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VIA ELECTRONIC FILING

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**RE: MUSSEY GRADE ROAD ALLIANCE COMMENTS ON OFFICE OF ENERGY SAFETY
INFRASTRUCTURE DRAFT DECISIONS ON SOUTHERN CALIFORNIA EDISON
COMPANY'S 2023-2025 WILDFIRE MITIGATION PLAN AND SAN DIEGO GAS AND
ELECTRIC COMPANY'S 2023-2025 WILDFIRE MITIGATION PLAN**

The Mussey Grade Road Alliance (MGRA or Alliance) files these comments pursuant to the Cover letter to the Stakeholders for San Diego Gas & Electric Company's (SDG&E) 2023-2025 Wildfire Mitigation Plan¹ and to the Stakeholders for Southern California Edison Company's (SCE) 2023-2025 Wildfire Mitigation Plan² which authorizes stakeholders to file comments on SCE's and SDG&E's 2023-2025 Wildfire Mitigation Plan Draft Decisions by September 19th, 2023. The Alliance filed comments on the 2022 Wildfire Mitigation Plans of all major IOUs April 11, 2022,³ and filed Reply Comments on April 18, 2022.⁴

The Alliance appreciates the work that the dedicated staff of the Office of Energy Infrastructure Safety (OEIS or Energy Safety) have performed in reviewing the thousands of pages of primary and supporting documentation that comprised these plans in an extremely compressed time frame, as well as reviewing input from stakeholders and incorporating it as appropriate.

¹ 2023-2025-WMPs; OFFICE OF ENERGY INFRASTRUCTURE SAFETY; DRAFT DECISION ON 2023-2025 WILDFIRE MITIGATION PLAN; SAN DIEGO GAS & ELECTRIC COMPANY (SDG&E Draft Decision or DD)

² 2023-2025-WMPs; OFFICE OF ENERGY INFRASTRUCTURE SAFETY; DRAFT DECISION ON 2023-2025 WILDFIRE MITIGATION PLAN SOUTHERN CALIFORNIA EDISON COMPANY (SCE Draft Decision or DD)

³ 2023-2025-WMPs; MUSSEY GRADE ROAD ALLIANCE COMMENTS ON 2023-2025 WILDFIRE MITIGATION PLANS OF PG&E, SCE, AND SDG&E; May 26, 2023. (MGRA Comments)

⁴ 2023-2025-WMPs; MUSSEY GRADE ROAD ALLIANCE REPLY COMMENTS ON 2023-2025 WILDFIRE MITIGATION PLANS OF PG&E, SCE, AND SDG&E; June 6, 2023. (MGRA Reply)

Comments of the Alliance are intended to supplement areas in which the Draft Decisions did not fully capture or process the vast information available and are intended to help refine the final product.

The Alliance reply comments are authored by the Alliance expert, Joseph W. Mitchell, Ph.D.

Respectfully submitted this 19th day of September, 2022,

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**COMMENTS ON THE OFFICE OF ENERGY SAFETY INFRASTRUCTURE DRAFT
DECISIONS ON SOUTHERN CALIFORNIA EDISON COMPANY’S AND SAN DIEGO
GAS AND ELECTRIC COMPANY’S 2023-2025 WMP WILDFIRE MITIGATION
PLANS ON BEHALF OF THE MUSSEY GRADE ROAD ALLIANCE**

The Mussey Grade Road Alliances’ (MGRA or Alliance) comments are authored by
MGRA’s expert witness Joseph W. Mitchell, Ph.D.⁵

1. INTRODUCTION

MGRA supports the majority of Energy Safety’s Draft Decision for Southern California Edison and San Diego Gas and Electric 2023-2025 Wildfire Mitigation Plans, and appreciates that OEIS recommends adopting MGRA suggestions in the areas of covered conductor, rapid earth fault current limiter (REFCL), and numerous other areas. MGRA would like to take this opportunity to discuss stakeholder input and how it is incorporated into regulatory findings. Some of these issues arise from recent Decisions by the CPUC regarding the relationship between CPUC intervenors and OEIS stakeholders, issues that OEIS staff may not necessarily be aware of.

MGRA also notes that although the scope of the “full” WMPs had expanded beyond anything encountered to date, with 2,000 pages alone from the Wildfire Mitigation Plans of the Big Three utilities, thousands of more pages of supplemental and GIS data, and many hundreds of data requests from not only OEIS but from stakeholders, the Energy Safety response itself has managed to be more terse and limited in scope than in past years. While some of this reduction may be the result of focus and practice, it appears leave fairly extensive swathes of the utility safety landscape only cursorily examined or ignored. It is in these areas that external stakeholders who might have specialized knowledge or expertise may be particularly helpful. Integrating this input in a correct manner improves regulation.

The following section discusses structural and semantic issues with the Draft Decisions and makes suggestions how they may be improved in the current WMP cycle and in the future.

⁵ M-bar Technologies and Consulting, LLC; <http://www.mbartek.com>; Email: jwmitchell@mbartek.com. Dr. Mitchell is also a board member of the Mussey Grade Road Alliance.

2. GENERAL IMPROVEMENTS FOR THE DRAFT DECISION TO CONSIDER

2.1. Integrating Stakeholder Input

While it would be presumptuous for stakeholders to state their value to the WMP process, OEIS management has always allowed stakeholders to have a voice in OEIS processes and feedback has often been incorporated into OEIS’s final products. Many stakeholders, such as MGRA, have a deep interest and stake in the prevention of catastrophic wildfires and have appreciated the opportunity to participate in these efforts.

The California Public Utilities Commission (CPUC), also recognizes the value that stakeholders play in the review of wildfire mitigation plans, particularly as it is the duty of the CPUC to review and ratify these plans, and that specifically it was in the interest of adhering to Commission requirements that intervenors be able to participate in plan reviews. In D.22-09-023, the Commission states that:

“In short, the Pub. Util. Code has created a complex and interrelated regulatory scheme to address utility wildfire risks. The work of the Commission and Energy Safety is dependent upon and informs each other, and the participation of intervenors in the WMP reviews at Energy Safety is essential to assisting the Commission in performing its statutory duties. Given the required ratification of the WMP disposition by the Commission, the Commission’s determination of ratemaking impacts of approved WMPs, the Commission’s role in enforcing WMPs, and the importance of ensuring the WMPs adhere to Commission requirements, we find as a matter of policy that it is consistent with the objectives of the statute to encourage the effective participation of intervenors in the WMP reviews at Energy Safety.”⁶

In furtherance of encouraging “effective participation” of intervenors in WMP proceedings, the Commission has determined that intervenor work resulting in substantive contributions to WMP reviews is eligible for compensation under the Intervenor Compensation Program:

“§ 326(b) and Govt. Code § 15473.) WSD/OEIS shall approve or deny WMPs and after such approval, the CPUC ‘shall ratify’ such action. (See § 8386.3(a).) This statutory WMP approval

⁶ p. 4.

scheme creates interrelated and coordinated roles for the CPUC and OEIS. We find that as a policy decision, it is consistent with the objective of the statute to incentivize intervenors to participate in the WMP reviews at OEIS.”⁷

This decision places the WMPs in a unique spot in the OEIS portfolio. Other Energy Safety activities, such as audits, issuance of Safety Certificates, etc., are not subject to CPUC review and therefore outside of the Commission’s Intervenor Compensation program.⁸ Consequently, public participation in these OEIS activities is purported to be lesser than that performed for the WMP reviews.

It is not the fault of Energy Safety that it lacks its own intervenor compensation program, but rather that of the legislature. And it is of course Energy Safety’s discretion how much public participation they wish to encourage. However, to the extent that Energy Safety activities and the CPUC Intervenor Compensation program do overlap in the Wildfire Mitigation Plan reviews, Energy Safety staff have considerable influence on the degree to which intervenors will be compensated.

Statutory rules surrounding intervenor compensation are stringent. In order to make a successful claim for compensation, an intervenor must show that they have made a substantive contribution to a Commission Resolution or Decision.⁹ It has been found, for instance, that contributions that a stakeholder made prior to the initial release of the WMPs and definition of their scope cannot be eligible for contribution.¹⁰ Another determination made by the Commission in a recent decision is that an Energy Safety “concurrence” with an intervenor finding. For example, in SPD-9, Energy Safety states:

“Energy Safety evaluated these comments and concurred with and in some instances incorporated the following stakeholder input on PG&E’s 2022 Update, as reflected in this Decision:

...PG&E should delay any major roll-out of undergrounding until the effectiveness of

⁷ Id.; p. 9.

⁸ D.21-03-013; p. 9.

⁹ PUC § 1801.3(d).

¹⁰ D.22-09-023; p. 21.

alternatives have been evaluated (MGRA).”¹¹

The Commission finds in this case:

“Energy Safety documents MGRA’s comments on this point but does not otherwise address or adopt the recommendation. MGRA has not demonstrated a substantial contribution.”¹²

Hence, it is not sufficient for Energy Safety to note concurrence or agreement with an intervenor finding for that finding to be compensable.

On the other hand, if an intervenor’s contribution to an Energy Safety finding is clearly cited, either directly or the use of a data request, then a substantial contribution is usually recognized.¹³ Even in cases where no mention of the intervenor is made it is still possible for an intervenor to show substantial contribution if Energy Safety’s finding or action closely matches one recommended by the intervenor.¹⁴

In the current case of the SDG&E and SCE Draft Decisions, mention of intervenors other than Cal Advocates is limited to Appendix C. The language used in Appendix C for these notations is:

“Energy Safety found the following stakeholder comments to concur with topics already included in Energy Safety’s findings:”¹⁵

The apparent implication of this language is that Energy Safety would have reached its findings without any additional input from stakeholders, i.e. that stakeholders (other than Cal Advocates) were not responsible for any substantive contributions to Energy Safety’s Draft Decisions. If this statement is in fact true, then no stakeholder can receive intervenor compensation for the comments listed by Energy Safety. This would seem to contradict numerous prior communications from Energy Safety staff and management encouraging public participation as well as conflict with the CPUC’s intent that intervenors be encouraged to participate in WMP reviews.

¹¹ SPD-9; pp. 23-24.

¹² D.23-08-039; p. 18.

¹³ Example at Id; p. 10; Item 4.

¹⁴ Example at Id; p. 13; Item 9.

¹⁵ SCE DD, SDG&E DD; Appendix C.

If it is indeed not the intent of Energy Safety to exclude or discourage review of Wildfire Mitigation Plans by CPUC intervenors then the language that it uses should be appropriately modified.

Recommendation:

Change the language in Appendix C from

“Energy Safety found the following stakeholder comments to concur with topics already included in Energy Safety’s findings.”

To

“Energy Safety found that the following stakeholder comments informed and contributed to its findings”

Recommendation:

In general, where a stakeholder comment matches or contributes to an Energy Safety finding, include a mention, citation, or quote to improve the chances that the stakeholder will be given credit for the work.

2.2. Reduced Scope of the Review of the Draft Decisions

In 2022, the SDG&E Wildfire Mitigation Plan Update was 699 pages, not counting supplemental files and data requests. The SCE Wildfire Mitigation Plan update in 2022 was 799 pages, not counting supplemental files and data requests. The 2023-2025 Wildfire Mitigation Plan for SDG&E was 1071 pages in length, and that of SCE was 938 pages. Hence the Plans themselves, not including the supplemental documents, files, GIS files, and data request responses increased from 1498 pages for these two utilities in 2022 to 2009 pages in 2023, a 34% increase.

Energy Safety’s Draft Decision for the SDG&E in 2022 was 211 pages, whereas its 2023-2025 Draft Decision is 122 pages. For SCE, the 2022 Draft Decision was 212 pages whereas the SCE Draft Decision is 124 pages. This represents a drop from 246 pages to 156 pages, a 37% decrease. Taken together, this shows a reduction in ratio of the number of pages of Draft Decision to the number of pages in the WMPs of over 50%. While a “pages to pages” comparison does not tell the full story, the “coverage” of the utility draft decisions seems to be even more restricted due

to the fact that in both cases, some coverage is due to the irreducible coverage of the Maturity Model comparisons, which take up equal space.

Taken together, these facts lead to the conclusion that the Energy Safety review appears to be more briefer than in previous years. This might perhaps be viewed optimistically that improvement and completeness in the utility models has necessitated less intervention on the part of Energy Safety. However, having performed a detailed review of the utility Plans MGRA has noted numerous remaining deficiencies and additional need for improvement, it is MGRA's opinion that the reduction in scope of the 2023-2025 review has reduced the quality of the Energy Safety review compared to Energy Safety's previous excellent efforts.

Recommendation:

Energy Safety should ensure that the review of the next update is adequately staffed and that the scope of the review covers all issues and deficiencies.

Recommendation:

Energy Safety should utilize stakeholder input more vigorously to ensure adequate coverage of the utility Wildfire Mitigation Plans.

3. TECHNICAL ISSUES

3.1. Use of Worst Case Scenarios, Probability Distributions, and Averages (Section 6.5.2)

In the case of both SCE and SDG&E, Energy Safety states that “SDG&E’s use of maximum consequence values at the asset or circuit level could lead to unrealistically high risk scores at the territory level, and this may affect SDG&E’s ability to optimally prioritize mitigations. Instead, mathematical standards support aggregating consequence values using probability distributions. When this is not possible, a suitable alternative is using average consequence values (also known as expected value). In its 2025 Update, SDG&E must provide a plan with milestones for transitioning from using maximum consequence values to either probability distributions or averages in its next Base WMP. If SDG&E is unable to transition to using probability distributions or averages, it must

explain the reason and propose an alternative strategy that would produce risk scores closer to what using the probability distributions or average consequences would produce.”¹⁶

Energy Safety makes an identical observation regarding SCE.¹⁷

While MGRA has stated that incorrect weighting and use of worst-case scenarios have led to errors in risk drivers and geographical risk distributions for some years,¹⁸ it appears that Energy Safety has not stated the problem completely or correctly. In MGRA’s WMP Comments it noted that:

“The lack of incorporation of extreme winds in the ignition model, incorrect weighting of risk drivers due to the incorrect coupling of probability and consequence due to reliance on “worst case” weather days. SCE remains the only utility not to use a power law (Generalized Pareto) distribution to calculate tail risk in its Enterprise risk model but instead uses 8 hour Technosylva runs, which are known to inadequately describe historical catastrophic losses.”¹⁹

There are three issues with Energy Safety’s assessment:

1. Utilities do not use “maximum consequence values” to calculate consequence. Rather they use consequences obtained under “worst case” weather values. As MGRA has noted in the past, unless these are properly weighted for the *probability* of a given driver occurring during the stated weather conditions, this will lead to error.
2. In numerous presentations at the CPUC and OEIS, MGRA has demonstrated that utility consequence models, if anything, *underestimate* risk due to the 8 hour limitation of the Technosylva fire spread model. Other MGRA analyses regarding risk from wildfire smoke and other issues lead more generally to utility models *underpredicting* risk.
3. Use of an *average* loss to describe utility consequences would be dangerously incorrect because wildfire size distributions follow a power law distribution with an exponent of absolute value less than 1.0. This means that predictions of future losses based on past history will always be underestimates. Also, the average of a probability distribution of

¹⁶ SDG&E DD; p. 23

¹⁷ SCE DD; p. 25.

¹⁸ Mitchell, J.W., 2023. Analysis of utility wildfire risk assessments and mitigations in California. Fire Safety Journal 140, 103879. <https://doi.org/10.1016/j.firesaf.2023.103879> (Mitchell 2023)

¹⁹ MGRA Comment; p. 23.

fire size does not represent the average catastrophe, a characteristic that author (and OEIS consultant) Sam Savage has coined the “Flaw of Averages”.

Attached with this filing is a whitepaper recently authored by MGRA at the request of the CPUC that discusses tail risk, power laws, and their importance in understanding wildfire losses.²⁰ What is important to understand is the average utility wildfire is not that bad – it is usually small in size and does little harm. Historically, using average losses was used by the utilities, resulting in dramatic and ultimately tragic underestimation of risk. For example, in PG&E’s 2017 RAMP proceeding, its use of average risk led it to rank wildfire as only the 5th largest enterprise risk.²¹ The wildfires that are of concern are due to rare, catastrophic events, events with small probabilities but tremendous consequences. As risk is the product of probability times consequences, these are the events that dominate the utility loss landscape.

Energy Safety is correct that the utility probability distributions need to be corrected – the *risk* probability distributions and not merely the consequence distributions – but its guidance on how to do so needs to be rewritten both in the text and in corrective actions SCE-23-02 and SDGE-23-02 in order to avoid a serious and in fact dangerous error.

Recommendations:

- Use “**incorrectly weighted consequence values**” instead of “maximum consequence values”
- Use “**incorrect**” instead of “unrealistically high”.
- Remove “~~When this is not possible, a suitable alternative is using average consequence values (also known as expected value)~~”
- Remove other references to averages. Use of averages leads to a dangerous level of risk underestimation.
- Remove incorrect reference to aggregating maximum consequence values, since this is not how the analysis is performed.

²⁰ CPUC Docket R.20-07-013; TAIL RISK AND EVENT STATISTICS FOR UTILITY PLANNING; Joseph W. Mitchell, Ph.D.; August 1, 2023.

<http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=516047299>

²¹ CPUC Docket I.17-11-003; COMMENTS OF THE OFFICE OF RATEPAYER ADVOCATES ON NOVEMBER 2017 SUBMISSION OF PACIFIC GAS & ELECTRIC COMPANY’S RISK ASSESSMENT AND MITIGATION PHASE; May 10, 2018; p. 26.

3.2. Extreme Wind Scenarios (Section 6.5.4, SCE-23-04)

MGRA welcomes Energy Safety’s emphasis on extreme wind scenarios. As MGRA has repeatedly raised in OEIS and CPUC proceedings, as reflected in Mitchell 2023, the primary difficulty MGRA sees arising from extreme wind scenarios is that the Machine Learning mechanisms used by PG&E and SCE use aggregated historical wind data and thus do not correctly identify areas of the landscape where rare wind events may be more likely.²²

Recommendation:

One modification in the OEIS SDG&E assessment is that SDG&E’s historical wind estimates used to determine the wind loading criteria it uses are derived from a long-term historical wind analysis and not from its 13-year ignition history.²³

3.3. Selection of Undergrounding Projects (Section 7.3.3.1, SDGE-23-06)

In addition to early fault detection, sensitive relay profile settings, and sensitive ground fault settings,²⁴ Energy Safety should add Falling Conductor Protection which will provide the greatest risk mitigation for covered conductor.²⁵

3.4. Continuation of Grid Hardening Joint Studies (SDGE-23-08, SCE-23-07)

MGRA concurs with OEIS that utilities should continue their joint hardening studies.²⁶ MGRA analysis of current studies has shown them to be a highly productive exercise.²⁷ In addition to the analysis done to date, MGRA suggests that OEIS include an analysis of SCE field data regarding wires down, outages, and ignitions for circuits having covered conductor versus unhardened circuits. MGRA analysis has shown that the rate of wires down and ignitions for fully

²² MGRA Comments; pp. 76-79.

²³ SDG&E WMP; p. 151.

²⁴ SDG&E DD; p. 30.

²⁵ MGRA Comments; pp. 101-103.

²⁶ SDG&E DD; p. 81, SCE DD; p. 40.

²⁷ MGRA Comments; pp. 87-94.

covered circuits is lower than that that would be predicted by a 67% effectiveness rate, indicating the possibility that covered conductor is performing better than anticipated.

Recommendation:

SCE should provide an analysis of outage, wires down, and ignition rates per mile for fully covered circuits versus uncovered circuits.

3.5. SCE WMP Strengths

In addition to acknowledged improvements such as long span initiative and tree attachments²⁸, Energy Safety should acknowledge SCE’s extensive deployment of covered conductor as this has led to an impressive reduction in ignitions and wires down.²⁹ This puts it far ahead of other major utilities in wildfire risk reduction.

Recommendation:

Add extensive deployment of covered conductor as an SCE WMP Strength.

3.6. Inclusion of Recommendations from Third Party Consultants (SDGE-23-07)

It was MGRA that first learned about the A P Consulting Report commissioned by SDG&E in a Data Request³⁰ and then obtained it in a subsequent data request.³¹ Energy Safety used the conclusions from the report obtained by MGRA to construct its recommendations.³² MGRA drew many of the same conclusions that Energy Safety did from this report.³³

Recommendation:

Note citation from MGRA Data Request regarding SDG&E’s A P Consulting Report.

²⁸ SCE DD; p. 39.

²⁹ Op. Cite.

³⁰ DR Response MGRA-SDGE-2023WMP-04-01.

³¹ DR Response MGRA-SDGE-2023WMP-06-01.

³² PA Consulting (May 2023). WiNGS-Planning Assurance Report, Appendix A: Table of Recommendations, pages 27-33. (<https://www.sdge.com/sites/default/files/regulatory/MGRA-2023-06%20Attachment%20Q1.pdf>, accessed July 28, 2023).

³³ MGRA Comments; pp. 45-47.

3.7. Cross-Utility Collaboration on Risk Model Development (SDGE-23-01)

MGRA agrees that the Risk Model Development Group is a highly effective forum for discussion of existing and potential risk modeling issues and practices. Energy Safety fails to mention that unlike other utility-based groups, technical stakeholders from OEIS and their consultants, the CPUC, and external stakeholders are regularly invited to delve deeply into technical issues, even going so far as to suggest and lead topics and to invite external experts. While product from this work often finds its way into utility WMPs, due to the temporal limitations placed upon intervenor compensation claims this work is often uncompensated if attended by intervenors, but it is important in that stakeholder input has often led to future actions and guidance.

Recommendation:

Mention participation and contributions by CPUC and third party stakeholders in the Risk Model Development workshops.

3.8. SDG&E and REFCL (SDGE-23-09)

OEIS states that “*Description: SDG&E has not moved forward with piloting REFCL, or explained why it is not exploring the technology.*”³⁴ This is not a correct or fair assessment. SDG&E was required to explain its reticence on REFCL in 2022, and it did so, as carefully explained in the MGRA Comments and associated references.³⁵ In short, effective REFCL requires a three wire configuration and most of SDG&E’s territory has a four-wire configuration. SDG&E maintains that a suitable substitute for REFCL can be obtained by a combination of “*Falling Conductor Protection, Sensitive Ground Fault Protection, and Sensitive Profile Settings...*”³⁶

Since SDG&E claims that its current Advanced Protection Program (APP) is already equivalent to REFCL, it should also be able to demonstrate the residual risk of APP in conjunction with Covered Conductor as an alternative to undergrounding.

³⁴ SDG&E DD; p. 82.

³⁵ MGRA Comments; pp. 94-95. Cites:

A.22-05-015/6; DR Response SDG&E Data Request MGRA-37.

³⁶ Id.

Recommendation:

Add to SDGE-23-09: **“In its 2025 WMP Update, SDG&E must demonstrate the effectiveness of its APP program in conjunction with covered conductor as a direct comparison to undergrounding for all circuits.”**

3.9. SDG&E’s APP (SDGE-23-09,10,11), also SCE 8.3.4.2, SCE-23-19.

MGRA welcomes additional scrutiny of SDG&E of its Advanced Protection Program, which contains a number of components including Falling Conductor Protection and Electronic Fault Detection. However, as participants in SDG&E’s General Rate Case, we have noted that SDG&E is strongly de-emphasizing these promising technologies because they do not intend to employ them in areas that are undergrounded, and SDG&E intends to make undergrounding its primary wildfire mitigation. Another consideration that OEIS should take into account is that these are maturing technologies that are being evaluated by utilities, and because of the short time frame utilities are proposing for deployment of massive undergrounding projects in is necessary that utilities be required to have plans to deploy their advanced technology suites in conjunction with covered conductor if funding for large utility undergrounding proposals is not approved.

Because many utilities are participating in advanced technology initiatives,³⁷ this should apply to them too.

Recommendations:

- All utilities should be required to do a full cost/benefit analysis for Covered Conductor + and advanced technology suite (FCP, EFD, etc) versus undergrounding
- Utilities should by their 2025 update have plans for deployment of advanced technologies across their service areas.

3.10. Prioritization of Risks and Drivers (SDGE-22-01)

MGRA disagrees with OEIS that SDG&E has adequately managed and analyzed its risks and drivers. This was discussed extensively in last year’s WMP review. The results from that

³⁷ SCE DD; p. 67.

review have been published in a peer-reviewed journal (Mitchell 2023). The root cause of this error is addressed in Section 3.1, in which Energy Safety recognizes that there is something wrong with utility risk modeling. In short, the drivers that occur randomly over time, and which represent the majority of ignitions, are not the same drivers that are likeliest to occur under extreme fire weather conditions.

Recommendation:

OEIS should find that SDG&E needs to perform additional work that its predicted risk drivers most closely correspond to those associated with catastrophic wildfire.

3.11. Risk Analysis Framework (SCE 6.2, SCE-23-09)

OEIS notes that SCE has added a “risk analysis framework” to its portfolio:

“SCE’s risk assessment framework is comprised of the Integrated Wildfire Mitigation Strategy (IWMS) and Multi-Attribute Risk Score Framework (MARS Framework or MARS).

• IWMS calculates overall utility risk from both wildfire and PSPS into three risk severity assessments, or risk “tranches,” to differentiate geographic area by risk assessment and to preemptively assign corresponding mitigation options depending on severity.”³⁸

It must be emphasized that SCE’s IWMS “risk management framework” is not a “risk management” framework at all, in that it does not include probability, but only consequence. It represents a radical deviation from the SMAP framework that has been under development since 2014. MGRA discusses this issue extensively in its comments.³⁹ It is vital that when a utility makes such a fundamental change in its approach to risk, that Energy Safety carefully scrutinize the technical justifications and implications of that change in order to make sure that this risk is being applied for the benefit of ratepayers. It should be noted that of the areas being subject to IWMS, SCE has determined that the primary mitigation for these areas will be undergrounding, which gives it a financial stake in this decision.

OEIS does require somewhat more information in its SCE analysis, stating: *“Mitigation selection should consider a variety of location-specific factors, such as how long it takes to deploy the solution, effectiveness at mitigating particular ignition drivers in a given location, feasibility*

³⁸ SCE DD; p. 21.

³⁹ MGRA Comments; pp. 69-76.

given terrain and access challenges, and the cost-benefit analysis.”⁴⁰ It is vitally important to understand regarding IWMS is that because there is no probability, there can be no cost/benefit analysis. Losses are given maximum weight, and hence any cost required to prevent that loss is justifiable. This is why SCE’s IWMS program requires significantly more scrutiny before it is approved by Energy Safety.

Recommendation:

Add an action item requiring SCE to provide a full technical description of its IWMS program, including why its IWMS tranches cannot be integrated into its MARS wildfire probability framework.

3.12. SCE’s WMP Strengths (Section 6.4)

Energy Safety notes briefly that *“In particular, including egress constraints and factors likely to result in smaller and fast-moving fires in populated hard-to-reach areas in the analysis is a strength.”⁴¹*

MGRA fully agrees with OEIS’s assessment of this program and in fact believes it is understated. SCE has developed a quantitative and transparent ingress / egress model.⁴² This is important, because virtually all mass casualty events – the 1991 Bay area fires, the 2018 Camp fire, and the 2023 Lahaina fire had high loss of life due to limited egress. Instead of simply noting that SCE is making progress in this area, Energy Safety should require PG&E and SDG&E as well to adopt equivalent or superior ingress / egress models. Another area that should be explored by utilities is how to normalized these models in order to properly incorporate them into a risk model.

Recommendations:

- SCE’s egress model should be recognized as current best-of-breed and other utilities should be urged to adopt or develop an equivalent.
- SCE should be required to integrate its egress model into its MARS probability-based risk model.

⁴⁰ SCE DD; p. 41.

⁴¹ SCE DD; p. 24.

⁴² MGRA Comments; pp. 72-73.

3.13. Effect of Fire Suppression on Wildfire Spread and Consequence Modeling (Section 7.3.3.1, SCE-23-06)

MGRA agrees with OEIS that fire suppression should be included to modeling to the extent that it possibly can. In particular, Energy Safety notes that it may be possible to separate out initial attack modeling as a more tractable approach to fire suppression: “*SCE must continue exploring how to incorporate fire suppression into wildfire consequence models to better understand how challenges with initial attack related to objective measures may impact wildfire spread and consequence risk in its territory.*”⁴³

For reference, MGRA originally⁴⁴ suggested separating out initial attack as a potential opportunity for a partial quantitative suppression model during the OEIS Risk Modeling Working Group meeting held on the topic of suppression.

Recommendation:

This requirement should be applied to all utilities, since none of them adequately is able to represent wildfire suppression in their risk models.

3.14. Consideration of PSPS Damage in Consequence Modeling (SCE 11.7, SCE-23-22)

MGRA was the originator of the concept of using PSPS damage in risk modeling, and to be more correct, “Consequence Modeling” should be “Risk Modeling” because the goal is to obtain *probabilities* of damage during PSPS events (initiated or uninitiated) rather than consequences. Nevertheless, MGRA welcomes OEIS’s requirement that all utilities apply this methodology so as not to under-estimate risk in areas frequently subject to PSPS.

In its comments, MGRA also suggests that this data be used to study PSPS thresholds, and wind levels at which it might be possible to safely operate hardened equipment.⁴⁵ This is in contrast to utility claims that only undergrounding can reduce PSPS scope, duration, and impact.

⁴³ SCE DD; p. 33.

⁴⁴ MGRA Comments; pp. 36-39.

⁴⁵ MGRA Comments; p. 108-110.

Recommendations:

- In future WMP updates, Energy Safety should require utilities to quantify the reduction in PSPS risk as a function of wind speed threshold.
- Energy Safety should not accept the utility assertion that PSPS risk reduction can only be achieved by undergrounding but should require that mitigations be evaluated singly or in combination for their effectiveness in changing PSPS thresholds and risk.

4. ATTRIBUTION OF CONTRIBUTIONS**4.1. Areas of Contribution**

MGRA's acknowledged contributions listed by OEIS in the Draft Decisions were limited to:

“Hardening decision-making”

Additionally, the following areas discussed by MGRA in its Comments as demonstrated above and also discussed in the Draft Decision should be added:

- Extreme winds
- Risk score calculations
- Covered conductor analysis
- SDG&E third party consultant
- REFCL
- Falling Conductor Protection / Advanced Technologies
- SCE's IWMS
- Egress/Ingress issues
- Initial Attack Suppression
- PSPS Thresholds

4.2. MGRA Data Requests Used by OEIS

On page 31 of the SDG&E DD, OEIS Cites to:
 PA Consulting (May 2023). WiNGS-Planning Assurance Report, Appendix A: Table of Recommendations, pages 27-33. (<https://www.sdge.com/sites/default/files/regulatory/MGRA-2023-06%20Attachment%20Q1.pdf>, accessed July 28, 2023). As noted in the URL, this originated in MGRA Data Requests, specifically #4 and #6.

An explanation as to why SDG&E doesn't use REFCL is found in:
 CPUC Docket A.22-05-015/6; DR Response SDG&E Data Request MGRA-37.

5. CONCLUSION

MGRA is pleased to have been able to contribute to the review of the Wildfire Mitigation Plans and we urge the Office of Energy Infrastructure Safety to consider and incorporate the considerable analysis that has been put into this effort.

Respectfully submitted this 19th day of September, 2023,

By: /S/ **Joseph W. Mitchell, Ph.D.**

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 on behalf of the Mussey Grade Road Alliance

Attachment A:
 CPUC Docket R.20-07-013; TAIL RISK AND EVENT STATISTICS FOR UTILITY PLANNING; August 1, 2023. Joseph W. Mitchell, Ph.D.