BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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

MUSSEY GRADE ROAD ALLIANCE INFORMAL COMMENTS

ON THE DEVELOPMENT OF GUIDELINES FOR THE 10-YEAR ELECTRICAL UNDERGROUNDING DISTRIBUTION INFRASTRUCTURE PLAN

Joseph Mitchell, Ph.D.
M-bar Technologies and Consulting, LLC
19412 Kimball Valley Rd.
Ramona, CA 92065
Telephone: (858) 228 0089
Email: jwmitchell@mbartek.com

for

Diane Conklin, Spokesperson
Mussey Grade Road Alliance
P.O. Box 683
Ramona, CA 92065
Telephone: (760) 787-0794
Email: dj0conklin@earthlink.net

Dated: November 2, 2023

1. INTRODUCTION

The following informal 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,[1] distributed by Energy Safety on October 26, 2023. Energy Safety's document invites stakeholders to provide answers to questions that arise as OEIS formulates guidelines for approval of 10 Year Undergrounding Plans under Sections 8385 and 8388.5 of the California Public Utilities Code.

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

2. QUESTIONS FOR STAKEHOLDERS

PART I. REQUIREMENTS FOR ENERGY SAFETY APPROVAL

I.a) Outage Programs

I.a(1) Definition

Propose how "outage program" should be defined for purposes of implementation of Section 8388.5(d)(2). Explain why this is an appropriate definition.

For the purposes of implementing Section 8388 of the Public Utilities Code, an "outage program" can be defined as any manual or automated process that creates an outage for a customer for purposes of wildfire prevention. Aside from PSPS, EPSS, and de-energization, another outage source would fast-trip programs. The degree to which an outage program creates a nuisance or a public safety threat depends on the frequency and duration of the outages.

I.b) Baseline for PSPS, EPSS, De-energization and Other Outage programs

I.b(1) Methodology

Propose a methodology for determining a level of reliability that should be used as

[1] OEIS Docket #2023-UPs; Electrical Undergrounding Plans (Docket #2023-UPs); Request for Comments on Development of Guidelines for the 10-Year Electrical Undergrounding Distribution Infrastructure Plan (Undergrounding Plan); October 26, 2023.

the baseline level of reliability against which any assessment of whether the use of PSPS, EPSS, de-energization and other outage programs is increased or decreased is measured.

Level of reliability should be in terms of customers affected. This should include both overall number of outages (including momentary outages) and overall customer minutes. This data should already be provided in the quarterly WMP submissions.

The plan should include estimates all outage variables as a function of time as the plan is executed. The plan must as per Section 8388.5(c)(4) also analyze the outage risk reduction for alternative mitigation strategies including covered conductor alone, and in conjunction with each of the appropriate current limiting technologies (REFCL, DCP, etc.). For the purposes of outage reduction, changes to shutoff thresholds and their resultant reduction in outage times should be provided. All calculations regarding reductions in outage number and duration for both undergrounding and alternatives should be based on models that are transparent and provided along with all supporting data at the time of plan submission.

I.b(2) Baseline

Should the reliability baseline be set as of the date of plan submission, application approval, or another date?

No response at this time.

I.b(3) Data

Address whether the proposed baseline can be determined using existing data (and if so, where that data can be accessed), or whether a new data set would be necessary.

The outage data collected as part of OEIS requirements to support the WMPs and their updates appears to be sufficient to estimate outage rates and durations. MGRA may modify its opinion based on new information.

I.c) Substantial Increase

I.c(1) Definition

What would constitute a "substantial" increase in reliability under the proposed methodology?

A substantial reduction should be notable by residents of affected areas. MGRA proposes a 50% decrease of outage minutes in areas rarely affected by power shutoff and a 90% decrease in outage minutes in areas often affected by power shutoff. MGRA may modify its opinion based on new information.

I.d) Baseline Risk of Wildfire

I.d(1) Methodology

Propose a methodology for determining a level of wildfire risk that should be used as the baseline level of wildfire risk against which any assessment of whether wildfire risk was reduced is measured. The baseline and comparisons should isolate wildfire risk reduction from other factors (such as cost, reliability, etc.).

The risk methodology should be based on the most recent version of utility planning risk model that has been fully presented and vetted either in the utility WMP or in a rate-setting proceeding. This methodology should be versioned and used to predict current baseline and risk reduction throughout the course of the project timeline.

Because risk models are works-in-progress, all updates throughout the course of the project should contain: 1) current risk based on original model based on any mitigation performed since project inception, and 2) risk based on most recent model for both 2a) current and 2b) original configuration. The latter is meant to determine to what degree the original model used for the application was accurate in its assessment of risk.

The plan must as per Section 8388.5(4) also analyze the wildfire risk reduction for alternative mitigation strategies including covered conductor alone, and in conjunction with each of the appropriate current limiting technologies (REFCL, DCP, etc.). Risk estimates should concentrate on ignition drivers that have been primarily responsible for catastrophic wildfire, giving lesser weight to ignition drivers that are rarely or never correlated with catastrophic wildfire.

It is important that risk also be estimated for projects to be hardened later in the project cycle to determine to what extent postponing them later into the cycle adds risk. Therefore, project wildfire risk calculation should include this cost of delay based on the proposed schedule for the project. With regard to alternatives, delay should also be included in the wildfire risk assessment, and should include modified delay times because the implementation of certain alternatives (i.e. covered conductor and DCD) can be implemented more quickly than undergrounding, thus improving their risk reduction by reducing the time the circuit is at higher risk.

I.e) Substantial Reduction

I.e(1) Definition

What would constitute a "substantial" reduction in wildfire risk under the proposed methodology?

A substantial reduction should be more than 50% on a circuit of moderate risk and 90% for circuits in the highest 10% of risk. MGRA may modify its opinion based on new information.

PART II. REQUIRED COMPONENTS OF UNDERGROUNDING PLAN

II.a) Definition of Undergrounding Projects

Definitions are offered below. MGRA may modify its opinion based on new information.

II.a(1) Definition

How should "undergrounding project" be defined for purposes of section 8388.5?

An "undergrounding project" should be a logically connected bundle of assets to be simultaneously treated with mitigation to reduce wildfire and shutoff risks, some components of which the applicants propose to put underground. The logical connection should extend over connected circuit segments and possibly circuits that pose a common wildfire threat to a set of customers, or which are necessary to mitigate as a unit in order to reduce shutoff risks for a certain group of customers.

Not all components of an "undergrounding project" must be necessarily undergrounded. The project may also include segments with alternative mitigations such as covered conductor or covered conductor with advanced trip technologies, or may be left untreated if they pose little to no wildfire risk.

II.a(2) Features

What features or characteristics should be used to differentiate individual undergrounding projects?

Undergrounding projects can be differentiated by:

- Time period of planned execution
- Geographic location
- Specific set of customers to be protected from wildfire or shutoff

II.a(3) Size requirements

Should there be minimum or maximum size requirements for individual undergrounding projects?

For minimum size, individual circuit segments should not be treated as individual projects if they are connected or interrelated regarding wildfire and shutoff risks to specific customers.

For maximum size, the project should be contiguous and contained within one time period of planned execution.

II.b) Identifying Information

II.b(1) Other information

What other information should be provided for this identification?

Other information should include:

- Wildfire risk as calculated by baseline risk model and most recent risk model (for updates)
- Outage rate
- Historical ignitions related to the segments proposed for the project
- Age of circuit segment (if known)
- Number of potential strike trees along segment

- Other relevant information

II.b(2) HFRA

Should the large electrical corporation include projects located in in utility-identified high fire risk areas (HFRA)?

Inclusion of HFRA projects should be conditional on the utility applying to have the HFRA included in the next revision of the High Fire Threat District maps. Should an area be rejected for inclusion in the HFTD elevated fire risk areas then segments of any project proposing hardening within that area should be modified to remove the affected segments from the project.

II.c) Prioritization

II.c(1) Distinguishing elements

How should the prioritization elements be distinguished from the Undergrounding Plan approval criteria in Section 8388.5(d)?

Public Utilities Code Section 8385 indicates that it is the understanding of the legislature that OEIS will be responsible for elements of the undergrounding plans having to do with ensuing that the projects that are proposed will have a substantive effect in reducing wildfire risk and reliability issues related to reducing power shutoff for wildfire prevention purposes. The Commission will be responsible for ensuring that the costs of the proposed projects are reasonable and that a proper balance of safety, cost, and reliability has been chosen.

As a result, it does not appear that risk-spend efficiencies, or cost/benefit ratios are envisioned as part of the OEIS review.

However, according to PUC Section 8388.5(c)(4), the undergrounding projects are to be considered against alternative mitigation strategies. This comparison is not merely from a cost perspective but from a wildfire and shutoff risk perspective as well. If a utility chooses or is mandated to replace a proposed underground segment with an alternative mitigation, the full safety implications of this choice need to be understood. Therefore, analysis of alternatives – on the basis of risk and safety – need to be conducted by Energy Safety within the first phase of the application. As these analyses also entail considerable effort on the part of utilities and stakeholders, it is also important to initiate them early in the application so that a full vetting can occur.

II.d) Timelines, Cost, and Targets

II.d(1) Completion metrics

Are there other completion metrics or annual targets that should be included in the Undergrounding Plan?

Utilities should also provide regular updates on current risk according to both original risk model at time of the application and the most recent version of the risk model. Both residual and mitigated risk estimates should be provided.

Utilities should also provide annual updates regarding outages, ignitions, external wildfire impingement, and strike tree changes throughout the course of the 10-year project for all circuit segments included in the project.

Respectfully submitted this 2nd day of November, 2023,

By: __*/s/*____***Joseph Mitchell***_____

Joseph W. Mitchell, Ph.D.
Prepared for: Mussey Grade Road Alliance
M-bar Technologies and Consulting, LLC
Ramona, CA 92065
Tel: (858) 228 – 0089
Email: jwmitchell@mbartek.com