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

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

Application 12-05-020  
(Filed May 18, 2012)

**COMMENTS OF FOREST RESIDENTS  
OPPOSING NEW TRANSMISSION LINES (“FRONTLINES”)  
ON THE PROPOSED ALTERNATE DECISION OF COMMISSIONER PICKER**

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## **1.0 INTRODUCTION**

Pursuant to Rule 14.3 of the California Public Utilities Commission (“Commission”) Rules of Practice and Procedure, Forest Residents Opposing New Transmission Lines (“FRONTLINES”) respectfully submits these comments on the Alternative Proposed Decision of Commissioner Picker (“the Alt PD”) issued in Proceeding A.12-05-020 pursuant to the South Orange County Reliability Enhancement Project (“SOCREP” or “SOCRE Project”) proposed by San Diego Gas & Electric (“SDGE”). SOCREP was approved by the California Independent System Operator (“CAISO”) as part of the 2010-2011 Transmission Plan (“TP”), and throughout this proceeding, both CAISO and SDGE have been SOCREP proponents. Other parties (including FRONTLINES) recommended alternatives to SOCREP which CAISO and SDGE have not supported despite substantial evidence in the record demonstrating the superiority of these alternatives. The Alt PD approves SOCREP as proposed by SDGE and rejects alternatives recommended by other parties.

The Alt PD embodies numerous factual errors and material deficiencies, many of which FRONTLINES is unable to address due to page limitations and time constraints. Instead, FRONTLINES has focused on a few areas where the Alt PD deficiencies are remarkable and significant. Among other things, these include the position that the Alt PD assumes regarding the deference that should be shown to opinions advanced by the California Independent System Operator (“CAISO”) as well as SOCREP reliability deficiencies which the PD ignores.

## **2.0 CAISO’S AUTHORITY AND CHARGE ARE NOT DIMINISHED WHEN A CPCN IS ISSUED FOR A PROJECT THAT DIFFERS FROM WHAT CAISO APPROVED**

The Alt PD properly asserts that “CAISO has responsibility to ensure the reliability of the State’s electrical system pursuant to Pub. Util. Code § 345” and that, pursuant to Pub. Util. Code § 1001, the Commission has an ongoing responsibility “to evaluate the public convenience and necessity of proposed transmission projects” [page 28]. However, the Alt PD does not set forth the manner in which the CAISO and the Commission should proceed with these responsibilities to ensure they meet their respective statutory obligations. Rather, the Alt PD simply declares “it is inappropriate for us [the Commission] to set aside CAISO’s execution of its paramount duty to ensure system reliability” and that the Commission must “give effect and complement” CAISO’s charge without overruling it, and that “we [the Commission] independently assess the record developed in this proceeding..... without diminishing the CAISO’s authority and charge.”

Though rather cryptically written, the Alt PD appears to suggest that, by granting a CPCN for a project which differs from CAISO’s approved configuration, the Commission is “diminishing the CAISO’s authority” and “setting aside CAISO’s execution of its duty” and “not giving effect to CAISO’s charge”. The Alt PD takes the position that the Commission should defer to CAISO’s opinion and approve SOCREP, despite the evidentiary record and contrary to

what the Final EIR concludes. Such a position presents a number of statutory implications, and it constitutes a rather significant departure from prior Commission opinions. Therefore, it must be carefully weighed and properly considered because, if adopted, it will certainly inform and substantially influence future Commission decisions pertaining to transmission infrastructure. Additionally, it must be recognized that the Commission has a duty to establish the “public convenience and need” for SOCREP based on today’s circumstances, which differ significantly from 6 years ago when CAISO approved SOCREP. Therefore, and prior to issuing its concurrence with the Alt PD, the Commission must establish that CAISO’s 2010 review and approval of SOCREP 1) was reasonable and addresses a current “public need”; and 2) rises to a level which satisfies the Commission’s statutory obligations under the California Public Utilities Code (“PUC”) and the California Environmental Quality Act (“CEQA”). FRONTLINES addresses these two issues separately below.

## **2.1 CAISO’s 2010 review of SOCREP Does Not Reflect Circumstances Today and is Insufficient for Commission Purposes.**

SOCREP was approved by CAISO nearly 6 years ago under conditions that differ substantially from what exists today and based on a transmission planning environment that CAISO has since modified significantly. Therefore, it is not certain that SOCREP would actually be deemed “necessary” by CAISO if viewed through the lens of CAISO’s current transmission planning process. For instance, to fulfill its core responsibility today, CAISO’s current planning process includes an obligation to “identify other solutions that will be pursued in other venues to avoid building additional transmission facilities if possible” [2015-2016 TP page 6] This was *never* part of CAISO’s self-identified “core responsibility” in the 2010-2011 TP, which was to “approve additions and upgrades to transmission infrastructure so that as conditions and requirements evolve over time, it can continue to provide a well-functioning wholesale power market through reliable, safe and efficient electric transmission service” [page 10]. This is relevant because the Commission should not consider deferring to CAISO’s approval of SOCREP without fully understanding all of the elements upon which CAISO’s approval was based. Toward that end, FRONTLINES offers the following analysis of CAISO’s 2010-2011 TP and planning process in effect when CAISO approved SOCREP<sup>1</sup>.

### **2.1.1 CAISO’s 2010-2011 Transmission Planning Process and Responsibilities**

In the 2010-2011 transmission planning cycle, CAISO implemented a new planning process which, in addition to assessing reliability concerns, sought to further state renewable energy policies and manage the risk to utilities resulting from stranded investments associated with policy-driven transmission additions. Beyond identifying

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<sup>1</sup> The analysis is derived from a careful review of CAISO’s 2010-2011 Transmission Plan (“2010-2011 TP”) and the transmission planning processes that CAISO implemented in and around 2010.

reliability projects deemed “needed” within CAISO’s 10 year planning horizon, this new planning process established 2 new categories for “policy driven” transmission projects: 1) “policy driven” transmission projects that would be approved; 2) transmission projects that would be considered in future planning cycles.<sup>2</sup> SOCREP was approved in the 2010-2011 TP as a reliability project and not designated as a Category 1 project [Table 5.9.3]. This is important, because under a “Memorandum of Understanding” executed by the Commission and CAISO in May of 2010, Category 1 projects approved by CAISO are supposed to “proceed directly to the CPUC and/or other siting authorities for Certificate of Public Convenience and Necessity, California Environmental Quality Act and other siting/permitting requirements”. Reliability projects such as SOCREP are not addressed by this MOU, so the Commission is under no obligation to proceed as if they are.

#### 2.1.2 CAISO Did Not Consider “Cross Boundary” Solutions to Address Reliability Concerns in 2010.

In 2010, CAISO did not consider connections across utility boundaries to address reliability concerns in lieu of adding new transmission facilities within a utility boundary. As far as FRONTLINES is aware, the only cross-boundary connections that CAISO has ever approved are those which the utilities themselves support. This is a clear shortcoming of CAISO’s which has become quite evident in the SOCREP Proceeding. The opportunity for a “cross boundary” utility connection as an alternative to SOCREP is readily apparent to any dispassionate observer looking at a transmission asset map of Southern California without reference to asset ownership or utility territory boundaries. Indeed, the Trabuco Alternative fairly “leaps out” as the most obvious choice. Yet, CAISO was (and apparently still is) loath to consider such options. The reason for CAISO’s reticence is not at all clear; CAISO controls all of the lines, so it does not “lose” or “gain” anything in approving cross-boundary connections. Certainly the utilities might perceive such projects as a “boundary dispute” in which they may “lose” something (though what that might be is not apparent). However, CAISO’s obligation to investor owned utilities (“IOUs”) is not dictated by territorial disputes. To the contrary, CAISO’s role is to transcend such issues and to perceive (and control) the grid as an interconnected web, so CAISO’s staunch opposition to a “Cross Boundary” solution like the Trabuco Alternative is not rational and quite “beyond the pale”. It would be imprudent for the Commission to defer to CAISO’s unreasonable position regarding the Trabuco Alternative, particularly since CAISO’s own testimony shows that the Trabuco Alternative can be feasibly constructed (Section 2.3.3.1.3 of FRONTLINES Opening Brief).

#### 2.1.3 In 2010, CAISO Assumed Significant Generation Would be “Online” in Southern California.

In the 2010-2011 transmission planning process, CAISO considered generation from the San Onofre Nuclear Generating Station (“SONGS”) to be both substantial and certain (as FRONTLINES’ Protest of the SDGE CPCN

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<sup>2</sup> Memorandum Issued by the CAISO Board of Governors approving the 2010-2011 TP – Agenda Item 8

application points out). That is not the situation in which we find ourselves today. In fact (and as the 2010-2011 TP shows), the only reason that CAISO approved SOCREP and rejected a lower cost reconductoring alternative was because SOCREP provided a second SOC connection to SONGS. Now, there is no SONGS and there is no SONGS generation to serve the new Capistrano substation that SOCREP provides. Therefore, the fundamental premise upon which SOCREP was approved is no longer valid. Indeed, the entire power flow “picture” in Southern California differs substantially from what CAISO anticipated in approving SONGS, and future power flow circumstances are fraught with uncertainties. This became clear in the evidentiary hearings, when CAISO’s Witness sparks could not confirm or even estimate when north power flow out of SONGS might reach 1800 MW (despite the fact that he modeled this power flow in his testimony), and he likened such a prediction to asking a weatherman to predict “how many times a one-in-a-hundred year drought or one-in-a-hundred year flood is going to happen” [TR at 329:15]. All of this demonstrates the substantial changes in Southern California’s power flow profile that have occurred since CAISO approved SOCREP, and they reveal the foolishness of proceeding with the proposed SOCRE Project, which connects a new Capistrano substation to non-existent SONGS generation .

#### 2.1.4 CAISO Assumed Unprecedented Load Forecasts in SOC in the 2010-2011 TP

In the 2010-2011 TP, CAISO assumed that load growth in SOC within a 10 year planning horizon would result in a 2020 SOC load of 523 MW [SOCRUP EIR Page 1-6]. Under this circumstance, CAISO predicted that certain Category C contingency events could result in load shedding [page 208], though CAISO does not advance the position that this would violate any NERC Standards. As FRONTLINES’ Opening Brief discussed in detail, these load forecasts were excessive, highly speculative, and never came to pass [Section 2.2]. And, as inspection of the 2010-2011 TP reveals, it was precisely these high load forecasts which CAISO relied upon to approve SOCREP in the first place. The load forecast methodology employed in CAISO’s current planning process predicts substantially lower SOC loads over the next 10 years [CAISO Exhibit 502, Table A-1], therefore SOCREP is not justified on the basis of future load growth.

#### 2.1.5 Projects Approved by CAISO Routinely Included Infrastructure Not Needed to Satisfy Project Objectives.

In 2010 (and even before 2010), CAISO did not limit the scope of its approved reliability projects to incorporate only those elements necessary to achieve the project’s reliability objectives. To the contrary, CAISO routinely approved projects that were much larger than they needed to be and which included far more infrastructure than was necessary to achieve project objectives. This issue is of substantial concern, because the Commission is obligated to demonstrate that all elements of a project are “needed” before issuing a CPCN for the project [D.09-12-044 at 10]. CAISO’s assessment of SOCREP is a good example of how CAISO routinely approved projects with extensive facilities not necessary to achieve project objectives. CAISO had monitored NERC reliability issues in SOC for

several years before the 2010-1011 TP, and had even approved a number of 138 kV upgrades in SOC in the 2009 and 2010 TPs. Then, in the 2010-2011 planning process, CAISO changed course and (as discussed in further detail below) adopted a highly speculative 15 year SOC planning horizon and assumed excessive future loads to justify a much larger SOC reliability project ostensibly because it provides a “second power source”, but in fact merely provides an extension of an existing power source.

The Alberhill project approved by CAISO in the 2009 TP is another good example of how CAISO often approves a “mountain” when a “molehill” will do; Alberhill is a half-billion dollar project that CAISO approved to address a NERC reliability concern which CAISO itself admits can be solved by simply adding one new transformer at the Valley South substation<sup>3</sup>. CAISO’s penchant for approving IOU requests for massive transmission projects in lieu of more modest projects that still meet all project objects is *legendary*<sup>4</sup>. It would take more pages and more time than FRONTLINES has to properly set forth all the many and varied ways in which CAISO has, over the years, approved projects with excessive infrastructure that is not intrinsically necessary to the project itself. Hopefully, FRONTLINES has provided sufficient information here to demonstrate that the CAISO transmission planning process in effect at the time SOCREP was approved did not embody the philosophy that project infrastructure should be limited to what is reasonably needed to meet project objectives, and that CAISO routinely approved substantially larger projects than necessary. Therefore CAISO’s approval of SOCREP must not be perceived by the Commission as “evidence” that SOCREP itself is either “needed” or “necessary”; all it evidences is that SOC may experience reliability concerns in future.

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<sup>3</sup> See alternative 2 identified in Table 1 of the Board of Governors Memorandum approving Alberhill.

<sup>4</sup> Consider for example the Tehachapi Renewable Transmission Project (“TRTP”), which was an enormous CAISO-approved SCE project that was billed as “needed to integrate renewable resources” in the Antelope Valley *even though* most of the project itself was located far from any renewable resources and on the opposite side of the San Gabriel Mountains from the Antelope Valley [Proceeding A.07-06-031]. The Commission “rubber stamped” the entire TRTP project based solely on CAISO’s approval and SCE’s unproved assertion that all TRTP elements were “necessary” [D.09-12-044 Section 4.1 at 9] *even though* no modeling or power flow studies were ever considered anywhere in the Proceeding. AND, there was absolutely nothing in CAISO’s TRTP approval which confirms that all the TRTP elements were “necessary” within the meaning contemplated by the Public Utilities Code. To the contrary, CAISO’s approval of TRTP specifically avoided consideration of RPS compliance, reliability, and economic benefits in any quantitative manner [Page 8 paragraph 3 of the CAISO decision on the Tehachapi project issued January 18, 2007]. AND CAISO approved TRTP knowing that it included far more transmission infrastructure than was necessary to achieve the 4,500 MW of transmission capacity that TRTP was intended to deliver (As the Acton Town Council pointed out in its Opening Brief in the TRTP Proceeding, CAISO packed the TRTP project with infrastructure sufficient to accommodate more than 8,000 MW of new transmission capacity, *which is nearly double the amount that TRTP was intended to address*). AND CAISO should have been forthright with the Commission and explained that TRTP was not necessary to address reliability concerns in the Antelope Valley because CAISO knew that reliability concerns had already been fully addressed in the Antelope Transmission project in D.07-03-012 and D.07-03-045 [Acton Town Council Reply Brief at 7 filed in Proceeding A.07-06-031]. But CAISO was *not* forthright about TRTP, and it chose *not* to inform the Commission regarding the excessive infrastructure included in the TRTP and the fact that most of it was not needed for any of the purposes set forth in D.09-12-044. So the Commission blindly and blithely considered CAISO’s approval of TRTP as proof that TRTP met the “need” standard imposed by the Public Utilities Code *even though* CAISO knew this premise was patently false. CAISO’s failure to clarify these issues before the Commission and “set the record straight” in Proceeding A.07-06-031 constitutes the worst kind of “mendacity by omission”.

2.1.6 CAISO's 2010 Approval of SOCREP was based on an Amputated Alternatives Analysis.

In the 2010-2011 TP, CAISO reviewed reliability projects and considered the extent to which they could adversely impact the grid and whether they addressed an electrical reliability "need" and occasionally (though not always), CAISO considered various utility-recommended alternatives to these projects as well. Based on this "need" determination, CAISO then approved reliability projects incorporating most, if not all, of the elements sought by the utility. CAISO did not "cast a net" to identify a spectrum of project alternatives to address the perceived "need"; to the contrary, CAISO's consideration of alternatives was generally limited to IOU recommendations and was tightly constrained by utility interests, territorial boundaries, and other factors. SOCREP was no exception, because CAISO's consideration of SOCREP in the 2010-2011 TP [on page 210] was limited solely to three alternatives: 1) SDGE's proposed project; 2) a slightly scaled down version of SDGE's project; and 3) a significant expansion of SOC 138 kV system upgrades that CAISO had previously considered [2009 TP and 2010 TP]. In fact, CAISO's consideration of SOCRUP was so stunted that it did not even meet requirements imposed by CAISO's tariff.<sup>5</sup>

2.1.7 Environmental Impacts were not Considered in Reliability Projects Approved by the 2010-2011 TP.

When approving reliability projects under the 2010-2011 transmission planning process, CAISO did not consider environmental impacts and, to FRONTLINES knowledge, CAISO has never prepared an EIR or a Negative Declaration pursuant to CEQA for any of its approved reliability projects. As a public benefit corporation formed by California law under jurisdiction of the FERC, CAISO considers itself exempt from CEQA<sup>6</sup> and is not bothered by the pesky details which attend CEQA compliance, nor does it ever face the very real environmental costs and human impacts that are incurred when it approves excessive and unnecessary transmission infrastructure.<sup>7</sup>

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<sup>5</sup> Section 24.4.6.2 of the CAISO Tariff in effect at the time stipulates that CAISO "shall consider lower cost alternatives to the construction of transmission additions or upgrades...such as...Demand-side management, Remedial Action Schemes, appropriate Generation, interruptible Loads..."

<sup>6</sup> FRONTLINES observes that there are many corporations in California (such as housing authorities) that are formed pursuant to state law and subject to federal jurisdiction and which routinely comply with CEQA. For instance, no housing authority in California ever approves the construction of a new housing project that will be operated under its jurisdiction unless the project documentation includes a certified EIR, MND, or ND prepared pursuant to CEQA.

<sup>7</sup> A good example of this is addressed by one small element of the TRTP project involving the replacement of an existing 220 kV line built by SCE in the early 1970's that was partially constructed to 500 kV standards and was located south of the Vincent substation within the Community of Acton. As set forth in the Acton Town Council's briefs & comments filed in Proceeding A.07-06-031. CAISO approved bringing this line up to 500 kV standards knowing that the upgrades were not necessary for TRTP, and that the line would operate at 220 kV far beyond a 2030 planning horizon. Despite this, CAISO approved it, so the Commission and approved it. Construction took more than a year, and involved helicopter operations from dawn to dusk. Helicopters constantly hovered over, and landed next to residences and their operations were so disruptive that the Acton Town Council filed a complaint [C.12-09-002]. The unnecessary towers constructed for this TRTP segment have contributed to ruined view sheds and create such glaring light intrusions into residential spaces at night that curtains do not help. None of these impacts should ever have occurred, and ALL of these impacts occurred only because CAISO approved unnecessary project infrastructure without consideration for any of the impacts that such an approval entails.

As discussed in more detail below, the alternatives analysis conducted in the transmission planning process that CAISO implemented to develop the 2010-2011 TP is insufficient for the purposes of CEQA, and therefore cannot be relied upon by the Commission as a basis for approving SOCREP

#### 2.1.8 Summary

Taken together, these factors demonstrate that 1) Today's peak load and power flow circumstances in SOC substantially differ from what CAISO anticipated with its approved SOCREP in the 2010-2011 TP and no longer provide adequate basis for the Commission to find that SOCREP is "needed" ; 2) Today's transmission planning process implemented by CAISO actively pursues non-transmission alternatives in a manner that was never considered in the 2010-2011 TP when SOCREP was approved, and, when coupled with CAISO's substantially reduced load forecast in SOC, it is plausible that CAISO would not approve SOCREP if it were considered through today's planning process; and 3) The environmental impacts of a project are intended to inform the project selection and approval process, and because CAISO's review and approval of SOCREP did not consider any environmental impacts, CAISO's approval is necessarily skewed and improperly balanced to such an extent that it cannot be relied upon in the Commission's determination regarding SOCREP. All of this demonstrates the substantial error in the Alt PD's conclusion that CAISO's 2010 opinion of SOCREP should be deferred to today in 2016.

### **2.2 CAISO's Review of SOCREP does not Satisfy the Commission's Statutory Obligations.**

FRONTLINES has analyzed the SOCRE Project and carefully reviewed CAISO's review of SOCRE Project and, as set forth below, concluded that neither meet the statutory requirements imposed by the PUC and CEQA.

#### 2.2.1 Neither SOCREP itself, Nor CAISO's Review of SOCREP comply with the PUC.

Before issuing a "Certificate of Public Convenience and Necessity" ("CPCN") the Commission is obligated by Section 1001 of the PUC to find that a proposed transmission project (like SOCREP) is *required* to meet public "convenience" and public "necessary" mandates. Section 1001 states (in pertinent part):

"no . . . electric corporation . . . shall begin the construction of a street railroad, or of a line, plant, or system, or of any extension thereof, without having first obtained from the commission a certificate that the present or future public convenience and necessity require or will require such construction."

Pursuant to Section 1001, the Commission must conclusively demonstrate that all elements of a project are "*required*" before issuing a CPCN for the project, and cannot approve project elements that are not "necessary" and "convenient" for public purposes. And, because it is not "convenient" for Californians to overpay for a project, PUC Section 1001 compels the Commission to adopt a less costly project alternative if it serves "public necessity" to the same extent as the proposed project. PUC Section 1001 also precludes the Commission from issuing a CPCN for

a transmission reliability project like SOCREP if it includes unnecessary elements or is configured in a manner which thwarts the reliability purposes that underlie the project.

Reconciling all of these aspects of PUC Section 1001 together results in the following maxim: Prior to issuing a CPCN for a reliability transmission project like SOCREP, the Commission must demonstrate, based on credible evidence, that the cost and scope of the project is commensurate with the public convenience and necessity it provides, and that the project itself is not intrinsically contrary to the reliability purpose which underlies it. However, and as discussed in more detail below, CAISO's "cost effectiveness" analysis of SOCREP is substantially flawed, and the SOCREP project itself threatens SOC reliability in several ways. These deficiencies demonstrate that SOCREP does not warrant a CPCN because it does not comply with PUC Section 1001. The Alt PD ignores all these concerns, and therefore lacks the substantive basis required to obtain Commission concurrence.

#### 2.2.1.1 . CAISO's "cost-effectiveness" Determination of SOCREP is Materially Flawed.

As mentioned above, CAISO's 2010-2011 TP assumed that load growth in SOC over 10 years would result in a 2020 SOC load of 523 MW. But rather than use this as the basis for establishing the "cost effectiveness" of SOCREP, CAISO extended the SOCREP planning horizon by more than 15 years to beyond 2025 [page 208 of the 2010-2011 TP], thereby allowing CAISO to speculate that loads far greater than 523 MW would occur in SOC. It was based on *this* astronomically high load threshold that CAISO established the "cost effectiveness" of SOCREP. Specifically, what CAISO did was estimate the cost that would be incurred to upgrade existing SOC infrastructure to accommodate this incredibly high 2025 load (\$348 million). Then, CAISO used this as a benchmark to establish the "reasonableness" of SOCREP's \$365 million price tag.

There are so many problems with this CAISO "cost effectiveness" determination that it is difficult to know where to begin. First, CAISO wrongly included the cost to rebuild Capistrano in the \$348 million "benchmark" [Page 209 of the 2010-2011 TP]. By SDGE's own admission, Capistrano has been in serious need of repair for decades, and it is disgraceful that SDGE did not completed these repairs long ago pursuant to CPUC General Order 131-D. But, the ongoing facility problems that are posed by Capistrano's ancient equipment (and which exist solely due to SDGE's shameful inattentiveness) has nothing to do with future reliability concerns that stem from SOC load growth. Therefore, it was *entirely unreasonable* for CAISO to roll the cost of fixing Capistrano's existing problems into a cost estimate for a project that addresses future growth-related reliability concerns. Second, it is completely irresponsible for CAISO to establish a benchmark cost based on a highly speculative and completely contrived load forecast. Moreover, the notion that anyone would rely on a 15 year planning horizon to justify a reliability project at a time when (as in 2010) California was implementing widespread and significant policy changes in energy procurement and transmission investment is flat out ridiculous. Yet, that is *precisely* what CAISO did when it

established the \$348 million “benchmark” cost to justify approval of the \$365 million SOCRE Project. History shows us just how wrong CAISO’s excessive and highly speculative 15 planning horizon was: none of the projected load forecasts have come to pass and, as if that were not enough, SONGS is now permanently decommissioned. All the elements upon which CAISO depended to justify its “cost-effectiveness” determination for SOCREP are either demonstrably unreasonable or have simply come to naught. Therefore, it would be grossly imprudent for the Commission to defer to CAISO regarding SOCREP’s “cost-effectiveness”.

#### 2.2.1.2. The SOCRE Project Itself Materially Threatens SOC Reliability

The Alt PD ignores the many and varied ways in which SOCREP itself threatens transmission reliability in SOC. Though Section 3.3.1.2 of the Alt PD is established to address SOCREP reliability, it does not do so, and instead it vaguely points to unidentified writings elsewhere in the Alt PD where SOCREP reliability is ostensibly “discussed above”. FRONTLINES combed through the Alt PD for comments addressing SOCREP reliability, and found only two paragraphs discussing wildfire and earthquake events [page 34]. As discussed below, the deficiencies noted in these paragraphs of the Alt PD are substantial and ignore key reliability concerns that SOCREP itself presents.

#### Wildfire events:

The Alt PD states:

“SDG&E disputes the need to position the second 230kV source as “far” from the Talega Substation as the Trabuco Substation. The two 230kV lines that it proposes to interconnect with the proposed new San Juan Capistrano Substation will run on the opposite side of, and not interconnect with, the Talega Substation from the present 230kV line interconnection into Talega Substation. For a fire to affect both the existing and proposed 230kV lines, a fire would have to engulf the entire Talega Substation. SDG&E acknowledges this risk, but submits that it has never suffered the loss of a transmission steel pole or lattice tower due to any kind of fire.”

This statement includes a number of factual errors and it ignores prior Commission determinations as well as key evidence that has been placed in the evidentiary record, to wit:

- As shown on page 28 of FRONTINES Reply Brief, the 230 kV lines that serve Talega from SONGS and the 230 kV lines that will “run” to Capistrano under SOCREP are all located on the west side of Talega. The Alt PD contention that these lines are on “opposite sides” of each other is patently false.
- One of the 230 kV transmission lines that will serve Capistrano under SOCREP does indeed interconnect directly to Talega AS WELL AS the 230 kV line that serves Talega via Escondido. Therefore, the Alt PD’s contention that the Capistrano 230 kV lines will “not interconnect with the Talega Substation from the present 230kV line interconnection into Talega Substation” is patently false.
- This Alt PD fails to address the serious reliability problem posed by SOCREP’s configuration in the vicinity of Talega. Specifically, because the 230 kV lines that will serve Capistrano are located on the west side of Talega and in the same corridor as the 230 kV lines that serve Talega from SONGS, any catastrophic event which occurs on the west side of Talega will impair 230 kV service to both Talega and Capistrano.

- As both the Commission and SDGE are aware<sup>8</sup> a wildfire can easily travel up to 300 feet per minute, therefore it is not only possible for a wildfire to “engulf the entire Talega substation”, it is quite probable that a wildfire will do precisely that.
- The complacency noted in the Alt PD regarding SOCREP’s ability to reliably serve SOC load during and after a wildfire event stems from the nonchalant observation that SDGE “has never suffered the loss of a transmission steel pole or lattice tower due to any kind of fire”. This assertion completely sidesteps the issue of permanent wildfire damage to conductors and other transmission line infrastructure that is not quickly or easily repaired, and it is entirely at odds with prior Commission determinations regarding such matters. As the Commission has previously found, “Lines carried by steel towers are also vulnerable to heat from wildfire... and steel-carried transmission lines are susceptible to physical damage from the heat of a wildfire, and conductor damage is not repairable (conductors must be replaced). A fire can force the outage of a transmission circuit if it raises the ambient temperature of the air around the conductors above the line’s operating parameters. Heavy smoke from a nearby wildfire can contaminate a transmission line’s insulating medium, which is the air surrounding the conductor. Smoke can cause an outage as a result of a phase-to-phase, or phase-to-ground fault because the ionized air in the smoke can become a conductor of electricity resulting in arcing between lines on a circuit or between a line and the ground. In an effort to protect the transmission facilities from this type of power surge the system’s protective equipment can shut the line down, resulting in an unplanned outage<sup>9</sup>. The utter lack of concern manifest in the Alt PD regarding SOCREP wildfire reliability renders it materially deficient.

Earthquake Events:

The Alt PD states:

“SDG&E has proposed to construct the proposed project to withstand forces greater than earthquake shaking. In the event that an earthquake is powerful enough to damage all three 230kV lines under the proposed project, it would “most likely” damage the Talega Substation as well. In such a scenario, bringing Talega back into service would require more time than it would to bring the transmission lines back into service.”

The Alt PD appears to present this argument as “proof” that SOCREP is not susceptible to reliability problems during earthquake events, but in actuality it proves just the opposite because it demonstrates that SOCREP (and by extension, SOC load) is highly susceptible to losses during earthquake events. The SOCREP scenario described here is one in which substantial earthquake damage is inflicted at Talega and the adjacent 230 kV transmission corridor serving Capistrano under SOCREP. This scenario drops all SOC load, and the SOC load remains “dropped” throughout the entire length of time required for SDGE to “bring the transmission lines back into service.” Conversely, with the Trabuco Alternative, this scenario does not drop any SOC load because power flow into SOC is maintained via SCE’s system connection at Trabuco. This scenario is a perfect illustration of why the Trabuco Alternative is vastly superior to SOCREP, because it will fully serves SOC load even if Talega and the transmission corridor adjacent to Talega is removed from service by an earthquake or any other event. The Alt PD completely

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<sup>8</sup> Section D.15 of Final EIS/EIR certified for the SDGE Sunrise Project [A.06-08-010].

<sup>9</sup> Attachment 1A of Final EIS/EIR certified for the SDGE Sunrise Project [A.06-08-010] – Page A1-1.

misconstrues the import of the very argument it proffers, because it illustrates just how unreliable SOCREP really is. Moreover, this argument reveals the fallacies in CAISO's analysis of SOCREP, which (as described above) was predicated on the assumption that SOCREP would serve SOC load if a catastrophic event removed Talega from service. The Alt PD's own argument clearly shows the extent to which SOCREP is incapable of securing the reliability protections which CAISO relied upon as pretext for approving SOCREP.

*SOCREP Reliability Concerns that were Completely Ignored by the Alt PD:*

The Alt PD ignores several other substantial reliability concerns pertaining to SOCREP, including reliability concerns that SDGE's own expert witnesses have confirmed. For instance:

- SOCREP will drop one-third of SOC load (approximately 150 MW) if a contingency event removes Capistrano from service *even if Talega remains fully operational and unimpaired*<sup>10</sup>. This is because SOCREP is configured to serve Laguna Niguel solely via 138 kV lines from Capistrano, and these lines will carry no power in the event Capistrano is down. So, both Capistrano and Laguna Niguel loads are dropped if Capistrano fails even if Talega is operating properly. As SDGE has testified, this risk to one-third of the South Orange County load posed by SOCREP cannot be eliminated; it can only be addressed by "jumping" a temporary "shoe-fly" connection between one of the Laguna Niguel lines to one of the Trabuco lines<sup>11</sup>. And, if this event were to occur during "peak" SOC load, lines TL13131 and 13838 would exceed their emergency thermal rating, which would demand even more load shedding to keep all lines operating within acceptable limits.<sup>12</sup> A loss of 150 MW is two times more than the 75 MW load loss acceptability "threshold" established by the Alt PD. This alone should disqualify SOCREP from further consideration based on the criteria established by the Alt PD.
- The evidentiary hearings revealed that, if SOCREP is constructed as proposed, SOC will experience voltage problems when Talega is removed from service [TR 1139: 3 -1140: 20]. This is because any event which removes Talega from service will also take Talega's synchronous condensers off-line. The synchronous condensers provide voltage support throughout SDGE's entire South Orange County system. Regarding the loss of Talega under SOCREP, SDGE's Witness Smith states: "Without the synchronous condensers in service on the 230 kV substation bus at Talega, the area overall, all across the southern area all the way to the beaches along the coast will be a little soft voltage wise [TR 1139:20-25] and "you described a situation where we've got Talega Substation out of service. That means the Talega 230 kV sub, you can no longer depend on any of the voltage support from the 230 kV system at Talega. So the only support you are going to get is that long line all the way into Capistrano, the capacitors are needed to help support some of that voltage. It is not a perfect situation, but it is better than having the lights go out in South Orange County."
- Under SOCREP, Talega will be served by a 230 kV line from Escondido and a 230 kV line from SONGS, and Capistrano will be served by the same 230 kV line from Escondido (via a 3-way "tap" at the Talega substation) and a 230 kV line from SONGS. If a Category P1 single contingency event occurs that removes the 230 kV Escondido line from service, and a second category P1 contingency event occurs that removes the 230 kV line serving Talega from SONGS, SOC load will be carried by a single 230 kV line from SONGS which, according to

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<sup>10</sup> FRONTLINES Opening Brief pages 11-15, 23, 38, 47-49.

<sup>11</sup> SDGE Exhibit 3.2RC page 66 at 9. Also, Transcript page 134 at 24 - 135 at 24 and page 734 at 5-14.

<sup>12</sup> Page 12 of FRONTLINES Opening Brief

SDGE's testimony, has a transmission capacity that is less than SDGE's peak load forecast for SOC. Therefore, if these overlapping contingencies occur under the peak load conditions forecast by SDGE, load shedding in SOC will be required.<sup>13</sup> The Trabuco Alternative is not susceptible to this problem because it fully serves SOC load from SCE's system even if all the 230 kV lines serving Talega were removed from service.

These reliability problems stem largely from the fact that SOCREP is configured to transmit power to Capistrano from the same power sources that serve Talega along the same corridors that serve Talega, and using the same transmission infrastructure that serves Talega. These factors demonstrate that SOCREP does not really provide SOC with a "second" power source, rather it provides a mere "extension" of the existing power source at Talega which is plagued by the same reliability problems as Talega.

#### 2.2.1.3 Summary

As evidenced above, the CAISO's determination that SOCREP is "necessary" is based on a substantially flawed cost assessment which assumes a highly speculative 15 year planning horizon and an astronomically high load forecast and it ignores important reliability problems which SOCREP itself creates. Therefore, the Alt PD materially errs in positing that CAISO's opinion regarding SOCREP "need" should be deferred to by the Commission. Nothing about CAISO's analysis of SOCREP comports with, or complies with, the "need" determination which the Commission must make pursuant to PUC Section 1001

#### 2.2.2 Deferring to CAISO's Opinion and Approving SOCREP Violates CEQA.

CEQA obligates the Commission to establish project objectives for a proposed project, and develop a reasonable range of project alternatives/mitigation measures that will achieve most (if not all) of these project objectives. CEQA also compels the Commission to adopt alternatives/ mitigation measures if they 1) reduce environmental impacts. 2) are technically and economically feasible, and 3) achieve most of the project objectives. Application of these CEQA requirements to the conclusions presented in the Alt PD reveal that the Alt PD embodies at least two significant material CEQA errors. The first significant material error lies within the Alt PD's argument that the Commission should defer to CAISO's opinion and simply approve SOCREP; this argument fails to recognize that CAISO's 2010 analysis of SOCREP does not comply with CEQA's mandate that the Commission consider a reasonable range of alternatives. The second significant material error lies in the Alt PD's failure to recognize that SOCREP itself fails to achieve the CEQA project objectives and is therefore insufficient for the purposes of CEQA. These two material errors are discussed in more detail below.

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<sup>13</sup> FRONTLINES Reply Brief Page 9

### 2.2.2.1. CAISO's 2010 Alternatives Analysis Does not Comply with CEQA.

CAISO does not conduct the type of comprehensive “alternatives analysis” that CEQA demands because CAISO does not consider itself subject to CEQA. Consistent with this position, CAISO's 2010 analysis of SOCREP was truncated to just three possibilities: 1) SDGE's proposed project; 2) a slightly scaled down version of SDGE's proposed project; and 3) a system upgrade project that expands SOC upgrades previously approved by CAISO in the 2009 and 2010 TP and which represents SDGE's description of a “no project” alternative. As discussed above, CAISO did not “cast a net” to consider any system alternatives, or cross-boundary alternatives, or any other alternatives as required by CEQA. So, while CAISO's alternatives analysis may have been perfectly sufficient for CAISO's purposes in 2010, it is not sufficient for the CEQA purposes that the Commission faces in 2016. This is no surprise; CAISO's purposes have never been aligned with CEQA's purposes because CAISO has never considered itself subject to CEQA. What all of this boils down to is that, pursuant to CEQA, there is only **one** circumstance under which the Commission can defer to CAISO's opinion and “rubber stamp” a CAISO-approved project. That circumstance only happens when the results of the Commission's CEQA-compliant alternatives analysis agrees with the results of the CAISO's non-CEQA compliant alternatives analysis.

*This is not the circumstance in which the Commission finds itself today.*

The Commission's CEQA-compliant alternatives analysis developed a system alternative (the Trabuco Alternative) that creates less environmental impacts, achieves all the stated project objectives, and is technically and electrically feasible. And it costs less, so it is economically feasible as well. Therefore, CEQA *compels* the Commission to approve this system alternative, according to the duty that CEQA imposes on the Commission to minimize environmental damage. Specifically, Section 15091 of the CEQA Guidelines states (in pertinent part):

#### 15091. FINDINGS

- (a) No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:
- (1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
  - (2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
  - (3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

The Commission cannot do as the Alt PD suggests and defer to CAISO opinion and “rubber stamp” SOCREP, because doing so will prevent the Commission from making the finding required by CEQA that changes have been incorporated in the project which substantially lessen significant environmental effects of the project.

#### 2.2.2.2. SOCREP Does Not Meet the Reliability Objective of the Project, but the Trabuco Alternative Does.

As discussed briefly above, and in detail in FRONTLINES Opening Brief, SOCREP itself is susceptible to very real and substantial reliability concerns, to which the Trabuco Alternative is entirely immune:

- If Talega is removed from service, all of SOC will experience significant voltage problems even if Capistrano is fully functioning because the synchronous condensers and STATCOM will be offline. The Trabuco Alternative provides voltage support from the synchronous condensers that SCE just installed Santiago.
- An intrinsic design flaw in SOCREP causes one-third of SOC load to be dropped in the event Capistrano is removed from service even if Talega is operating properly. Therefore, SOCREP does not provide system redundancy because SOC load is not fully served in the event either Capistrano or Talega are removed from service. The Trabuco Alternative has no such design flaws, and SOC load is fully served if either Talega or Trabuco are removed from service.
- Because the Capistrano substation proposed by SOCREP is served from the same power lines that serve Talega along the same transmission corridor adjacent to Talega, it is susceptible to the very same failures that SDGE claims Talega is susceptible to such as fire, earthquake, and vandalism. The Trabuco Alternative does not have this weakness; even if Talega were down and all of SDGE's lines from SONGS were down and SDGE's line from Escondido were down (which would be a truly astounding catastrophe), SOC load would still be served from SCE's system in the north.

In every conceivable way, the Trabuco Alternative meets all of the Project reliability objectives established under CEQA. SOCREP does not. In fact, SOCREP largely fails to achieve the primary goal set by CAISO when it approved SOCREP; namely, the establishment of a redundant power source in SOC. Because the Trabuco Alternative achieves all the CEQA project objectives and it has far less significant environmental impacts than SOCREP, it is clearly the "environmentally superior" alternative as that term is contemplated in CEQA. No amount of complaining from CAISO or sword rattling from SDGE will ever change this fact. And, in accordance with the duty that is imposed on the Commission by CEQA to minimize environmental impacts, the environmentally superior Trabuco Alternative *must* be approved. Therefore, doing as the Alt PD suggests and simply deferring to CAISO's opinion regarding SOCREP is a statutory impossibility.

### **2.3 It Is Imprudent for the Commission to Defer to CAISOs Opinion Regarding SOCREP**

FRONTLINES observes that the Commission has always taken the position that it has jurisdiction and statutory responsibility to assess "need" in a CPCN proceeding [D.03-05-038; see also D.02-10-065, D.02-10-066, D.01-05-059, and D.01-10-029]. Moreover, the Commission does not grant a rebuttable presumption of reasonableness to a CAISO cost effectiveness determination unless the project itself provides economic benefits and the CAISO Board of Governors adopts the specific findings that are set forth in D.06-11-018. CAISO conducted an economic assessment of all the reliability projects it approved in the 2010-2011 TP (including SOCREP) and concluded that

none of them provided a positive net economic benefit [2010-2011 TP page 18]. Therefore, it cannot be inferred by the Commission that CAISO's cost assessment of SOCREP is per se reasonable.

For these reasons, it is both rational and statutorily appropriate to look askance and CAISO's claim that SOCREP is "needed" and that it provides a "cost effective" solution to perceived SOC reliability concerns. This is particularly true in light of the fact that, in 2010, CAISO approved transmission projects based on scant and constrained alternative analyses that are amputated in accordance with the wishes of the proposing utility. History has shown that ratepayer interests and environmental protections are not secured unless the Commission conducts a robust alternatives analysis which contemplates a wide range of alternatives that CAISO would never consider because they are not in the proposing utility's interest. That is precisely the situation in which we find ourselves with SOCREP. It is also precisely why FRONTLINES has set itself against the erroneous and legally insufficient opinion posited in the Alt PD that the Commission should somehow accede to CAISO's wishes and simply adopt the project that CAISO recommends. There is no doubt that CAISO's finding of "need" for the SOCRE Project configuration is entirely insufficient for the purposes of CEQA and PUC compliance.

That being said, FRONTLINES does not argue that CAISO's assessment of SOC reliability "need" is flawed; to the contrary, FRONTLINES's analysis shows that there may be some NERC reliability concerns in SOC at very high loads. What FRONTLINES does argue is that the project approval process which CAISO relies upon to mitigate these perceived reliability concerns is generally dictated by utility interests, and is therefore so myopic that CAISO often fails to recognize reasonable, low-impact and low-cost alternatives even when they are staring CAISO in the face. This is why the Commission must reject the Alt PD premise that the Commission should defer to CAISO's opinion regarding project configuration and cost. In its place, the Commission should resolve to factor in CAISO's opinion only to the extent that it informs the Commission regarding where reliability concerns exist and what their contributing factors are. These are the only elements that are relevant to CAISO's participation in a Commission proceeding, and they are the only ingredients necessary for the Commission to independently develop a robust analysis of project alternatives that are legally sufficient under CEQA and the PUC. Moreover, by adopting this approach, the Commission does not "diminish CAISO's authority" nor does it "set aside CAISO's execution of its duty" nor does it fail to "give effect to CAISO's charge". To the contrary, it properly recognizes CAISO's role in the Commission's process for approving reliability-driven transmission projects.

Lastly, FRONTLINES is *horrified* by the very idea that the Commission would abdicate its decisional responsibilities regarding transmission infrastructure in favor of CAISO's opinion on such matters. Certainly with regard to reliability projects like SOCREP, the CAISO's own adopted transmission plans demonstrate that it only considers truncated project alternatives that are utility-driven and utility-serving. Even under circumstances such as those we face with

SOCREP where projected SOC load increases have never materialized (and in fact load levels have dropped) and entire power flow profiles across Southern California have been transformed by the shutdown of SONGS, CAISO has remained tenaciously committed to SOCREP *even though CAISO's own analysis shows the Trabuco Alternative is entirely feasible*. CAISO's unwavering intractability on this point is proof positive that the Commission should NOT defer to CAISO, because CAISO has shown itself to be remarkably inflexible in its thinking and extraordinarily stunted in its perspective on transmission project alternatives.

### **3.0 THE ALT PD'S CONTENTION THAT FRONTLINES PROPOSALS ARE NOT "CONVINCING" LACKS FOUNDATION AND IS COMPLETELY UNSUPPORTED.**

On page 35, the Alt PD states "ORA and FRONTLINES's proposals do little to convince of their feasibility. Without adequate modeling of these proposals, we are loath to support their conclusions." This assertion in the Alt PD is entirely unsupported, it ignores substantial modeling and other technical evidence placed in the record of this proceeding, and it fails to clarify what aspects of FRONTLINES proposals were unconvincing or why they were unconvincing. Therefore, this conclusion in the Alt PD is materially deficient. The insubstantial nature of this criticism, coupled with the lack of explanatory detail it provides, and the dismissive manner in which it is delivered, is simply *deplorable*. Nonetheless, and despite these deficiencies, FRONTLINES responds below, and points out that the Alt PD's contention that FRONTLINES alternatives are somehow "unconvincing" is more fully rebutted beginning in FRONTLINES' Reply Brief (beginning on page 25) which appears to have been completely ignored by the Alt Pd. Because the Alt PD fails to specify which of FRONTLINES' two proposals is deemed "unconvincing", both are considered below:

#### **3.1 FRONTLINES Reconductoring Proposal**

As set forth clearly in FRONTLINES Direct Testimony and in Section 2 of the Opening Brief, FRONTLINES' Reconductoring Alternative incorporates replacement of the 2 aged Talega transformers with a single high-capacity transformer, upgrades on two distributive transmission lines (TL13835, TL13816) and upgrades (or SPS) on two other distributive transmission lines (TL13836, TL13846) as well as modifications to the Talega and Pico substations, and an overhaul of the Capistrano 138 kV substation to reduce limitations on lines TL13834 and TL13816. No party in this proceeding ever asserted that FRONTLINES Reconductoring alternative is technically or electrically infeasible. Therefore, it is assumed that the criticism expressed in the Alt PD regarding the feasibility of FRONTLINES Reconductoring Alternative relates to a perceived lack of "modeling results". FRONTLINES points out that SDGE conducted multiple modeling assessments of FRONTLINES Reconductoring Alternative. One model run by SDGE (provided in Exhibit 24) properly includes upgrades on TL13835, TL13816, and TL13834, but omits upgrades on TL13836, TL13846, and the Talega transformers. The model assumes an excessive (>500

MW) SOC load, and found that the only elements having NERC violation “overloads” were those that SDGE omitted as upgraded elements. In other words, SDGE’s model proves that FRONTLINES Reconductoring Alternative properly upgrades all the elements necessary to NERC violation “overloads”. Another SDGE model of FRONTLINES Reconductoring Alternative (provided in Table 6-1 of SDGE Exhibit 3.2) properly includes upgrades on TL13835 and TL13834 and the aged Talega transformers, but omits upgrades on TL13816, TL13836, and TL13846. As before, the result of this modeling analysis showed that NERC violation “overloads” occur only on those elements that SDGE failed to model as upgraded. The extensive modeling that SDGE did on FRONTLINES Reconductoring Alternative conclusively demonstrates that FRONTLINES’ Reconductoring alternative properly captures *all* of the system upgrades necessary to eliminate NERC violation “overloads” in SOC through and beyond a 10 year planning horizon, and it eliminates all load drop concerns under all scenarios except those that result in removing the entire Talega substation from service.

CAISO also modeled FRONTLINES Reconductoring Alternative; the results prove that it addresses *all the thermal overloads identified in CAISO’s Testimony*, because it incorporates the Talega modifications that Witness Sparks states are “necessary to meet NERC or CAISO transmission planning standards”. [CAISO Exhibit 501 page 1-11]. For all of these reasons, the Alt PD errs substantially in concluding that FRONTLINES’ Reconductoring Alternative is not feasible or supported by modeling results.

### **3.2 FRONTLINES Trabuco Alternative**

As set forth clearly in FRONTLINES testimony and Opening & Reply Briefs, FRONTLINES recommends a Trabuco Alternative that includes the construction of a new 230kV “breaker and a half” GIS substation adjacent to the existing Trabuco distribution substation which is properly configured to preclude loop flow and supply power from the SCE system to fully support the entire SOC load from SCE’s system in the event the Talega substation is down for maintenance or removed from service due a catastrophic event. It also includes the removal of the two aged transformers at Talega and other modifications at Talega. As clearly set forth in painstaking detail in Section 2.3.3 of FRONTLINES Opening Brief, the FRONTLINES Trabuco Alternative is demonstrated to be:

- Technically feasible because it easily fits on the 2.4 acre lot and provides ample vehicular access even with two high capacity transformers and the necessary stormwater runoff controls and water quality infrastructure.
- Electrically feasible because it accommodates all SOC load without “loop flow” concerns, includes two high capacity transformers, and is in a reliable “breaker and a half” configuration to meet industry standards.
- Economically feasible because it is substantially less expensive than SOCREP.

Taken together, these elements conclusively establish the feasibility of FRONTLINES’ Trabuco Alternative, so it is not clear why the Alt PD concludes otherwise. Nonetheless, it is assumed that the concern expressed in the Alt PD

regarding the feasibility of FRONTLINES Trabuco Alternative relates to a perceived lack of “modeling results” (even though the record is replete with modeling results addressing the Trabuco Alternative). For instance, consider CAISO’s modeling results summarized in Table 1 of Exhibit 505. The only NERC violation “overload” scenario indicated by this model is one in which the new Trabuco 230 kV substation includes only one 230/138 kV transformer. This is why CAISO testifies that a second 230 kV transformer is needed to render the Trabuco Alternative feasible [Exhibit 505 page 6 at 7]. It is also why FRONTLINES’ Trabuco Alternative includes a second Trabuco 230 kV transformer. Regarding verbal testimony offered by CAISO Witness Sparks that “supplemental” model results indicate possible overloads on the Trabuco Alternative, FRONTLINES conclusively demonstrated that these supplemental models were premised on a catastrophic “Category D” contingency event in which half the lines comprising WECC path 43 are removed from service! [FRONTLINES Opening Brief pages 32-33]. Moreover, (and as FRONTLINES identified in the evidentiary hearings) the “supplemental” Trabuco Alternative model results that Witness Sparks mentioned during examination completely contradicted his written testimony [TR 408:1-9]. Nonetheless, and *even under the extreme Category D contingency event* hypothesized by CAISO’s Witness Sparks during the hearings, FRONTLINES’ Trabuco Alternative would still fully serve SOC load because the Trabuco 230/138 transformers would immediately disconnect from the grid when these conditions are detected, which would leave SOC fully served via Talega. For all these reasons, the Alt PD errs substantially in concluding that FRONTLINES’ Trabuco Alternative is not feasible or supported by modeling results.

#### **4.0 THE 75 MW THRESHOLD ESTABLISHED BY THE ALT PD.**

Beginning on page 26, the Alt PD discusses the new TPL-001-4 Standard, and asserts that, “the former footnote B that potentially provides an exemption for local area networks was removed. Under the new standard most single contingency events are now subject to the new footnote 12”. It also concludes, based on CIAISO’s Opening Brief that, “FRONTLINES’ contention that footnote B allows for load loss after a single event is moot because the prior standard has been entirely replaced by NERC TPL-001-4 and “footnote B” no longer exists”. Finally, and based on the language of footnote 12 in TPL-001-4, the Alt PD establishes a load loss limitation of 75 MW under a single contingency event as the threshold for determining whether a SOCREP project alternative provides an acceptable level of reliability<sup>14</sup>. There are a lot of issues “packed” into this discussion, and a number of the foundational elements within this discussion are at best, misconstrued law, and at worst, factually incorrect interpretation. FRONTLINES attempts to correct these errors in the following sections.

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<sup>14</sup> The Alt PD also states “No party presented evidence on the effect of these new [TPL-001-4] standards during hearings”. This is incorrect. FRONTLINES addressed TPL-001-4 during examination of SDGE’s Witness Jontry [TR168:15–172:5]; Direct Testimony [at 6:16-20 & footnote 20]; Opening Brief (at 4 - addresses relation between the prior & new NERC standards); Reply Brief (at 9 -SOCREP violates TPL-001-4 under certain scenarios). Also ORA addressed TPL-001-4 when examining SDGE’s Witness Jontry. [TR100: 6-15].

#### 4.1 “Footnote b” in the Prior NERC Standard and Footnote 12 in the Current TPL-001-4 NERC Standard.

The Alt PD essentially draws a parity between “footnote b” and “footnote 12”, and fails to comprehend that they address two entirely different types of load loss, and that there is a significant “bright line” difference between them:

Footnote b pertains exclusively to consequential load loss that occurs in local networks and radially served areas with a single power source<sup>15</sup>. As CAISO Witness Sparks confirmed on the stand, “if you only have one power source, you lose that source. You lose 500 megawatts... it's actually consequential load loss” [TR 355:22]. Footnote b does not address non-consequential load and it does not permit non-consequential load loss.<sup>16</sup> Footnote b is incorporated into the new TPL-001-4 standard via footnote b found on page 8 of TPL-001-4 which states “b. Consequential Load Loss as well as generation loss is acceptable as a consequence of any event excluding P0.” Although the new NERC standard does not impose a limit on consequential load loss, CAISO does through operation of its Planning Standard. Specifically through operation of Planning Standard #5, CAISO manifests its intent to “put a cap on the radial and/or consequential loss of load allowed under NERC standard TPL-001-4 single contingencies (P1)”, and it specifies a 250 MW load loss limit on all single contingency (P1) event<sup>17</sup>. However even application of a 250 MW load loss limit on SOC via CAISO’s standards is an utter contrivance because (as FRONTLINES Reply Brief explains in detail) SOC is not part of the BES, and is therefore not supposed to be under CAISO control or FERC jurisdiction or NERC standards. CAISO’s control of SOC is merely a “fig leaf” that is used to impose the CAISO Planning Standard on SOC and thereby justify expensive reliability upgrades that SDGE wants to be paid for and CAISO wants to control.

Footnote 12: Pertains exclusively to non-consequential loss or “load shedding” as clearly set forth in TPL-004-1. The non-consequential load loss addressed in Footnote 12 is entirely different from, and completely unrelated to, the consequential load loss addressed by footnote b (which exists in both the previous NERC standard and the current TPL-004-1 standard) . Footnote 12 in the new TPL-001-4 does not subsume Footnote b from the previous NERC standard because they address two entirely different load loss profiles. Footnote b pertains exclusively to consequential load loss, and footnote 12 addresses only non-consequential load loss. Footnote 12 limits non-consequential load loss to 75 MW. The current CAISO Planning Standard recognizes and incorporates this 75 MW limit as applicable only to non-consequential load.<sup>18</sup> The CAISO Planning Standard applies a different limit to consequential load loss; as discussed above, CAISO’s consequential load loss limit is 250 MW.

The ALT PD erroneously makes an “apples to oranges” comparison between the *consequential* load loss addressed by footnote b in both the previous and the current NERC standard and the *non-consequential* load loss addressed by footnote 12 in the new TPL-001-4 NERC standard, and it equates the two in a way that completely obliterates the distinctions that separates them. As TPL-001-4 clearly states, Footnote 12 limits only *non-consequential* load loss after a single P1 contingency event; it does not limit *consequential* load loss after a single

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<sup>15</sup> As FRONTLINES Witness Ayer states: “South Orange County load is a local network radially supplied, therefore, load loss is consequential. Footnote b allows load loss after a single event”. [TR1364 at 23]

<sup>16</sup> As SDGE Witness Jontry states “Footnote B is very clear in that non-consequential load loss is not permitted for that category of contingency -- for Category B contingencies.”[TR 81:10].

<sup>17</sup> CAISO Planning Standard 5 – see explanation on page 14 of “California ISO Planning Standards – Effective April 1, 2015”

<sup>18</sup> Page 17 of “California ISO Planning Standards – Effective April 1, 2015

contingency event. The Alt PD builds on this mistaken assumption by wrongly concluding that “Footnote 12” replaced “Footnote b” and that the 75 MW “short-term” *non-consequential* load loss limit imposed by Footnote 12 actually applies to *any* load loss, including *consequential* load loss.<sup>19</sup> In an effort to clarify the errors encompassed in the Alt PD, FRONTLINES offers the following:

- South Orange County is radially served by a 138 kV local network via a single connection to the CAISO grid, and other than the 230 kV bus and other equipment at Talega, SOC is not part of the “Bulk Electrical System” (“BES”) <sup>20</sup>. However, because SOC is controlled by CAISO, it is subject to CAISO’s Planning Standards and, by extension, the NERC standards.<sup>21</sup>
- As a radially served system that is not part of the BES, load loss in the SOC 138 kV system is categorized as “consequential” load loss and, per CAISO Planning Standard #5, consequential load loss occurring as a result of any single (P1) contingency must not exceed 250 MW.<sup>22</sup>
- If SOC were part of the BES, then SOC load loss occurring after a single P1 contingency event could be categorized as “non-consequential” load loss, and therefore limited to 75 MW ‘near term’ in accordance with page 18 of CAISO’s current Planning Standard.

FRONTLINES is disappointed that SDGE and CAISO have “muddied the waters” of this proceeding and twisted the facts pertinent to NERC Standard requirements to such an extent that the Commission does not discern the substantial difference “consequential” load loss and “non-consequential” load loss, and therefore concludes that “load loss” of any kind is generally subject to the 75 MW “near-term” limit imposed by Footnote 12 of TPL-001-4. *Nothing could be further from the truth, and both CAISO and SDGE know it.*

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<sup>19</sup> The Alt PD derives these conclusions based on CAISO’s Opening brief stating “FRONTLINES contention that Footnote b” allows load loss is moot” because “Footnote 12 replaced Footnote b”. There are so many errors in this element of CAISO’s Opening Brief that it is difficult to know where to begin. First, as set forth above, Footnote 12 did not replace Footnote b. Second, FRONTLINES testimony regarding “footnote b” addressed only *consequential* load loss, and is therefore not pertinent to Footnote 12 (which pertains exclusively to non-consequential loss). As the transcript clearly shows, testimony by FRONTLINES Witness Ayer cited by CAISO that “Footnote b allows load loss after a single event” is explicitly limited to consequential load loss which occurs because SOC is a local network that is radially supplied. Witness Ayer’s actual testimony was: “Frontlines’ position is that South Orange County load is a local network radially supplied, therefore, load loss is consequential. Footnote B allows load loss after a single event,” [TR1364:23-27] and “A South Orange County system is a local network that is radially supplied. Therefore, loss, load loss in South Orange County, is consequential load loss. And it is not a violation of NERC standards to have consequential load loss as a result of a loss of an element” [TR 1361:10-16]. CAISO’s Opening Brief ignores all of this, and mendaciously misrepresents FRONTLINES actual testimony by judiciously carving out 7 words from an entire transcript and omitting all context and qualifications. The Alt PD magnifies this fabrication perpetrated by CAISO by again misrepresenting FRONTLINES testimony. Incidentally, FRONTLINES definitively established that SOC is indeed a radially served local network that is not integrated into the CAISO grid by demonstrating that the SOC 138 kV system meets all five factors of FERC’s “Mansfield test” as applied by CAISO. [FRONTLINES Reply Brief page 4].

<sup>20</sup> As set forth in Section 1 of FRONTLINES Reply Brief, SDGE and CAISO acknowledge that SOC is radially served from Talega, and CAISO has stated that even a total loss of the SOC 138 kV system would not affect the BES, therefore SOC is not part of the BES. An analysis of SOC via the 7 factor test established by FERC order 888 and the 5-factor “Mansfield” test demonstrates that SOC is a distribution system that is not part of the BES. Therefore, SOC should not be under the control of CAISO at all.

<sup>21</sup> Page 4 paragraph 2 of FRONTLINES Reply Brief; CAISO Exhibit 503 on page 4 at 4.

<sup>22</sup> Page 6 of CAISO’s Current Planning Standard effective April 15, 2015.

#### **4.2 FRONTLINES' Reconductoring Alternative Complies with the 75 MW Threshold.**

The record clearly shows that FRONTLINES' Reconductoring Alternative fully complies with the 75 MW load loss "threshold" established by the Alt PD. In fact, the record shows that FRONTLINES' Reconductoring Alternative will not result in *any* SOC load losses under *any* of the P1, P2, and P3 contingency events governed by Footnote 12 in TPL-004-1. Moreover, FRONTLINES' reconductoring alternative will avoid SOC load losses even during P4, P5, and P6 contingency events (formerly recognized as Category C events) in which TPL-004-1 specifically permits load loss in high voltage ("HV") systems like SOC's 138 kV systems. The ability of FRONTLINES' Reconductoring Alternative to avoid all SOC load shed during Category B and Category C (or P1-P6) contingency events is proven by SDGE's and CAISO's modeled results (as detailed previously in Section 3). Therefore, FRONTLINES' Reconductoring Alternative is NOT eliminated by application of the 75 MW load loss threshold for a single contingency event that is established by the Alt PD, and the Alt PD errs substantially in concluding otherwise. In fact (and as set forth in Section 2 of FRONTLINES' Opening Brief), the only circumstances under which FRONTLINES' Reconductoring Alternative would result in load shed are those which entirely remove Talega from service. FRONTLINES' Reconductoring Alternative meets *all* the NERC and CAISO reliability requirements addressed in section 3.2 of the Alt PD, and it does so with minimal environmental impact and at a fraction of the cost of SOCREP. Therefore, the Alt PD errs substantially in eliminating FRONTLINES' Reconductoring Alternative from further consideration.

#### **5.0 THE ALT PD PROVIDES INSUFFICIENT BASIS TO REJECT THE TRABUCO ALTERNATIVE**

Page 47 of the Alt PD rejects the Trabuco Alternative based on allegations that the Trabuco Alternative creates: 1) impacts on SCE's and SDGE's 230 kV system<sup>23</sup>; and 2) impacts on SDGE's 138 kV system. These allegations are addressed separately below, and shown to be entirely baseless.

#### **5.1 The Trabuco Alternative Does not Impact SCE's 230 kV System any More than SOCREP.**

The Alt PD errs substantially in criticizing the Trabuco Alternative for impacting SCE's system (specifically, the Ellis-Johanna corridor) because it completely ignores the fact that the SOCRE Project itself impacts SCE's system in the same manner and to the same extent as the Trabuco Alternative. This was demonstrated time and again by CAISO's own modeling results [Tables 2, 3, and 4 of CAISO Exhibit 505 & Tables 2, 3, and 4 of FRONTLINES Exhibit 436] which show that SOCREP impacts SCE's system the same way that the Trabuco Alternative does and revealed that there is less than 1% difference in the impact levels posed by SOCREP and the Trabuco Alternative..

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<sup>23</sup> The evidentiary record only addresses impacts to SCE's 230 kV system, not SDGE's 230 kV system. Additionally, the Alt PD fails to allege any impacts to SDGE's 230 kV system, so FRONTLINES analysis is limited solely to alleged impacts to SCE's 230 kV system.

Moreover, in its 2013-2014 transmission planning process (which, of course, did not include the Trabuco Alternative) CAISO found the potential need to upgrade Ellis-Johanna Corridor [FRONTLINES Exhibit 415]. This was echoed in the 2014-2015 TP [page 124] and the 2015-2016 TP [page 339]. Notably, all of these transmission plans assumed SOCREP is constructed, and all of them found reliability concerns on SCE's Ellis-Johanna corridor. These facts were discussed in detail in FRONTLINES' Opening Brief [page 32], and apparently ignored completely by the Alt PD. It is simply outrageous that the Alt PD would ignore substantial evidence placed in the record, and criticize the Trabuco Alternative for alleging an SCE system impact that SOCREP itself creates.

## **5.2 CAISO Never Analyzed SPS to Prevent Loop Flow for the Trabuco Alternative.**

The Alt PD wrongly asserts (on page 43) that CAISO “analyzed” the use of a Special Protection Scheme (“SPS”) to prevent loop flow on the Trabuco Alternative, and concluded that “SPS would be infeasible as it would trigger an exceedingly complex SPS that would not meet CAISO Planning Standards”. This assertion is drawn solely from a representation made by CAISO in its Opening Brief, and it forms the basis upon which the Alt PD rejects the Trabuco Alternative, stating it “requires an SPS that the CAISO has deemed to be so complex as to violate its Transmission Planning Standards”. However ***CAISO never ever analyzed the use of SPS to prevent loop flow.*** Here, the Alt PD relies upon a portion of CAISO's Opening Brief which states: “The CAISO reviewed whether an SPS could be put in place to address identified reliability concerns and found that such an SPS would be infeasible as it would trigger an exceedingly complex SPS that would not meet the CAISO Planning Standards”, and it points to three lines from CAISO Witness Spark's examination. However, *none of what CAISO asserts in its Opening Brief is reflected in the transcript.* CAISO's Witness Sparks never even suggests that an SPS was “complex” and he certainly did not explain how the use SPS fails to meet CAISO standards. CAISO's Witness Sparks did not (and could not) identify a single planning standard that would not be met by the use of SPS in Trabuco Alternative<sup>24</sup>

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<sup>24</sup> Pages and pages of transcript are devoted to intervenor attempts to “drill down” to specifics regarding what aspects of SPS on the Trabuco Alternative do not meet CAISO Planning Standards, and which standards are not met [336-344], but CAISO Witness Sparks simply repeated over and over that CAISO's analysis found that “the use of SPS was not feasible”. When asked by ALJ Farrar whether CAISO considered SPS to be infeasible because it does not meet certain criteria and so CAISO never “got to” whether it would mitigate the loop flow, Witness Spark answered in the affirmative [TR 341:7-24]. The record clearly shows that CAISO never actually analyzed whether SPS could successfully eliminate “loop flow” concerns. Instead, CAISO simply declared that it was infeasible. When pressed about what standards apply to SPS for the Trabuco Alternative, Witness Sparks answered that it was actually “guidelines” [TR341:23]. When asked what guidelines, he claimed they were NERC guidelines not CAISO [TR341: 27]. When asked what NERC guidelines prevent the use of SPS for the Trabuco Alternative, he could not say, and simply demurred “The ISO has a large number of SPS on the system already. And one of the fundamental objectives is make sure that these special protection systems don't interact with each other” [TR342:3]. This suggests that SPS cannot be used for the Trabuco Alternative because there are already too many SPS on the SOC system. To test this hypothesis, FRONTLINES asked Witness Sparks how many SPS are in SOC, and he said there is only one [TR 394:14]. Note: CAISO's Planning Standards do not limit the number of SPS in a local area, they merely require that SPSs be “evaluated as a whole and studied as such” [Page 10 - “ISO SPS 5”]. Moreover, CAISO Planning Standards specifically provides up to 6 local contingencies that can trigger an SPS, and it allows up to 4 monitored elements on an SPS [Page 10 - “ISO SPS 6”]. As the record shows, there is only one SPS in place in SOC; so the addition of a second SPS still meets CAISO Planning Standards.

(Though many pages of transcript were devoted to this topic). AND, the record clearly shows that CAISO never actually modeled or otherwise analyzed whether SPS would successfully eliminate “loop flow”<sup>25</sup>. Instead, CAISO’s witness merely repeated the mantra over and over that using SPS with the Trabuco Alternative “was not feasible” without explanation, clarification, or justification. These facts demonstrate that CAISO’s testimony regarding the feasibility of using SPS to avoid “loop flow” with the Trabuco Alternative is utterly unsupported in fact and in law, and provides no basis to reject the Trabuco Alternative. The Alt PD errs in concluding otherwise.

## **6.0 THE ALT PD CRITICIZES THE TRABUCO ALTERNATIVE BASED ON NONEXISTENT TESTIMONY AND CAISO STATEMENTS THAT FRONTLINES HAS PROVEN TO BE FALSE.**

On page 43, The Alt PD criticizes the Trabuco Alternative stating that “two transformers would not prevent overload... but would instead worsen the risk of overload on the SOC system because the two transformers would actually reduce impedance...” and that “SPS can only address an initial overloading”. It supports these statements by citing CAISO’s Supplemental Rebuttal Testimony [Exhibit 505]. However, FRONTLINES found no such statement in CAISO’s testimony (or CAISO briefs). The first statement actually contradicts CAISO’s testimony, which is that modifying the Trabuco Alternative by adding a second transformer (among other things) would address CAISO’s reliability concerns [Exhibit 505 at 5-6]. The second sentence does not make sense, because the whole point of using SPS for the Trabuco Alternative is to “catch” the overload at the initial stage, then open up the Trabuco transformers to stop the power flow completely.

On page 42, the Alt PD states that CAISO “even found overloads if there were two 230/138 kV transformers installed”. It does not cite any CAISO testimony to this effect, however CAISO’s Opening Brief (where a similar statement is found) points to FRONTLINES Exhibit 436. Assuming that this is the source relied upon by the Alt PD in making this statement, FRONTLINES has already revealed the egregious errors in this CAISO statement [page 36 of FRONTLINES’s Reply Brief]. Specifically, CAISO’s modeled results of the two Trabuco transformers that is referred to in this statement fails to consider that the Trabuco-Santiago circuit would be opened under these conditions, (accomplished by opening up the Trabuco 230 kV transformers). CAISO’s Witness Sparks specifically confirmed that this would stop the power flow and eliminate any overload conditions [TR 344: 7-16]. FRONTLINES has shown the utter speciousness of this CAISO statement, and the Alt PD errs substantially in ignoring this.

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<sup>25</sup> Id.

## **7.0 THE DISCUSSION OF TRABUCO ALTERNATIVE COST IN THE ALT PD IS FRAUGHT WITH ERROR.**

A number of statements pertaining to the Trabuco Alternative cost are erroneous and/or misrepresent the record.

### **7.1 The Alt PD Misstates SDGE's Trabuco Cost Estimate, Which Includes Unnecessary Elements.**

On page 45, The Alt PD states that "SDG&E estimates that Alternative J will cost \$404- \$492 million" and cites SDGE's Rebuttal Testimony. However, this is inconsistent with SDGE's Opening Brief, which states the cost will be \$518-634 million [page 59] which does not include "property acquisition costs" or the "upgrades to SDG&E's 138 kV network" or Reliability Upgrades that CAISO may require". SDGE's costs are exorbitant in part because they include overhauling/rebuilding the ancient equipment at Capistrano (which, as FRONTLINES clarifies above, is something SDGE should have done long ago and does not belong in a cost estimate for a reliability project addressing future load increases). Another factor in SDGE's exorbitant cost is that it includes a completely unnecessary rebuild of the Trabuco distribution substation which is simply a waste of money (Opening Brief at 26).

### **7.2 None of CAISO's "Cost Adders" are Necessary**

Page 45 of the Alt PD asserts that CAISO finds SDGE's cost estimate for the Trabuco Alternative "credible" based on the slew of "cost adders" that CAISO contends is required for the Trabuco Alternative such as reliability upgrades in the SOC 138 kV system and on the SCE' 230 kV system (specifically the Ellis-Santiago and Ellis-Johanna lines). The Alt PD ignores all the substantive evidence which FRONTLINES placed in the record demonstrating that SCE reliability upgrades are no more needed under the Trabuco Alternative than they are for SOCREP itself, therefore the Alt PD wrongly agrees with CAISO by setting this "cost adder" to the Trabuco Alternative account. It also ignores FRONTLINES' evidence that using SPS to stop loop flow will avoid the 138 kV upgrade "cost adder" that CAISO contends is required for the Trabuco Alternative. Therefore, the Alt PD errs substantially by lending credence to all of these unnecessary CAISO "cost adders". The Alt PD should recognize CAISO's demonstrated penchant for adding unnecessary transmission facilities, and reject CAISO's contentions.

### **7.3 The Alt PD's Understanding of the Significant Cost Elements in the Trabuco Alternative flawed.**

The Alt PD cites FRONTLINES testimony and states (on page 46): "A significant element of the costs of Alternative J is the potential addition of a second 230/138 transformer at Trabuco Substation. As described in FRONTLINES' testimony, this addition to Alternative J involves the construction of a new 230kV substation which includes two high capacity (392) MVA transformers in a BAAH configuration on the 2.3 acre parcel north of the existing Trabuco distribution substation." It is not clear how this statement is supported in the record, since FRONTLINES testimony and briefs actually show the cost to construct the Trabuco 230 kV substation in a breaker and a half configuration is comparatively small at (\$91 million) compared to SDGE's estimate (\$634) million, especially when topped off with CAISO's "cost adders". Moreover, and as FRONTLINES Opening Brief indicates, the addition of a second

transformer to the Trabuco Alternative is actually a very small cost element. To be clear, it is not the addition of a second transformer which results in the construction of the Trabuco 230 kV substation in a “breaker and a half” configuration; this configuration would still be used even without the second transformer because the substation would include 3 elements connected to the 230 bus, so a “breaker and a half” configuration would be reasonable and reliable, and it provides a spare line position. Nothing in this statement actually makes sense, so any conclusions that the Alt PD derive therefrom are insupportable.

## **8.0 OTHER ERRORS IN THE ALTERNATIVE PROPOSED DECISION**

Additional errors noted in the Alt PD include:

Page 32 states “FRONTLINES offered one alternative to the proposed project, that is, modifications to the Talega substation independent of the addition of a second source at Trabuco”. This statement is factually incorrect. As set forth in Section 2.3 of FRONTLINES Opening Brief and discussed above, FRONTLINES offered two alternatives (Reconductoring and Trabuco) both of which eliminated all NERC reliability issues.

Page 37 addresses the reliability of reconfiguring Talega under the “No Project” alternative. The Alt PD wrongly states: “It appears that doing maintenance on Talega would put SDG&E at risk of a P1 NERC violation if the operating transformer were to fail while the other transformer is being replaced” and that this “alternative, which carries the risk of a significant (>75 MW) loss of load under a single contingency, does not appear to satisfy the new NERC reliability standard”. As FRONTLINES detailed in Section 2 of its opening brief, Talega has four transformers; by removing one of low capacity, then installing a high capacity transformer in its place, then removing the second low capacity transformer Talega is always served by 3 transformers and will NOT drop load during a P1 contingency and will therefore always fully comply with TPL-001-4.

Pages 37-38 addresses reliability of the Reconductoring Alternative. Notably, the Alt PD cites only CAISO’s testimony and briefs, and it wrongly entirely ignores all of FRONTLINES testimony and briefs, which (as discussed above) conclusively demonstrate all Category B and C contingency events are fully mitigated and all NERC violations are avoided with the Reconductoring Alternative. CAISO’s own testimony proved that FRONTLINES Reconductoring Alternative addresses *all the thermal overloads identified in CAISO’s Testimony*, because it incorporates the Talega modifications that Witness Sparks states are “necessary to meet NERC or CAISO transmission planning standards”. [CAISO Exhibit 501 page 1-11].

## **9.0 CONCLUSIONS**

For all the reasons set forth above, the Commission should reject the Alt PD and not approve SOCREP as proposed by SDGE.

Respectfully submitted;

/s/ Jacqueline Ayer  
Jacqueline Ayer  
on behalf of FRONTLINES

October 17, 2016