constructed of steel rather than wood for increased security. Due to the visibility from the street, it is proposed to include translucent wire glass at the transom only, but otherwise the new door assembly would be constructed of steel following the original pattern. Where glazing occurs at the transom, security bars would be installed on the interior.
- Interior Window Sills - Damage to concrete would be repaired at windows sills where water infiltration has occurred.
- Interior Crane – The moveable crane would be retained.
- Lighting - Development and implementation of a lighting plan would include exterior wall sconces on the north and south walls. Such exterior wall sconces would operate manually.

To ensure conformance with the SOI Standards through final design and construction, SDG&E would retain a qualified professional historic architect meeting the Secretary of the Interior’s Professional Qualifications Standards to monitor those activities. SDG&E also would prepare Historic American Building Survey (HABS) photographic documentation for the existing utility structure before the east wing is removed.

Chattel, Inc. concluded that these measures would further reduce the Capistrano Preservation Alternative's already less-than-significant impacts on the utility structure (assuming the utility structure qualifies as an historic resource).

D. The Capistrano Preservation Alternative Achieves SDG&E's Project Objectives

Unlike the other alternatives in the RDEIR, SDG&E's Capistrano Preservation Alternative achieves SDG&E's fundamental project objectives despite requiring reduction in the ultimate distribution capacity of the rebuilt Capistrano Substation. If the Keeper determines that the existing utility structure is a historic resource, the reduction in ultimate distribution capacity is an acceptable trade-off for its preservation. Even as modified, SDG&E's Capistrano Preservation Alternative remains the best way to address reliability concerns in South Orange County other than the SOCRE Project.

SDG&E's Capistrano Substation is within a mile of the load center for South Orange County, thus "placing the second 230 kV source there negates the need to upgrade SDG&E's 138 kV lines in South Orange County within the current ten-year planning window, and for some time thereafter." Exhibit 6 (Second Supplemental Testimony, Chapter 2, Section 3).

As discussed, the Capistrano Substation must be rebuilt if SDG&E is to provide reliable electric service to its South Orange County customers. The 60-year-old Capistrano Substation needs to be rebuilt for many reasons: (i) to upgrade its current bus configuration to a more reliable configuration; (ii) to replace deteriorating infrastructure and equipment near the end of their useful life; (iii) to meet current seismic, safety and security standards; and (iv) to allow the 12 kV ties with neighboring substations that increase the reliability of the overall system, among other reasons. Expanding Capistrano Substation to include a 230 kV substation on existing substation property during the required rebuild is cost-effective, along with placing the second 230 kV source at the appropriate location.

Modifying SDG&E's SOCRE Project to preserve the existing utility structure and thereby reduce Capistrano's ultimate distribution capacity achieves SDG&E's project objectives to rebuild Capistrano to replace aging equipment and increase capacity, improve transmission and distribution operating flexibility, and accommodate customer load growth.

- A new substation can be built on the Capistrano property without compromising the reliability of the existing substation during construction or placing construction personnel at risk;
- The new substation will facilitate SDG&E's long range transmission and distribution's forecasted 10 year planning needs to serve its customers; and
- The new substation would comply with SDG&E's current operating and reliability criteria and seismic and safety design requirements.

Currently, Capistrano Substation 138/12 kV transformer loading is at 85% capacity at peak. When customer load exceeds the current capacity, the existing substation cannot accommodate the required amount of additional transformers. High transformer loading at

Capistrano also limits its ability to support neighboring substations via 12 kV circuit ties, thereby limiting flexibility in distribution line equipment and substation transformer outages.

In the Capistrano Preservation Alternative, rebuilding the entire Capistrano substation will allow for expansion from the existing 60 MVA substation to an ultimate 90 MVA substation. This additional capacity will allow for future load increases and for load transfers from neighboring substations into the new Capistrano Substation when needed during the near future. Simply replacing equipment in kind will not allow room for the expansion necessary for a more reliable configuration or to allow an additional transformer and its 12kV switchgear and capacitor to be installed without deviating from SDG&E reliability criteria. Unless Capistrano Substation is fully rebuilt, the capacity of the existing substation cannot be increased.

The preservation of the existing utility structure in the Capistrano Preservation Alternative will not affect the reliability improvements at Capistrano Substation; rather, reliability will increase because the new substation will be rebuilt to SDG&E's current operating and reliability standards. Operational flexibility also will increase through creating the additional 12 kV bus tie. When operating a substation with three distribution transformers, SDG&E typically connects two transformers to one bus and the third transformer to another 12kV bus. These two busses are separated by an open 12kV bus tie. There is an additional bus tie between the two transformers that normally is closed, but also has the flexibility of opening in case of a bus fault or other failure that requires sectionalizing the transformers from each other. This results in limited load loss and the flexibility to isolate the problem.

Even though the Capistrano Preservation Alternative reduces the ultimate distribution capacity of the rebuilt Capistrano Substation to 90 MVA from 120 MVA, with three transformers rather than four, it still provides the capacity required for the 10-year distribution planning horizon. The addition of a third transformer allows for planned load growth as well as creating redundant capacity to offload circuits in nearby substations Trabuco and Laguna Niguel in the event of equipment outages at those sites. It also increases the short-term operating flexibility and reliability through adding an additional 12kV bus tie, further sectionalizing outage impacts caused by 12kV bus faults at Capistrano.

Whereas the project as proposed would install a fourth 138/12kV distribution transformer at Capistrano in the future to create capacity for future circuit expansion, also known as "ultimate capacity," the Capistrano Preservation Alternative would not have that ability. That is the major difference between the two projects. The project as originally proposed would not immediately require ultimate capacity and would not install it, but future load growth and/or expansion outside of the 10-year planning horizon could require it. Both Laguna Niguel and Trabuco (the substations adjacent to Capistrano) are built out to their ultimate four-transformer capacity already. Therefore, adopting the Capistrano Preservation Alternative rather than the SOCRE Project means that at some time beyond the 10-year planning horizon sufficient continued load growth will require an expansion of Capistrano Substation beyond its current fence-line, or construction of a new substation at a new location.

IV. The SOCRE Project Does Not Have Significant Impacts To Biological Resources Or Any Associated Land Use Impacts.

A. The RDEIR Erroneously Finds A Potential Conflict Between The Project And Certain Conservation Easements.

The RDEIR's conclusion that the SOCRE Project may have significant impacts on Biological Resources and Land Use and Planning is based on a mistaken reading of SDG&E's NCCP/HCP. The RDEIR recognizes that SDG&E is governed by its NCCP/HCP rather than by the Orange County Southern Subregion Habitat Conservation Plan (Orange County HCP), and recognizes that certain areas traversed by the SOCRE Project may be considered "preserve areas" under SDG&E's NCCP/HCP.¹⁰ Preserve areas include existing reserve or conservation areas established by regional planning documents such as the Orange County HCP.¹¹ The RDEIR notes that the SOCRE Project would traverse through several areas that may be considered preserve areas, including an area subject to a conservation easement at Orange County's Prima Deshecha Landfill preserved as mitigation under the Orange County HCP, and a yet-to-be recorded proposed conservation easement in the Talega Corridor.¹²

Based on these observations, the RDEIR assumes a "significant" conflict with respect to Biological Resources.¹³ The DEIR had found that SDG&E's NCCP/HCP, which provides a process for determining mitigation in preserve areas, plus proposed Mitigation Measure BR-10, which requires coordination with local jurisdictions, mitigated any conflict with HCPs, NCCPs or other such plans to less than significant levels. The RDEIR, however, concluded that the SOCRE Project "may conflict with" the Talega Conservation Easement (unrecorded) and the Prima Deshecha Landfill Conservation Easement (recorded), both of which were or are being established within the Orange County HCP, and thus would be considered preserve areas under the SDG&E NCCP/HCP.¹⁴ Despite the NCCP/HCP and its Implementing Agreement with the USFWS and the California Department of Fish and Wildlife (CDFW), which make clear that the NCCP/HCP fully mitigates all potentially significant biological impacts,¹⁵ the RDEIR nonetheless concludes that:

Potential conflicts with the Talega Conservation Easement cannot be determined until the easement is recorded and the applicant conducts further consultation with the USFWS regarding the applicant's existing ROW, the establishment of new ROW, and the potential use of ground disturbing construction techniques within the Talega Conservation Easement. Much of the proposed project in the Talega Corridor would lie within the boundaries of the Talega Conservation Easement.¹⁶

¹⁰ RDEIR at 2-138.

¹¹ RDEIR at 2-138.

¹² RDEIR at 2-46.

¹³ RDEIR at 2-75.

¹⁴ RDEIR at 2-77.

¹⁵ Exhibit 6 (Second Supplemental Testimony, Attachment 44, NCCP/HCP at 102).

¹⁶ RDEIR at 2-77.

As discussed further herein, the RDEIR should have noted that most of the SOCRE Project in the Talega Corridor is located within SDG&E right-of-way as part of an SDG&E easement recorded more than 50 years ago -- whereas the proposed Talega Conservation Easement has yet to be recorded and will be subject to SDG&E's prior recorded easement when it is recorded. Thus, parties reviewing and entering into the proposed Talega Conservation Easement have full knowledge of the existence of SDG&E's Talega Corridor transmission lines as well as of the potential for new SDG&E facilities in that area. Indeed, owners of properties to be traversed by the SOCRE Project received notice of this Application and the SOCRE Project.

Nonetheless, as set forth below, SDG&E has further refined the SOCRE Project to keep all permanent structures that would be within the proposed boundaries of the Talega Conservation Easement within SDG&E's existing right-of-way (ROW). SDG&E has held further consultation with USFWS, as requested by USFWS and contemplated by SDG&E's NCCP/HCP, and reached agreement that any remaining impacts from work outside of SDG&E's ROW, and within the proposed Talega Conservation Easement (for temporary string sites, for example), will be mitigated to below a level of significance. *See* Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 4).

Regarding potential impacts of the SOCRE Project on the Prima Deshecha Landfill Conservation Easement, the RDEIR states:

Potential conflicts with the Prima Deshecha 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. A small part of the proposed project crosses through this easement. The CPUC is in the process of gathering additional information pertaining to the boundaries and allowable uses in each easement. Based on recent discussions with the USFWS, establishing new ROW or impacting areas outside of the applicant's existing ROW and within the boundaries of the conservation easement(s) would conflict with both conservation easements, resulting in a significant impact (Snyder 2015).¹⁷

When SDG&E met USFWS on September 11, 2015, USFWS agreed that the minimal impacts of the SOCRE Project within the Prima Deshecha Landfill Conservation Easement and outside of SDG&E's existing right-of-way are less than significant.

The RDEIR goes on to state that the USFWS comment to the DEIR (USFWS DEIR Comment) indicates that establishing new ROW within the Talega Conservation Easement or impacting areas of the Prima Deshecha Landfill Conservation Easement that are outside of the applicant's existing ROW "would directly conflict with the provisions of the aforementioned conservation easement(s),"¹⁸ and in the meantime until further information is gathered the impacts should be treated as "significant and unavoidable."¹⁹ That is a mischaracterization of the USFWS DEIR Comment. The USFWS did not say the impacts should be treated as significant,

¹⁷ RDEIR at 2-77.

¹⁸ RDEIR at 2-77.

¹⁹ RDEIR at 2-77.

only that additional consultation was requested with the goal of avoiding potential impacts or otherwise addressing the impacts.²⁰ And that is exactly what already has and will continue to occur, pursuant to SDG&E's NCCP/HCP, as is further discussed below.

Based on its erroneous conclusion that a significant impact to biological resources may exist, the RDEIR compounds its mistake by improperly stating in Impact LU-3 that "Conflict with any applicable habitat conservation plan or natural community conservation plan" is significant and that there may be just such a conflict here. That is not the case. The relevant binding agreements make clear that there are no significant impacts to biological resources resulting from the SOCRE Project, or any conflict with the Orange County HCP. Thus, there is no conflict between the SOCRE Project and the conservation easements and thus no significant and unmitigated land use impact, either.

B. SDG&E's NCCP/HCP and Associated Implementing Agreement Mitigate All Impacts to Biological Resources To Below A Level Of Significance.

In 1995, SDG&E, USFWS and CDFW entered into a long-term agreement for the preservation and conservation of biological resources, resulting in SDG&E's NCCP/HCP and the associated Implementing Agreement. SDG&E's NCCP/HCP allows SDG&E to develop, install, maintain, operate, and repair its gas and electric facilities within nearly all of its service territory in San Diego County and portions of Orange and Riverside Counties, to provide reliable utility service to its customers while reducing any potential impacts on the environment to the extent feasible. SDG&E prepared its HCP following the NCCP approach authorized by the Federal Endangered Species Act (ESA), the California Endangered Species Act (CESA) and California's NCCP Act. The NCCP/HCP complies with the ESA and CESA, and is designed to authorize take, if necessary, of species and habitat, as identified and described in the NCCP/HCP (these species are referred to as "covered species" in the NCCP/HCP documentation).

The NCCP/HCP was created to protect and preserve natural resources within SDG&E's service territory, while reducing and streamlining the regulatory processes typically involved with the operation, maintenance, and typical expansion of the existing gas and electric systems within SDG&E's service territory. Implementing the NCCP/HCP provides assurance to SDG&E, the USFWS, and the CDFW that all covered species (identified in the Plan) and their habitat would be protected as if they were listed under the ESA or CESA. It also provides assurance that avoidance and minimization measures that have been previously identified within the NCCP/HCP would not be subject to modifications during the term of the Implementing Agreement. The NCCP/HCP and Implementing Agreement continue in force today.

The NCCP/HCP and the Implementing Agreement set forth the steps to be followed when evaluating any impacts from SDG&E's transmission line activities to biological resources, including those that may occur when a new or existing transmission line runs through a Preserve in which conservation easements are in place. The NCCP/HCP and Implementing Agreement require SDG&E to avoid impacts to biological resources where feasible and, for impacts that

²⁰ Exhibit 6 (Second Supplemental Testimony, Attachment 45, USFWS DEIR Comment at 2).

cannot be avoided, to mitigate those impacts.²¹ They require that the USFWS and the CDFW find that SDG&E's compliance with the protocols and mitigation ratios of the NCCP/HCP equate to full mitigation of any impacts to biological resources resulting from a new or existing transmission line, even where the line runs through a conservation easement in a Preserve.

The USFWS and CDFW adopted the SDG&E NCCP/HCP to set forth the mitigation required when SDG&E must work on existing transmission lines and when it expands or modifies its transmission lines. It is meant to cover exactly the situation at issue here. The NCCP/HCP makes clear that it and the associated Implementing Agreement are meant to fully describe the mitigation measures required to ensure that any impacts to biological resources or to conservation easements within the Subregional Plan Area are mitigated to less-than-significant levels through compliance with the NCCP/HCP and its Implementing Agreement, and that no additional mitigation will be required.

In relevant part, the NCCP/HCP explains that:

This Subregional Plan will cover all of SDG&E's Activities conducted within the area described in Figure 3 (Subregional Plan Area)

SDG&E, USFWS, and CDFG have ... entered into a long term Implementing Agreement which describes the legal rights and obligations of such parties regarding the implementation and maintenance of this Subregional Plan. The Implementing Agreement authorizes SDG&E to conduct its Activities within the Subregional Plan Area provided the same are performed in conformity with this Subregional Plan. ... Finally, the Implementing Agreement will provide assurances by USFWS and CDFG that, absent Unforeseen Circumstances, the terms of conditions of SDG&E's Activities authorization and Permits including, but not limited to, the required mitigation measures, will not change during the term of the Implementing Agreement.²²

Because the NCCP/HCP also contemplated exactly the situation that exists here, nothing is left uncertain as to the significance of potential impacts, in contrast to what the RDEIR concludes. Section 6 of the NCCP/HCP was created to, as its title says, address "SDG&E Activities Within Habitat Conservation Plan Preserves."²³ The NCCP/HCP recognizes that SDG&E activities:

[I]nclude the maintenance, repair, and replacement of existing Facilities as well as the installation, maintenance, repair, and replacement of new Facilities. Existing Facilities are and new Facilities may be expected to be, in part, located within established Preserve Areas of Habitat Conservation Plans (HCPs), state, federal,

²¹ Exhibit 6 (Second Supplemental Testimony, Attachment 44, NCCP/HCP at 3).

²² Exhibit 6 (Second Supplemental Testimony, Attachment 44, NCCP/HCP at 3).

²³ Exhibit 6 (Second Supplemental Testimony, Attachment 44, NCCP/HCP at 98).

or local preserve areas including public and private lands or other areas set aside for the protection of plants and animals.²⁴

Section 6 of the NCCP/HCP then goes on to set out the parties' agreement that will be adhered to for SDG&E transmission lines (existing or new) that occur or may occur in preserve areas and, as further described below, SDG&E has followed those agreements and is in full compliance with the NCCP/HCP and Implementing Agreement, hence there can be no conflict between the SOCRE Project and either an existing or a proposed conservation easement within the Orange County HCP.

C. USFWS Did Not And Could Not Urge the EIR To Consider The Project's Impacts To Biological Resources Significant and Unmitigated.

Although the USFWS does request consultation in its comment letter to the DEIR, it only requests consultation so that it can be confident that SDG&E is avoiding biological resource impacts where feasible, and minimizing them where they cannot be avoided. This already is required by the NCCP/HCP and will be done. The USFWS does not in its comment letter, or otherwise, urge that the EIR change its conclusions to assume impacts to biological resources or land use will be significant and unmitigated until consultation occurs, nor could it take such a position.²⁵

In relevant part, the Implementing Agreement states that, where USFWS or the CDFW participate in evaluating potential environmental impacts of any proposed SDG&E activity in the Subregional Plan Area (which includes the area of the proposed SOCRE Project) under CEQA:

USFWS and CDFG will not require, recommend, or request the imposition of any additional or more stringent protective or mitigation measures directed at the protection or conservation of the Covered Species or their habitats than required in this [Implementing] Agreement, the Take Authorizations or the [NCCP] Subregional Plan,²⁶

The SOCRE Project is an SDG&E "Activity" within the Subregional Plan Area being evaluated under CEQA and does not entail "Extraordinary Circumstances." As a result, there are no significant unmitigated impacts to biological resources and there cannot be under the terms of the NCCP/HCP and its Implementing Agreement. Moreover, the Implementing Agreement also confirms that "the provisions of any Habitat Conservation Plan ... the boundaries of which fall within any part of the [SDG&E] Subregional Plan Area shall not be binding upon, govern or have any force or effect upon the performance of any Activities conducted by SDG&E"

Thus, for the RDEIR to find a significant unmitigated impact where SDG&E is performing an Activity for a Facility in the Subregional Plan Area, and/or otherwise conclude that the Orange County HCP impairs SDG&E's ability to repair or replace its existing

²⁴ Exhibit 6 (Second Supplemental Testimony, Attachment 44, NCCP/HCP at 98).

²⁵ Exhibit 6 (Second Supplemental Testimony, Attachment 45, USFWS DEIR Comment at 2).

²⁶ Exhibit 6 (Second Supplemental Testimony, Attachment 44, Implementing Agreement, §6.11, at p. 21).

transmission lines or install new ones in this location, would violate both the NCCP/HCP and its Implementing Agreement. The FEIR must therefore be corrected to confirm that, by following the terms of the NCCP/HCP and its Implementing Agreement, SDG&E has mitigated all impacts to biological resources to a less-than-significant level.

D. SDG&E’s SOCRE Project Falls Under NCCP/HCP Section 6.1, Because It Replaces an Existing 138 kV Line with a 230 kV Line, Thus No Further Consultation Is Required.

Section 6.1 of the NCCP/HCP states that “[w]ithout further authorization from USFWS or CDFG, SDG&E may conduct all necessary maintenance, repair, and replacement Activities with respect to all existing Facilities which are now or may hereafter be located within a Preserve Area of an HCP, if conducted in accordance with the provisions of this Subregional Plan.” “Activities” is defined to mean “all current and future activities of SDG&E, arising out of or in any way connected with the siting, (including any site assessment, surveying, testing, or planning), design, installation, construction, use, maintenance, repair and removal of Facilities within the Subregional Plan Area”

Although the CPUC considers the increase in voltage capacity a “new” project for its purposes, biological resources are not affected by the voltage of the line. At least arguably, then, given that the bulk of the work for the SOCRE Project is in the existing right-of-way, no further consultation with or authorization from USFWS and CDFW is required, since the “Activities” in the preserve areas are the replacement of one of SDG&E’s existing “Facilities.” As recognized in the DEIR, the SOCRE Project involves: “Replacing a single-circuit 138-kV transmission line between the applicant’s Talega and Capistrano substations with a new double-circuit 230-kV transmission line (approximately 7.8-miles long).” Under Section 6.1 of the NCCP/HCP, no further authorization from USFWS or CDFW is required for SDG&E to proceed with replacement work.

E. If Section 6.2 Did Apply, SDG&E Already Is Consulting with USFWS And All Potentially Significant Impacts To Biological Resources Already Have Been Determined To Be Mitigated To Less-Than-Significant Levels.

Even if the SOCRE Project’s replacement of SDG&E’s existing 138 kV line with a 230 kV line in a Preserve were considered a “New Facility,” SDG&E nonetheless has fully complied. When Section 6.1 of the NCCP/HCP does not apply, the parties fall under Section 6.2 of that document. Section 6.2 requires that SDG&E provide USFWS and CDFW with written notice of any intent to install a new electric transmission line or electric substation in a Preserve Area, and provide the agencies with the information typically contained in a Pre-activity Survey Report (PSR).²⁷ SDG&E has done that, by providing USFWS and CDFW with the PEA. Section 6.2’s written notice is required to “contain a detailed description of such Facilities and of their location, along with a map of the area. At a minimum, the information on the PSR form is required.”²⁸ That was provided, and more. The PEA includes a detailed description of the

²⁷ Exhibit 6 (Second Supplemental Testimony, Attachment 44, NCCP/HCP at §6.2, pp. 99-100).

²⁸ Exhibit 6 (Second Supplemental Testimony, Attachment 44, NCCP/HCP at §6.2, pp. 99-100).

transmission line and substation -- much more detail than is required on a PSR. Appendix A of the NCCP/HCP describes the scope of a PSR, and those are to provide: (i) the type, location and size of the project (all provided in the PEA's project description); (ii) surrounding land uses (described in the PEA's environmental setting and land use sections); (iii) the type and quality of habitat (described in the PEA's biological resources section); (iv) the work description and methods used to avoid or minimize ground disturbance, including any biological monitoring during construction (included in both the biological resources section of the PEA and its attached Biological Resources Technical Study); (v) anticipated impacts and proposed mitigation for biological resources (again included within the biological resources section of and technical appendix attached to the PEA); and a (vi) map of location of work area (included in the project description and environmental setting sections of the PEA.

By providing all of the information required to be included in a PSR, and more, the PEA fully satisfies any requirement for written notice in Section 6.2. Nonetheless, consultation has not stopped. The USFWS and CDFW also reviewed the DEIR and provided their comments on the project by that means, requesting: "additional coordination with SDG&E to determine if the project will result in impacts that are in conflict with existing conservation easements. If such impacts are anticipated, we request additional coordination among SDG&E, the Wildlife Agencies, the easement holder(s), and CPUC with the goal of modifying the project to avoid potential impacts to areas anticipated to be permanently protected. If such impacts cannot be avoided, additional coordination with the easement holders will be necessary to discuss a process for addressing the anticipated impacts in a manner that does not compromise existing conservation plans."²⁹

That further coordination has occurred, including as recently as September 11, 2015, when SDG&E met with the USFWS to discuss the project and its relationship to the recorded and unrecorded conservation easements in the project area, and to continue to consult and coordinate to ensure that biological resource impacts are avoided, minimized, and mitigated per the terms of the NCCP/HCP and Implementing Agreement. SDG&E agreed to modifications to its project that not only would reduce the need for new SDG&E Right-of-way, but also would reduce permanent impacts to areas outside SDG&E's easements that are proposed to be subject to the unrecorded "Talega Conservation Easement." Any remaining impacts would be mitigated to less than significant levels by drawing against SDG&E's mitigation bank under its NCCP/HCP. USFWS confirmed that there is no conflict between the SOCRE Project and the Prima Deshecha Landfill Conservation Easement. *See Exhibit 6 (Second Supplemental Testimony, Chapter 3, Section 4).*

In short, even if Section 6.2.1 is applicable, SDG&E has fully complied with it through providing the information contained in a PSR, through its coordination with USFWS, and through project modifications to reduce the impacts to the extent feasible, and through mitigation credit withdrawals for any remaining impacts. The RDEIR's finding that the SOCRE Project results in a "significant conflict" with the provisions of SDG&E's NCCP/HCP is not supported by the substantial evidence in the record. Rather, substantial evidence supports the conclusion

²⁹ Exhibit 6 (Second Supplemental Testimony, Attachment 45, USFWS DEIR Comment at 2).

that all potentially significant impacts from the SOCRE Project on biological resources – including by work within an area subject to a recorded or unrecorded conservation easement – have been mitigated to below a level of significance.

F. SDG&E’s Right of Way Easements Pre-Date the Conservation Easements, and Include Secondary Easement Rights.

SDG&E has land rights under several Right-of-Way Easements (ROW Easements) being used by the SOCRE Project.³⁰ Easement 15813, recorded November 19, 1964, gives SDG&E right-of-way 150-feet wide “... in, upon, over, under and across the lands hereinafter described to erect, construct, change the size of, improve, reconstruct, relocate, replace, repair, maintain and use a line or numerous lines of poles and/or steel towers and wires and/or cables suspended therefrom and supported thereby ... including guys, anchorage, crossarms, braces and all other appliances and fixtures for use in connection therewith”³¹ In addition, SDG&E has “the right of ingress and egress therefrom, to and along said right of way by a practical route or routes in, upon, over and across the hereinafter described lands.” This clause covers not just the easement itself, but also the rights of ingress and egress to that easement over the larger parcel. As part of its easement for its transmission lines, SDG&E also acquired secondary easements across the larger parcel, enabling it to access the easement and do other work necessary to operating the transmission line that is the subject of the easement itself.

An early case involving Pacific Gas and Electric Company is directly on point. There, the court explained that:

Every easement includes what are termed “secondary easements”; that is, the right to do such things as are necessary for the full enjoyment of the easement itself (*North Fork Water Co. v. Edwards*, 121 Cal. 662, 54 P. 69); and repairs and replacements which cause no greater burden are permitted to be made (*City of Gilroy v. Kell* [Cal. App.] 228 P. 400). The question really resolves itself into what may be considered a reasonable use of the right as acquired. Manifestly it would be impossible in a judgment to describe and limit the exact kind and character of the materials that might be used by the company when it is called upon to repair or reconstruct its lines. Any question which might arise by reason of such repairs or reconstruction as to whether such change was justified under the use, or whether it created an additional servitude beyond that originally imposed, is to be determined in an appropriate proceeding.³²

SDG&E’s easements necessarily include the right to do what is necessary to reasonably operate its transmission lines; unless SDG&E has the ability to access its lines, and stage the equipment necessary to string its lines, it cannot “enjoy” the easement as no transmission line could be constructed or maintained. Every easement contains “secondary easements” -- rights to do the actions that are necessary for full enjoyment of the easement itself. *Dolnikov v. Ekizian* (2013) 222 Cal. App. 4th 419; *see also North Fork Water Co. v. Edwards* (1898) 121 Cal. 662,

³⁰ Exhibit 6 (Second Supplemental Testimony, Attachment 46, SDG&E ROW Easements).

³¹ Exhibit 6 (Second Supplemental Testimony, Attachment 46, SDG&E ROW Easements).

³² *Pacific Gas & Elec. Co. v. Crockett Land & Cattle Co.* (1924) 70 Cal. App. 283, 294-95.

665-66). This includes the right to make “repairs, renewals and replacements on the property that is servient to the easement.” *Dolnikov*, 222 Cal. App. 4th at 428; *see also Donnell v. Bisso Brothers* (1970) 10 Cal. App. 3d 38, 42; *Smith v. Rock Creek Water Corp.* (1949) 93 Cal. App. 2d 49, 53).

It is well-known that, during the life of its transmission line easements, SDG&E must stage equipment in certain areas outside of the right-of-way -- it is impossible to string all of the lines and construct a transmission line project without going slightly outside the right-of-way in certain areas; for example, where the corridor does not follow a straight line. These temporary impacts do not overly burden the land from which the easement was taken. Thus, staging and wire pulling areas required to install, repair and replace electric transmission lines are secondary easements over the larger parcel necessary to enable SDG&E its use of the full extent of the easement as a corridor for an electric transmission line.

It is well-established that “[t]he grant of an easement must ‘be interpreted liberally in favor of the grantee.’” *Dolnikov*, 222 Cal. App. 4th at 428 (*citing Norris v. State of California ex rel. Dept. Pub. Wks.* (1968) 261 Cal. App. 2d 41, 46-57). The *Dolnikov* court found that grading cut to level the ground sufficient to reach a home under construction was consistent with the easement for ingress and egress to the parcel on which the home was being built, and that constructing retaining walls required due to the slope were “necessary for the use of the easement for its expressly intended purpose,” and “in no way inconsistent with the nature of the easement” and therefore “were authorized by the easement.” *Id.* Similarly, the grant of a right-of-way easement for its transmission line gave SDG&E both the interests expressed in the grant “and those necessarily incident thereto.” *Dolnikov*, 222 Cal. App. 4th at 428 (*citing Pasadena v. California-Michigan etc. Co.* (1941) 17 Cal. 2d 576, 579). The rights necessarily incident to the grant of a public utility electric transmission corridor includes the temporary access to that corridor as well as the temporary staging and wire pulling sites necessary to use the easement for the purpose intended.

This is especially true where, as here, the underlying land owners as well as the County of Orange, the USFWS and the CDFW were aware of SDG&E’s rights and recorded easements at the time they negotiated the conservation easements at issue. *See Dolnikov*, 222 Cal. App. 4th at 429 (noting that the servient tenement owners were fully aware of the easement before they purchased their property). Finally, the ROW Easements state that “no other easement or easements shall be granted on, under or over the above described easement of right of way without the previous written consent of [SDG&E].”

SDG&E has reviewed the recorded conservation easement at Orange County’s Prima Deshecha Landfill, which consists of two Conservation Easement Deeds from the County of Orange to The Reserve at Ranch Mission Viejo, an original 2012 deed and a 2014 amendment to the earlier deed to add additional acreage (Prima Deshecha Conservation Easement).³³ Paragraph 10 of that easement confirms that the easement rights it conveyed are “expressly subject to all matters of record as of the date this Conservation Easement is executed.” The

³³ A true and correct copy of the Prima Deshecha Conservation Easement is attached in Exhibit 6 (Second Supplemental Testimony, Attachment 47).

Prima Deshecha Conservation Easement was executed long after the SDG&E ROW Easements were recorded, and thus is subject to SDG&E's easement rights. Furthermore, the express terms of the SDG&E ROW Easements state that no other easements may impair SDG&E's easement rights without SDG&E's previous written consent. No such consent was sought, nor was any given. The NCCP/HCP similarly did not give away SDG&E's easement rights. The Prima Deshecha Conservation Easement cannot, and does not, prohibit any rights and uses granted in the SDG&E ROW Easements. *See* Exhibit 6 (Second Supplemental Testimony, Chapter 3, Section 3 & Attachment 47).

Therefore, the Prima Deshecha Conservation Easement does not and cannot conflict with any of SDG&E's SOCRE Project activities that are authorized by the SDG&E ROW Easement. These activities include but are not limited to ingress and egress to the existing and proposed SDG&E facilities, construction of the proposed SDG&E facilities, removal of the certain of SDG&E facilities, grading of access roads, grading of maintenance pads, grading of temporary work pads, preparation of stringing sites, and staging of materials for use in the easement areas. Under legally enforceable "secondary easement" rights, some such activities may occur outside SDG&E's easement if reasonably necessary for SDG&E's enjoyment of its easement rights to construct, install, maintain and operate its utility facilities, including electric transmission lines.

Following the issuance of the RDEIR, SDG&E asked Energy Division for a copy of the "yet-to-be recorded conservation easement in the Talega Corridor," as described in therein. Energy Division never responded to SDG&E's request. SDG&E has not seen the "yet-to-be recorded conservation easement in the Talega Corridor," as described in RDEIR. USFWS has informed SDG&E that the boundaries and permitted uses under that "yet-to-be-recorded easement" are not yet final. Whatever it ultimately says, however, as a matter of law a later-recorded easement cannot impair rights granted under a previously recorded easement, and thus the as-yet-unrecorded easement cannot impair rights under SDG&E ROW Easements. Therefore, this unrecorded easement cannot, and will not, prohibit any rights and uses granted in the SDG&E ROW Easement. Additionally, pursuant to the terms of the SDG&E ROW Easement, no easements shall be granted on, under or over the SDG&E ROW without the previous written consent of SDG&E, which has not been sought and would not be granted. SDG&E has not and would not grant consent to an easement being placed over its existing easements without full acknowledgment that SDG&E's existing easement rights are and will be acknowledged and fully protected.

The substantial evidence thus demonstrates that the unrecorded conservation easement in the Talega Corridor does not conflict with any of SDG&E's SOCRE Project activities that are authorized by the SDG&E ROW Easement.

G. With The Refinements That Keep Structures within SDG&E's Easements, USFWS Does Not Object to SOCRE Project Activities Outside of SDG&E's Easements.

The RDEIR states: "The USFWS has indicated that establishing new ROW within the Talega Conservation Easement or impacting areas of the Prima Deshecha Landfill Conservation Easement that are outside of the applicant's existing ROW would directly conflict with the provisions of the aforementioned conservation easement(s), and thereby the provisions of the Orange County Southern Subregion HCP." The RDEIR and USFWS thus recognize that

SDG&E's exercise of its pre-existing rights under its ROW Easements does not conflict with the provisions of later-recorded or proposed conservation easements because such later conservation easements are subject to SDG&E's ROW Easements. Instead, USFWS' concern is SDG&E activities outside its existing easements and within areas covered by an existing Prima Deshecha Landfill Conservation Easement or proposed Talega Conservation Easement.

Following publication of the RDEIR, SDG&E transmission engineering staff evaluated the possibility of refining the transmission and power line design (specifically for Segment 4) to minimize the need for new ROW. Segment 4 crosses an area that USFWS and Energy Division have said will be subject to the proposed, unrecorded Talega Conservation Easement. SDG&E prepared a preliminary design that would remove several structures and electrical transmission and power lines in Segment 4 that were outside of SDG&E's existing ROW and within the potential future boundaries of the Talega Conservation Easement, and place all of them within existing SDG&E ROW, easements, and fee-owned property. *See* Exhibit 2 (SOCRE Project Segment 4 Design Revision). By relocating proposed structures that would be in the conservation easement to be within existing SDG&E ROW, the amount of new ROW potentially required in Segment 4 of the SOCRE Project would be significantly reduced to small areas between two existing SDG&E easements and immediately adjacent to fee-owned property.

SDG&E staff met with USFWS staff on September 11, 2015 to discuss SDG&E's easements and associated rights, and USFWS' concern that the SOCRE Project may conflict with certain existing or proposed conservation easements. During the meeting, SDG&E reviewed a map showing SDG&E's easements and the SOCRE Project's path. USFWS agreed that any SDG&E activities within existing SDG&E ROW, Easement, or fee-owned property would not cause a conflict with any subsequently recorded conservation easement or with the provisions of the Orange County HCP.³⁴

With respect to the Prima Deshecha Landfill Conservation Easement, the only portion that would fall outside SDG&E's easement is a 210-square-foot portion of an existing road bed is a proposed work area (for structure No. 26). USFWS agreed that the scope of work anticipated for that location would not create a conflict between the SOCRE Project and the Conservation Easement. The SOCRE Project crosses the Prima Deshecha Landfill Conservation Easement at two locations, and contains one proposed new 230kV structure (No. 26), the removal of existing 138kV structures, and the use of existing unpaved access roads.³⁵

The SOCRE Project would require temporary work space for the construction of the new 230kV structure and permanent work space for the inspection and maintenance of the 230kV structure (No. 26) for the life of the project. All ground disturbing activities (e.g. grading, grubbing, and vegetation removal) will be contained within the limits of SDG&E's existing ROW. SDG&E would also utilize the existing access road network during construction and operation.³⁶ SDG&E's rights to its ROW includes the ongoing use of the existing network of

³⁴ *See* Exhibit 6 (Second Supplemental Testimony, Chapter 3, Section 4).

³⁵ *See* Exhibit 6 (Second Supplemental Testimony, Chapter 3, Section 4 and Attachment 50-52) (showing the SOCRE Project alignment, proposed new structures, and access roads in relation to the Prima Deshecha Landfill Conservation Easement.)

³⁶ *See* Exhibit 6 (Second Supplemental Testimony, Chapter 3, Section 4 and Attachments 50-52).

unpaved access roads that lead to and connect all existing structures, as well as existing structures owned and operated by SCE within its adjacent ROW.

In addition, the attached Structure 26 Detail Map and Structure 26 Aerial Photograph show that the small portion (approximately 210 square feet) of Structure 26 work area that could extend outside of SDG&E's existing ROW is limited to the existing roadbed (access road), and that no earthwork (grading, grubbing, clearing, etc.) would be required.³⁷ This area could be used for the placement of construction equipment (such as a crane) or maintenance equipment (such as an aerial bucket truck). As existing road bed, this area is already disturbed. Following review of this information, USFWS agreed that the SOCRE Project would not conflict with the Prima Deschecha Landfill Conservation Easement as work associated with the SOCRE Project would be contained within SDG&E existing rights pursuant to SDG&E ROW Easement.³⁸

With respect to the proposed Talega Conservation Easement, USFWS confirmed that the easement has not yet been finalized and its boundaries are not yet set. Many of SDG&E's proposed permanent work pads occur within areas that are in between two existing SDG&E easements.³⁹ When it was noted that some parcels being considered for inclusion in the Talega Conservation Easement are owned by the Transportation Corridor Agencies (TCA), USFWS said that such parcels may not end up in the final boundaries of the Talega Conservation Easement because TCA may not approve the inclusion. Some of the parcels over which SDG&E is interested in acquiring an easement are owned by TCA.⁴⁰

Assuming that the proposed Talega Conservation Easement will cover some areas in Segment 4 of the SOCRE Project, SDG&E shared with USFWS the minor refinements to the SOCRE Project designed to eliminate potential conflict with such an easement. SDG&E and USFWS discussed the preliminary redesign shown in attached Exhibit 6 (Second Supplemental Testimony Attachments 48-49). This redesign relocates all permanent transmission and power line support structures within the Talega Conservation Easement to be within SDG&E's existing ROW Easements. USFWS and SDG&E recognized that portions of permanent work pads and some temporary string sites and other temporary work areas would occur within potential areas of the proposed and unrecorded Talega Conservation Easement that are outside of SDG&E's existing easements.⁴¹ USFWS agreed that any activity that would occur within an existing road or work pad, and which would not require any ground disturbance, such as a pull/stringing site, would not require mitigation. USFWS stated that, based on the proposed redesign, they would be willing to work with SDG&E and the Talega Conservation Easement stakeholders to ensure that the remaining SOCRE Project impacts would be mitigated to a level acceptable to both

³⁷ See Exhibit 6 (Second Supplemental Testimony, Chapter 3, Section 4).

³⁸ See Exhibit 6 (Second Supplemental Testimony, Chapter 3, Section 4).

³⁹ See Exhibit 6 (Second Supplemental Testimony, Chapter 3, Attachment 48).

⁴⁰ See Exhibit 6 (Second Supplemental Testimony, Chapter 3, Section 4).

⁴¹ Both SDG&E and USFWS recognized that, as engineering progressed, minor changes to the location or extent of such work likely would change also, and that such impacts would be addressed through mitigation. Indeed, further engineering already has identified another temporary string site in an area that USFWS has indicated will be subject to the Talega Conservation Easement and which is outside SDG&E's existing ROW. This is reflected in Exhibit 2, SDG&E's Segment 4 Design Revision.

SDG&E and the USFWS. This already is required by the NCCP/HCP and Implementing Agreement in any event.

Even if SDG&E did not already have the right to proceed under Section 6.1 and Section 6.2.1 of its NCCP/HCP, this coordination with USFWS removes any possible conflict between the SOCRE Project and the two known or proposed Conservation Easements, as any potential impacts would be mitigated to a level of less than significant via compliance with those agreements. This already is required by RDEIR Mitigation Measure BR-10. Thus, there are no remaining significant unmitigated impacts to biological resources.

H. Because There Is No Conflict With the Conservation Easements, There Is No Significant Land Use Impact. Because Local Land Use Decisions Are Preempted By The CPUC, There Is No Land Use Impact From A Local Ordinance.

1. There Is No Conflict Between the SOCRE Project And The Recorded Or Unrecorded Conservation Easements.

The RDEIR revises the conclusions of the DEIR in Impact LU-3 “Conflict with any applicable habitat conservation plan or natural community conservation plan” to conclude that the impact is “significant” because the project could conflict with the conservation easements discussed above.⁴² As noted in the biological resources discussion above, however, no conflict exists.

The RDEIR states that “potential conflicts with the Talega Conservation Easement cannot be determined until the easement is recorded and the applicant conducts further consultation with the wildlife agencies” regarding new right-of-way and ground disturbance. As discussed above, the USFWS has confirmed that there will be no conflict. Moreover, the NCCP/HCP already requires that SDG&E avoid impacts where feasible and, if avoidance is not feasible, mitigate the impacts to biological resources. Finally, all impacts to biological resources are mitigated to less-than-significant levels through compliance with the protocols of the NCCP/HCP and Implementing Agreement, including the mitigation ratios set forth there. Therefore there will be no conflict and thus no land use impact. The FEIR should return the conclusions concerning Impact LU-3 back to the language contained in the DEIR, with the addition of the latest information from USFWS confirming that no conflict exists.

2. The Height Limits of the Local San Juan Capistrano Ordinance Are Preempted Under General Order 131-D.

The RDEIR asserts that the proposed SOCRE Project has a “significant” land use impact because it conflicts with a height limitation in the San Juan Capistrano Municipal Code, stating: “However, the proposed project would directly conflict with applicable building height regulations defined within the San Juan Capistrano Municipal Code. This conflict is deemed to be unavoidable based on the proposed design of the San Juan Capistrano Substation. Therefore, impacts under this criterion would be significant.”

⁴² RDEIR at 2-145.

As the CPUC has previously made clear, however, General Order-131 preempts local zoning ordinances including building setbacks, floor area standards and height limitations.

In addition, Public Utilities Code section 1007.5 states that:

The commission, in the exercise of the jurisdiction conferred upon it by the Constitution of the state and by this part, and consistent with Section 9 of Article I of the California Constitution and Section 10 of Article I of the United States Constitution, may grant certificates of public convenience and necessity, make decisions and orders, and prescribe rules affecting vessel common carriers notwithstanding the provisions of any ordinance, permit, or franchise of any city, county, or other political subdivision of this state, and in the case of conflict between any certificate, decision, order, or rule the commission and any ordinance, permit, or franchise, the certificate, decision, order, or rule of the commission shall prevail.

Because the height limits found in the local SJC municipal code are preempted and thus do not apply to the proposed project, there is no conflict. And even if a potential conflict did somehow exist, CEQA directs lead agencies to analyze “applicable” plans. *Sierra Club v. County of Orange* (2008) 163 Cal. App. 4th 523, 543 (EIR not inadequate because it did not discuss potential inconsistency with a general plan traffic significance standard or methodology, because county general plan did not apply to project). The local SJC height limit does not apply, thus cannot conflict. Moreover, because it is not “applicable,” any potential inconsistency with it is not relevant to the analysis of the project’s potential impacts.

The Commission has long been clear that local land use laws, including zoning laws, are not “applicable” to public utilities’ construction of electrical substations. Article XII, Section 8 of the California Constitution provides: “A city, county, or other public body may not regulate matters over which the Legislature grants regulatory power to the Commission.” Public Utilities Code § 701 provides: “The commission may supervise and regulate every public utility in the State and may do all things, whether specifically designated in this part or in addition thereto, which are necessary and convenient in the exercise of such power and jurisdiction.”

As repeatedly held by the CPUC itself as well as California courts, the CPUC has “exclusive jurisdiction over all privately owned utility electric facilities in California, and all local agencies are pre-empted.” Decision 94-06-014, 55 Cal. PUC 2d 87, 96 (1994). As “to matters over which the PUC has been granted regulatory power, the PUC’s jurisdiction is exclusive.” *Southern Cal. Gas Co. v. City of Vernon*, 41 Cal. App. 4th 209 (1995). *Accord, e.g. Pacific Telephone & Telegraph Co. v. City and County of San Francisco*, 51 Cal. 2d 766, 774 (1959) (city could not restrict placement of telephone wires in its streets); *California Water and Telephone Co. v. Los Angeles*, 253 Cal. App. 2d 16, 30 (1967) (city water ordinance was void because placement of water utilities was preempted by state law).

In adopting General Order 131-D, the CPUC expressly stated that regulation of public utility facilities is subject to the CPUC’s exclusive jurisdiction. In Decision 94-06-014, the CPUC considered local interest in public utility facilities, but “firmly maintain[ed] that local jurisdictions have no authority to disapprove or unduly interfere with utility activities as this

would conflict with the state regulation of utilities." 55 CPUC 2d 87 at *8. After discussing numerous CPUC and judicial precedents regarding the CPUC's exclusive jurisdiction, the CPUC stated, "with the issuance of this decision and GO 131-D, we herein declare our intent to exercise exclusive jurisdiction over all privately owned utility electric facilities in California, and all local agencies are preempted." *Id.* at 10.

The CPUC concluded as a matter of law that: "Local jurisdictions acting pursuant to local authority are preempted by law from regulating or imposing conditions on electric power lines, substations and facilities constructed by public utilities subject to the Commission's jurisdiction." *Id.* at *27. *Accord* General Order 131-D, Section XIV; *see also San Diego Gas & Electric Co. v. City of Carlsbad* (1998), 64 Cal. App. 4th 785, 805-806 (court rejected proposed standards whereby local regulation of public utilities would be allowed where no CPUC rule or regulation, or other state standard, directly conflicted with it. The court found that "[e]ach of these standards disregards the rule of implied preemption and would promote endless litigation to resolve questions of whether local law infringes on an occupied field." *Ibid.* Instead, "[p]articularly in the utility field, a bright line rule is preferable."). *Ibid.*

As recently as SDG&E's South Bay Substation Project (Application 10-06-007), Energy Division recognized that the CPUC's jurisdiction preempted local land use laws, and thus a utility project could not conflict with such laws because they were not applicable. Until the California Coastal Commission adopted Chula Vista's Bayfront Master Plan under state law, Energy Division insisted that conflict with the local plan was not a significant impact under CEQA, stating: "While the Existing South Bay Substation Site Alternative would not further the redevelopment goals envisioned in the Chula Vista Bayfront Master Plan, pursuant to General Order No. 131-D, the CPUC has sole and exclusive jurisdiction over the siting and design of the SOCRE Project. Consequently, the Existing South Bay Substation Site Alternative would not conflict with any applicable plans, policies, or regulations of an agency with jurisdiction over the project." In its Response to Comments, Energy Division reiterated its position: "The Draft EIR concludes in Impact LU-3 that because CPUC has sole jurisdiction over the project and alternatives, off-site alternatives would not be subject to local land use plans, zoning regulations, and discretionary permitting, and therefore would not conflict with any applicable plans or regulations of any agency with jurisdiction over the SOCRE Project, and determined that no impact would occur under Land Use Impact LU-3."

Notwithstanding the CPUC's stated preemption of local land use laws, G.O. 131-D, and Energy Division's own past interpretation that CPUC preemption renders local land use laws inapplicable under CEQA, Energy Division now contends that the proposed SOCRE Project has a "significant" impact under CEQA because a substation structure would exceed San Juan Capistrano's height limit. If the Commission adopts this approach, then it offers every local government the opportunity to zone out utility facilities within its jurisdiction. That would force the Commission to adopt overriding considerations under CEQA in every such case. The Commission has not taken this approach in the past, and should not now. CEQA directs only that a project's potential inconsistency with "applicable" plans be studied, and SJC's local height limit is not applicable to the plan due to the preemption. *Sierra Club v. City of Orange* (2008) 163 Cal. App. 4th 523, 543. Furthermore, a project's potential inconsistency with a local land use plan, zoning regulation or discretionary permit does not "in itself mandate a finding of significance" of a potential environmental impact under CEQA. *Lighthouse Field Beach Rescue*

v. City of Santa Cruz (2005) 131 Cal. App. 4th 1170, 1207. Instead, such potential inconsistency should be considered “merely a factor to be considered in determining whether a particular project may cause a significant environmental effect.” *Ibid.*

V. The Trabuco Alternative Is Not Feasible, Has Significant Impacts That Have Not Been Analyzed Or Disclosed, And Would Be Costly And Take Years To Implement.

A. The Trabuco Alternative is Not Reliable and Is Not Feasible.

SDG&E fully addressed the flaws in RDEIR Alternative J, the Trabuco Alternative, in its Second Supplemental Testimony, Chapter 4, attached hereto as Exhibit 6 and incorporate by reference herein. As noted below, the RDEIR is inconsistent in its description of the Trabuco Alternative, but provides ZGlobal’s Figure 3-5, a “Trabuco Substation Conceptual Site Plan.” The RDEIR Trabuco Alternative does not use a standard BAAH substation layout at Trabuco and as such, does a poor job isolating failed equipment. This is a poor design.

The salient drawbacks of the RDEIR Trabuco Alternative from a transmission planning standpoint are immediately evident and include the following:

1) Contrary to the RDEIR’s description, the SONGS-Santiago 230 kV line is not, in fact, “looped in” to the proposed Trabuco 230 kV substation, where it would form two two-terminal lines (SONGS-Trabuco and Trabuco-Santiago). Instead, it is configured as a three-terminal line (SONGS-Trabuco-Santiago) with one end terminating in the normally-closed 230/138 kV Trabuco transformer. The implication of this arrangement is that there is a single 230 kV transmission line serving the rebuilt Trabuco Substation under the RDEIR Trabuco Alternative. Any fault or maintenance outage on any segment of this line removes the 230 kV source from Trabuco.

2) The 230 kV bus in the RDEIR Trabuco Alternative is not actually a bus at all. It is simply a connection point for a three-terminal line that terminates into a single transformer. Taking either the 230 kV line, 230 kV breaker, or 230/138 kV transformer out of service disconnects the 230 kV source from Trabuco substation. The minimum SDG&E design standard for a 230 kV bulk power substation is a breaker-and-a-half (BAAH) arrangement, which in combination with a properly looped-in 230 kV line would prevent a single-element outage from disconnecting Trabuco from the 230 kV system.

3) A similar BAAH arrangement would normally be expected for a 138 kV substation performing bulk power service; as the RDEIR Trabuco Alternative would be expected to be fully redundant to Talega Substation, which is nominally a BAAH arrangement on both the 138 kV and 230 kV voltage levels, a BAAH arrangement would be expected for Trabuco as well.

4) Neither the “normally closed” or “spare” 230/138 kV transformer can be isolated from the 138 kV bus, as there is no disconnect switch between the 138 kV transformer terminations and the 138 kV bus. In the event of a transformer failure or maintenance outage, it would be necessary to physically disconnect the faulted transformer from the 138 kV bus by removing jumpers or bus segments. The “spare” unit could not be energized until this was done, extending an outage from minutes to hours or possibly days.

5) The Trabuco 138 kV substation arrangement presented in the RDEIR Alternative is a single-bus, single-breaker arrangement. By inspection of Figure 4-1, which was created from Figure 3-5 of the Recirculated DEIR, it is immediately obvious that numerous faults or equipment failures will result in a complete loss of the 230 kV source at Trabuco. This is explained in detail in Sections 2 and 7 below. In contrast, a BAAH arrangement, as proposed for the 230/138/12 kV San Juan Capistrano substation in SDG&E's Proposed Project, would allow for loss of any one bus or breaker without loss of the connection to the 230 kV source.

The substation layout does not provide redundancy necessary for reliability. A single transmission line failure, transformer failure, bus fault or circuit breaker fault will drop all South Orange County load. SDG&E has identified 13 Equipment failures which will drop all South Orange County load when Talega Substation is out of service. The failures are presented below:

- Fault on the three terminal SCE 220 kV transmission line connecting San Onofre to Trabuco to Santiago substations;
- Fault on the MAIN Trabuco 230/138 kV transformer;
- Fault on the SPARE Trabuco 230/138 kV transformer. The 138kV terminal of the 230/138 kV transformer will be energized and even though the transformer is not carrying load, it will be exposed to a fault which would drop all South Orange County load;
- Fault on, or failure of, the 230 kV circuit breaker for Trabuco MAIN transformer;
- Fault on, or failure of, the 230 kV circuit breaker for Trabuco SPARE; transformer. Only if the normally open circuit breaker is closed and the circuit breaker is energized;
- Fault on, or failure of, the 138 kV circuit breaker connecting the Trabuco transformer bus (labeled TB XFR on Figure 4-1) to the 138 kV Trabuco North bus (labeled TB N on Figure 4-1);
- Fault on, or failure of, the 138 kV circuit breaker connecting the Trabuco North bus to Trabuco South bus (labeled TB S on Figure 4-1);
- Fault on, or failure of, the 138 kV circuit breaker connecting the Trabuco North bus to transmission line TL13833 (labeled TB13833 on Figure 4-1);
- Fault on, or failure of, the 138 kV circuit breaker connecting the Trabuco North bus to Trabuco Bank 40 transformer (labeled 40 on Figure 4-1);
- Fault on, or failure of, the 138 kV circuit breaker connecting the Trabuco North bus to Trabuco Bank 41 transformer (labeled 41 on Figure 4-1);
- Fault on the new Trabuco 230 kV bus;
- Fault on the Trabuco 138 kV transformer bus (TB XFR bus);

- Fault on the Trabuco 138 kV North bus (TB N bus).

The RDEIR Trabuco Alternative is not feasible as described, and does not meet the project objectives of providing reliable electric service to South Orange County. As discussed in more detail below, the RDEIR Trabuco Alternative:

- Does not comply with mandatory NERC Reliability Standards, and will result in load shedding that would not occur with SDG&E's Project.
- Does not add 230 kV power at South Orange County's load center, thus requiring upgrades to SDG&E's South Orange County 138 kV system to redistribute the power to the distribution substations within South Orange County.
- Would delay ensuring reliable electric service to SDG&E's South Orange County customers for years while the impacts of an interconnection to SCE's transmission system are studied under SCE's FERC-approved Transmission Owner's Tariff, pursuant to the CAISO Transmission Control Agreement, and in a WECC Path Rating group.
- Causes loop flows on SDG&E's South Orange County system that will impact not only SDG&E's system, but the flows between SDG&E's system and SCE's system. As a result, the SCE interconnection will not be allowed without construction of necessary Reliability Upgrades to SDG&E's South Orange County 138 kV system, on SCE's system, potentially elsewhere in the CAISO-controlled grid and potentially elsewhere in the WECC system. The scope of these Reliability Upgrades will be determined through the years-long study process by SCE, CAISO and WECC—only then will the Commission know the true cost of this alternative and be able to assess all of its environmental impacts.
- Does not rebuild the aging Capistrano Substation, which must be rebuilt to ensure reliable electric service. The Recirculated DEIR's failure to acknowledge that Capistrano Substation must be rebuilt, at least as a 138/12 kV substation, does not reflect what is reasonably expected to happen if the Commission approves the RDEIR Trabuco Alternative (or any other alternative that does not include rebuilding Capistrano Substation).
- Does not provide adequate space for construction and operation of an expanded 230/138/12 kV Trabuco Substation. As set forth in Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 7), the Recirculated DEIR provides a "Trabuco Substation Conceptual Site Plan" that is neither safe nor reliable, does not contain all necessary equipment, and requires a non-standard design that is far inferior in terms of reliability SDG&E's proposed San Juan Capistrano substation..
- The estimated cost of the known elements of the RDEIR Trabuco Alternative exceed the estimated costs of the Proposed Project—and such costs do not include the unknown costs of Reliability Upgrades caused by the SCE interconnection.

B. The RDEIR's Trabuco Alternative Is Internally Inconsistent.

The RDEIR new "Alternative J – SCE 230-kV Loop In to Trabuco Substation" (Trabuco Alternative) is explained as an expansion of SDG&E's "existing 138/12-kV Trabuco Substation in Laguna Niguel into a 230/138/12-kV substation," requiring SDG&E to "acquire approximately 2 acres of land, currently owned by AT&T, adjacent to the north side of the existing Trabuco Substation for the construction and operation of the 230-kV switchyard," and requiring SDG&E to acquire new right-of-way for a "new underground, double-circuit 230-kV transmission line segment . . . that would loop the new substation into SCE's Santiago–SONGS 230-kV line," ultimately connecting to the Santiago–SONGS 230-kV line."

In one part of its description of the alternative the RDEIR states that "[t]he 230-kV/138-kV transformer would be housed in a 40- to 50- foot high gas insulated substation [(GIS)] building,"⁴³ but neither its "Trabuco Substation Conceptual Site Plan" in Figure 3-5 of the RDEIR nor its list of 230 kV equipment to be placed on the AT&T parking lot include one. It is impossible to know, then, whether the Trabuco Alternative includes a GIS or not. Figure 3-5 shows an air insulated substation (AIS) design and the transformers in the drawing appear to be laid out in an AIS format.

Assuming that the Trabuco Alternative would seek to house transformers in a GIS building, this would require GIS type transformers. If the transformers were to be housed in a GIS building, the building would need to be at least 50 feet tall to meet clearances required to maintain the transformers. For fire safety requirements, the transformers should not be housed in the same building; however, if they are, then the building would need independent roofing structures and a fire wall barrier between the two transformers. Each transformer would need access around each transformer for maintenance and/or construction, which would require the building to be a minimum of 75 feet by 190 feet long, assuming SDG&E's standard 230/138kV transformers. Additional spacing may be required for the GIS terminations on the transformers.

The RDEIR also leads the reader to believe that "the Trabuco 130/12-kV system would remain operational while the new 230/138kV equipment is installed," and that "[a]ny potential disruptions of service would be limited to the time required to establish a physical connection between the new 230/138-kV equipment and the existing 138-kV equipment."⁴⁴ As discussed below, that is not feasible.

An accurate description of the project or alternative being studied is essential to determining the scope of environmental review. It is only through an accurate view of the project (or, by extension, a project alternative) that decision-makers can balance benefits versus environmental cost and "weigh other alternatives in the balance." *County of Inyo v. City of Los Angeles* (1977) 71 Cal. App. 3d 185, 192. An EIR cannot do its job of allowing decision makers and the public to evaluate the comparative merits of the alternatives unless the alternatives are accurately described. CEQA requires that "[t]he EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed

⁴³ RDEIR at 2-14.

⁴⁴ RDEIR at 2-22.

project.” 14 Cal. Code Regs. 15126.6(d). The RDEIR fails to comply with this command. The inaccuracies in the description of the Trabuco Alternative make meaningful evaluation, analysis or comparison with the SOCRE project impossible, as is further described below.

The Trabuco Alternative is not feasible from a technological, legal, or economic perspective, and fails to meet the project objectives, even as those are defined in the RDEIR.

C. The Trabuco Alternative Does Not Meet The Project Objective Of Complying With Mandatory NERC Reliability Standards.

Under the FERC-approved NERC Transmission Line Planning Standards, SDG&E must provide reliable electric service to its South Orange County customers. This requires addressing its system reliability issues with a coherent and comprehensive plan of service. To do so, a potential plan of service, evaluated under the mandatory requirements in the FERC-approved NERC Transmission Planning Standards. The RDEIR failed to do so. SDG&E performed the necessary power flow analysis for the Trabuco Alternative, and the results of that analysis are included in Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 2).

The NERC transmission planning standards (TPL-001-0.1, TPL-002-0b, TPL-003-0b, TPL-004-0a and the recently approved combined standard TPL-001-4), require CAISO, as the registered Planning Coordinator for the SDG&E service territory, and SDG&E, as the registered Transmission Planner, to prepare a valid assessment of their portion of the transmission system. Performed annually, the assessment must test numerous contingencies under various critical conditions. A single power flow analysis that looks at a single load level and does not consider the outage of critical equipment or changes in critical parameters, such as has been done for the Trabuco Alternative in the RDEIR, is not a valid assessment under applicable rules. The annual CAISO and SDG&E assessment of SDG&E’s portion of the CAISO controlled transmission system, which includes the South Orange County transmission, test numerous contingencies at increasing load levels under different critical conditions, as required for a valid NERC assessment.

Although the RDEIR omitted such an assessment for the Trabuco Alternative, SDG&E has performed a valid NERC assessment of the Trabuco 230kV Alternative J and the results are included in Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 2 & Confidential Attachment 53). Using specialized power flow software tools, SDG&E simulated 82,680 (3 x 27,560) contingencies to assess the Trabuco Alternative, assuming that all existing transmission equipment were in-service pre-contingency.

These assessments concluded that the Trabuco Alternative does not meet NERC Reliability Standards. With power flow on Path 43 increased, the power flow analysis found NERC violations (as shown on Table 4-1 of Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 2)). When load is above 450 MW, the Trabuco Alternative would leave SDG&E’s South Orange County system in violation of NERC standards, with no project to mitigate the overloads. The percent above the Applicable Rating will increase over time, making matters worse. South Orange County load has been forecasted to reach a peak load of 450 MW as early as 2016, thus by the time the Trabuco Alternative would be built, the load would already be enough to cause violation of NERC Reliability Standards.

The Trabuco Alternative would not address the need to shed load under a number of NERC contingencies, and the power flow analysis with Path 43 stress found that load would need to be shed for a number of contingencies starting in the year the load reaches the elements Normal Rating. See Table 4-2 of Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 2).

Numerous overloads occur beyond year 2031, because of high flows on Path 43, high South Orange County load, and a lack of reactive support in the design.

The RDEIR statement that “No 12-kV distribution lines or 138-kV transmission lines would require relocation or reconductoring” with the Trabuco Alternative is wrong. In fact, to avoid violating NERC TPL-003-0b and its successor TPL-001-4, adoption of the Trabuco Alternative would require SDG&E to pursue the several projects to prevent overloads:

- Upgrade TL13836 to a higher rating: Talega Substation to Pico Substation;
- Upgrade TL13816 to a higher rating: Pico Substation to Capistrano Substation;
- Upgrade TL13846A to a higher rating: Pico Substation to TL13846 tap point;
- Upgrade TL13846C to a higher rating: Talega Substation to TL13846 tap point.

Further, to prevent MVar flow between South Orange County’s 138 kV transmission system and SCE’s 220 kV system, the Trabuco Alternative would require that SDG&E construct a new dynamic voltage control device (SVC, STATCOM or Synchronous Condenser) at the new Trabuco Substation at an estimated \$81 million to \$99 million cost (with AFUDC, \$89 million to \$109 million). The new device would supply MVars to the SCE system at Trabuco 230 kV, which in turn would stop the flow of MVars through South Orange County’s 138 kV system. SDG&E would have to perform additional analysis to determine the appropriate equipment size. Should the Trabuco Alternative be selected, SDG&E also would need to replace the Talega STATCOM when it reaches the end of its useful life, or install a new dynamic voltage control device (SVC, STATCOM or Synchronous Condenser) at the rebuilt Capistrano Substation at that time, at an estimated cost of another \$81 million to \$99 million (with AFUDC, \$89 million to \$109 million).⁴⁵

Thus, the statement in the RDEIR that the 12-kV distribution lines and the 138-kV transmission lines do not require relocation or reconductoring must be corrected in the FEIR to make clear that in fact, at a minimum, the work described above would be required. And, of course, the impacts from that work also must be analyzed.

⁴⁵ See Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 2).

D. The Trabuco Alternative Does Not Provide Reliable Second Source of Power for South Orange County In the Event of a Talega Substation Outage.

The Trabuco Alternative does not provide a second, redundant source of power to South Orange County, thus does not meet that important SDG&E project objective.⁴⁶ SDG&E's power flow analysis is substantial evidence that the Trabuco Alternative is not a true redundant source of power, both because it is not located at the load center for the area, requiring 138 kV transmission line upgrades to ensure that SDG&E's South Orange County distribution substations would receive adequate power if Talega Substation were out of service; and because its design and equipment are not sufficient to reliably serve South Orange County if Talega Substation were out of service.

1. The Trabuco Alternative Does Not Add a 230 kV Source at the Load Center for South Orange County.

The Capistrano Substation is close to the center of load for South Orange County, so adding a 230 kV source there is more effective and efficient than adding it at the Trabuco Substation, which is several miles north of the load center.⁴⁷ Generally speaking, energy injected from the 230 kV system into the 138 kV system flows towards the load center, across the 138 kV network, before it flows out to serve customer load. Capistrano is located in a better location than Trabuco to act as a second source to South Orange County (both closer to the load center and electrically removed from Talega).⁴⁸

2. The Trabuco Alternative Is Not Designed Or Equipped To Serve As a Second 230 kV Source for South Orange County If a Talega Substation Outage Occurred.

Expensive transmission projects that provide poor reliability are an inefficient use of capital, yet the Trabuco Alternative is just that kind of project. If the Trabuco Alternative were adopted, SDG&E and its customers would spend well over \$500 million, yet be left with a South Orange County transmission system which is not fully redundant, will likely need additional upgrades in the future, requires complicated maintenance programs, and requires negotiation of new interconnection contracts. This is what is known. Unknowns could add more costs and potential impacts resulting from the unreliability inherent in the Trabuco Alternative. Some of the issues SDG&E has identified with the Trabuco Alternative are outlined below.

a. The Trabuco Alternative Would Have Only A Single 230-kV Line.

When the Talega 138 kV substation is out-of-service, South Orange County load would be supplied by the single 230/138 kV transformer located at Trabuco. The maximum amount of South Orange County load which can be supplied would be limited by the rating of the transformer; 392 MW. Although the RDEIR shows a second transformer, it is labeled

⁴⁶ See Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 2).

⁴⁷ See Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 3 at Fig. 4-4), which represents the load center analysis for South Orange County and indicates the relative proximity of all of the substations.

⁴⁸ Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 3 at Figure 4-4).

“SPARE,” implying it would not be in-service.⁴⁹ Putting this aside and placing both transformers in service will only add an additional 77 MW of capability. The new limit will not be the combined transformer capability but instead will be defined by a transmission line limitation. The outage of TL13837 will load TL13846B to its maximum rating. Therefore, at most, 469 MW can be served from Trabuco Substation with Talega Substation 138 kV out of service. To maintain this limit, load would be shed before the outage of TL13837 occurred, which must be done to prevent damage to TL13834B.

b. The Trabuco Alternative Has Only Three 138-kV Outlets.

Unlike the six 138-kV transmission lines that will terminate at Capistrano Substation with the SOCRE Project, or the four 138-kV transmission lines that terminate at Talega Substation today, Trabuco Substation has only three 138 kV transmission lines. For a second 230/138 kV source located at Trabuco Substation to be fully redundant to the existing source at Talega, and given that two of the lines are located in a common transmission corridor south of Trabuco Substation and could be subject to a common-mode failure, adoption of the Trabuco Alternative would force SDG&E to add at least one additional 138 kV line from Trabuco Substation to Capistrano Substation. That work has not been disclosed or analyzed in the RDEIR.

Energy tends to flow south from Trabuco towards the load center at Capistrano Substation. Following a loss of Talega Substation, if Trabuco Substation acts as the sole source to South Orange County, several hundred megawatts of energy would flow south from Trabuco. As both lines south of Trabuco (TL13834 and TL13833) share a common transmission corridor and could be subject to a common-mode failure, it is possible for a single N-2 contingency to remove both lines from service. This would effectively cut off Trabuco from the bulk of the South Orange County load. As a result, substantial work would be required on the 138 kV system to allow a 230 kV source at Trabuco Substation to serve South Orange County in the event of a service outage at Talega Substation should the Trabuco Alternative be adopted – none of which is analyzed or disclosed in the RDEIR.

A fault on a transmission line leading to the forced outage of the transmission line is one of the most common failures in the electric utility industry. When Talega 138 kV is out-of-service, not only will the South Orange County load be limited to 469 MW, but it will be supplied by a single 230 kV transmission line, which supplies one (or two) 230/138 kV transformers at the rebuilt Trabuco Substation.

c. The Trabuco Alternative Has Only A Single-Bus Single-Breaker Topology, Making It Vulnerable To Single Element Outages

The two transformers share a single circuit breaker on the 138 kV side of the transformer.⁵⁰ Without individual circuit breakers, the transformers cannot be isolated by from each other. When one transformer fails, both will be removed from service to isolate the fault.

⁴⁹ RDEIR at 2-25, Figure 3-5.

⁵⁰ Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 3.C).

- d. The Trabuco Alternative Has only A Single Transformer In Service At Any One Time.

A single transformer is not capable of carrying the full South Orange county customer load even today, much less as is forecast in 10 years. The substation layout provided in the RDEIR does not provide redundancy necessary for reliability. A single transmission line failure, transformer failure, bus fault or circuit breaker fault will drop all South Orange County load. SDG&E has at least identified 13 equipment failures which will drop all South Orange County load when Talega Substation is out of service under the Trabuco Alternative.

By contrast, the SOCRE Project will have two 230/138 kV transformers in-service and be supplied by two 230 kV transmission lines at Capistrano, providing the redundancy required to achieve the reliability that is the project's goal. The SOCRE project will not only support 469 MW of load when Talega 138 kV substation is out-of-service, but transmission lines and transformers at the rebuilt Capistrano Substation also will be connected by breaker and a half configuration, provide a high level of reliability for a moderate cost. Unlike the Trabuco Alternative, the SOCRE Project allows the system to respond to a transmission line, transformer, bus or circuit breaker fault without dropping all South Orange County load when the Talega 138 kV substation is out of service. This important difference is ignored in the RDEIR.

3. The Trabuco Alternative Is Infeasible; It Does Not Allow Enough Space to Construct a Safe and Reliable 230/138/12 kV Substation.

There is not enough space at the existing Trabuco Substation to construct a 230/138/12 kV substation. Reliable service requires a BAAH 230/138/12 kV substation on an expanded Trabuco Substation site (including the existing site plus property to the north and south). Also, forecasts show that the aggregate South Orange County peak load exceeding the capacity of SDG&E's standard 230/138 kV transformer (392 MVA). The Trabuco Alternative assumes that SDG&E will "acquire approximately 2 acres of land, currently owned by AT&T, adjacent to the north side of the existing Trabuco Substation for the construction and operation of the 230-kV switchyard." The RDEIR then makes various assertions about what equipment would be placed on the acquired property and provides a "Trabuco Substation Conceptual Site Plan" that purports to diagram a 230 kV substation on the acquired property and how it would connect to SDG&E's existing Trabuco Substation. RDEIR at Figure 3-5. The Trabuco Alternative also states that "[m]odifications to the existing Trabuco Substation would not be required as part of this alternative" and "[n]o 12-kV distribution lines or 138-kV transmission lines would require relocation or reconductoring."⁵¹ Based on this claim, the RDEIR does not attribute any environmental impacts to the performance of such work. In short, the Trabuco Alternative does not permit the work that SDG&E identified as necessary to construct a safe and reliable 230/138/12 kV substation at and adjacent to the existing Trabuco Substation.

For a rebuilt Trabuco Substation to serve as a redundant second source, it would require at least two 392 MVA 230/138 kV transformers at Trabuco as well as a proper BAAH bus configuration. SDG&E also would reserve space for a future third transformer to enable enough

⁵¹ RDEIR at 2-22.

capacity to feed the South Orange County load center at the system peak demand. The site for the transformers must be large enough to accommodate them.

The non-budgetary estimated cost to build a 230/138/12kV substation at Trabuco would be higher than the proposed 230/138/12 kV rebuilt Capistrano Substation because Trabuco has more existing equipment than Capistrano that would need to be replaced. The estimated cost of constructing a 230/138/12 kV substation at Trabuco and the relocation of the existing distribution circuits is approximately \$189- \$231 million (including AFUDC), not counting the costs of relocating the existing 138kV transmission; adding new 138kV and 230kV transmission lines; permitting, mitigation, property acquisition costs; or the purchase of right-of-way. The rebuilt Trabuco Substation also would need a voltage control device to control the flow of MVars between South Orange County and the SCE system, at an estimated cost of \$81-\$99 million (with AFUDC, \$89 million to \$109 million).

The substation proposed by Z-Global in the Trabuco Alternative is neither safe nor reliable. It would create risks to SDG&E's electric customers that do not currently exist. It does not meet industry guidelines, regulatory requirements, or SDG&E's standards. SDG&E does not recommend construction of the substation proposed by the Trabuco Alternative. If the Commission expressly requires SDG&E to do so, the decision must make clear that that the responsibility for the substation design lies with Z-Global and the Commission.

4. The Trabuco Alternative's Substation Has Neither A Safe Nor A Reliable Substation Design.

A substation is an assembly of electrical apparatus and physical structures for the purpose of control, regulation, subdivision, and transformation or conversion of electrical energy. It is the connecting link between two or more sections of a transmission or distribution system, and directs flow of electrical energy in a power system, transforms; voltage; and serves as the location for System Protection and Control and isolation devices (relays and circuit breakers).

Reliability, safety, and operational flexibility of a substation are created by building redundancy into the physical arrangement and protection designs. Although this "redundancy through design" requires more equipment, it provides greater reliability of electric service to customers, avoids unnecessary outages, and allows routine maintenance and/or trouble repairs to be worked in a safe and efficient manner. It also reduces the risk of customer interruptions during maintenance and repairs, and affords substation personnel appropriate work space and isolation points from energized equipment. In general, redundancy requires more physical space and equipment.

Physical redundancy in a substation is created by the bus arrangements and number of protective equipment (including circuit breakers) and isolating equipment (disconnects) installed as part of the bus arrangement.

- The substation bus is the conductor(s) serving as a common connection between circuits and the power flow in a substation.
- Circuit breakers are designed to break, make, and carry normal load current and to quickly interrupt high currents caused by failed/faulted elements and short circuits. Circuit

breaker operation is typically automatic (as used in the application of removing faults from the electric system) or performed remotely to restore or redirect power flow.

- Disconnect switches are used to isolate a piece of equipment or segment a substation bus, transmission line, or distribution circuit for the purposes of personnel isolation intended for de-energized work. Disconnects are not load dropping devices and can only safely be opened when the equipment it is isolating is no longer carrying load. Properly sized disconnects are essential for personnel safety and are not typically operated automatically or remotely.

The purpose of installing a 230 kV switchyard at Trabuco Substation would be to provide a reliable second source of power via a 230 kV transmission line into South Orange County. This 230 kV power would then be stepped down via 230/138kV transformer(s) and distributed to the 138 kV transmission grid serving the seven 138/12kV distribution substations within SDG&E's South Orange County electric grid. The voltage is then further stepped down from the 138 kV transmission voltage to the 12 kV distribution voltage circuits that serve the roughly 300,000 people in South Orange County.

The substation supplying the second source of power to the distribution substations must have the flexibility, capacity and reliability to serve the customers if the existing Talega Substation is out of service. It should also allow routine maintenance and/or trouble repairs to be performed in a safe and efficient manner, without high risk of customer outages or placing substation personnel at risk due to proximity to energized infrastructure.

SDG&E designs new substations to meet SDG&E standards and industry guidelines for safety and reliability, and to meet regulatory concerns, by considering the following basic physical requirements:

- Electrical clearances (physical separation of energized exposed conductor to other exposed conductor, grounded surfaces, and or personnel walkable surfaces). SDG&E uses industry references to determine safe clearances for substation equipment.
- Safe access to equipment
 - Drive aisles shall be designed to accommodate regional standards for all safety vehicles.
 - A transmission substation's drive aisle in front of transformers should be approximately 40 feet to allow for placement/removal of transformers and required work on the transformer
 - Drive aisles between an energized rack/bus, high voltage terminations and a fence/wall will be wide enough to allow safety and/or construction vehicles to safely turn, drive, and work– this is usually 25-30 feet.
- Noise

- The size of the site must allow transformer placements so that the decibel level at the property line meets the County noise requirements of the substation site or regulatory specifications.
- Fire safety (based on IEEE Std-979 IEEE Guide for Substation Fire Protection)
 - Minimum 20-foot-wide access roads and gates, to accommodate emergency vehicles. Access roads inside the substation shall have adequate turning radius and access to all oil filled equipment.
- Separation of a transmission bank should be at least 50 feet from the edge of the adjoining transformer's containment pit or a four hour fire barrier should be installed. The fire barrier should be placed a minimum of 4 feet away from the transformer radiators to allow for air cooling.
- Water Quality and Hydromodification
 - All new substation sites must meet space requirements for water quality and hydromodification management criteria as required by the Regional Water Quality Control Board, and preliminary designs allow approximately 20-25% of space to meet these requirements until actual calculations can be done based on final site designs.
- Grounding
 - Ground studies must be done to determine the required ground grid that needs to be installed to safely dissipate fault current and allow for safe touch and step voltages for personnel and equipment protection. A smaller substation site may result in less area available inside the substation for the required ground grid, which may require additional mitigation and/or affect neighboring properties.
- Flexible operation.
 - Substation layout should include spacing to allow for safe construction and maintenance of all equipment allowing clear isolation points and proper clearance distances for these activities. Substation layout should also include room for future growth due to unforeseen customer growth and/or potential large customer or generation interconnection.

Reliability, safety, and operational flexibility of a substation also are created by building redundancy into the substation's physical bus and circuit breaker arrangement. Proper design of control and protection systems are required to identify system disturbances and isolate them. Redundancy through design allows routine maintenance and/or trouble repairs to be easily scheduled without major system impacts. Redundancy requires more equipment and therefore more cost. SDG&E seeks to balance cost and reliability by applying bus designs that escalate redundancy based on the magnitude of the impact the site has on potential customer outages.

IEEE, SDG&E, and industry standards commonly recognize five different types of substation bus designs. The single bus – single breaker (SBSB) is the least reliable because each element is supplied through a single breaker and there is no way to offload the bus or breaker without dropping the load fed from the piece of equipment being de-energized. It's also the least costly because it only requires one breaker per element, and the most problematic for maintenance as maintenance cannot be done without offloading or dropping load on the element being removed from service. This configuration also allows little reliability, as any faulted piece of equipment fed from the bus will cause an outage to all elements fed from the bus (the bus itself or individual circuit breakers).

SDG&E uses IEEE, SDG&E, and industry standard practices when considering bus designs for a substation, taking into consideration a variety of factors including: the substation's intended purpose; safety and reliability requirements; the potential system impact of line or faults and/or Breaker failures; the simplicity of relaying requirements to protect the configuration; cost, ease of maintenance, and operational flexibility; limitations and layout impacts of connecting lines entry and exit from the substation; safety and reliability impacts of the bus electrical clearances towards meeting appropriate codes and guidelines; physical arrangement of the station to allow access to equipment for maintenance and/or replacement due to failure and/or future upgrades; current unique site limitations, SDG&E standards and general system operating practices; general capacity for future expansions and general redundancy to provide means for continuity of service during construction and maintenance; and all bulk power transformer banks must be installed in a Breaker and Half or Double Breaker configuration, as well as the fact that transformer bay position must be 1.5 times the rating of the normal transformer rating to account for short duration overload capabilities of the transformer.

E. The Substation Serving as the Second 230 kV Source for South Orange County Should Have a Safe and Reliable BAAH Design.

A fundamental project objective is to provide a reliable second source of power via a 230-kV transmission line into a properly located substation in South Orange County. To provide reliable service to SDG&E's customers, this substation must have the flexibility, capacity and reliability to serve South Orange County if the existing Talega Substation is out of service for any reason. It should also allow routine maintenance and/or trouble repairs to be done in a safe and efficient manner, without risk of customer outages or to substation personnel.

SDG&E's SOCRE Project would construct a 230/138/12 kV substation at the existing Capistrano Substation site, the load center for South Orange County. The proposed rebuilt Capistrano Substation would meet SDG&E standards and industry guidelines for the physical layout to meet the safety and regulatory considerations. The Trabuco Alternative would not.

To provide the appropriate level of reliability, SDG&E's proposed design for the 230/138 kV bulk power transmission substation as described in the SOCRE Project requires BAAH configuration to meet operating and reliability criteria. A BAAH configuration means each transmission bay has two elements connected to separate busses with a tie breaker between each element, allowing each element to be fed by either bus, allowing continuity of service to each element in the event of a bus outage. A BAAH configuration is more reliable for large transmission stations because it limits any single point of failure to a maximum of two elements,

minimizing transmission outage impacts. It is the most cost effective design to meet the reliability requirements of the proposed 230/138 kV substation.

Industry standards, e.g., IEEE Standard 605-2008, show that the BAAH configuration is the most suitable design for a major transmission substation. It has greater operating flexibility and higher reliability than the Trabuco Alternative's proposed design. All switching is performed by circuit breakers, any circuit breaker can be isolated for maintenance without disrupting service to any element and each element can be fed by either bus. If a bus fault occurs, it does not interrupt service to any element during normal operation. It also allows proper electrical spacing so that each element can be safely taken out of service and grounded, as required for personnel safety during routine maintenance. All of these characteristics result in significantly less risk of isolating the transmission grid from the load, thus increasing the overall reliability of the feed. IEEE Standard 605-2008 recommends this arrangement for important 230kV substations and it is SDG&E's standard design for bulk power transmission substations. A BAAH design reduces the risk of customer outages and the risk to substation personnel working on substation equipment.

Bus arrangements should take into account future expansions and provide means for continuity of service during construction and maintenance – the SOCRE project does that; the Trabuco Alternative does not. The SOCRE project meets SDG&E's goals of safety, reliability, operation, maintenance, and flexibility, the Trabuco Alternative does not.⁵²

F. The “Conceptual Site Design” for Rebuilt Trabuco Substation Is Infeasible.

1. The “Conceptual Site Design” Is Not a Recognized IEEE or Industry Standard, and Does Not Meet SDG&E's Standards for Reliability or Safety.

In describing the Trabuco Alternative, the RDEIR states that the 230 kV switchyard would include “two 230 kV/138 kV transformers (one required and spare) with a capacity 392 MVA.”⁵³ It goes on to say that “the 230-kV/138-kV transformer would be housed in a 40- to 50-foot-high gas insulated substation building,”⁵⁴ and provides a “Conceptual Site Plan” that does not include the GIS building mentioned as being part of the alternative, and describes the new equipment for the 230 kV switchyard without any GIS building. As the “Conceptual Site Plan” reflects Energy Division's effort to design a rebuilt Trabuco Substation that would fit on the AT&T parking lot and not require reconstruction of the 138 kV and 12 kV substations at Trabuco, this letter focuses on the flaws in the design depicted in the Conceptual Site Plan. However, constructing a safe and reliable 230 kV switchyard with a GIS building, particularly one containing two 230/138 kV transformers, on the AT&T parking lot along with other necessary air insulated equipment, is equally infeasible.

The Trabuco 230kV substation design shown in the RDEIR “Conceptual Site Plan” is not a recognized industry standard configuration. The RDEIR does not explain how this layout would operate --what disconnects and/or breakers would normally be open—yet that information

⁵² See Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 2).

⁵³ RDEIR at 2-22.

⁵⁴ RDEIR at 2-22.

is vital to evaluating the feasibility of the design. After review of every possible operating configuration, SDG&E's engineers assume that the Trabuco Alternative would operate the design under the configuration shown in the one line diagram in Figure 4-1 of the RDEIR. SDG&E assumes the 230kV disconnect is normally closed in this diagram and modeled it as such in its power flow models -- a reasonable assumption considering the location of the disconnect in relation to other equipment. When the 230 kV transmission line disconnect is opened and the spare transformer disconnect open, the SCE transmission line connecting San Onofre Substation to Santiago Substation would be opened at Trabuco Substation. This would create two radial 220 kV transmission lines. One transmission line would supply power to Trabuco from San Onofre and the other transmission line would remain opened at Trabuco and carry no power. Consequently, the SCE transmission line would no longer carry power to SCE and SCE would lose one of its four 220 kV transmission line interconnections with SDG&E. The RDEIR omits any discussion of that. Also, placing the spare transformer in service by closing the spare transformer disconnect and leaving the transmission line disconnect open would make matters worse. Power meant for SCE would flow through both the main and spare transformers to reach SCE's Santiago Substation. This would put unnecessary stress on the two Trabuco 230/138 kV transformers and be considered extremely poor design.

For these reasons, SDG&E's experts have assumed that only one 230/138 kV transformer would be in service at the rebuilt Trabuco Substation with the transmission line disconnect closed. SDG&E notes that when both transformers are in-service, they are both connected together on the 138 kV side of the transformer with no isolation points (circuit breakers) to divide them. A single outage removes both transformers from service. With this design, SDG&E would be required to replace one (or both) of the aging 230/138 kV transformers at Talega. The Trabuco Alternative would lead to South Orange County be supplied by five 392 MVA 230/138 kV transformers; three in-service transformers at Talega, one in-service transformer at Trabuco and one spare out-of-service transformer at Trabuco. The SOCRE project uses four in-service 392 MVA 230/138 kV transformers; two at Capistrano and two at Talega. At most, the RDEIR's Trabuco Alternative design is a modified single breaker, single bus design. However, that design is not as reliable as a SBSB design because: (a) the transmission lines connect directly to the bus without a breaker,⁵⁵ and (b) both the transformers are protected off the low side bus by a single breaker.⁵⁶ There are many defects in such a design.

Even if the Trabuco Alternative's design was a full SBSB, it still would be less reliable than the SOCRE project. Per IEEE Standard 605-2008 and SDG&E Standard SES-4402, a single breaker, single bus (SBSB) design has the lowest reliability of all standard bus designs. A bus or breaker fault causes loss of an entire bus, and in this case, the 230kV feed into Trabuco substation. Breaker maintenance under this configuration also requires the associated Transformer outage as there are no isolation points between the circuit breakers and transformers. While it requires the lowest cost and reduced land area, this comes at a large reliability risk.

⁵⁵ See Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 7.D, Figure 4-4, Area A).

⁵⁶ See Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 7.D, Figure 4-4, Area B).

The Trabuco Alternative's design has less reliability than the already limited reliability of an SBSB design. The offered design does not meet any of the SDG&E requirements for bus design. This design makes the substation less safe, thus leading to potentially significant public health and safety impacts. Without having any 230kV breakers isolating the Transmission lines or serving as a 230kV bus tie breaker, isolating the Transmission lines for standard maintenance on the 230kV bus, or to repair any damage on the line, becomes incredibly difficult as isolation normally requires de-energizing and grounding the required element. Strict procedures need to be written as isolation will require coordination between SCE and SDG&E. Isolation must first occur at both SCE sites (San Onofre Substation and Santiago Substation) at the remote ends of the Transmission Lines feeding into the proposed 230kV switchyard at Trabuco, and at the Trabuco 230kV Transformer feeds, in order to safely isolate any work areas. The bus tie disconnect can only be operated safely after all areas are de-energized and isolated, requiring a much larger outage area than the area within which the maintenance or repair work will be performed. If the bus tie disconnect is operated outside of this procedure, there is a safety risk of de-energizing the 230kV transmission line cable, which typically carries capacitive charging current. Interrupting capacitive charge with a disconnect switch exceeds the current interruption rating of the switch. The typical failure mode of a disconnect switch under this condition causes the contact parts to melt. Human operators of the switch are located in close proximity to the switch and may be subject to burns and falling debris if this occurs. Additionally, damage to a switch renders it inoperable and an outage on the path would be required (typically multiple days) in order to replace the switch. Normally, additional circuit breakers are installed in the line and bus tie positions in order to afford on-site switching personnel the ability to locally isolate devices and equipment, and to alleviate communication and procedural errors that may lead to this scenario. Under Energy Division's design, there is no way to isolate any equipment without increasing outage requirements and following the mitigating procedure above.

There are many events and durations that could force long duration outages at the Talega Substation, as described in the attached Exhibit 4 (Corrected Supplemental Testimony, Chapter 2). To add system redundancy to mitigate the effects of these outages, any alternative that serves as a redundant feed to Southern Orange County must have the capability to reliably feed the system for multiple months. The proposed design for the Trabuco Alternative meets the need to add a second 230kV source to South Orange County, but fails to reliably provide service during Talega Substation outages. Some of the reliability problems if the Trabuco Alternative were required to feed South Orange County in the event of a long-term Talega Substation outage include transmission line faults, 138-kV or 230-kV bus faults, and circuit breaker/transformer faults.

Any fault on either of the two 230kV feeds into the Trabuco substation as designed in the Trabuco Alternative would isolate both lines, since no isolating devices separates the two 230kV feeds. By de-energizing the entire 230kV bus, South Orange County will lose power, de-energizing all of that customer load. Troubleshooting would be hampered, because any potential fault would have to be evaluated from relay event records at the SCE ends of both lines, rather than at the Trabuco site (as the necessary instrument transformer infrastructure to be able to capture relay events at Trabuco has not been provided in the Trabuco Alternative's design). If the fault location is narrowed to either of the 230-kV cables, all of the 230-kV feed infrastructure would be de-energized in order to troubleshoot and find the fault location (which would take hours instead of minutes due to the safety procedures required). Once the cable was de-

energized and tested, the good feed could be isolated and used to restore service to South Orange County customers. Any line faults would likely cause outages to all of the 300,000 residents of South Orange County for several hours, depending on fault location and the damage.

Since there is no redundancy in bus design, a bus fault on either the 230-kV bus or the 138kV bus in the Trabuco Alternative would isolate the entire 230-kV feed into South Orange County, causing an immediate outage to all of those customers for the duration of repairs to the bus, or restoration of Talega Substation (whichever is faster). Repairs could last from hours to days depending on the extent and location of the damage and the availability of spare parts.

A 230kV Circuit breaker fault on one or more of the 230/138kV transformers, or a fault on any of the 138kV breakers on the Trabuco North Bus, would isolate the 230kV feed into South Orange County and cause an outage to all those customers. All of the 138-kV circuit breakers on the Trabuco North Bus have isolating disconnects, and isolation and restoration of service from a failure on these circuit breakers would occur within an hour. Under the RDEIR's Trabuco Alternative design, there are no isolation points between the 230/138kV main and spare transformer, and the 230-kV and 138-kV circuit breakers. Substation crews would have to de-energize, isolate, and ground this entire infrastructure and physically cut bus sections apart to isolate the damaged equipment, allowing at least one of the 392 MVA transformers to be re-energized. This process would take hours. If load was above the 392 MVA limit, some of the South Orange County customers would not be re-energized until either load in the system decreased, repairs were made to the faulted device, or service was restored at Talega substation (whichever is faster). Replacement of a faulted circuit breaker typically takes up to a week and replacement of a faulted transformer may take three to four weeks as mentioned in prior testimony. And, if the single 138-kV Circuit Breaker serving the two 230/138kV transformers failed, all of the South Orange County customers would experience an outage until the circuit breaker was replaced or repaired (up to one week), or service at Talega substation is restored.

The Trabuco Alternative's design violates SDG&E and industry guidelines for protective relaying, which follows the principle that during a N-1 event only the faulted element will be removed from service. More circuit breakers and relaying would be required to be able to isolate a single 230-kV line and/or bus to make them into discrete elements (i.e. two separate 230kV transmission lines and a distinct 230-kV bus). Because there is no isolation, the configuration is inaccurately described as two separate 230-kV transmission lines feeding into the Trabuco site, as the system operates more like a single transmission line with a 230-kV tapped transformer being fed off of it.

Any maintenance on either 230-kV TL would require both transmission lines to be de-energized and isolated, which would isolate the whole 230-kV Trabuco feed for a few hours until the 230-kV bus tie disconnect could be opened to restore service.

The RDEIR's design of the Trabuco substation places all 230/138kV transformers and 138-kV and 230-kV feeding circuit breakers together with no isolating devices from each other. Any maintenance performed would either take all of the infrastructure out of service for the duration of the outage or substation crews would have to take outages to physically cut bus sections apart to isolate them so that partial service can be restored. Normal transformer maintenance can last for up to one month, and circuit breaker maintenance can last as much as

one week. This may get extended if damage is found inside the piece of equipment during inspection and parts are not readily available. Additionally, the 138kV breaker feeding both transformers will cause an outage on the whole 230kV Trabuco feed into South Orange County for the duration of any maintenance performed on it.

The location of the connecting 230 kV TLs is physically close, but may not be able to connect due to constraints in existing utilities in the street or having to cross Interstate 5. Also, the Trabuco Alternative does not meet safety and reliability requirements, as the bus electrical clearances do not appear meet appropriate codes and recommendations. It appears the 138kV bus spacing is larger than the 230kV bus spacing, meaning there is not sufficient spacing in the 230kV design to meet minimum requirements to prevent insulation breakdown of the air between energized phases, leading to a potential 230kV fault under normal operating conditions.

In addition, buses must physically be arranged to allow access to equipment for maintenance and/or replacement due to failure or upgrades – Trabuco Alternative’s proposed design does not allow physical space for maintenance on the transformers and does not allow for electrical clearances required on equipment to perform maintenance. Similarly, buses must be designed to meet all SDG&E standards and operating practices – yet the design of the Trabuco Alternative does not meet SDG&E’s operating practices, fire safety requirements, or allow for maintenance requirements.

Bus arrangements should take into account future expansions and provide means for continuity of service during construction and maintenance – yet this design does not allow for any additional connections for the required voltage control device, metering between SCE and SDG&E, and/or Station Light and Power transformers. Adding any element would require isolating breakers and disconnects on all elements already tied to the 230kV bus, which the Trabuco Alternative does not have enough space to accommodate. This means the 230-position that designed could never be used. Also, all bulk power transformer banks must be installed in a Breaker and Half or Double Breaker configuration and the transformer bay position must meet the overload capacity rating of 1.5 x transformer MVA rating. The Trabuco Alternative’s design does not meet any of these requirements as they seek to keep the existing 138kV bus that does not meet these ratings..

2. The RDEIR’s Proposed 138 kV Bus Design.

The Trabuco Alternative’s 138-kV bus design is again a single beaker – single bus design proposed to connect directly to the existing SDG&E Trabuco Substation 138kV bus. SDG&E constructed this bus as a SBSB design because it currently is a distribution substation and therefore does not require the reliability of a bulk power transmission substation. The 138 kV bus connected to the second 230 kV source for South Orange County should be a BAAH design to allow the greatest reliability and result in significantly less risk of isolating the transmission grid from the load. The 138-kV system should be considered part of the bulk power transmission substation and built accordingly, but that has not been done.

The Trabuco Alternative’s proposed design provides no requirement to reconstruct Trabuco Substation’s 138-kV bus and the existing 138/12 kV substation equipment would not be modified, exception by connecting the new 138 kV circuit breaker and interconnecting bus work

to the existing 138 kV system. Extrapolating this decision, the Trabuco Alternative dictates that SDG&E may not increase the rating of its 138kV existing bus at Trabuco, which would limit the capacity of the 230kV, since they are connected. The lowered rating would leave Trabuco substation without enough capacity to carry the load, so it would not be sufficient to act as a full and redundant feed into Southern Orange County.

Even if the Trabuco Alternative were amended to allow such work, none of it could be accomplished without an extended outage of the 138 kV bus in order for it to be replaced and upgraded to meet the capacity requirements of the 230/138kV transformers. This would expose customers to a higher probability of forced interruption of customer service fed from Trabuco substation. The Trabuco Alternative dictates that SDG&E utilize an improper Trabuco Substation 138kV SBSB design that is not suited for major transmission substations. It also jeopardizes SDG&E ability to construct a safe and reliable substation in accordance with prudent industry and SDG&E standards. As a result, the Trabuco Alternative understates the necessary project scope, construction requirements to the existing Trabuco Substation, and the space required to build this alternative.

3. The Trabuco Alternative Is Missing Essential Equipment.

The RDEIR's "Conceptual Site Plan" does not include the minimum equipment requirements required for the second source substation. The Trabuco Alternative does not appear to meet electrical clearance requirements. The RDEIR conceptual plan appears to show the 138-kV spacing is larger than the 230-kV spacing and the disconnects appears to be undersized as well.⁵⁷ If 230-kV spacing is increased, the proposed design may not be feasible in the given space constraints proposed. Much more space is required for phase separation on 230kV as compared to 138-kV.⁵⁸

Drive aisles should be designed to accommodate regional standards for all safety vehicles, but the RDEIR's "Conceptual Site Plan" for the Trabuco Alternative does not allow safe vehicle access to the transformer on the east side and does not allow any access to the middle of the bus to make repairs/modifications with lift equipment and cranes. Also, transmission substation's drive aisle in front of transformers should be approximately 40 feet to allow for placement/removal of transformers and required work on the transformer. The RDEIR's "Conceptual Site Plan" does not allow enough drive access to the east transformer to enable a crane or boom truck to work on the transformer. SDG&E's boom trucks require 30 feet of clearance to extend their stiff legs. The narrow space allocated to the Trabuco Alternative also would make it impossible to remove a transformer without demolition and replacement of existing infrastructure, extending outage times and costs unnecessarily. The RDEIR's "Conceptual Site Plan" spacing between the 230-kV bus and north and east wall is questionable for safe access and drive-ability, since this drive aisle should be between 25-30 feet to allow safety and/or construction vehicles to safely turn, drive, and work.

⁵⁷ See Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 7.D, See Figure 4-4).

⁵⁸ See Exhibit 6 (Second Supplemental Testimony, Chapter 4, Section 7.D, See Figure 4-5).

The size of the site and transformer placements should be placed so the decibel level at the property line meets county noise requirements for the county that the substation resides in and/or any other regulatory noise specifications. Based on SDG&E's experience, the transformer located on the East side of the property is located too close to the property line. There is not enough space to install a noise barrier to mitigate these sound effects. Additional noise levels to the North, South and West would need to be studied to determine impacts from this design and if there is an impact then a noise barrier will have to be installed..

Access roads and gates must be at least 20 feet wide to accommodate emergency vehicles, and access roads inside the substation must have adequate turning radius and access to all oil-filled equipment. The RDEIR's "Conceptual Site Plan" spacing between the 230kV bus and north and east wall does not appear to provide for safe access and drive-ability.

Transmission or oil containment (if required) should be at least 50 feet to the wall or fence line; otherwise, a fire barrier must be installed between the transformer and wall or fence. The Trabuco Alternative does not allow space for the fire wall on the East end of the property. In addition, the transmission transformer bank should be at least 50 feet from the edge of the adjoining transformer's containment pit, or a four hour fire barrier should be installed. The fire barrier should be placed a minimum of four feet away from the transformer radiators to allow for air cooling. No fire barriers are provided in Energy Division's design.

All new substation sites must meet the Regional Water Quality Control Board's space requirements for water quality and hydromodification management criteria, usually through the use of underground infiltration tanks and above-ground detention basins. The RDEIR's "Conceptual Site Plan" does not provide any space for the necessary hydromodifications and thus would have potentially significant water quality impacts.

Experts believe it would take a minimum 15% of the entire property space (as a percentage of the total existing site and additional property) to meet the hydromodification requirements. The existing Trabuco property would need to be considered in the calculations since work would be done in the existing yard as part of the new construction, with approximately 0.6 acres needed for hydromodification.

Ground studies must be done to determine the required ground grid that needs to be installed to safely dissipate fault current and allow for safe touch and step voltages for personnel and equipment protection. A smaller substation site may result in less area inside the substation for required ground grid which may affect neighboring properties. Depending on grounding studies for the substation, additional property may be required or ground wells may need to be installed. Also, Substation layout should be sized to allow for safe construction and maintenance of all equipment, including room for future growth. The "Conceptual Site Plan" does not include any allowance for required underground conduit sweeps – the proposed 230-kV underground alignment may not be physically possible due to the radius required for underground 230-kV cable and the space requirements for bundled 230-kV underground cable. It does not appear that the design in the RDEIR is feasible.

The "Conceptual Site Plan" does not include any allowance required to safely maintain and operate equipment – it does not allow enough access to the east side of the bus to easily

maintain the transformer and its breaker. The drive aisles should be at least 25 feet and closer to 40 feet next to the transformer, to allow oil processing equipment to be placed in close proximity to the transformer for normal prescribed maintenance activities.

The “Conceptual Site Plan” does not include any allowance for the required voltage control device, estimated by experts at SDG&E to be up to approximately 00.75 acres for the equipment and access requirements. The “Conceptual Site Plan” also fails to include a BAAH configuration to provide proper reliability as a second source to Southern Orange County. The configurations lacks disconnect switches and current interrupting circuit breakers for proper isolation of system disturbances and to provide isolation for maintenance of each element eliminating operational flexibility and necessary redundancy. The site plan also ignores allowances required for metering units if required at Trabuco Substation (required on at least one end of each 230kV interconnection with SCE).

The RDEIR describes the Trabuco Alternative as being set back from the perimeter of the parcel by at least 20 feet, but a 20-foot setback around the perimeter of the substation would place the substation boundary nearly adjacent to the AT&T building and would block AT&T’s ingress and egress to AT&T’s building on its south side, also impacting AT&T’s parking spaces, significantly impacting site operations. Also, additional allowances may be required to construct the east walls along the Interstate 5 freeway, depending on Cal Trans’ easements.

To construct the required 230kV and 138kV BAAH design, install the required voltage control equipment, hydromodification, and fire walls, and provide proper clearances and space for needed equipment, SDG&E’s preliminary Trabuco 230/138/12kV substation 12kV design estimated approximately three-to-four additional acres would be required. The environmental impacts resulting from constructing the substation on three-to-four additional acres has not been evaluated in the RDEIR, nor was it in the DEIR, and this must be corrected in the FEIR.

G. The RDEIR Ignores Major Modifications to The Existing Trabuco Substation That Would Be Required With the Trabuco Alternative.

The RDEIR’s “Trabuco Substation Conceptual Site Design” is infeasible. The layout appears designed solely to fit within a prescribed space, without regard for safety, reliability, adequate equipment or compliance with regulatory standards. SDG&E cannot construct a safe and reliable substation in the area dictated by the RDEIR’s Trabuco Alternative.

In addition, the RDEIR mistakenly asserts:

Major modifications to the existing Trabuco Substation would not be required as part of this alternative because the existing 138/12-kV equipment has not been identified as aging equipment by the applicant. It is anticipated that the Trabuco 130/12-kV system would remain operational while the new 230/138kV equipment is installed. Any potential disruptions of service would be limited to the time

required to establish a physical connection between the new 230/138-kV equipment and the existing 138-kV equipment.⁵⁹

To the contrary, outages would be necessary on the existing Trabuco 138kV bus as part of the Trabuco Alternative. Incorporating the emergency loading requirements to meet 150% the rated load of both 230/138kV transformers, the existing 138 kV bus would have to meet a rating of 1176 MVA, which exceeds its current ratings. To increase the ratings of the existing Trabuco 138kV bus, all electrically conducting bus would have to be increased from the existing 2.5" Al Bus to larger than 6" Al bus, which requires a new design that has never been built by SDG&E. Since SDG&E does not have a standard that fits this sizing, it is likely that all disconnect switches and structural supporting steel would have to be replaced to meet the new requirements. Appropriate equipment sizing would be based on studies that include seismic, short circuit, and normal flow analysis. Work (depending on scope) would take anywhere from one to several months to perform and emergency portable equipment would likely be brought in to support distribution station loading for the duration of the outage. Portable equipment is less reliable than normal equipment, leading to an increased risk of equipment failure and customer outage for the duration of this work. Also, the Trabuco 138kV North and South Bus outages would impact transmission load flows by offloading the 138kV transmission lines fed from Trabuco. This impact would have to be studied to determine the outage feasibility based on the effects on the Southern Orange County transmission system. And, none of this work would address the lack of reliability due to failure to provide a BAAH configuration for the 138-kV bus.

H. The Trabuco Alternative Would Not Meet Industry Standards for Substations.

IEEE 605-2008 reflects industry standards with respect to substation design. With respect to SBSB design, the IEEE states: "The single bus single breaker arrangement is generally applied in substations from distribution voltage through 121 kV to 161 kV and in locations where system reliability is not critical."⁶⁰ By contrast, with respect to BAAH design, it states: "This arrangement is used for substations where reliability and service continuity is important. This arrangement is used extensively for voltage levels above 345 kV and some 230 kV substations due to the importance of these substations. Line switches can be added if required."⁶¹ The rebuilt Trabuco Substation design in the Trabuco Alternative, which at most is a modified SBSB design, does not and would not meet industry standards for substation design.

I. The RDEIR Ignores Issues Regarding Interconnection with SCE's Transmission System.

The RDEIR's discussion of the Trabuco Alternative does not include any of the issues involved with interconnections between SCE and SDG&E. These issues include the fact that the Trabuco Alternative would require that SDG&E comply with SCE's Transmission Owner Tariff, the Transmission Control Agreement among transmission owners and the CAISO, and the CAISO Tariff to interconnect with SCE. It would require a minimum of twelve months and as long as twenty-four months to complete an interconnection application, System Impact Study,

⁵⁹ RDEIR at 2-22.

⁶⁰ IEEE 605-2008 at 5.

⁶¹ IEEE 605-2008 at 9.

and a Facilities Study for an interconnection with SCE, as described in the SCE Alternative. SDG&E also would need to obtain CAISO approval, which likely would go through the normal annual transmission planning process. Depending when the CPUC provided such direction, and when SCE completed its studies, it could be up to a year before CAISO would decide whether to approve the Commission's solution (and any "Reliability Upgrades" to SCE's or other systems determined to be necessary to permit the interconnection). The same process would apply if SDG&E were to seek an interconnection to SCE's system as part of the Trabuco Alternative.

Until SCE performs a System Impact Study and any follow-on Facilities Study, the full scope of activities required to implement the Trabuco Alternative cannot be known. The Trabuco Alternative does not reflect any of the Direct Assignment Facilities or Reliability Upgrades that may be required by SCE and CAISO for SDG&E to implement the Trabuco Alternative. And until SCE conducts a Facilities Study to determine the modifications to SCE's facilities necessary to permit interconnection, the construction activities, new structures and new lines that may be needed for such modifications is not known. Thus there could be impacts not disclosed to the public or the decision-makers unless this information is added to the FEIR.

Further, to the extent that any of the Reliability Upgrades require CPUC approval, SDG&E and/or SCE would need to file applications with the CPUC for such approval, triggering more delay and environmental review. SDG&E's Application for this Project has been pending since May 2012. The date when all required Reliability Upgrades are approved and constructed, before which time the interconnection to SCE will not be allowed under SCE's FERC-approved tariff, cannot be predicted accurately. None of this delay is necessary with the SOCRE Project.

Among the issues the RDEIR left unresolved and that may affect the layout of the substation are:

1. Where would the interconnection point be? Typical interconnections between different entities include revenue metering at the point of change of ownership. The RDEIR fails to identify the interconnection point in its design, and does not provide sufficient space for the equipment required for revenue metering.
2. If the interconnection point is in the substation, can SCE build the 230kV TL interconnection under SDG&E's permit? SCE may need to file an Application for its own permit to build the Transmission line unless it (a) relinquishes ownership to SDG&E of the line or portions of the line or (b) allows SDG&E to build SCE's portions of the line. Either option would have to be evaluated.
3. At any interconnection, SDG&E will have to request permission from SCE (and vice-versa) to perform any maintenance on the transmission lines and/or substation equipment, which may affect maintenance schedules and/or cost. Close coordination would have to occur to address safety, system operability, and reliability issues caused by the RDEIR's proposed design.

An interconnection with SCE would parallel a robust 230 -kV path with a relatively weak 138-kV network, resulting in the dual negative impacts of restricting the allowable flow on the 230-kV path and subjecting the 138-kV system to network flows for which it was not designed. Restricting allowable flow on the SCE lines in South Orange County could limit the transfer

capability between the SDG&E and SCE systems, reducing import capability for both utilities. Such an interconnection could have a significant impact on Southern California's import capability. SDG&E performed power flow analyses of several alternatives that include an SCE interconnection, and provided those results to Energy Division. The power flow assessment shows that any connection to one of SCE's 220 kV transmission lines which make up Path 43 will result in SCE power flowing through South Orange County's 138 kV network. This "loop flow" will be carried by the South Orange County 138 kV transmission lines. These transmission lines are heavily loaded during peak load periods and the additional power flowing through them will result in post contingency overloads, which would not have existed without the SCE connection. The SOCRE project does not provide a path for this loop flow.

SCE's System Impact Study is likely to identify significant impacts to a number of important import paths and therefore require Reliability Upgrades to SCE's and SDG&E's systems at SDG&E's expense (which would be passed on to CAISO ratepayers). To properly assess the risk to the import limit, a WECC PRG (Path Rating Group) would be formed to determine any additional projects that would be needed to mitigate the impact to the import limit. These costs also would be attributed to SDG&E and then to CAISO ratepayers.

Because none of the Reliability Upgrades or WECC projects have been identified at this time (and would not be for at least several years), their environmental impacts have not been assessed. Thus, the RDEIR is inadequate under CEQA; even though the analysis for an alternative may be less than that for the project as proposed, there still is a basic level of analysis required, and that done for the Trabuco Alternative is inadequate under the applicable standards. There are simply too many unknowns to adequately analyze the Trabuco Alternative today.

J. Transmission and Distribution Work Would be Required by the Trabuco Alternative's Need to Interconnect with SCE.

Based on Figure 3-5 in the RDEIR, the most feasible connection to SCE is the route along Camino Capistrano and West of Interstate 5, which would require undergrounding 2-230 kV circuits southward along Camino Capistrano to the Trabuco Substation proposed 230kV yard north of the existing substation. There does not appear to be sufficient room in Camino Capistrano to accommodate the necessary trenching, conduit, and manholes required for the 230-kV undergrounding. Additional concerns arise from the bridge crossing over Oso Creek along Camino Capistrano. It may well be infeasible to cross the creek, as two main points of concern include the available space for positioning of the two 230kV lines and determining if the physical loading of the bridge can accommodate the additional weight. Structural analysis and consultation with the bridge owner would need to be done to address the feasibility of crossing the creek within or attached on the outside of the bridge (side or belly of bridge). Based on preliminary analysis there looks to be several attachments for other utilities within and on the outside of the bridge crossing Oso Creek. If the bridge cannot accommodate the additional 230-kV lines an alternate route would need to be identifying to accommodate the creek crossing. Undergrounding techniques such as horizontal direction drilling may be needed and would adversely affect traffic due to spacing needed to perform the operation. This technique would also present potential environmental concerns such as frac-out during the drilling operation.

There would be other traffic issues on Camino Capistrano due to the lane closure requirements to construct the trench, conduit, vaults, and cable system installation (pulling, splicing, terminations). Distribution overhead and underground facilities may also need to be relocated to accommodate the routing of the underground and installation of the 230kV riser structures.

The proposed 230kV route in the RDEIR that crosses the Interstate 5 freeway is least desirable due to difficulty in obtaining Cal Trans permits to cross interstate 5, traffic control impacts along Interstate 5 during construction and maintenance, and acquisition of new easements to accommodate the routing east and west of Interstate 5. The stringing of transmission lines across the freeway involves shutting down all lanes of the freeway multiple times, once for each phase of conductors.

Additional concerns include the siting of the 230kV double circuit overhead structures on either side of Interstate 5. Referring to Figure 3-5, there looks to be limited room to locate a double circuit 230kV structure either inside the substation or adjacent to the substation and Cal Trans right of way. If a 230kV pole could be installed outside and adjacent to the north east corner of the expanded substation yard, as indicated in Figure 3-5, it is unclear if there would be enough electrical clearance between the 230kV pole and AT&T building as well as enough working space to install and maintain the 230kV pole. This route would also require considerable undergrounding in the business/community area east of the freeway and there may be conflicts with other utilities (water, sewer, gas, telecom, etc...) that would conflict with the two 230kV trench, conduit and manhole infrastructures.

K. A Reliable RDEIR Trabuco Substation Alternative Would Be Costly.

Substantial evidence supports the overwhelming conclusion that the Trabuco Alternative is infeasible. Even if the Trabuco Alternative were altered to allow construction of a safe and reliable 230/138/12 kV substation, using a BAAH configuration and acquiring the property north and south of the existing Trabuco Substation site, and even if necessary 138 kV and 12 kV work were in place, the Trabuco Alternative would cost ratepayers more than the SOCRE Project costs.

The estimated cost of constructing a 230/138/12 kV substation at Trabuco and the relocation of the existing distribution circuits is approximately \$189 - \$231 million, not including the cost of acquiring the necessary property, which would include the cost of relocating two businesses and any AT&T communications infrastructure located at its facility. This cost also does not include relocating the existing 138-kV transmission, adding new 138-kV and 230-kV transmission lines, permitting, mitigation, or acquiring right-of-way. Thus, this cost likely will be considerably more.

To interconnect at rebuilt Trabuco Substation with an SCE transmission line, the likely path (without any engineering study) would be 0.5 miles of 230 kV double circuit underground down Camino Capistrano, at an estimated cost of \$16 - \$20 million (includes AFUDC and EMF mitigation). And, to supply MVars to SCE's system, a voltage control device at a rebuilt Trabuco Substation may cost as much as \$81-\$99 million (with AFUDC, \$89 million to \$109 million) (appropriate size and type will require further study).

To support South Orange County voltage, SDG&E's SOCRE Project includes two 230 kV capacitors at a rebuilt Capistrano 230 kV bus. The Trabuco Alternative will require an additional voltage control device at either Capistrano or Talega when the existing Talega STATCOM reaches the end of its useful life at an additional cost of \$81-\$99 million (with AFUDC, \$89 million to \$109 million).

Capistrano Substation still must be rebuilt as a 138/12 kV substation to provide reliable electric service. The estimated stand-alone cost of rebuilding Capistrano Substation as a 138/12 kV substation, with the same configuration and location as proposed in the SOCRE Project, is between \$135 million and \$165 million (including AFUDC, permitting and mitigation).

SDG&E's estimated cost for the SOCRE project is \$384 million. The elements of the Trabuco Alternative, modified as noted above and for which SDG&E has had time to estimate a cost, total \$518 million to \$634 million, not including additional costs for property acquisition and business relocation at the expanded Trabuco Substation, 138 kV upgrades to address NERC Category C violations and load shedding, 138 kV upgrades to mitigate the risk of forced outages during maintenance events, and 138 kV upgrades to make a rebuilt Trabuco Substation fully redundant for South Orange County in the event of a Talega service outage. To avoid NERC violations and to make a 230/138 kV source at Trabuco fully redundant to Talega, SDG&E would have to:

- Upgrade TL13836 to a higher rating: Talega Substation to Pico Substation;
- Upgrade TL13816 to a higher rating: Pico Substation to Capistrano Substation;
- Upgrade TL13846A to a higher rating: Pico Substation to TL13846 tap point;
- Upgrade TL13846C to a higher rating: Talega Substation to TL13846 tap point;
- Add a third Trabuco-Capistrano 138 kV line;

The substantial evidence demonstrates that the Trabuco Alternative will cost far more than the SOCRE Project.

L. The Reasonably Expected Actions If the Trabuco Alternative Is Selected Will Have Greater Environmental Impacts Than the SOCRE Project.

The reasonably expected actions if the Commission selects the Trabuco Alternative will have more environmental impacts than the SOCRE project, not less. The information about these impacts provided by SDG&E during data requests was omitted from the RDEIR, and instead the RDEIR simply concludes that such work will not happen. The RDEIR erroneously asserts that:

The Trabuco Alternative would require removing existing infrastructure in the AT&T parking lot, and conducting civil work to establish a new pad for the 230/138-kV equipment. New equipment would include support structures for the 230-kV double circuit transmission line, a 230-kV bus, two 230-kV circuit breakers, two 230/138-kV transformers (one required and one spare), a 138-kV

circuit breaker, and a new 80- x 40-foot control building. New substation componentry would be set back from the perimeter of the parcel by at least 20 feet (Figure 3-5). A small switchyard would be constructed to loop SCE's Santiago-SONGS 230-kV line into the Trabuco Substation. The existing 138/12-kV substation equipment would not be modified, with the exception of connecting the new 138-kV circuit breaker and interconnecting bus work to the existing 138-kV system.

The SDG&E South Orange County 138-kV System would not require any reconductoring under this alternative. The Capistrano Substation would not be expanded, but equipment at Capistrano Substation found to be inadequate would be replaced. The distribution circuit 315 (12-kV) would not be relocated.⁶²

Because its assertions are in error, the RDEIR's conclusions that the Trabuco Alternative will have fewer and less significant environmental impacts than the SOCRE Project also are erroneous, and are not supported by substantial evidence, which instead supports the opposite conclusion.

M. The Trabuco Alternative Requires Rebuilding a 138/12 kV Capistrano Substation, Thus Would Have Impacts to Or Greater Than The SOCRE Project.

Capistrano Substation must be rebuilt or overhauled to provide reliable electric service even if the Trabuco Alternative were adopted. To do no more than replace aging equipment in the existing Capistrano Substation, as the RDEIR assumes for the Trabuco Alternative, will not provide adequate reliability for SDG&E's customers in the South Orange County service territory. Adequate reliability can be achieved only by a complete rebuild and expansion of the existing Capistrano Substation. Replacing aging infrastructure in kind and rebuilding a limited size substation in the existing yard will not achieve the improvements provided by the SOCRE Project, and will not achieve SDG&E's goal to provide reliable electric service to its South Orange County customers. The rebuild of the Capistrano Substation would expand to the lower yard within SDG&E-owned property and add a minimum of two spare 138kV positions for future needs that may arise outside of the planning time horizon, but within the expanded lifetime of the newly rebuilt substation. The substation cannot be rebuilt in its current location and needs to be built in the lower yard to maintain construction safety and station reliability during the rebuild project.

Moreover, a new 138kV transmission line from Trabuco to Capistrano would be needed to maintain reliability during a Talega Substation outage, were the Trabuco Alternative to be adopted. There is no room at Capistrano for a new transmission connection, thus connecting a new transmission line into Capistrano Substation requires a new position at Capistrano. This would require a new rebuilt substation at Capistrano.

If the second 230 kV source for South Orange County were to be moved to another site, then Capistrano Substation must be rebuilt as a 138/12 kV substation. If rebuilt as a stand-alone

⁶² RDEIR at 2-171, line 22-24.

project, a Capistrano 138/12 kV substation is estimated to cost between \$135 million to \$165 million (including permitting, mitigation and AFUDC costs).

Unless the Commission directs SDG&E that it may not rebuild Capistrano Substation, Capistrano Substation will be rebuilt. Nonetheless, even knowing this, the RDEIR repeatedly states that certain impacts would be avoided with the Trabuco Alternative, because Capistrano Substation would not be rebuilt. (The RDEIR, like the DEIR, makes this inaccurate assumption in assessing the environmental impacts of nearly all of the alternatives to SDG&E's SOCRE Project.) This is incorrect and results in an inaccurate comparison of environmental impacts, as well as misinforming the Commission and the public.

As stated above, a safe and reliable 230/138/12 kV substation cannot be constructed on the existing Trabuco Substation plus the AT&T parking lot. Instead, SDG&E would have to acquire property both to the north and south of its existing Trabuco Substation, and engage in construction on all such property. By contrast, the RDEIR assumes that the work would occur in a much smaller area and require less new construction. Based upon Energy Division's method of analyzing impacts, these assumptions result in an inaccurate assessment of the impacts on air quality, biological resources, land use and planning. This results in an inaccurate comparison of environmental impacts, as well as misinforming the Commission and the public.

As stated above, the Trabuco Alternative will require upgrades to SDG&E's 138 kV system both to meet NERC reliability standards and to allow a rebuilt Trabuco Substation to serve South Orange County in the event of a Talega Substation outage. By contrast, the RDEIR asserts that no work on SDG&E's 138 kV transmission lines would be required. The RDEIR's erroneous assumption results in an inaccurate comparison of environmental impacts, as well as misinforming the Commission and the public.

Further, the RDEIR fails to acknowledge the environmental impacts of the necessary Reliability Upgrades that will be required to mitigate the interconnection's impacts on SCE's system and the WECC Paths. Although it will require several years of study by SCE, CAISO and WECC to determine the necessary Reliability Upgrades in sufficient detail to determine their environmental impacts, the RDEIR does not even note that such Reliability Upgrades will be necessary and will have environmental impacts of uncertain scope. As a result, the RDEIR fails in its essential CEQA task – it does not inform the Commission or the public of the reasonably anticipated actions that would arise from selection of the Trabuco Alternative.

VI. Neither The Capistrano Preservation Alternative Nor the Project Refinements Trigger Recirculation.

A. Adding the Capistrano Preservation Alternative Does Not Trigger Recirculation.

The addition of the Capistrano Preservation Alternative does not trigger the need to recirculate the RDEIR under Section 15088.5 of CEQA. Rather, it constitutes a feasible means of avoiding an otherwise significant impact that the applicant is willing to undertake. Because it is a reduction of an impact and not a new or more severe significant impact, no recirculation is required. SDG&E has substantial evidence that it has submitted to the Keeper supporting the conclusion that the former utility structure should not be deemed eligible for listing as historic.

Even if the Keeper rejects that evidence, however, the impacts that would otherwise result from demolishing the structure can be avoided through adoption of the Capistrano Preservation Alternative. Under CEQA, a project that follows the Secretary of Interior Standards “shall be considered as mitigated to a level of less than significant.” 14 Cal. Code Regs. 15064.5(b)(3) Because the alternative lessens impacts, and does not create new ones, and because the applicant is willing to adopt it, under CEQA Guidelines Section 15088.5 recirculation is not required.

Final EIRs often add newly proposed alternatives, and doing so does not demand recirculation unless adding that new alternative meets the factual definition of “significant new information.” 14 Cal Code Regs. §15088.5(a)(3). Adding the Capistrano Preservation Alternative does not meet the factual definition of “significant new information” and thus does not generate the need to recirculate the EIR.

Under the California Supreme Court decision of *Laurel Heights Improvement Ass’n v Regents of Univ. of Cal.* (1993) 6 Cal. 4th 1112 (*Laurel Heights II*) and the CEQA Guidelines (14 Cal. Code Regs. §15088.5(a)(3)), when information added to the Final EIR consists of a suggested new project alternative or new mitigation measures, recirculation is required only if the new alternative or mitigation measure meets all four of the following criteria:

- It is feasible;
- It is considerably different from the alternatives or mitigation measures already evaluated in the draft EIR;
- It would clearly lessen the project’s significant environmental impacts; and
- The project’s proponents decline to adopt it.

This was reiterated in *South County Citizens for Smart Growth v County of Nevada* (2013) 221 Cal. App. 4th 316, 330, where the court made clear that an EIR must be recirculated when a new project alternative or mitigation measure is added to the Final EIR only when each of the four criteria are met. Here, although the Capistrano Preservation Alternative: (i) is feasible, (ii) is considerably different from the other alternatives considered in the RDEIR, and (iii) clearly would lessen the significant environmental impact to cultural resources, recirculation is not required because SDG&E has not declined to adopt it.

Because all four tests for triggering recirculation are not met, adding the Capistrano Preservation Alternative does not trigger recirculation. *See South County Citizens*, 221 Cal. App. 4th at 330; *see also North Coast Rivers Alliance v Marin Mun. Water Dist.* (2013) 216 Cal. App. 4th 614, 655 (new alternative did not trigger recirculation because it did not meet two of the four criteria required).

B. The Minor Project Refinements Do Not Require Recirculation.

The refinements to the SOCRE Project proposed to avoid or minimize impacts to biological resources do not constitute “significant new information” because they do not reveal “a substantial adverse environmental effect on the project” or a “feasible way to mitigate or avoid such an effect” that the applicant refuses to adopt. Rather, SDG&E has voluntarily refined its project to avoid or minimize impacts, hence the revision could not trigger recirculation. Recirculation is not required simply because new information is added after the EIR has

circulated for public review. As the California Supreme Court observed in *Laurel Heights II*, 6 Cal. 4th at 1124, “the final EIR will almost always contain information not included in the draft EIR” given the CEQA statutory requirements of circulation of the draft EIR, public comment, and response to these comments prior to certification of the final EIR. Nonetheless, “[r]ecirculation was intended to be an exception, rather than the general rule.” *Id.* at 1132.

VII. All Of The RDEIR Alternatives Are Infeasible Under CEQA.

Other than the Capistrano Preservation Alternative, the alternatives described in the RDEIR are infeasible and should therefore be rejected on that basis alone. In determining feasibility under CEQA, after consideration of economic, environmental, social, and technological factors, the courts have held that “an agency may conclude that an . . . alternative is impractical or undesirable from a policy standpoint and reject it as infeasible on that ground.” *California Native Plant Society City of Santa Cruz*, 177 Cal. App. 4th 957 (2009); *accord, e.g., City of Del Mar v. City of San Diego*, 133 Cal. App. 3d 401, 417 (1982) (“feasibility” under CEQA encompasses “desirability” to the extent based on the legal factors). The Commission follows the same approach. In its Decision 09-07-024 regarding SDG&E’s Sunrise Powerlink Transmission Project, the Commission recognized that it makes the ultimate feasibility finding based upon factors that include its policies:

The feasibility of alternatives is considered at two separate stages in the CEQA process. First, alternatives are screened for potential feasibility before preparing the EIR, in order to determine which alternatives merit further review. (Guidelines, § 15126.6 (a). Later, where there are environmentally superior alternatives, an agency must find them infeasible before approving an environmentally inferior project. (Guidelines, § 15091 (a)(3).) At this later stage, “‘feasibility’ under CEQA encompasses ‘desirability’ to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, and technological factors.” (*City of Del Mar v. City of San Diego* (1982) 133 Cal. App. 3d 401, 417) and the degree to which the project is consistent with the project objectives. (*Sierra Club v. County of Napa* (2004) 121 Cal. App. 4th 1490, 1503.) **Pursuant to CEQA, therefore, it is acceptable for an agency to reject an alternative as infeasible, when the EIR concluded it was feasible for purposes of environmental review.** (*Mira Mar Mobile Community v. City of Oceanside, supra*, 119 Cal. App. 4th at p. 491). . . . Our conclusion that the In-Area Renewable Alternative is infeasible because it would not facilitate as large an amount of renewable energy is legitimate and based on substantial evidence.⁶³

The same approach applies here. The Commission should find that all Alternatives other than the Capistrano Preservation Alternative are infeasible under CEQA Guideline section 15091(a)(3), since there are economic, legal, technological and other reasons that make those alternatives infeasible here.

⁶³ CPUC Decision 09-07-024 at 18 (emphasis added).

The RDEIR was wrong in determining the Trabuco Alternative to be environmentally superior to the SOCRE Project, as the substantial evidence demonstrates. To the contrary, the Trabuco Alternative likely has more environmental impacts that the RDEIR disclosed or analyzed, when the reasonably expected actions to make it safe, reliable, and able to provide reliable electric service are taken into consideration, as CEQA requires. When those activities and impacts are properly taken into account, the Trabuco Alternative is not environmentally superior. And, even if it were, the substantial evidence set forth herein, and in the attached Exhibit 6, demonstrate that it is infeasible. The Commission should find the Trabuco Alternative and all alternatives other than the Capistrano Preservation Alternative infeasible to implement. This conclusion of infeasibility of the alternatives is based on substantial evidence included in the exhibits attached hereto.

VIII. Unless The Capistrano Preservation Alternative Is Included As Part Of The FEIR, The EIR Would Lack A Reasonable Range Of Alternatives Under CEQA.

If and only if the Capistrano Preservation Alternative is considered as one of the Alternatives will the Commission have considered a reasonable range of alternatives under section 15126.6 of the State CEQA Guidelines. Without the Capistrano Preservation Alternatives, the RDEIR is inadequate under CEQA for failure to study any preservation alternative or mitigation. The substantial evidence in the record leads to the conclusion that of the various options, only the SOCRE Project and the Capistrano Preservation Alternative are feasible to implement. 14 Cal. Code Regs. §15364 (“[f]easible’ means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors”).

Also, failure to include an alternative that evaluates the merits of preserving the existing utility building consistent with the SOI standards would leave the FEIR open to an attack that it had failed to consider any feasible on-site alternative, and had failed to consider the SOI Standards in any way. Where a project would have significant impacts from demolishing an historic resource, the EIR should include an analysis of mitigation or alternatives that could preserve the building through compliance with the SOI Standards. The RDEIR does not do that and, as such, it does not yet include a reasonable range of alternatives. *See San Bernardino Valley Audubon Soc’y v. County of San Bernardino* (1984) 155 Cal. App. 3d 738, 750 (EIR must discuss “all reasonable alternatives” to the project); *see also County of Inyo v. City of Los Angeles* (1977) 71 Cal. App. 3d 185, 203.

IX. The FEIR Should Reflect SDG&E’s Current and Prior Comments.

SDG&E commented on the DEIR and incorporates those previous comments by reference herein. The FEIR should expressly incorporate all of the work that SDG&E has said must be done under each of the alternatives, even if the FEIR attributes the conclusions about the significance of those impacts to SDG&E and its experts. This includes not only the host of impacts described above that would result from the Trabuco Alternative, but also impacts from the No Project Alternative and all of the other Alternatives. The substantial evidence demonstrating that those impacts would occur is found in the exhibits attached, including the expert testimony.

The comparison of the SOCRE Project to the Alternatives also is flawed because of the RDEIR's failure to disclose the project refinements that have eliminated any need for full road closures and thus have eliminated the temporary traffic impacts that otherwise would result from such closures. The FEIR should reflect the refinements which avoid the temporary direct and cumulative impacts of the project to traffic as well as the refinements that avoid or minimize impacts to biological resources and, of course, the Capistrano Preservation Alternative that minimizes any potentially significant impact to cultural resources to less-than-significance. In addition, to ensure adequacy under CEQA the FEIR should include the mitigation measures that should be deleted or revised, per SDG&E's April 10, 2015 comments to the DEIR.

For all the reasons described in this letter and the attached materials, SDG&E respectfully requests that CPUC prepare the FEIR, including the information identified in the comments above, and (1) confirm that the proposed SOCRE project is environmentally superior to all other project alternatives or select the Capistrano Preservation Alternative (found in Exhibit 1) as the environmentally superior alternative, for the reasons stated herein; (2) revise the description of the project consistent with the minor project refinement reflected in the Segment 4 Design Revision attached as Exhibit 2; (3) revise the EIR to present the full and fundamental project objectives, and reveal the degree to which Alternatives attain those project objectives; (4) disclose to the public and the decision-maker that rebuilding at Capistrano Substation is reasonably foreseeable to occur under every Alternative, and properly assign those impacts to the various Alternatives; and (5) revise the mitigation measures and the APMs as described in Attachment B - Proposed Mitigation Revisions, Technical Corrections & Clarifications to SDG&E's April 10, 2015 comment to the DEIR.

SDG&E appreciates this opportunity to comment on the RDEIR for the SOCRE project, and provides additional specific comments in Exhibit 10 attached hereto.