

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

Docket #2023-UPs
ElectricalUndergroundingPlans@energysafety.ca.gov

**MUSSEY GRADE ROAD ALLIANCE COMMENTS
ON THE DEVELOPMENT OF GUIDELINES FOR THE 10-YEAR ELECTRICAL
UNDERGROUNDING DISTRIBUTION INFRASTRUCTURE PLAN**

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Dated: January 8, 2024

1. INTRODUCTION

The following additional comments have been prepared for Mussey Grade Road Alliance (MGRA or Alliance) regarding the Development of Guidelines for 10-Year Electrical Undergrounding Distribution Infrastructure Plan, as solicited by Kristin Ralff Douglas' December 13, 2023 Memorandum distributed by Energy Safety on December 13, 2023, which set January 8, 2024 as the date for comment and January 18, 2024 for Reply Comments.¹

MGRA Comments have been prepared by Alliance expert Joseph W. Mitchell, Ph.D.

2. BACKGROUND

MGRA has been involved since the initiation of SB 884. Indeed our expert lobbied the Governor's office to have it vetoed because of the potential for utility windfall profits and concomitant dissolution and harm due to low income and vulnerable ratepayers it could entail. Our work in the undergrounding proceedings being formulated at OEIS and the CPUC will be to ensure that remaining safeguards built into Public Utilities Code Section (§) 8388.5 are applied to prevent the potential negative outcomes of leaving utilities effectively unregulated in determining the scope of their undergrounding programs.

2.1. Previous MGRA Comments and Filings on this Topic

MGRA has been active in filings at both OEIS and the CPUC, often working directly with other parties on joint filings, since many stakeholders share similar positions regarding the undergrounding issue. MGRA comments concentrated on inevitable substantive changes to the outputs of risk models as items such as high wind events, unrestricted wildfire spread, health threat from wildfire smoke, and PSPS impacts on data collection are collected into the models. Additionally deployment of advanced technologies, particularly with covered conductor will provide an effective wildfire mitigation at much lower cost than undergrounding. Hence, regular

¹ Docket #2023-Ups; TN13456; Dates for Additional Comments 2023 Undergrounding Plans (Docket #2023-UPs) Schedule for Comments and Reply Comments for the Development of Guidelines for the 10-Year Undergrounding Distribution Infrastructure Plan (Undergrounding Plan); December 13, 2023.

review of circuit risk and costs, as well as “on” and “off” ramps for proposed undergrounding projects need to be incorporated into the process.

2.1.1. MUSSEY GRADE ROAD ALLIANCE INFORMAL COMMENTS ON THE FEBRUARY 24, 2023 SB 884 WORKSHOP²

In MGRA’s informal workshop responses it reiterated a number of points it had raised and has continued to raise throughout this process, namely:

- Utility rate estimates have a number of errors and inaccuracies which we expect to be addressed over the coming years, leading to a reprioritization of circuits with respect to risk.
- For this reason, utilities must continually re-evaluate risk during any 10-year undergrounding plan.
- There must also be “on” and “off” ramps whereby the riskiest and most cost efficient projects remain at the top of the undergrounding queue.
- New technologies in combination with covered conductor can provide very high risk reduction. New information is constantly becoming available about these technologies. Hence, comparison of these technologies on an effectiveness and cost/benefit to undergrounding must be an annual occurrence.

2.1.2. Joint Letter to the Commission and OEIS

On April 26, 2023, Public Advocates Office, The Utility Reform Network, and the Mussey Grade Road Alliance served a letter on the Commission and OEIS entitled “RE: Implementation of Senate Bill 884 – Ten-Year Undergrounding Plans”.³ To our knowledge, this document still represents the fundamental rules and frameworks stakeholders believe need to be in place to ensure that the program is administered in an optimal, cost-effective manner and that utilities are held to proper account.

2.1.3. Attendance at Undergrounding Workshops

² MUSSEY GRADE ROAD ALLIANCE INFORMAL COMMENTS ON THE FEBRUARY 24, 2023 SB 884 WORKSHOP; March 10, 2023.

³ 2023-Ups; TN13458_20231213T122445.

MGRA's representative attended the SB 884 workshops held by OEIS, asked questions and provided input, especially around how changing knowledge, data, and models would affect 10 year plans.

2.1.4. MGRA Comments on CPUC Draft Resolution SPD-15

The Safety Policy Division Staff of the CPUC developed a draft proposal for procedures to be followed in support of the SB 884 Program. Comments were invited and MGRA submitted its opening comments on December 28, 2023.⁴ This document represents the most complete summary of MGRA positions regarding SB 884 to date. Since it is not filed in a docketed CPUC proceeding, it is being attached as an appendix (Appendix A) to this filing and represents MGRA's most current concerns and suggestions with regard to SB 884 implementation. Energy Safety should review this appendix, since most issues are directly relevant to them as well.

3. COMMENT SPECIFIC TO THE OFFICE OF ENERGY SAFETY

Both Energy Safety and the CPUC have critical roles to play in the successful implementation of underground plan review and approval processes. These different roles arise from the different mandates of these agencies. Energy Safety is tasked with eliminating wildfire and PSPS risk from utilities, whereas the CPUC's mandate directs that utilities provide safe, affordable, and reliable service. For the most part then, Energy Safety's review should concentrate on ensuring that the materials received from the utilities are complete, accurate, and correctly summarize the risk posed by utility infrastructure and what risk reduction on which time frame will be associated with the plan.

However, Public Utilities Code Section (§) 8388.5 mandates that these plans be compared against alternatives to ensure that the correct mitigation is being pursued in the plan. Hence the OEIS approval criteria should ensure that utilities provide transparent risk calculations providing comparisons between:

- Utility undergrounding

⁴ CPUC Undocketed; Re: MUSSEY GRADE ROAD ALLIANCE COMMENTS ON DRAFT RESOLUTION SPD-15 AND THE STAFF PROPOSAL FOR THE SB 884 PROGRAM; December 28, 2023.

- Deployment of Covered Conductor on the same segment
- Deployment of Covered Conductor + REFCL on the same segment
- Deployment of Covered Conductor and non-REFCL advanced technologies and mitigations (falling/downed conductor protection, electronic fault detection, etc.)

It is important to note that for their General Rate Cases, utilities generally do NOT perform these alternative analyses but instead utilize a “decision tree” algorithm that defaults to undergrounding if certain utility-determined criteria are met, and no risk analysis is then performed for the alternative.⁵ This would not be acceptable under Section (§) 8388.5, which requires that undergrounding be compared against viable alternatives. Energy Safety will have the first opportunity and responsibility to ensure that these important comparisons are done.

Once Energy Safety approves an undergrounding plan, it will go to the CPUC for further analysis and potential approval. The Commission will apply additional criteria regarding affordability utilizing the risk data that OEIS will ensure is part of the application. Part of the Commission’s review will be a cost/benefit analysis. While it is not explicitly in OEIS’s mandate to require cost information and cost efficiency information be reviewed, it would be most helpful if OEIS were to perform an “existence/consistency/sanity check” to ensure that the numbers provided by the utilities are sufficiently rigorous as to provide meaningful cost/benefit analysis, even if OEIS itself makes no determination of whether the provided request is reasonable. This would benefit the process by ensuring that plans are not rejected by the CPUC once passed by OIES merely because they do not have adequate cost information included in the plan.

4. CONCLUSION

The Mussey Grade Road Alliance respectfully requests that Energy Safety acknowledge and address its concerns and take all measures to ensure that undergrounding plans are a public benefit rather than a mechanism for further profit growth by utilities. MGRA and other stakeholders have requested a number of checks, balances, and safeguards that would help both the CPUC and Energy

⁵ A.22-05-015/016; MUSSEY GRADE ROAD ALLIANCE OPENING BRIEF ON SAN DIEGO GAS AND ELECTRIC COMPANY’S 2024 GENERAL RATE CASE; August 14, 2023; p. 33. SCE’s algorithm, currently under review, employs a nearly identical mechanism.

Safety successfully meet criteria set forth in PUC Section (§) 8388.5 ensuring rapid deployment of mitigations while ensuring ratepayer protections.

Respectfully submitted this 8th day of January, 2024,

By: /s/ **Joseph Mitchell**

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Appendix A – MGRA Comments on Draft Resolution SPD-15

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

December 28, 2023

Via Electronic Service

Rachel Peterson, Executive Director
California Public Utilities Commission
505 Van Ness Avenue
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**Re: MUSSEY GRADE ROAD ALLIANCE COMMENTS ON DRAFT RESOLUTION SPD-15 AND
THE STAFF PROPOSAL FOR THE SB 884 PROGRAM**

Dear Executive Director Peterson,

The Mussey Grade Road Alliance (MGRA or Alliance) respectfully submits the following comments on Draft Resolution SPD-15 for the SB 884 Program. Comments have been prepared by Alliance Expert Witness Joseph W. Mitchell, Ph.D.

We respectfully urge the Commission to adopt the recommendations discussed herein.

Respectfully submitted,

/s/ Diane Conklin

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Dated: December 28, 2023

5. INTRODUCTION

History

Senate Bill 884 was introduced in the summer of 2022 in order to expedite the long term planning of utility undergrounding and hardening projects.⁶ The Alliance expert and others immediately saw potential issues in the proposed bill that would risk both safety and affordability in the state. MGRA's expert, in fact, wrote a letter to the governor opposing the bill in September of 2022. After the bill was adopted as Public Utilities Code § 8388.5, MGRA has participated in workshops and meetings with OEIS, SPD, and stakeholders as rules for implementing the law have been discussed and developed. These plans have now entered the comment phase and the Alliance respectfully asks both the Commission and the OEIS to consider its input.

Draft resolution SPD-15⁷ was served on November 9, 2023 with a due date for Comments on December 28, 2023. This Draft Resolution was served on the SB 884 notification list and service lists of A.21-06-021, A.23-05-010, and A.22-05-016.

6. MGRA COMMENTS ON ISSUES

6.12. Issues in Common with Cal Advocates and TURN

MGRA has collaborated closely with Cal Advocates and TURN throughout the SB884 undergrounding plan development process and strongly supports suggestions and comments of these stakeholders. We particularly note their positions that:

- Rules for regulating undergrounding plans by OEIS and the Commission must be closely coordinated and synchronized, and that since the OEIS evaluation of undergrounding plans will precede Commission review, the OEIS rules should be established prior to the Commission rules and the Commission rules should maintain consistency with the OEIS rules. Hence, the present deadline for SPD-15 is

⁶ https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220SB884

⁷ Draft Resolution SPD-15; November 9, 2023.

premature and resolution should be postponed until after OEIS has finalized its own regulations.

- The Commission should ensure that sufficient regulatory mechanisms are in place to ensure just and reasonable rates for ratepayers, and that utilities are not permitted to enjoy a windfall from these programs.
- A strong auditing process must be in place to ensure that utilities provide promised risk reduction to ratepayers at the promised cost.

6.13. MGRA Specific Comments

In addition to its support of the comprehensive TURN and Cal Advocates comments, MGRA has a number of additional comments and observations that should be incorporated into the regulations governing the undergrounding plans to ensure that they do result in excess costs to ratepayers, reduction in safety for certain residents, and provide increased flexibility to incorporate new information as it becomes available.

6.13.1. Uncertainty, error, and change in utility risk analyses

MGRA has been heavily involved in utility safety proceedings at both the OEIS (in WMP analysis) and the CPUC (General Rate Cases and RAMP proceedings). As a general statement, it is inarguable that the utility approaches to risk are changing and evolving rapidly. For example, results from PG&E's WDRM v2 and WDRM v3 risk models produced radically different model results.⁸ Utilities continue to incorporate new information as it becomes available, and for the most part these changes are evolutionary improvements. However, the fact that the utility risk estimates are mutable raises fundamental questions about how they can be utilized to project accurate ten-year hardening plans as required by Public Utilities Code § 8388.5.

The utilities cannot at this point claim that their current plans are now "fixed" and that future changes should be relatively small. There remain a number of errors, inaccuracies, and flaws with the current risk models that MGRA has raised in both WMP and GRC cycle analysis, and which its

⁸ D.23-11-069; p. 282.

expert recently published in a paper in a refereed fire science journal.⁹ Major issues currently still plaguing utility risk models and under active study by utilities, the Commission, and OEIS include:

- The current 8 hour duration used by utilities for wildfire spread modeling puts a cap on the maximum fire loss that is considerably less than those observed in major utility wildfires.¹⁰ This creates a bias that amplifies risks from nearby ignitions and suppresses risk from distant ignitions.
- Machine learning models used for planning hardening projects aggregate weather variables and therefore do not correctly predict the drivers that are responsible for catastrophic fires, overweighting ignitions from external agents (animals, vehicles, balloons, 3rd parties) at the expense of weather related drivers such as equipment damage and vegetation contact.¹¹
- Because utility models use past ignitions or outages to predict future wildfire risk, use of PSPS will cause areas most subject to PSPS to be underrepresented in risk models because data is not collected during the most dangerous periods.¹²
- Utilities do not incorporate wildfire smoke risk, which based upon recent research may be responsible for more injuries and fatalities than wildfire itself.¹³
- Covered conductor, based on data from the SCE deployment, seems to have a higher efficiency in preventing catastrophic wildfire ignitions than has been presented by other utilities.

This is not a complete list of biases and errors in utility wildfire modeling. Because utilities continue to improve their models and we expect that over time a number of these errors will be corrected, it must be anticipated that relative risk ranking of circuits and absolute measures of wildfire risk will evolve over time. It is therefore not possible to ensure that a wildfire mitigation plan with a ten-year timeline as envisaged by Public Utilities Code § 8388.5 will be accurate over the lifetime of the plan. Mechanisms need to be built in to allow flexibility.

⁹ 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>

¹⁰ MUSSEY GRADE ROAD ALLIANCE COMMENTS ON 2023-2025 WILDFIRE MITIGATION PLANS OF PG&E, SCE, AND SDG&E; May 26, 2023; pp. 39-42. (MGRA 2023 WMP Comments)

¹¹ MUSSEY GRADE ROAD ALLIANCE COMMENTS ON 2022 WILDFIRE MITIGATION PLANS OF PG&E, SCE, AND SDG&E; April 11, 2022; pp. 17-40. (MGRA 2022 WMP Comments)

¹² MGRA 2023 WMP Comments; p. 65.

¹³ *Id.*; p. 23.

6.14. Advanced technologies and covered conductor

In addition to covered conductor, a range of advanced technologies are in some stage of development at the three utilities, including REFCL (Rapid Earth Fault Current Limiter), ECCVM Sensors, RF Sensors, ED, APP, FCD (Falling Conductor Detection), and others. Some of these technologies compliment the already high protection offered by covered conductor, yielding protections approaching undergrounding at a much lower cost.

In PG&E's rate case *“The Commission finds that new emerging technologies, such as REFCL, may in the near future enable PG&E to reduce the risk of wildfire caused by its overhead assets at a significantly lower costs than undergrounding. Because new technologies are emerging that may be highly effective at reducing ignition risks and much less costly, these developments weigh against authorizing a \$5.9 billion forecast to support an ambitious plan to underground 2,000 miles when emerging technology may soon present a more attractive alternative for ratepayers in terms of safety and costs.”*¹⁴

Public Utilities Code § 8388.5(c)(4) specifically calls out comparison with these technologies as a component of a complete undergrounding plan. However, as noted in the previous section, utility risk models should be expected to continue to evolve and change over time, and so should the predicted capabilities and costs of alternative technologies. Hence it is not reasonable to expect a calculation of the wildfire reduction efficiency of Advanced Technologies + Covered Conductor to be accurate over a period of ten years.

Regulators must also recognize that there is an inherent moral hazard with regard to utility capital spending, since utilities make a 10% revenue requirement off of this spending. This bias may lead utilities to “slow walk” advanced technology projects that potentially interfere or compete with undergrounding, and to underestimate their effectiveness. Also, with changing models and data, the proper choice of mitigation and priority should be expected to be very different in 2025 than it will be in 2029 – if the utilities are required to do these calculations correctly.

¹⁴ D.23-11-069; pp. 294-294.

6.15. Affordability and links to safety and health for poor and vulnerable populations

An analysis that MGRA has been presenting in its recent WMP and GRC filings and which has not yet been successfully refuted in any forum is the relationship between utility rates and increased mortality of the poorest quintile of the population.

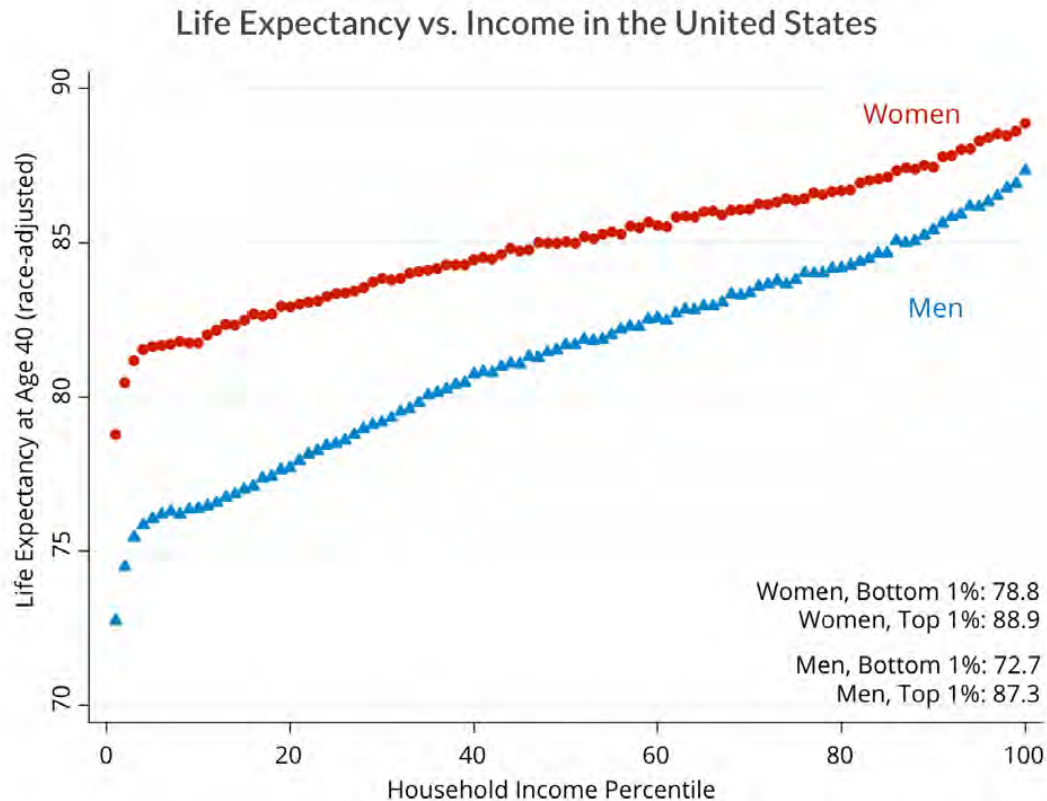


Figure 1 - Life expectancy versus household income in the US. Data from the Equality of Opportunity Project.¹⁵

“In California, the 20% quintile is equivalent to a household income of approximately \$25,000 and a 40% quintile is equivalent to a household income of approximately \$50,000.¹⁶ For men (chosen for this example due to greater sensitivity of life expectancy to income), there is

¹⁵ <http://www.equality-of-opportunity.org/health/> and <https://opportunityinsights.org/> citing

The Association Between Income and Life Expectancy in the United States, 2001-2014 | Health Disparities | JAMA | JAMA Network [WWW Document], n.d. URL <https://jamanetwork.com/journals/jama/fullarticle/2513561?guestAccessKey=4023ce75-d0fb-44de-bb6c-8a10a30a6173> (accessed 4.6.22).

¹⁶ <https://statisticalatlas.com/state/California/Household-Income>

approximately a three year life expectancy difference between the 20% quintile and the 40% quintile. Hence, in this income range, a difference of around \$8000 a year is equivalent of an extra year of life expectancy.

If this is the case, then a \$300 per year permanent increase in utility rates would cause a \$300 decrease in income. This would be correlated with a $\$300/\8000 or .038 year decrease in life expectancy for this portion of the population. If the poorest 10 million Californians were affected by this change, the number of equivalent years of life lost would be 380,000, or the equivalent of over 5,000 75-year lifespans.”¹⁷

7. RECOMMENDATIONS

In order to ensure that the undergrounding plans and the implementation of SB884’s provisions are not in conflict with existing Commission and OEIS regulations, particularly those regarding reasonable service and rates, MGRA recommends that:

- 7.12.1. Clear on/off ramp policies should be in place that allow circuits originally assigned to be undergrounded to be provided with alternate mitigation based on reanalysis of the original data, and vice versa.**
- 7.12.2. Utilities should be required to re-run their analysis of risk and mitigation prioritization every time a major change to models, technologies, or assumptions is made, up to yearly. Results of these analyses should inform the on/off ramps.**
- 7.12.3. Because utility models will be changing frequently, and because it is necessary to audit the end-to-end undergrounding program, utilities will need to maintain historical risk models and compare them against new models as time progresses. This will allow utility performance to be gauged against original commitments.**
- 7.12.4. In the case of high uncertainty, which MGRA argues is true in the current instance, the optimal strategy should be to ensure that the maximum number of residents in high risk areas be provided mitigation as soon as possible and at the least cost. A more elaborate expensive program such as undergrounding, may delay mitigation for those at extreme risk particularly if it is later found that their risk was originally underestimated by utility risk models.**

¹⁷ MGRA 2021 WMP Comments; pp. 59-60.

- 7.12.5. Regulators should specify benchmarks for utility R&D, pilots, and deployment of advanced technologies in order to reduce the moral hazard faced by utilities who face a strong economic incentive to underground the most conductor possible.**
- 7.12.6. The CPUC should take the lead role with regard to affordability, having a clear legislative mandate in this area while this is less the case for Energy Safety. The CPUC should inform Energy Safety what sort of bounds of utility wildfire prevention spending it will find acceptable so that delays are not introduced in developing a unified plan. The Commission should ensure that they are not merely shifting risk from Wildland Urban Interface Residents onto the poorest and most vulnerable ratepayers.**

Respectfully submitted this 28th day of December, 2023,

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