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Ms. Caroline Thomas Jacobs
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California Public Utilities Commission, Wildfire Safety Division
505 Van Ness Avenue
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Transmittal via email: wildfiresafetydivision@cpuc.ca.gov and R.18-10-007 service list

RE: MUSSEY GRADE ROAD ALLIANCE COMMENTS ON THE WILDFIRE SAFETY DIVISION STAFF PROPOSALS AND WORKSHOPS

Dear Director Thomas Jacobs:

The Mussey Grade Road Alliance (MGRA or Alliance) serves these comments pursuant to the WSD Workshop Update email of August 5, 2020,[1] which authorizes public comment on workshop presentations and associated staff proposals. During the workshops, staff requested that commenters indicate changes using a "red-line" format to indicate changes, and where we request specific content changes MGRA made.

The following Alliance comments were prepared by MGRA's expert witness, Joseph W. Mitchell.

[1] Wildfire Safety Division Workshop - Aug 11-12 – Update; Wildfire Safety Division; August 5, 2020, 4:44 pm.

1. WILDFIRE SAFETY DIVISION STAFF PROPOSAL ON CHANGES TO WILDFIRE MITIGATION PLAN REQUIREMENTS AND METRICS TABLES

1.1. Add Customer Support Survey to Item 3 of Nine Objectives (page 4)

MGRA has repeatedly noted that the IOU reports regarding customer complaints and claims provide anomalous data. This was first noticed in MGRA's comments to SED regarding the October 2019 PSPS events.[2] Specifically, it was noted that:

"*The complaint rate for SDG&E is 2X larger than SCE's for the events evaluated, and 60X larger than PG&E's. The claims rates for PG&E and SCE are both approximately 0.1%. SDG&E's claims rate is almost 3X larger. The likelihood that the differences between SDG&E's, SCE's and PG&E's are the result of a statistical fluctuation vary from very unlikely (for SCE's complaint rate) to virtually impossible (for PG&E's complaint rate, and for claims rates for both SCE and PG&E).*"[3]

The most likely source of this inconsistency is the ease of submitting a complaint or claim: A utility that blocks complaints and claims, has poor customer service, has website issues, or makes the process onerous will tend to receive fewer complaints. Unfortunately, the Capability Maturity Model's test of utility customer support maturity is "*During PSPS events, what percent of customers complain?"*[4] Low complaint rates are equated to a higher maturity, which MGRA claims is the opposite of what the data actually indicates.

While MGRA believes that a review of CMM is overdue, which we mention in a subsequent section, differentiating between happy customers and customers who have given up filing a complaint in exasperation requires the collection of additional data. Customers subject to a shutoff event should be provided a survey by their utility, and the utility should collect this data and make it available to the Commission and WSD. This survey would fit well into item #3:[5]

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[2] MGRA Response to Mid and Late October SDG&E Shutoff Events; October 10, 2019; pp. 6-7.
[3] Id.
[4] CMM; question F.III.c.
[5] Wildfire Safety Division; Staff Proposal on Changes to Wildfire Mitigation Plan Requirements and Metrics Tables; p. 4. (Staff Proposal)

Original:

3. Require Local Outreach and Outcome Metrics

• PSPS reduction plans

• Community Outreach

Proposed:

3. Require Local Outreach and Outcome Metrics

• PSPS reduction plans

• Community Outreach

• **Post-Event Customer Surveys**

1.2. Review of 2020 WMP Process with Stakeholders

As noted in MGRA's comments on the WMPs,[6] there were a number of issues with the 2020 WMP templates and capability maturity model (CMM) that extend beyond the improvements proposed by WSD. MGRA suggested that WSD host workshops to discuss some of these issues.

To the extent that the CMM is actually intended as a legitimate measure of utility maturity it is important to correct any improper metrics as soon as possible so that actual utility maturity can be tracked over time. A CMM revision will "reset the clock" for IOU maturity tracking, and it is important to get this out of the way sooner rather than later. MGRA noted a number of technical and process issues with the CMM in its comments on the wildfire mitigation plan templates,[7] and showed the problematic consequences of CMM issues in its 2020 comments.[8] Some of the utilities also noted legitimate concerns with the CMM questions.

Among the issues raised by MGRA are:

- Lack of domain knowledge in regard to weather and meteorological questions
- Lack of technical specificity in questions allows inflated self-assessments

[6] RE: MUSSEY GRADE ROAD ALLIANCE COMMENTS ON 2020 WILDFIRE MITIGATION PLANS OF SDG&E, PG&E, SCE; April 7, 2020; p. 5. (MGRA 2020 WMP Comments)
[7] R.18-10-007; MUSSEY GRADE ROAD ALLIANCE COMMENTS ON WILDFIRE MITIGATION PLAN TEMPLATES; December 30, 2019; pp. 6-12.
[8] MGRA 2020 WMP Comments; pp. 60-72.

- Question regarding GO 95 compliance needs to be reformulated to determine adherence to currently known local conditions rather than mere compliance with GO 95, which all utilities will claim.

1.3. Wind and Weather Conditions

MGRA Supports WSD's proposal to use publicly available methodologies for calculating weather variables.[9] However, WSD does not specify which methodologies should be used, leading to the possibility that utilities will continue to apply different methods.

Additionally, MGRA has noted the following issues related to weather and wind in its CPUC filings and submissions to WSD:

- Red Flag Warnings (RFWs) are a metric that correlates poorly to both wind speed and outages.[10] Additionally, this metric will be heavily biased by de-energization, which will remove outages and ignitions from more recent data sets, confounding and removing correlations that might prove useful in prevention. While RFW may be useful for certain purposes it is an insufficient metric for measuring wildfire risk.
- The wind exceedance (95^{th} and 99^{th} percentile) metrics is incorrectly defined and could potentially lead to counterfactual conclusions.[11] The problem with the definition arises from the fact that these exceedance values are *local*, rather than global, and that therefore the "circuit mile days" metric has no relation to the magnitude of the wind speed.
- Utilities also define and implement their estimations of 95^{th} and 99^{th} percentile wind estimations differently. MGRA analysis also found that wind models for PG&E and SCE produced dramatically different results when applied to the same geographic area.[12]

[9] Staff Proposal; p. 17.
[10] MGRA 2020 WMP Comments; pp. 8-13.
[11] Id.; pp. 13-15.
[12] Id.; pp. 50-60.

Given these considerations, MGRA recommends that WSD support workshops on weather and wind issues to come to common agreement between IOUs regarding definitions for Red Flag Warnings, 95th and 99th percentile wind speeds, and weather models.

1.4. Keep "Near Miss" Definition As-Is

In Section 2.1 of the Staff Proposal,[13] WSD "suggests changing Near Misses to 'Near Ignitions' defined as 'Events that manifest in charring, melting, heavy smoke deposits, and/or visible evidence of arching that could indicate enough heat was present, which could have led to an ignition.'", from its current definition of: "An event with significant probability of ignition, including wires down, contacts with objects, line slap, events with evidence of significant heat generation, and other events that could cause sparking or have the potential to cause ignition."

Making this change would result in a much more restrictive and smaller set of data and would potentially lead to important leading indicators being missed. For instance, the following events would not be considered under the new category:

- A broken cross-arm with no wire-vegetation contact
- A tree branch in contact with conductors that doesn't result in an ignition
- De-tensioning of a line so that it sags enough to contact a neighboring conductor during the next high wind event.
- Crumpling of transmission towers during a winter storm.[14]
- Damage to equipment during a power shutoff event.

These are potentially very useful data and can potentially be used to identify weaknesses in infrastructure or vegetation management programs.

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[13] p.13.

[14] It has been alleged that five transmission towers on the same transmission line that ignited the Camp fire failed during the same winter storm in 2012.
"It was originally built in 1919. What failed on PG&E tower at heart of Camp Fire probe?"
By Matthias Gafni and Thomas Peele; Bay Area News Group; PUBLISHED: December 7, 2018 at 5:11 pm | UPDATED: December 10, 2018 at 4:09 am
https://www.mercurynews.com/2018/12/07/it-was-originally-built-in-1919-what-failed-on-pge-tower-at-heart-of-camp-fire-probe/

WSD staff provide no explanation of why such a change would be necessary or beneficial. In fact, the new categorization that WSD suggests can easily be identified by the addition of a sub-field that collects information on the degree of energy released and type of damage that occurred. SDG&E, for instance, is already collecting this information.[15] Data can always be filtered. However, it can not be re-constituted if it is not collected in the first place.

MGRA opposes this proposed change.

2. DRAFT WILDFIRE SAFETY DIVISION (WSD) GEOGRAPHIC INFORMATION SYSTEM (GIS) DATA REPORTING REQUIREMENTS AND SCHEMA FOR CALIFORNIA ELECTRICAL CORPORATIONS[16]

The proposed schema for GIS data collection to be comprehensive and well thought through. A quick review has found no obvious shortcomings.

MGRA's greatest concern, however, is the public availability of this data.

2.1. Public Availability of GIS Data

IOUs will release GIS Data quarterly or yearly to WSD: asset, critical facility and weather data will be submitted annually, while data related to risk events or utility initiatives will be collected quarterly.[17]

Neither WSD's Draft Staff Proposal nor its GIS Data Reporting Requirements define any process for release of this data to the public, or how the public would retrieve it. This is a major shortcoming in the document and should be remedied by adding a section dedicated to the assurance of public access.

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[15] R.18-10-007; SAN DIEGO GAS & ELECTRIC COMPANY'S (U 902-E) DATA COLLECTION FOR WILDFIRE MITIGATION PLANS REPORT PURSUANT TO DECISION 19-05-036, ORDERING PARAGRAPH 2; July 30, 2019; p. 10.

[16] Draft Wildfire Safety Division (WSD) Geographic Information System (GIS) Data Reporting Requirements and Schema for California Electrical Corporations; ISSUED BY CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC); August 5, 2020. (WSD GIS Data)

[17] WSD GIS Data; p. 5.

Section 8386 of the California Public Utilities Code states that: "*The Wildfire Safety Division shall post all wildfire mitigation plans and annual updates on the commission's internet website for no less than two months before the Wildfire Safety Division's decision regarding approval of the plan. The Wildfire Safety Division shall accept comments on each plan from the public, other local and state agencies, and interested parties, and verify that the plan complies with all applicable rules, regulations, and standards, as appropriate.*" Wildfire mitigation plans and metrics will to a great extent be based on the data that the utilities collect and provide to WSD. Assuming that the public continues to be given the opportunity to fully evaluate these plans, in other words to test the statements of the utilities by comparing them to data and metrics, they will need a mechanism to obtain the data. During the 2019 and 2020 WMP cycles, data was obtained via data requests originating from WSD and from parties. The short timeframe set by AB 1054 makes this an onerous process for both utilities and parties. It would be preferable not to have to repeat this process in 2021.

In its recommendations for 2021, the Wildfire Safety Advisory Board (WSAB) recommends the creation of a "Data Access Portal" where "*data sources can be accessed by interested parties through a portal with varying levels of data access. To ensure data security, WSD would develop data policies defining a hierarchy so that different granularities of data can be accessed by interested parties with certain levels of permissions types (e.g. CPUC staff, scientists, those with Non-Disclosure Agreements (NDA), or the public)*."[18] WSAB also recommends that "*WSD develop data policies through a transparent stakeholder process, taking into consideration the needs of regulators, the scientific community, and other stakeholders as well as the security of utility infrastructure*."

While MGRA strongly supports the development of such a data access portal and the requisite permission scheme that would allow public or stakeholder access to it, it is unrealistic to expect that this tool will be in place by 2021. WSD will need to come up with other mechanisms to ensure public access.

During the public presentation of the data schema and requirements by WSD during the August 12, 2020 workshop, WSD's representatives stated that it was WSD's intent to make the data

[18] California Wildfire Safety Advisory Board Recommendations on the 2021 Wildfire Mitigation Plan; Guidelines, Performance Metrics, and Safety Culture; June 24, 2020; p. 8.

public, but that there would be a long process of determining what data and fields were confidential and which were not. It was WSD's expectation that this process could take some time. WSD also stated that it did not yet know whether public access to the data would be through WSD or whether the utilities would publish it on their website.

From the standpoint of stakeholders, CPUC intervenors, and the public, it is not desirable to go into the 2021 WMP review cycle without clear policies in place regarding data access and confidentiality. Assuming that the process for 2021 is similar to that of previous years, stakeholders who have been given party status at the CPUC will have the opportunity to issue data requests for the data that utilities have been providing to the WSD. At that point, utilities will need to find a mechanism to remove any confidential data from the database and provide it to intervenors. Also, any disagreements over the classification of data as confidential will need to be litigated on a very short timeframe, potentially limiting intervenor access to the data required to evaluate the WMPs.

MGRA therefore recommends that WSD do the following:

- Plan for the development of a data portal with appropriate levels of data access, as recommended by WSAB, and announce an approximate target date for availability.
- Include stakeholders in discussions as to classification of utility data and fields as confidential, so that any conflicts or disagreements can be resolved prior to the 2021 WMP review.
- Until such time that a data portal becomes available, require that IOUs release a "public" version of all data submitted to WSD on their websites, through the public-facing portal generally used to satisfy data requests. This public data will be identical to the geodatabases released to WSD but will have confidential data and fields left blank. "Public" data will be comprised of:
    - Data that IOUs do not contend is confidential.
    - Data for which any conflicting interpretations of confidentiality have been resolved by WSD and/or the Commission and determined to be non-confidential.
    - Data which was treated as non-confidential and released to WSD and intervenors during the 2019 and 2020 WMP cycles.

3. SHEUR (SYSTEM HARDENING ELECTRIC UTILITY RESILIENCY AND RISK REDUCTION) PRESENTATION

During the WSD August 12, 2020 workshop, John Mader of the Wildfire Safety Advisory Board presented an overview of WSAB's proposed SHEUR (System Hardening Electric Utility Resiliency and Risk Reduction) threshold for power shutoff events. This presentation discussed the SHEUR proposal included in WSAB's 2021 recommendations as a concurrence.[19] WSD representatives invited participants to provide public comment on this proposal during the WSD workshop.

SHEUR is intended to create a framework for an analytical tool that allows wildfire risk reduction to be balanced against power shutoff for existing construction and for potential mitigation strategies. As such, it falls within the same family as "cost/benefit" analysis, which was originally proposed by MGRA and adopted in D.09-09-030,[20] and Risk/Spend efficiency (RSE), which is required as part of the WMPs. As stakeholders showed and WSD found, RSE as implemented by the utilities cannot be applied appropriately to power shutoff because the utilities do not take customer harm caused by shutoff into account.[21] Determining a power shutoff threshold by balancing customer harm and other indirect consequences of power shutoff against the potential for catastrophic wildfire ignition is a complex undertaking, as indicated in MGRA expert's white paper submitted in A.08-12-021 "WHEN TO TURN OFF THE POWER? COST/BENEFIT OUTLINE FOR PROACTIVE DEENERGIZATION".[22]

A common framework for determining power shutoff thresholds would be greatly beneficial for two reasons:

- It would reduce development and maintenance costs by allowing utilities to leverage common tools, and
- It would provide more transparency for WSD and other stakeholders to evaluate how the utilities are applying PSPS.

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[19] Concurrence of Board Member John Mader on the California Wildfire Safety Advisory Board's Recommendations on the 2021 Wildfire Mitigation Plan Guidelines, Performance Metrics, and Safety Culture Risk Spend Efficiency and the System Hardening Electric Utility Resiliency and Risk Reduction (SHEUR) Threshold; June 26, 2022; pp. 51-56.
[20] D.09-09-030; p. 59.
[21] WSD-002; p. 38.
[22] A.08-12-005; MUSSEY GRADE ROAD ALLIANCE COMMENTS ON SDG&E'S SHUTOFF PLAN AND PROPOSED RULE 14 CHANGE; March 27, 2009. (MGRA 2009 SDG&E Shutoff Comments)

Therefore, the proposed SHEUR framework targets a legitimate need.

Another need that SHEUR attempts to address is a shortcoming noted by a number of stakeholders who analyzed the 2020 WMPs: Utilities do not calculate risk at the circuit level. As WSD noted in its evaluation of the SDG&E WMP, "a key lesson learned from its PSPS metrics is that mitigation efforts such as system hardening should be determined based on a more comprehensive circuit-level or segment-level assessment and not just an asset-level assessment, in order to take into account the grid connectivity and effects of PSPS."[23]

What is presented for SHEUR is a general description and a toy model. The model demonstrates how a ratio of risk scores to power shutoff impact scores can be determined and optimized through selection of different mitigations. The examples are admittedly simplistic, and look at only a few circuit attributes such as span height, conductor spacing, and vegetation type. Furthermore, these attributes are divided into a small set of categories, each associated with impact scores. Attributes and scores are applied on a segment level, and so an overall risk score and PSPS impact scores for an entire circuit can be calculated. Different mitigations would come with different costs, and would change risk scores for segments to which they are applied. The presentation assumes that a real implementation would use a much larger set of attributes and a probabilistic assignment of scores.

The greatest weakness of the proposed SHEUR model is that in the words of the WSAB presenter, the scores for risk and shutoff impacts are "apples and oranges". That cannot be so if the analysis model is to have value – otherwise the shutoff thresholds are arbitrary and can be tuned at will. MGRA has long advocated for the quantification of customer harm risk arising from shutoff so that it can be directly compared with wildfire risks, using the same units. MGRA has urged that this work be undertaken by either WSD or by the Commission.[24] SHEUR might be used to provide a relative comparison of different mitigations strategies, however without common units it is still difficult to see how this would be helpful. For example, if we were to compare the following mitigations:

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[23] WSD-005; p. 15:

[24] For example; A.20-07-013; MUSSEY GRADE ROAD ALLIANCE RESPONSE TO ORDER INSTITUTING RULEMAKING TO FURTHER DEVELOP A RISK-BASED DECISION FRAMEWORK; August 17, 2020; p. 6.

Mitigation 1: Reduction in risk: 10% Reduction in PSPS time: 10% Cost: $40M

Mitigation 2: Reduction in risk: 20% Reduction in PSPS time: 50% Cost: $200M

It is not clear how to compare the value of these two mitigations. In order to enable direct comparison and actual value ranking, de-energization must be linked to a cost, as must risk reduction.

Utilities are already undertaking some SHEUR-like activities, and their prioritization of circuits for mitigation takes into account a number of factors, though often these are highly specific to the particular utility, non-transparent, and based on a combination of quantitative and qualitative (domain expert opinion) factors.[25] Utilities are also beginning to track different risks per asset.[26] I am unaware as to whether they track any quantitative measure of shutoff impact per asset, and this would need to be done as part of any SHEUR-like analysis mechanism.

Finally, there is no actual plan or funding mechanism proposed for SHEUR. It is not clear who should lead this effort, or how individual utilities would implement it.

In summary, SHEUR is a rough sketch of a framework for comparison of the impact of mitigation activities on wildfire risk and shutoff impact. It speaks to a deeper need: transparency of utility prioritization and decision making with regard to hardening and PSPS. If it or anything similar is adopted, it must be part of a larger framework that allows risk/benefit/cost balancing between PSPS and other mitigation mechanisms, and which can be tied in a straightforward manner to risk/spend efficiency at the circuit and segment level. It would be highly beneficial to ratepayers and residents if a program with this broader goal were to be initiated by WSD or the Commission.

4. CONCLUSION

The Alliance is pleased to have had the opportunity to review WSD's 2021 proposals, and to have participated in the workshops. As members of a wildfire-prone community, it is reassuring to see the detail and effort that WSD is putting into the development of its utility plan review and data collection programs. We look forward to working with WSD and other parties as we progress into the 2021 Wildfire Mitigation Plan reviews.

[25] For example, see MGRA 2020 WMP Comments; Data Request MGRA-SDGE-01-Q4 (p. 172).
[26] For example, see MGRA 2020 WMP Comments; Data Request MGRA-SCE-005-Q3 (p. 151).

Respectfully submitted this 25th day of August, 2020,

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