

**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
Sunrise Powerlink Transmission
Project

Application No. 06-08-010
(Filed August 4, 2006)

**MUSSEY GRADE ROAD ALLIANCE REPLY BRIEF TO
PHASE 2 OPENING BRIEF OF SAN DIEGO GAS & ELECTRIC COMPANY**

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I. INTRODUCTION

The Mussey Grade Road Alliance (“Alliance”) files this reply brief in reply to statements made in the San Diego Gas and Electric Company (“SDG&E”) Opening Brief.

II. SDG&E’S ARGUMENTATION SUPPORTS ALLIANCE RECOMMENDATIONS REGARDING SYSTEM EXPANSION

A. SDG&E clearly states that planning for build-out along existing routes is prudent.

In its Opening Brief, SDG&E points out that assuming system expansion along existing routes is a reasonable assumption: *“It is prudent planning for large infrastructure projects such as transmission lines to design for future needs, even where the precise timing of such needs is unknown.”*

*SDG&E does not know the precise routes of these potential future transmission lines, or if they will ever be built. It is reasonable to assume the future 500 kV or 230 kV lines would go to existing substations. Thus, future 230 kV circuits out of Central East Substation would probably terminate at existing substations such as Escondido and Sycamore Canyon.”*¹

The Company also argues that a choice of some routes will make system expansion much more likely:

*“...there are realistic options for connecting Sunrise to the Southern California Edison (“SCE”) system in the future, and such connection has been shown via system studies to be an effective expansion option.”*²

¹ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; p. 66

² Ibid; pp. 68-69.

B. The Commission should adopt Alliance recommendations and assumptions stated in its Opening Brief regarding expansion of existing routes:

1. The final EIR should be considered complete only if it contains full analysis of these potential expansions.

The Alliance has argued that based upon Commissioner Grueneich's interpretation of the law as applied to the Draft EIR/EIS, any expansion that is easily foreseeable must be fully analyzed in the Draft EIR/EIS³. The Alliance has shown that the Draft EIR/EIS as-is is insufficient, and the final version should fully treat these expansions.

2. The hypothesis of a 10-year build-out of 230 kV lines as suggested in the Draft EIR/EIS should be considered for comparative route hazards and costs.

The Alliance offered two hypotheses when calculating overall fire risk impact rates for various routes⁴ and the subsequent costs that would be applied to projects⁵. The easily foreseeable nature of the SDG&E expansion argues that the assumption of build-out should be adopted as the working hypothesis for estimating route costs.

3. Routes which allow for 230 kV or 500 kV expansion in high fire-risk areas will have their fire risks commensurately increased and should be disfavored.

If the SDG&E argument is taken at face value, it would imply that routes that have more significant probability of expansion in high fire risk areas would be problematic from a wildland fire standpoint – the probability of ignition will increase with the number of lines exposed to hazardous vegetation⁶. The Alliance has argued that such routes should be disfavored from a wildland fire safety standpoint.

III. SDG&E'S CHARACTERIZATION OF THE DRAFT EIR AS OVERSTATING ENVIRONMENTAL IMPACTS IGNORES WILDLAND FIRE

SDG&E complains that the Draft EIR/EIS overstates the impact of the line on sensitive species: "*Aspen has taken a worst-case analysis approach to predicting the potential environmental*

³ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; pp. 28-29.

⁴ Ibid.; pp. 69-73.

⁵ Ibid.; pp. 19-24.

⁶ Ibid; p. 69.

impacts from Sunrise and, as a result, has overstated those potential impacts in a number of resource areas.”⁷

The Alliance maintains that this overlooks what is perhaps the greatest threat to the environment from this project: the specter of type conversion from frequent wildland fires. Unlike environmental impacts that would be caused by project construction and operation, which will generally be localized in the vicinity of the project, wildland fire can be carried for miles from its ignition point. The Alliance has argued in its Opening Brief that this issue received insufficient scrutiny in the Draft EIR/EIS⁸. In fact, this problem has already been observed as a result of a power line fire – roughly 40,000 acres of land burned in October 2003 was re-burned in the Witch Fire of October 2007, making it critically endangered⁹. Couple this with a non-negligible probability of ignition during the lifetime of SPL¹⁰, and it is clear that a significant environmental hazard is presented by this line.

So whatever possible overstatements might be present in the Draft EIR/EIS, the elephant in the living room has been overlooked – the effects of type conversion from power line ignitions could dwarf all other environmental impacts.

IV. THE MOST RELEVANT QUESTIONS REGARDING WILDLAND FIRE CONCERN THE RISK AND POTENTIAL COSTS TO RATEPAYERS POSED BY THE SPL.

There has been much testimony and discussion in Phase 1 and Phase 2 briefs regarding wildland fire and its relevance to the proposed Sunrise Powerlink. The key issue that the Alliance addressed in both Phase 1 and Phase 2 testimony and briefs is the risk imposed by *this particular project*, and the resulting harm and cost this might impose on SDG&E ratepayers. Much SDG&E argumentation is peripheral to this point, and while sometimes useful for setting context often either misses the point or arrives at incorrect conclusions. Other argumentation is directly misleading.

A. Argumentation by SDG&E regarding the fraction of power line fires is correct but the conclusions reached are not correct.

SDG&E has an extensive discussion of the number of power line fires in their Opening Brief, comparing the number of power line fires to fires started from other sources, and comparing

⁷ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; p. 264.

⁸ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; pp. 27-28.

⁹ Ibid.; p. 59.

¹⁰ Ibid.; p. 57.

the number of transmission line fires to the number of distribution line fires¹¹. We have not contested much of this argumentation; in fact their own brief uses some of our own data. They use this analysis to conclude that “...*the overwhelming evidence shows that 230 kV and 500 kV transmission lines such as those proposed for Sunrise produce minimal risk for fire ignition*”, a conclusion not warranted by the data presented.

1. The relevant question is not what fraction of fires is caused by transmission or distribution lines, but what the lifetime risk of fire is from *this* project.

The fact that high voltage transmission lines ignite a small fraction of fires, which no party contests, is much less important than the fact that this fraction is non-zero: big lines start fires. Using the observed fires as a baseline, the Alliance has performed this calculation and reached conclusions based upon it¹².

The SDG&E brief notes that the fire rate from distribution lines is greater than that from transmission lines, a fact quantitatively confirmed by MGRA analysis of the SDG&E fire history. However, SDG&E is not proposing to build a distribution project. It is proposing to build a very long transmission line that cuts through a very long swath of highly flammable vegetation and would be operated for 40 years. The question of relevance in the case of the SPL is not what types of wildland fires or power line fires can be generally expected, but rather how many fires we would expect *this* project to cause in the course of its lifetime.

This is exactly the question the MGRA analysis addresses quantitatively. The SDG&E testimony, on the other hand, asserts that because catastrophic fires from 230 kV lines have not happened yet the risk is “negligible”.

Deductively, we know that SDG&E takes an incorrect approach. We know that 230 kV lines have caused fires under windy conditions, and we know that fires that start under windy conditions will occasionally become catastrophic fires. We therefore know that 230 kV power lines are capable of causing catastrophic fires.

¹¹ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; pp. 290-294.

¹² OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; pp. 56-63.

2. Power line fires are more destructive than other fires, and a power line ignition is more likely to grow to into an uncontrollable wildfire.

Alliance Phase 1 testimony distinctly showed that power line fire history in San Diego County is the history of catastrophic fire, with power line fires burning 17% of all land burned since 1960, and that furthermore power line fires are over-represented in the list of largest fires in California history¹³. As stated in the Alliance Phase 2 Opening Brief, this is even more true in the aftermath of the October 2007 fires¹⁴. This destructiveness, as has been pointed out repeatedly by the Alliance, is due to the fact that the same extreme Santa Ana winds that can cause power line faults and infrastructure failure also cause fires to grow too fast for firefighters to effectively control them. As discussed in the Alliance Rebuttal testimony, the attempt to use fires from power tools, for instance, as a comparison is flawed for this very reason – of all fire sources only power line fires are actually correlated with high wind¹⁵.

B. Despite apparent engineering advantages of 230 kV lines, they are an ignition source.

SDG&E points out a number of superior engineering characteristics of 230 kV lines in their testimony and brief¹⁶. Nevertheless, 230 kV lines in the SDG&E service area are admittedly a source of fire¹⁷.

1. Three fires due to 230 kV lines occurred within the SDG&E network in four years; two of these under high-wind conditions.

As stated in the Alliance direct testimony, only a four-year fire data history is available from SDG&E. Yet in this four-year history there are three fires that have been attributed to 230 kV lines¹⁸. Two of these occurred under high wind conditions, and were larger than the average power line fire though not catastrophic¹⁹. However, they demonstrate the plausibility of wind-related ignition from 230 kV transmission infrastructure.

It should be pointed out that reaching this conclusion was not particularly easy or straightforward. Initial data requests for fire history indicated there was none, and further data requests to SDG&E were required to reveal that data did in fact exist and then yet another data

¹³ MG-1; PHASE 1 DIRECT TESTIMONY OF THE MUSSEY GRADE ROAD ALLIANCE; pp. 18-19.

¹⁴ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; pp. 34-35.

¹⁵ MG-26; PHASE 2 REBUTTAL TESTIMONY OF THE MUSSEY GRADE ROAD ALLIANCE; p. 3.

¹⁶ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; pp. 295-296.

¹⁷ Ibid; p. 294.

¹⁸ MG-20; PHASE 2 DIRECT TESTIMONY OF THE MUSSEY GRADE ROAD ALLIANCE; Appendix 2A; pp. 5-8.

¹⁹ MG-1; PHASE 1 DIRECT TESTIMONY OF THE MUSSEY GRADE ROAD ALLIANCE; Appendix B; p. 3.

request was necessary to obtain it. The history itself, while complete in other ways, inexplicably lacks the voltage of the transmission line. However, by correlating the fire data with the outage history (another chore to obtain), it was possible to deduce the correct line voltage for each failure resulting in fire, and it was in this way that the 230 kV origin of these fires was determined by the Alliance²⁰.

2. Lattice EHV towers have collapsed from wind in other service areas.

During Phase 1 cross-examination, the Alliance submitted into evidence photographs of lattice EHV towers that collapsed under high-wind conditions in the SCE and PG&E service areas, as Exhibits MG-5 and MG-9. These are shown below.



MG-5



MG-9

Under cross-examination during Phase 1 testimony, SDG&E Witness Mortier conceded that it was likely that these particular collapses were not responsible for fire because of the lack of

²⁰ Ibid. p. 5.

vegetation at the failure site²¹. This establishes that this type of construction is not fool-proof. Certainly, the engineers working for SCE and PG&E did not intend these structures to fail, either.

3. Systems do not fail because of their strong points but because of their weak points.

While the engineering measures taken by SDG&E to assure the safety of EHV transmission lines²² might well measure up to industry standard, they do not explain why 230 kV lines cause fires. In fact, the 230 kV static line failures that have caused fires illustrate some very important points. The first is that the cause of a future failure will not always be obvious beforehand. One would assume that if SDG&E had known about the static line issue in advance, they would have taken countermeasures against it. Another is that causes of failure might only evince themselves over time – in fact they may not occur for years. Some processes, such as corrosion or metal fatigue, can take many years to become apparent. The danger is that they will then become apparent – cause a failure – when the system is under unusual stress, such as a Santa Ana windstorm. Another issue is that a problem can be introduced that wasn't present to begin with – such as replacement parts that are of inferior quality. In business, there is always pressure to cut costs in order to increase profits, and this can affect not only the choice of components but also the quality of preventative maintenance.

SDG&E has noted that the Alliance examined their maintenance records for 230 kV and 500 kV transmission lines, and claim that this examination “revealed that there were no problems with SDG&E’s maintenance practices”²³. This overstates the case. Absence of evidence is not evidence of absence. The Alliance Opening Brief in fact states that: “These are of limited value, however, because in order to determine how SDG&E’s practices compare to that of other utilities would require that the maintenance records be compared with other companies, which is not possible under the scope of this proceeding.”²⁴ However, these data could potentially be used in future Commission proceedings, or even by SDG&E itself (if it were so inclined) to actually estimate predicted fire rates for 230 kV and 500 kV lines due to various types of failure. For every fire caused, there will likely be a number of “near misses” – and it should be possible to identify these in the service record. From this it should be possible to estimate potential fire start rates – and to take preventive actions that will eliminate root causes for fires.

²¹ Phase 1 Hearings; Mortier Cross Examination; pp. 994-996.

²² PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; pp. 295-296.

²³ Ibid.

²⁴ MG-20; PHASE 2 DIRECT TESTIMONY OF THE MUSSEY GRADE ROAD ALLIANCE; p. 30.

4. More conservative assumptions need to be made as to wind loading.

SDG&E argues that Alliance criticism of the SDG&E wind study in which we request that more conservative assumptions be applied is unwarranted²⁵. The Alliance discusses the SDG&E wind analysis and our recommendations in some detail in our Opening Brief²⁶, and this is responsive to most of the points raised by SDG&E. Summarizing briefly:

- While the SDG&E methods are not contested, the data they have to work with is unrepresentative of much of the proposed and alternative routes.
- Realizing this, they have applied very conservative assumptions (which constitute slight exceptions to their methodology) to some segments of the line. The Alliance requests that these areas be expanded to include areas of high fire risk where wind conditions have been observed to be and may be expected to be severe.
- Use of very long return intervals is warranted when dealing with events that can cause massive loss of life or property. Precedent exists with regard to earthquake planning.

C. Using current fire rates supplies the best available estimate for future fire rates and allows reasonable estimations of cost that are consistent with recent observations.

Cost assignment for power line fires using an actuarial method was first used during Phase 1 testimony, and argumentation and is continued in Phase 2 testimony using more recent data which is discussed in detail in our Opening Brief²⁷. Most of the argumentation used by SDG&E against this analysis is addressed. We add further clarification below.

1. Costs of power line induced wildland fires need to be taken into account regardless of the liability assigned to SDG&E.

For the purposes of some cost/benefit analysis, it doesn't really matter whether SDG&E is assigned damage or not, but rather whether California ratepayers have been harmed. So while SDG&E claims that "*SDG&E is not responsible for any damages of the October 2007 fires unless a*

²⁵ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; pp. 297-298.

²⁶ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; pp. 64-67.

²⁷ Ibid; pp. 57-63.

*court finds SDG&E liable and SDG&E exhausts any appeals*²⁸, it is certainly true that SDG&E ratepayers have been severely harmed. Total property damage for the October 2007 fires was estimated at roughly \$1.6 B, a considerable portion of which was endured in San Diego County, with the Witch fire – classified as a power line fire by Cal Fire – being the primary culprit²⁹. Contrary to SDG&E’s assertion³⁰ that Alliance Witness Mitchell’s cost estimates were not based upon actual data, in fact Alliance testimony shows clearly that 1,650 structures were destroyed in the Witch Fire alone, and that the California Insurance Department estimated that 2,000 homes were destroyed in *all* fires. Adding in the fact that the Rice Fire (also attributed to power lines by Cal Fire) destroyed 248 structures, and it is clear that the \$300M to \$1B cost estimate made by the Alliance for power line fires during the October 2007 Firestorm is completely reasonable and factually supported.

SDG&E argumentation concentrates solely on liability. For the sake of clarity, there are actually four types of wildland fire costs that could be incurred by SDG&E ratepayers, some based upon liability and some not³¹. All of these are addressed in Alliance argumentation, but we break them out separately below to make clear to the Commission which type of costs may be assigned under what conditions, and which assumptions are implicit in each. All of these costs need to be treated in an actuarial manner since, while the probabilities of any given event are small, the damages that can accrue as a result are very large. Hence argumentation that the Alliance is calling for the Commission to “assign billions of dollars to this particular project”³² is simply incorrect.

- **Direct cost of property damage** – these costs accrue because ratepayers are the ones damaged by power line fires. A power line that was beneficial to ratepayers for other reasons might be an overall liability if it was likely to destroy property.
- **Direct cost of environmental damage** – public open spaces, forests, and preserves are all maintained with ratepayer money. When the environmental quality of these public holdings is degraded or destroyed due to damage by frequent fires, the public

²⁸ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; p. 322-323.

²⁹ MG-20; PHASE 2 DIRECT TESTIMONY OF THE MUSSEY GRADE ROAD ALLIANCE; Appendix 2A; pp. 13-14.

³⁰ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; p. 323-324.

³¹ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; pp. 56-61.

³² PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; p. 325.

good suffers. Amount of damage is assumed to be restoration or replacement cost. This cost assumes no liability.

- **Cost of liability for property damage** – Unlike direct costs, these costs assume that *additional* costs can be assessed against ratepayers via SDG&E’s own liability in the event that they are found to be responsible for property damage. Under the theories of inverse condemnation and trespass commonly used in power line fire cases, multiple damages may be assessed against utilities. Since these damages can be indirectly passed on to ratepayers, they need to be considered as part of the cost/benefit analysis. Application of this cost assumes utility liability and assessment of up to triple damages.
- **Cost of liability for environmental damages** – In analogy to the costs for property damage, these costs assume that multiple damages could be assessed for damage to public lands. It is founded on the same assumptions as the cost of liability for property damage, and additionally assumes that the public land agency having jurisdiction seeks cost recovery in order to restore or replace the damaged public lands.

2. Application of case law supporting additional liability costs is justified.

This issue was handled extensively in Phase 1 argumentation³³. Trespass and inverse condemnation are used in power line wildland fire liability cases, and are not a speculative construct as suggested by SDG&E³⁴.

3. Estimates for catastrophic fire start rates are supported by data.

When estimating how many significant fires would be generated by the SPL over its estimated lifetime (a number whose estimation is well documented) would become “catastrophic” and cause significant damage, an estimation of between one in five and one in 25 was used, culminating in a set of “worst case / best case” ratio of 10% and 2% respectively for the total 40-year lifetime probability of SPL sparking a catastrophic fire. These percentages were then used for cost estimation³⁵.

³³ A.0608010 – Sunrise - OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE I ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; p. 33-34.

³⁴ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; p. 324.

³⁵ MG-1; Phase 1 Direct Testimony of the Mussey Grade Road Alliance; pp. 38-39.

SDG&E has complained that these estimates are somewhat rough³⁶. Regardless, between Phase 1 and Phase 2 testimony they became well-supported by data, as noted in the Alliance Opening Brief³⁷, since now three catastrophic fires out of 81 fire starts from power lines under wind or component failure have been measured. Since 3.5 fire starts are expected from SPL based on extrapolation from current rates³⁸, one can see that the available data are consistent with the Alliance's original estimates, though much closer to the "worst case" assumption than the "best case" assumption (3.5 X (3/81) ~ 13%).

V. SDG&E ARGUMENTATION REGARDING TYPE CONVERSION IS BASED ON A FLAWED ANALYSIS

SDG&E argues that the risk of type conversion from transmission lines in general and the SPL in particular is minimal, and that this is dwarfed by other causes of type conversion³⁹. The Alliance presents an extensive critique of SDG&E's testimony regarding type conversion in its Opening Brief⁴⁰ that is fully responsive to these claims and which further argues that analysis and testimony by SDG&E witness Mortier on the issue of type conversion lacks value and should be discarded. Summarizing the arguments from our Opening Brief, we note:

- The SDG&E argument conceptually ignores the fact that type conversion caused by an ignited fire is most likely to occur far from the ignition point due to the very large sizes of catastrophic fires.
- The analysis seems to conflate habitat lost due to development with habitat lost because the native vegetation on disturbed land is replaced with other non-native vegetation. No evidence is presented that "non-native vegetation" used in the analysis is actually caused by type conversion processes.
- The witness was unfamiliar with the classifications used in the GIS study, leading one to question whether the data is being properly understood or used.

³⁶ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; p. 324.

³⁷ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; pp. 59-60.

³⁸ MG-20; PHASE 2 DIRECT TESTIMONY OF THE MUSSEY GRADE ROAD ALLIANCE; Appendix 2D; p. 14.

³⁹ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; pp. 301-308.

⁴⁰ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; pp. 45-48.

- Absurdly small amounts of land in San Diego, in general, are shown as “type converted”, leading one to question the interpretation. These are *much* smaller than lands affected by the recent wildfires.
- What it means to be “adjacent” to power lines is not defined.
- There is a general lack of citations or references that would bolster the witness’s case.

VI. SDG&E’S ATTEMPT TO DISCREDIT ALLIANCE STATISTICAL ANALYSES HAVE NO VALUE OR VALIDITY

SDG&E has attempted to discredit statistical analyses performed by the Alliance expert witness, Dr. Joseph Mitchell. Their goal, as addressed at length in the Alliance Phase 2 Opening Brief⁴¹, seems to have been primarily to obfuscate statistical issues rather than to present cogent or convincing statistical arguments of their own. Our major argument was that the testimony of the SDG&E witness, Dr. Jim Lackritz, was sorely lacking in merit and should not be given weight. Our reasoning can be briefly summarized as:

- No claim made in the testimony is supported by either a calculation or a reference.
- The witness makes statements outside of his field of expertise.
- The witness simply gainsays a number of Alliance arguments, ignoring clearly stated suppositions, focusing on trivial points, and through repeating conditionalities raised in the Alliance testimony as criticism.
- The witness did not join the proceedings until March 17th and is unfamiliar with the arguments and principles involved.
- SDG&E’s strategy was to use procedural tricks rather than evidence to confuse issues relating to statistics.

The Alliance witness, Dr. Joseph Mitchell, is an experimental particle physicist who has, since his return to the United States in 1999, leveraged his expertise to do groundbreaking work in the field of wildland fire, including a refereed publication in the world’s premier fire journal and presentations at wildland fire conferences⁴². The statistical analyses performed for the Alliance testimony were simple and straightforward, and easily within the competence of the witness: If

⁴¹ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; pp. 74-79 and pp. 18-19.

⁴² MG-1; PHASE 1 DIRECT TESTIMONY OF THE MUSSEY GRADE ROAD ALLIANCE; Appendix J; Joseph W. Mitchell, Ph. D. - Vitae.

statistics were auto mechanics, the analyses done in Alliance testimony would be an oil change. SDG&E's witness, on the other hand, provides no quantitative analysis whatsoever, regardless of his qualifications.

While we have already argued why the SDG&E testimony on this issue lacks merit, we would also like to address further errors and problems in the SDG&E Opening Brief.

A. The SDG&E Opening Brief mistakenly conflates two separate analyses performed by the Alliance's expert and thereby makes incorrect statements.

SDG&E misinterprets both the Alliance testimony and the testimony of its own expert witness as evidenced in the statement that "*MGRA's entire analysis is based on the contention that San Diego has more fires than the rest of Southern California, and that the destructiveness of fires in San Diego is greater than five other counties...*"⁴³ In fact, as clearly stated and delineated in the Alliance's Phase 2 testimony, the Alliance performed several distinct and *logically separate* analyses that form the basis of its conclusions, each of which was discussed in a separate appendix of the testimony:

1. An analysis of the October 2007 Firestorm, which dealt only with the fires occurring during the Santa Ana event in late October, and which covered all of Southern California⁴⁴.
2. A historical analysis in all counties of Southern California having similar vegetation types and weather conditions, extending back to 1960 and examining all power line fires in this timeframe⁴⁵. The purpose of this analysis was to see whether the excess of power line fires in San Diego noticed in October 2007 was a statistically significant historical trend. As this relates to the SPL, an excess might indicate that conditions in the SDG&E service area were more dangerous than those elsewhere, and would imply that more stringent conditions would be appropriate in San Diego than might have been applied elsewhere.
3. An analysis of the SDG&E fire records, restricted only to the physical SDG&E service area, and extending back for only four years – the total time that SDG&E

⁴³ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; p. 308.

⁴⁴ MG-20; PHASE 2 DIRECT TESTIMONY OF THE MUSSEY GRADE ROAD ALLIANCE; Appendix 2A.

⁴⁵ MG-20; PHASE 2 DIRECT TESTIMONY OF THE MUSSEY GRADE ROAD ALLIANCE; Appendix 2B.

has collected fire data⁴⁶. The purpose of this analysis was to estimate future fire probabilities assuming that recently observed fire rates continue into the future.

Hence, SDG&E's claim that all Alliance conclusions are contingent on the Southern California power line fire history analysis (#2 above), is patently incorrect. SDG&E makes further argumentation based upon this misconception, stating that "*Even if it were true that San Diego county has more fires compared to other areas of Southern California (which SDG&E does not concede), Dr. Mitchell acknowledged on cross examination that this could be due to the fact that the results are based on a narrow four-year window of data.*" Again, this is based upon conflation of the two analyses, and is a false interpretation of the cross-examination record. As clearly stated above and shown incontrovertibly in the Alliance testimony, the Southern California power line fire study timeline extended back to 1960 – a period of 46 years, not four years as implied above. The cross examination referred to a *hypothetical* four year time window, as is clearly evident in the phrasing of the question by SDG&E counsel: "*If you assume that there's data over a 46-year period and San Diego has a lower distribution of fire throughout that whole period, isn't it possible that San Diego could have more fires during any particular 4-year period of time within that larger period of time?*"⁴⁷ What SDG&E clearly had in mind with this line of questioning was the four-year window used by the Alliance for the analysis of its own fire data, and which had its own separate statistical analysis performed. These two analyses are not causally or logically related, and any conclusions based on the assumptions that they are will be incorrect. This entire line of argumentation is, put simply, a goof.

The misunderstanding that the different Alliance analyses are directed at solving different problems also extends into the expert witness testimony as well. Referring to their expert witness testimony, SDG&E argues that only 230 kV or 500 kV power line fires should be used in the Alliance statistical analysis that is applied to all counties in Southern California (analysis #2, above)⁴⁸. The purpose of this particular analysis was not to determine fire start rates for 230 kV or 500 kV lines, but rather to establish the presence of conditions that have caused power line fires. That 230 kV or 500 kV lines can be subject to these same conditions and cause fires require an independent form of proof, and this was supplied as part of the separate analysis of SDG&E fire data (analysis #3), discussed above.

⁴⁶ MG-20; PHASE 2 DIRECT TESTIMONY OF THE MUSSEY GRADE ROAD ALLIANCE; Appendix 2D.

⁴⁷ A.06-08-010 Sunrise Phase 2 Hearings Transcript; Witness Mitchell; v. 24; p. 3367; l. 13-18.

⁴⁸ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; p. 312.

B. SDG&E’s argumentation does not quantitatively undermine – or even challenge – the fact that there is a historical statistical excess of power line fires in San Diego County.

The Alliance analysis of historical fire data revealed a statistically significant excess of power line fires in San Diego County⁴⁹. It is important to note that despite their bluster the SDG&E testimony and brief do *not* challenge this calculation or present calculations to the contrary, which were cross-checked and present a conservative result⁵⁰. There is no claim that the excess itself is statistically insignificant. The Alliance testimony cautions about naïve application of this fact, since “counties” are artificial constructs and all other things being equal one would expect a very big county to have more power line fires than a smaller one^{51,52}. However, as we argued in the Opening Brief, there is one sense in which a “county” is a very relevant entity – the fact that the SDG&E service area is very nearly identical to the area of San Diego County. Hence, an excess of power line fires in San Diego – regardless of cause – is a problem for SDG&E and SDG&E ratepayers.

SDG&E argues that if one takes into account the total number of fires from all causes as a possibly correlated variable, that the excess in San Diego is statistically insignificant⁵³. As noted in our Opening Brief, no assertion made by the SDG&E witness is backed up by quantitative calculation. The Alliance’s own investigation into this question indicated that the probability of accidentally achieving an excess was only 6%, as noted by the Alliance witness upon cross-examination⁵⁴. The Alliance witness further noted that the incongruity of the Alliance and SDG&E statements was likely explained by the fact that statisticians often use 5% as a criterion of “significance” – a distinction not shared by physicists. Whether or not the Commission regards the difference between 5% and 6% as a legitimate delineation, the rest of the SDG&E argumentation is irrelevant and misses the point entirely: the remaining question is not *whether* there is a statistical excess of power line fires in San Diego County (there is – and this has in fact not been challenged by SDG&E testimony) – but *why*. Even *if* the primary explanation was that there are just more fires overall in San Diego County (there is a 6% chance this is consistent with data), that would *still* be a

⁴⁹ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; pp. 36-40.

⁵⁰ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; pp. 309-312.

⁵¹ MG-20; PHASE 2 DIRECT TESTIMONY OF THE MUSSEY GRADE ROAD ALLIANCE; p. 18.

⁵² A.06-08-010 Sunrise Phase 2 Hearings Transcript; Witness Mitchell; v. 24; p. 3364; l. 13-18.

⁵³ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; pp. 311.

⁵⁴ A.06-08-010 Sunrise Phase 2 Hearings Transcript; Witness Mitchell; v. 24; pp. 3372-3373.

big problem for SDG&E and its ratepayers, and would have implications for SPL planning. As noted in our Opening Brief, though, it is likely that the fact that significance becomes somewhat less when the total number of fires of all causes is assumed to be source of variation is due to the fact that the total number of wildland fires and number of powerline fires have a common source – the large amount of vegetation in San Diego County⁵⁵.

SDG&E and its witness also attempt to elevate trivial observations in the Alliance testimony (for instance, the fact that ‘3’ is half of ‘6’) to the point of statistical analysis, and falsely state that the Alliance analysis is predicated on these “statistics”⁵⁶. It isn’t – it is based upon a global fit to all available fire data analyzed by the Alliance. Furthermore SDG&E mistakenly uses a section of argumentation that applies to Alliance testimony that is not in evidence, having been corrected by issuance of an erratum prior to testimony submission. This applies to the paragraph taking up of most of p. 311 of their brief (“Dr. Lackritz... 4.32”), which should not have been included.

SDG&E goes on to assert that the methodology that the Alliance applied to this calculation was incorrect, asserting that only mileage of power lines could be used for this particular calculation⁵⁷. As discussed extensively in our Opening Brief⁵⁸, not only does this represent the SDG&E witness’s unfamiliarity with the subject matter, it is a bold misstatement of fact. The use of proxies – the use of the variations in one thing to estimate the variations in another when it isn’t possible to do a direct measurement – is an established and fundamental part of all quantitative sciences. Statisticians are, or should be, familiar with this. In fact, SDG&E’s own fire witness, Hal Mortier, uses a proxy method himself in his own calculations, as stated in SDG&E’s Opening Brief: “SDG&E looked at areas with non-native vegetation as a proxy of type conversion.”⁵⁹ While the subsequent analysis was flawed, as discussed elsewhere (they didn’t choose a very good proxy) the use of a proxy is perfectly allowable scientifically. This is particularly true in the Alliance’s testimony because the various hypotheses tested by the Alliance testimony were not to prove the existence of a statistical excess (the statistics themselves do this), but rather to help illuminate possible causes.

⁵⁵ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; p. 39.

⁵⁶ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; pp. 310-311.

⁵⁷ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; pp. 311-312.

⁵⁸ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; p. 75.

⁵⁹ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; p. 302.

Another gross misstatement of fact made by the SDG&E witness and argued by SDG&E is that extrapolation based upon observed rates stretches “uncertainty laws of probability”⁶⁰. There are no such laws, and none are cited by their witness in support of this assertion. Contrary to SDG&E argument, the testimony of the Alliance quantitatively and carefully addresses the uncertainties introduced by argument from small statistics, and shows high and low acceptable ranges for derived values in all calculations of fire rates and probabilities. One can measure one’s pulse for ten seconds and use this to get per minute rate, with the caveat that the measurement will simply be more accurate if the pulse is measured for a longer period of time. To assert, as SDG&E and its witness do, that measurement and prediction times need to be equivalent is a specious argument.

The art of prediction – of predicting usage rates, population growth, and outage rates – of predicting *anything* about the future for use in calculating the usefulness, safety and efficacy of the Sunrise Powerlink is fraught with uncertainties and assumptions. The general rule to follow is:

Do the best you can, with all the information you have.

The Alliance testimony and argumentation have done just this.

C. Case law cited by SDG&E is inapplicable to the Alliance testimony.

SDG&E cites four cases in support of their argument against acceptance of the Alliance’s statistical analyses: *International Bhd. of Teamsters v. United States*, 431 U.S. 324, 340 (1977); *Watson v. Ft. Worth Bank & Trust*, 487 U.S. 977, 996-97 (1988); *Morita v. Southern California Permanente Med. Group*, 541 F.2d 217, 220 (9th Cir. 1976); and *Harper v. Trans World Airlines, Inc.*, 525 F.2d 409, 412 (8th Cir. 1975). For various reasons, these cases do not apply to the statistical analyses found in the Alliance testimony.

1. Cases all come from a different domain than that analyzed by the Alliance.

All of the cases cited by SDG&E come out of discrimination law, and are difficult to relate directly to the scientific analysis conducted as part of the Alliance testimony. These are adversarial cases, with one party attempting to use statistics to demonstrate discrimination against another party. These establish both a different standard of argument and a different burden of proof, as discussed below.

⁶⁰ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; p. 312-313.

2. Cases arguing against use of small statistics do not indicate any use of a quantitative analysis.

The two cases in which the use of statistical evidence from small samples was denied were *Morita* and *Harper*. In both of these cases, argumentation was made that discrimination existed based upon a very small number of examples (five in the case of *Harper* and eight in the case of *Morita*). *Prima facie* examination of these cases calls into question the very use of the term “statistics” to refer to the decision making process by which the proffered evidence was discarded.

Had a quantitative analysis been applied to either one of these cases – had “statistics” actually been used – the conclusion from both cases would be that no statistical evidence exists for discrimination. There is a substantial difference between showing numerical measurements and calculating the probabilities associated with the hypotheses that could lead to those measurements. Only the latter is properly called “statistics”. What these cases are effectively arguing is against naïve argument from small numbers and for quantitative statistical proof.

The Alliance testimony only engages in the latter. All analyses are carefully analyzed for probabilities, assumptions are clearly stated, and uncertainties are quantified and presented for review. The cited cases do not indicate any level of diligence of that sort was applied in their argumentation. Therefore, the appropriate decision made to exclude data in the cited cases does not apply to Alliance testimony.

3. All cases refer to probative issues, while Alliance argument is strictly for decision-making and predictive purposes because causation is already demonstrated.

Another important distinction between the referenced case law and what is being argued by the Alliance is that the discrimination cases are fundamentally probative: Statistical analysis can be used as evidence to support the assertion that an employer is engaging in discriminatory practices. In the case of Alliance predictive testimony, the fundamental assertion made by the Alliance – that “big lines cause fires” – is already proven by the very existence of fires from 230 kV lines reported in SDG&E fire records⁶¹. Subsequent Alliance analysis and resulting argumentation is to gauge the level of risk that this observation would imply for the SPL under the assumption that recent observations are typical of those that will be made in the future. Hence, a “burden-of-proof” standard is not applicable in this case, since factual basis is effectively proven. Instead, the goal is to provide the Commission with the best information possible for decision-making.

⁶¹ MG-20; PHASE 2 DIRECT TESTIMONY OF THE MUSSEY GRADE ROAD ALLIANCE; Appendix 2D; p. 8.

The goal of the Commission is not to determine whether SDG&E EHV lines are capable of starting fires (though they are), but rather to determine the cost efficacy and potential safety issues that would arise from the Sunrise Powerlink project. *To make a correct decision, the Commission should use all available information.* This is one key discriminator to determine which information should be used in Commission decision making: if information improves the quality of the decision-making outcome it should be incorporated, otherwise it should not.

To accept SDG&E's argument that the fact that fires due to 230 kV lines occur should not be incorporated into the analysis because of small statistics has the same practical effect as saying that these fires do not occur. This in itself would insert a fundamentally incorrect assumption into the analysis, and degrade the quality of the Commission decision. It is better to use the Alliance values with their inherent uncertainties, since these have incorporated a wide range of effects, considerations and factors, and contain much better information than a blanket assumption of no effect.

The effect of small statistics in this particular case is not to render prediction useless, but rather to increase the uncertainty of prediction. SDG&E is no stranger to large uncertainties in prediction. The testimony of Witness Oatman, for instance, who calculated an estimated range of potential outage costs for southern route alternatives (incorrectly, as will be shown below) that spans from \$360M to \$3 billion⁶². If the Commission finds uncertainties in the Alliance fire rate calculations to be large, it should also compare the uncertainties in proffered SDG&E testimony as it determines what data to accept in its final decision-making process.

VII. SDG&E'S OPENING BRIEF'S CLAIMS OF ADDITIONAL FIRE RISKS AND OUTAGE COSTS FOR SOUTHERN ROUTES ARE ERRONEOUS

SDG&E has argued that its proposed and other northern routes are more reliable from a wildland fire standpoint, and that any southern route will be subject to a Category C RAS⁶³. They also have argued that there will be a \$1.3 B associated with outage costs if a southern route is chosen⁶⁴.

⁶² SD-36; SDG&E Phase 2 direct testimony; p. 13.19.

⁶³ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; pp. 58-64.

⁶⁴ Ibid. p. 12.

A. SDG&E’s own analysis shows rough equivalence of fire risk along northern and southern routes, though they state the opposite.

SDG&E quantitatively compared routes with respect to exposure to flammable vegetation based upon the results of the DEIR analysis. They’ve summarized their results in Table 7-1 of their Opening Brief⁶⁵, which shows summaries for very high burn probability (“VHBP”) and high burn probability (“HBP”) areas for each route alternative. They then go on to state that “*each of the northern route alternatives has a lower percentage of total VHBP and HBP areas compared to each of the southern route alternatives.*”

This is a fundamentally incorrect comparison. We expect hazard due to power line ignitions as well as outages due to fire impingement on line route to both be proportional to the TOTAL exposure of lines to vegetation, not the FRACTIONAL exposure of line to vegetation. A 200-mile line with 10% exposure, for instance, would have twice the exposure of a 10 mile line with 100% exposure. If we look at the TOTAL exposure length from Table 7-1, we come to a quite different conclusion:

Route	VHBP miles	HBP miles	Total
Aspen’s Northern	2.28	7.27	9.53
Proposed Project	4.44	6.85	11.29
Enhanced Northern	4.66	7.96	12.62
UCAN	3.00	7.48	10.48
Aspen’s Southern	3.64	8.30	11.94
Modified Southern	4.40	11.08	15.48
LEAPS	4.62	5.17	9.79

We have taken the liberty of adding a “Total” column in the table above, which contains the sum of the numbers in the second and third columns. The VHBP and HBP columns are copied verbatim from the SDG&E brief. It is clear that the Proposed Project has a rough equivalence to the Aspen Southern alternative in exposure to hazardous fire conditions (a result completely in accord with Alliance testimony⁶⁶), and has significantly less exposure than SDG&E’s “Modified Southern” alternative. The erroneous use of fractional rather than total exposure is also applied to SDG&E’s

⁶⁵ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; p. 315.

⁶⁶ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; p. 42.

analysis of the LEAPS and other transmission alternatives⁶⁷ and should be ignored. The totals in the table above should instead be used for comparison of line-vegetation exposure between various routes using Draft EIR/EIS data.

The Alliance has also argued in its Opening Brief that the surveys used to gather the Draft EIR/EIS data have a bias that significantly *underestimates* lifetime exposure of northern routes to vegetation due to fuel removal during the 2003 fires⁶⁸. This effect will differentially increase the fire risk along any northern alternatives with respect to southern alternatives over the next decade.

B. SDG&E's fire rate calculations for the southern route were substantially in error.

The Alliance argued in its Phase 2 Opening Brief that the fire analysis upon which the conclusion that the Environmentally Superior Southern Route would be expected to have twice the number of outages as the northern route was in error⁶⁹. Summarized briefly, the primary errors were that the SDG&E fire expert incorrectly included fires that did not meet Cal Fire data quality standards (larger than 50 acres), and that using a wide swath (six miles) to categorize small fires was inappropriate. SDG&E has noted but not challenged MGRA's analysis in its brief⁷⁰.

SDG&E does a separate analysis that counts the total number of fires in each fireshed analyzed in the Draft EIR/EIS⁷¹. This is also a deceptive analysis because: 1) there is no attempt to normalize for the total area of each fireshed, and 2) there is no attempt to normalize for the path length of each route in each fireshed. Without these corrections, it is not a useful metric for determining the overall threat posed to power lines due to fire ignitions. This analysis also suffers from the same criticism raised in the previous paragraph – that many ignitions in the southern areas are smaller fires that present little threat to power lines.

C. This erroneous data formed the basis of the WECC's route classification.

As noted in the Alliance Opening Brief, UCAN rebuttal testimony definitively shows that the WECC fire assessment was based solely upon data provided to WECC by SDG&E⁷². Hence, the

⁶⁷ Ibid.; p. 318-320.

⁶⁸ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; pp. 40-41.

⁶⁹ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; pp. 52-53.

⁷⁰ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; p. 320, footnote 230.

⁷¹ Ibid; p. 316.

⁷² U-101; UCAN Phase II Rebuttal Testimony by David Marcus on Behalf of UCAN; p. 26.

WECC fire assessment has been tainted by SDG&E's incorrect analysis, and there is no reason to believe that this would continue to be the decision of the WECC if the data were to be corrected.

SDG&E speciously attributes the origin of the fire hazard assertion to WECC itself, as in the analysis of Aspen's Environmentally Superior Southern Alternative: "*According to the WECC, any southern route is at a much higher risk of a common corridor outage than the northern routes...*"⁷³ as well as that of their own Enhanced Southern Route⁷⁴. These assertions should be discounted.

D. Historical fire data shows that *all* alternative routes will be subject to N-1-1 outages due to wildland fires with MTBF < 30 years.

Alliance analysis, summarized in the Opening Brief, shows that *all* routes will be subject to N-1-1 outages due to fires affecting SWPL and the route in question⁷⁵, and that the mean time between such events should be expected to be <30 years. This is due to the fact that clusters of large fires tend and have historically tended to occur during severe Santa Ana wind events. It should be assumed that this information will figure into future WECC considerations, and may result in the reclassification of a northern alternative as Category C.

E. Cost estimates based upon a Category C RAS designation are a factor of five to seven larger than would be expected from wildland fire outages.

Calculations by SDG&E Witness Oatman were referenced in the SDG&E Opening Brief and used to argue that a southern route would be subject to an additional \$1.3 B in costs over the lifetime of the line due to its Category C RAS⁷⁶. The Alliance has shown in its Opening Brief that this number is larger by a factor of five to seven than what would reasonably be expected from wildland fire, using the same assumptions used by Oatman in combination with wildland fire history data⁷⁷. The main difference between the Alliance and Oatman's calculation is that Oatman used *all* outages in his calculations, and not just those due to fire. If we assume that Oatman's calculations are correct then the great majority of the outages for which the Category C RAS

⁷³ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; p. 147.

⁷⁴ *Ibid.*; p. 160.

⁷⁵ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; pp. 54-55.

⁷⁶ PHASE 2 OPENING BRIEF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY; A.06-08-010; May 30, 2008; p. 12; footnote.

⁷⁷ OPENING BRIEF OF THE MUSSEY GRADE ROAD ALLIANCE ON PHASE 2 ISSUES OF THE SUNRISE POWERLINK TRANSMISSION PROJECT; A.06-08-010; May 30, 2008; pp. 55-56.

penalties would be invoked would not be due to wildland fire at all, and would further imply that one would expect almost the same outage rate for a northern route.

Respectfully submitted this 13th day of June, 2008,

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CERTIFICATE OF SERVICE

I hereby certify that pursuant to the California Public Utilities Commission's Rules of Practice and Procedure, I have served a true copy of the **MUSSEY GRADE ROAD ALLIANCE REPLY BRIEF TO PHASE 2 OPENING BRIEF OF SAN DIEGO GAS & ELECTRIC COMPANY** to all parties on the service list for Application No. 06-08-010 via electronic mail or first class mail for those for whom an electronic mail address is not provided.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 13th day of June, 2008 at Ramona, California.

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