



Christopher M. Lyons
Senior Counsel
San Diego Gas & Electric Company
8330 Century Park Court, CP32D
San Diego, CA 92123
Tel: 858-654-1559
Fax: 619-699-5027
clyons@sdge.com

April 16, 2020

VIA EMAIL

Ms. Caroline Thomas Jacobs
Wildfire Safety Division
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Re: SDG&E Reply Comments on the 2020 Wildfire Mitigation Plans

Dear Ms. Jacobs,

Pursuant to Public Utilities Code Section 8386(d) and Resolution WSD-001, San Diego Gas & Electric Company (SDG&E) submits the attached reply comments to public comments submitted on April 7, 2020 on the 2020 Wildfire Mitigation Plans (WMP). SDG&E's reply addresses both comments that were broadly aimed at all of the utilities' 2020 WMPs, as well as those specifically directed to SDG&E's 2020 WMP.

Respectfully submitted,

/s/ Christopher M. Lyons

Attorney for San Diego Gas &
Electric Company

cc: R.18-10-007 Service List

**REPLY COMMENTS OF SAN DIEGO GAS & ELECTRIC COMPANY
ON 2020 WILDFIRE MITIGATION PLANS**

April 16, 2020



Table of Contents

- I. INTRODUCTION..... 1
- II. SDG&E’S REPLY TO PUBLIC COMMENTS ON WILDFIRE MITIGATION PLANS.... 2
 - A. WMP – General..... 2
 - 1. Meaning of WMP Approval/Cost Recovery; Confidentiality Process; Outreach Requirements 2
 - 2. SDG&E 2019 WMP Alleged Deficiencies 7
 - 3. Updates to WMP Guidelines and Templates 8
 - B. Conditional 2020 WMP Approval Based on General Resource Constraints and Feasibility 9
 - C. Metrics..... 11
 - D. Risk Analysis and Risk Spend Efficiencies 13
 - E. Directional Vision for PSPS and WMP Implementation 14
 - F. Risk Assessment and Mapping..... 15
 - G. Grid Design and System Hardening..... 16
 - 1. Shift in System Hardening Strategy 16
 - 2. Socioeconomic Factors in Deciding Sequence of Hardening Activities..... 17
 - 3. Wood-to-Steel Conversion; Cost/Safety and Cost/Benefit 17
 - 4. Expand Covered Conductor 19
 - 5. Undergrounding Approval 20
 - 6. Cost-Effectiveness of Undergrounding..... 22
 - 7. Microgrids 23
 - 8. Generator Grant Program 24
 - 9. Whole Home Generator Program..... 25
 - H. Asset Management and Inspections 27
 - 1. Drone Inspection Program 27
 - 2. Evaluating Efficiency of Inspection Programs..... 29
 - I. Vegetation Management..... 29
 - 1. Enhanced Vegetation Management..... 29
 - 2. Collaboration on Best Practices 33
- III. CONCLUSION 34

**REPLY COMMENTS OF SAN DIEGO GAS & ELECTRIC COMPANY
ON 2020 WILDFIRE MITIGATION PLANS**

I. INTRODUCTION

Pursuant to Public Utilities Code (P.U. Code) Section 8386(d) and Resolution WSD-001,¹ San Diego Gas & Electric Company (SDG&E) submits these reply comments to comments submitted on April 7, 2020 in response to its 2020 Wildfire Mitigation Plan (WMP or Plan). More specifically, SDG&E addresses both comments that were broadly aimed at all of the utilities' 2020 WMPs, as well as those specifically directed to SDG&E's 2020 WMP. SDG&E appreciates the parties' efforts to thoughtfully review and comment on the 2020 WMPs.

While the parties' comments addressed various aspects of SDG&E's 2020 WMP, as addressed in detail below, several issues merit particular attention. First, the Public Advocates Office (CalPA) errs in its contention that SDG&E has shifted its system hardening strategy from wildfire mitigation to mitigations aimed to ensure reliability during a Public Safety Power Shutoff (PSPS) event. In fact, SDG&E is fully committed to wildfire mitigation and, if anything, views mitigating PSPS events to be complimentary to that commitment. Second, CalPA is wrong that supplemental justification for undergrounding projects should be provided. California utilities have long used undergrounding in their service territories, and it both mitigates potential wildfire ignitions in high risk locations *and* mitigates potential PSPS events for customers served by underground facilities. Third, SDG&E has and continues to provide adequate justification for expanding vegetation clearances to 25 feet in high risk situations. Notably, many of the most devastating wildfires in California since 2017 have resulted from

¹ Resolution WSD-001 (January 24, 2020) at 3 requires electrical corporations to submit replies to public comments within seven business days of submission by serving them on the Director of the Wildfire Safety Division (WSD or Division) and the service list in Rulemaking (R.) 18-10-007.

vegetation-power line contact. Expanded clearances mitigate the risk of such fires, and SDG&E has a track record of success in reducing outages through such clearances. Fourth, contrary to Protect Our Communities Foundation’s (POC) claims, SDG&E’s drone assessment program is fully justified: it has already provided significant benefits in terms of enhancing SDG&E’s existing inspection programs by discovering infractions or other equipment issues that SDG&E is then able to remedy, mitigating risk. Fifth, CalPA attempts to downplay California’s goal of reducing the impact of PSPS on customers. PSPS is a wildfire mitigation tool, which SDG&E implements as a measure of last resort to prevent catastrophic wildfires. SDG&E’s proposed whole home generator program provides an option to keep the lights on for customers frequently impacted by PSPS events. SDG&E further discusses these and other issues below.

II. SDG&E’S REPLY TO PUBLIC COMMENTS ON WILDFIRE MITIGATION PLANS

A. WMP – General

1. Meaning of WMP Approval/Cost Recovery; Confidentiality Process; Outreach Requirements

Various parties comment on the meaning of WSD approval of utility WMPs, as well as how recovery of costs associated with the WMPs should be addressed. SDG&E submits that the P.U. Code – as amended in AB 1054² – clearly and unambiguously addressed each of these issues, and it is clear from the statute that the Legislature intends the review to be meaningful. First, Section 8386(b) directs each electrical corporation to “annually prepare and submit a wildfire mitigation plan to the division for review and approval.” Consistent with that provision, Section 8386(d) directs the Wildfire Safety Division to “verify that the plan complies with all

² Assembly Bill (AB) 1054 (Ch. 79, Stats. 2019) was subsequently modified by AB 1513 (Ch. 396, Stats. 2019); a companion bill, AB 111 (Ch. 81, Stats. 2019), was also enacted.

applicable rules, regulations, and standards, as appropriate.” Furthermore, Section 8386.3(a) provides as follows:

The Wildfire Safety Division shall approve or deny each wildfire mitigation plan and update submitted by an electrical corporation within three months of its submission, unless the division makes a written determination, including reasons supporting the determination, that the three-month deadline cannot be met. Each electrical corporation’s approved plan shall remain in effect until the division approves the electrical corporation’s subsequent plan. The division shall consult with the Department of Forestry and Fire Protection on the review of each wildfire mitigation plan and update. In rendering its decision, the division shall consider comments submitted pursuant to subdivision (d) of Section 8386. Before approval, the division may require modifications of the plan. After approval by the division, the commission shall ratify the action of the division.

Thus, it is clear that the Wildfire Safety Division must (1) review each Wildfire Mitigation Plan; (2) verify whether the plan complies with applicable rules, regulations, and standards; and (3) render a determination as to whether the plan should be approved, modified or denied.

Second, the statute prescribes the required contents that each electrical corporation must include in its Wildfire Mitigation Plan submission. Specifically, Section 8386(c)(1)-(22) indicates the descriptions, discussions, protocols, procedures, plans, lists and showings that must comprise each Wildfire Mitigation Plan. Thus, it is also clear what information the Wildfire Safety Division shall review in verifying whether the plan complies with applicable rules, regulations, and standards, and in determining whether to approve, modify or deny the plan.

Third, the statute sets forth how and in what context the review of costs related to each Wildfire Mitigation Plan will be handled. Section 8386.4(a) provides that the Commission shall authorize establishment of memorandum accounts to allow electrical corporations to track costs incurred to implement its Wildfire Mitigation Plan. Section 8386.4(b) provides that the Commission shall consider the justness and reasonableness of costs to implement each WMP in

the utility’s General Rate Case (GRC). It further provides that, to the extent costs incurred for wildfire mitigation are not covered in the utility’s revenue requirements (*e.g.*, the costs have not yet been approved in an existing GRC decision), those costs should be tracked in a memorandum account. Section 8386.4(b) also provides another avenue for review of recorded costs – *i.e.*, the utility can “elect to file an application for recovery of the cost of implementing its plan as accounted for in the memorandum account at the conclusion of the time period covered by the plan.” Thus, it is clear that recovery of Wildfire Mitigation Plan costs must be determined by the Commission in the context of a GRC or a separate utility application.

The Utility Reform Network (TURN) and Energy Producers and Users Coalition (EPUC) urge the WSD to downplay or diminish the statutory meaning of WMP approval.³ The WSD should resist those suggestions. According to TURN, the limited timeframe for WSD review means that “WSD cannot approve the plans as presenting the ideal or optimal mix of programs or the proper scope of work in each proposed program.”⁴ As an initial matter, the timeframe for WSD’s review is prescribed by Section 8386.3, and clearly the Legislature did not view that timeframe as a limiting factor, or as providing a justification for any partial or incomplete review or decision-making. Further, while the statute does not even suggest that review should extend to whether the WMPs present “the ideal or optimal mix of programs,” it does set forth a list of programs and scope items (Section 8386(c)(1)-(22)), and it requires the Wildfire Safety Division to review and render a decision on these items, as discussed above. Accordingly, EPUC’s contention that “the 2020 WMP decision should not approve the WMP program scope”⁵ is exactly wrong. If the Wildfire Safety Division does not approve, modify or deny the scope of

³ See TURN at 3-7; EPUC at 2-4.

⁴ TURN at 3.

⁵ EPUC at 3 (emphasis in original).

each electrical corporation's proposed WMP program, its review will be effectively meaningless, contrary to the plain language of the statute.

It is also unclear why TURN urges the Wildfire Safety Division to make a finding of "paper compliance." SDG&E is not requesting, nor does the statute contemplate, a finding of "paper compliance." The entire issue of WMP "compliance" – *i.e.*, how and whether each utility complies with its filed WMP – is a separate issue, as addressed in Section 8386.3(c). Rather, SDG&E submits that the Wildfire Safety Division's decision on its 2020 WMP should clearly indicate, as required by statute, that WSD has (1) reviewed SDG&E's Plan; (2) that it has endeavored to verify whether the Plan complies with applicable rules, regulations, and standards; and (3) that the Plan is approved, modified or denied. To the extent the Wildfire Safety Division determines that, for example, SDG&E's Plan includes activities that should not be undertaken or, conversely, includes activities that not only meet but exceed applicable requirements, the Division should so state in its decision. It should explain how and why SDG&E complied or fell short of applicable rules, regulations, and standards, including those set forth in the WMP Guidelines issued in December 2019. Likewise, the Wildfire Safety Division should clearly articulate its assessment of SDG&E's protocols, metrics, risk assessments, strategies, and all the other major components of the Plan.

It is critically important – particularly in this early stage of the WMP process – that the Wildfire Safety Division and Commission provide clear guidance and expectations. Such guidance especially matters given that costs associated with Wildfire Mitigation Plan activities will be significant, while the recoverability of those costs may not be known, in certain circumstances, until after the activities are undertaken. Thus, clear upfront guidance can help utilities prioritize spending decisions, as appropriate. By contrast, taking the position that TURN

appears to urge – whereby the Division throws up its hands in despair at the timeframe it has to review the plans, and merely indicates that the electrical corporation has achieved “paper compliance” – neither comports with the spirit of the statute nor helps the electrical corporations improve in their wildfire mitigation and prevention, including with respect to capital investments associated with the plans.

TURN, the California Environmental Justice Alliance (CEJA), and EPUC each claim that the Wildfire Safety Division should indicate in its decisions on the 2020 Wildfire Mitigation Plans that it is not addressing cost recovery.⁶ Generally, these parties ask the Division to make a finding that approval of a 2020 WMP does not mean that costs associated with that plan are approved for recovery. SDG&E submits that such a finding is not necessary. While various parties disputed the appropriate timing and setting for cost recovery with respect to the 2019 Wildfire Mitigation Plans, the Legislature provided additional clarity on these issues in AB 1054 in July 2020. As discussed above, the Legislature provided that the reasonableness review of WMP costs would take place in GRCs or separate applications for recovery of costs recorded to memorandum accounts. Thus, findings related to cost recovery are not needed.

Also unnecessary is TURN’s recommendation electrical corporations be prohibited from applying for cost recovery a second time after being denied recovery in a prior proceeding. TURN appears to base its concern upon the fact that Section 8386.4(b) permits electrical corporations to seek plan cost recovery either in a GRC or in a separate memorandum account recovery application. But Section 8386.4 does not appear to permit or contemplate that a utility will be permitted to seek recovery in one proceeding of costs rejected as unreasonable in another proceeding. Thus, there is no reason to provide the “clarification” TURN seeks.

⁶ TURN at 5-6; CEJA at 1-2; EPUC at 2-4.

In its comments (at 20-22), CEJA emphasizes the need for utilities to conduct community outreach before and after wildfire events, as well as alludes to outreach related to PSPS events. CEJA (at 21) asks utilities to “update their WMPs to reflect the requirements of the recent Commission decision related to languages, types of outreach, and assessment of outreach” and further requests that “utility assessments of understanding should be conducted in other languages other than Spanish and English.” It is not entirely clear which decision CEJA refers to (or in which proceeding). But SDG&E does plan to continue to comply with applicable Commission decisions related to community outreach and communication, as well as languages, whether in the context of wildfire events or PSPS events.

Lastly, CEJA (at 21-23) requests that the Wildfire Safety Division develop a process and guidance for utility designation of confidential information and challenges to such designations. SDG&E agrees that all stakeholders are well-served by a transparent and understandable process for confidentiality designations and challenges to those designations. SDG&E submits that the existing process is fair and transparent in that the procedures mirror those of any other Commission proceedings, but it is open to exploring this issue, as appropriate.

2. SDG&E 2019 WMP Alleged Deficiencies

POC continues to make unfounded allegations against SDG&E related to various “deficiencies” in its 2019 WMP. SDG&E has responded to these claims in numerous pleadings before the Commission and summarizes the main points here. POC’s argument that SDG&E’s 2019 WMP is not approved fails. There is no Commission statement or decision in which the Commission made any indication that it was denying or rejecting SDG&E’s 2019 WMP, nor does POC point to any such statement.

In fact, the Commission stated that “SDG&E’s Wildfire Mitigation Plan contains each of the elements required in Senate Bill 901, Public Utilities Code Section 8386(c).”⁷ In Ordering Paragraph 13 of D.19-05-039, the Commission also stated: “[SDG&E] is authorized to open the memorandum account described in Public Utilities Code Section 8386(e), which provides: ‘At the time it *approves* each plan, the Commission shall authorize the utility to establish a memorandum account to track costs incurred to implement the plan’” (emphasis added). Accordingly, SDG&E’s 2019 WMP was approved.

3. Updates to WMP Guidelines and Templates

SDG&E agrees with the parties who advocate for workshops to further refine and update the WMP Guidelines and Templates, including the Utility Wildfire Mitigation Maturity Model,⁸ in advance of beginning the process for the 2021 WMP updates. It is important that such lessons learned from the use of the templates and stakeholder feedback is taken into account when updating these materials. Furthermore, such workshops should be scheduled to allow for sufficient time for feedback and revisions to be incorporated and published well in advance of the deadline for electrical corporations to submit their 2021 WMP updates.

Several parties’ comments provide specific feedback on the WMP Guidelines and Templates. SDG&E addresses a few of the points raised. The WMP template, and particularly the tables, require the utilities to provide data and information in a prescriptive manner. For outcome metrics, it requires data on various wildfire risk drivers to be normalized by Red Flag Warning (RFW) circuit mile days. The Mussey Grade Road Alliance (MGRA) (at Section 2.3.1)

⁷ D.19-05-039 at 2.

⁸ R.18-10-007, Administrative Law Judge’s Ruling on Wildfire Mitigation Plan Templates and Related Material and Allowing Comment, Attachment 1 – WMP Guidelines and Attachment 2 – Utility Wildfire Mitigation Maturity Model (December 16, 2019), as clarified by the WSD on January 15, 2020 and January 29, 2020.

explains that while red flag warning day miles are correlated to wildfires, it is not a useful normalization tool, as they are not statistically correlated to outages, wire down events, or ignitions. This is an example of why workshops are important, so that metrics and how they should be calculated and utilized can be discussed with interested stakeholders.

SDG&E generally agrees with the analysis performed by MGRA. The value of the RFW miles metric is not in a correlation analysis, but rather lies in a comparison of two data sets. One data set would contain outages, wire downs, and ignitions per mile that occurred on RFW days, and one data set would have outages, wire downs, and ignitions that occurred on all other days. The data sets would then be compared with the objective that a statistically significantly less amount of these events occur on RFW day because utilities perform extra operational mitigations during these events. This would be a way to measure the effectiveness of those mitigations.

CalPA also highlights opportunities for the WMP guidelines and templates to be updated. Specifically, CalPA stresses (at 45) the importance of developing and using consistent definitions for terms such as “ignition” and “near miss” and ensuring that all metrics can be compared on an apples-to-apples basis. CalPA also notes that until mitigation effectiveness studies are performed (pre-mitigation performance versus post-mitigation performance), the projections on drivers of ignition probability (contained in WMP Table 31) provide little value. SDG&E agrees with CalPA on all of these points.

B. Conditional 2020 WMP Approval Based on General Resource Constraints and Feasibility

CalPA recommends (at 51-53) that the WSD only approve the 2020 WMPs on the condition that each electric utility submit a supplement that addresses resource constraints and feasibility. CalPA contends that a “robust discussion of resource constraints is essential to determine whether the plan is feasible” otherwise “an unrealistic WMP is of little value to

customers, the public, or the Commission.” SDG&E disagrees with CalPA’s recommendation in this regard. SDG&E has made wildfire safety, prevention, and mitigation a central tenet of its culture and operations, and it takes seriously its obligation to prepare a robust and actionable WMP, per statutory directives.

In compliance with the Commission’s WMP Guidelines and Template, SDG&E’s 2020 WMP (at 41-42) already addresses potential resource constraints and feasibility concerns. Constraints are also discussed in each activity section where applicable, including how SDG&E plans to address such constraints. Thus, conditional approval as suggested by CalPA is unnecessary and unwarranted.

In addition, the quarterly reports required by AB 1054 in support of the utility’s Annual Safety Certification (per P.U. Code Section 8389(e)(7)), and the periodic audits the WSD plans to perform provide transparency on utility progress for implementing WMPs and provide an opportunity for utilities to further highlight particular constraints or concerns. Conditioning the approval of the WMP until submission of a supplemental filing detailing constraints is unnecessary and would slow down WMP progress. Utilities need to move forward with their WMPs expeditiously with the support of a WSD approved plan.

Even if supplemental plans detailing constraints were to be filed, the constraints may vary and be outdated soon thereafter. For example, many constraints associated with obtaining easements, property owner permissions, permitting delays, environmental issues, construction challenges are not discovered until after the work makes significant progress. This is because it is hard to predict the variability in situations and customer reactions to mitigation projects. Similarly, resource constraints can be driven by the delays caused by these constraints around easements, property issues, and environmental issues. If projects get delayed due to the

constraints just mentioned, engineering and construction resources may move on to other work within the same utility but sometimes to other utilities. Predicting constraints and the impacts to wildfire mitigation plans is something that evolves over time and can be managed over time accordingly. Utilities are more than willing to work with the WSD to communicate constraints and progress of the WMP as often as needed. Since it will be early in the progress of the mitigation activities, a supplemental detail of constraints will not provide value prior to approval of the WMP as the supplemental filing will not adequately identify the full impacts of the constraints.

C. Metrics

As noted above, the WMP Guidelines and Templates provide prescriptive instructions on how the utilities should provide and present data and information. POC takes issue with the metrics provided in the WMP, specifically commenting on an extract from SDG&E's WMP Table 11, which provides information regarding near misses. POC (at 7) argues that SDG&E shows little performance improvement from year to year. POC further claims that the data reveals SDG&E has maximized the effectiveness of their mitigations and has hit the wall of diminishing returns.

POC's interpretation of the data is flawed. The data provided in WMP Table 11, as required by the WMP Guidelines, is the near miss data for the entire overhead system (inside and outside the HFTD), which includes 6,500 miles of overhead line. Total system near miss data is not a good metric to measure the effectiveness of targeted mitigations. To add some context, SDG&E hardened 450 miles to date on its Fire Risk Mitigation (FiRM) hardening program, which represents less than 7% of SDG&E's entire overhead distribution system. Also, while SDG&E is investing heavily in the areas of highest risk, SDG&E is investing less in other areas

of the system given the priority to wildfire risk, which can offset the gains made by hardening using the current data set. SDG&E agrees with the Green Power Institute's (GPI's) approach (at 6) for future WMPs to "[p]rovid[e] near miss and ignition data on only those lines that are hardened or updated based on new [enhanced vegetation management] EVM practices and other wildfire mitigation activities, and comparing those data to historical data and as-yet untreated lines could provide a more focused assessment of WMP success in addition to system-wide and HFTD averages."

POC also claims (at 8) that climate change is not increasing the threat of wildfires, pointing to the fact that there were less high Fire Potential Index (FPI) days in 2019 than 2018 and stating, "There is no trend toward an increasing number of days per year with high fire threat." This conclusion is short sighted, as five years of data is too small a sample to measure a trend on climate change. In collaboration with the University of California, Los Angeles (UCLA) and the U.S. Forest Service, SDG&E performed a study that looked at wildfire risk from 1984 through 2003 which showed an increasing trend, as depicted in the figure below.⁹

⁹ Yang Cao, *et al.*, "The Santa Ana Wildfire Threat Index: Methodology and Operational Implementation" (2016), *Weather and Forecasting*. 31. 10.1175/WAF-D-15-0141.1. (available here: <https://journals.ametsoc.org/doi/pdf/10.1175/WAF-D-15-0141.1>).

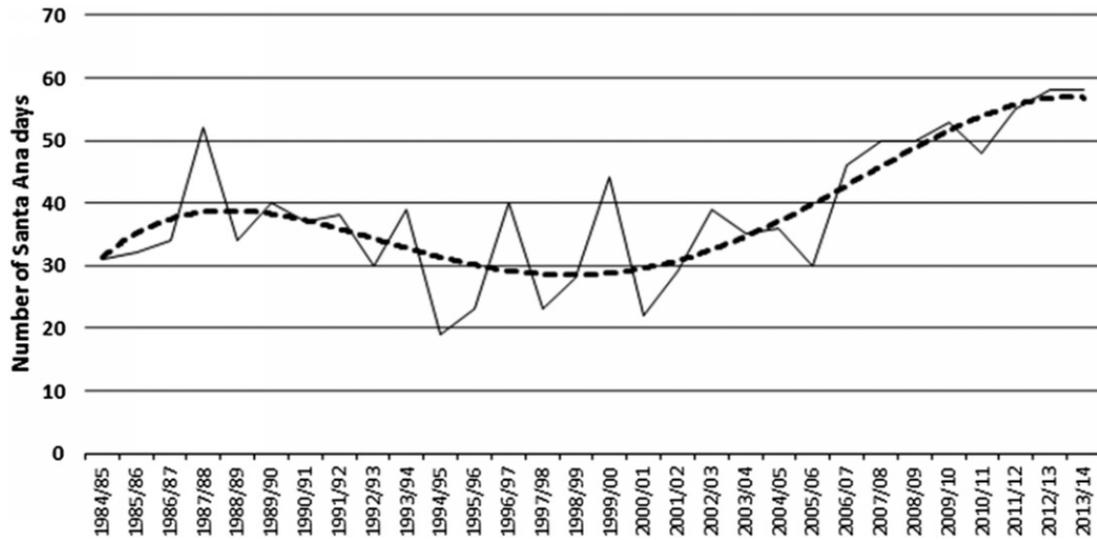


FIG. 18. Number of Santa Ana wind days per rain year (1 Jul–30 Jun) for years spanning 1984–2014 (solid black line). Dashed line is a polynomial fit to the data, which helps to depict the longer time period trends.

Although wildfire risk days were reduced in 2019 from peaks in 2017 and 2018, it does not mean that wildfire risk due to climate change is declining as a broader trend. These are further examples of why a workshop or series of workshops is needed to determine how to calculate metrics that would be useful in assessing effectiveness of wildfire mitigations.

D. Risk Analysis and Risk Spend Efficiencies

A few parties comment that a more thorough discussion of RSEs can occur in future WMPs. SDG&E agrees. There are many aspects of Multi-Attribute Value Functions (MAVFs) and RSEs that are continually evolving, as SDG&E moves from one Risk Assessment Mitigation Phase (RAMP) cycle to another. SDG&E's next RAMP filing is scheduled to be filed in May 2021 and SDG&E has already identified several areas that will likely change compared to its November 2019 filing; including the likely addition of attributes to the MAVF. Additionally, wildfire risk modeling is always maturing which includes newer improved ways of thinking about how to measure wildfire risk and PSPS risk. Lastly, SDG&E anticipates that a new Safety

Model Assessment Proceeding (S-MAP) will begin soon, and it will certainly lead to modified ways to present risk topics. These new changes will be applied at their proper timing, with some elements introduced in the 2021 WMP filing and 2021 RAMP.

Of particular note, specific topics in which SDG&E is attempting to demonstrate improvement include: (1) more granular view of risk assessment and mitigation effectiveness; (2) updated MAVF that more closely aligns with company values; (3) improved analytics brought about by evolving asset management and instrumentation; (4) a more complete understanding of the impacts of PSPS; and (5) increased analytics involving new technologies and communication strategies.

E. Directional Vision for PSPS and WMP Implementation

MGRA (at 21) urges the utilities to “acknowledge the unacceptability of PSPS as a long term strategy” and as part of their 10 year plan, they should discuss “how the need for PSPS would be eliminated or drastically reduced.” While PSPS is a valuable measure of last resort to protect public safety in the short-term, SDG&E is taking steps to significantly reduce the use of PSPS in the future. As explained in its WMP (at 33-36), SDG&E has been working on identifying various mitigation strategies to identify engineering solutions to reduce PSPS impacts as well as identifying and establishing customer programs to support the reduction of PSPS impacts to customers. SDG&E has already identified steps that are being quickly implemented to reduce the impacts of PSPS in 2020 and will continue to identify such opportunities with the aspirational goal of significantly reducing or eliminating PSPS impacts in the long-term.

Most recently and as a part of its PSPS analysis, SDG&E has developed preliminary risk models that quantify PSPS impacts, which are then included as a part of assessing risk spend efficiencies of various project alternatives. Although SDG&E believes formalizing such models

is part of separate Commission proceedings and regulatory processes such as S-MAP and RAMP, SDG&E continues to work on its risk analysis capabilities and will incorporate updates in the next WMP.

F. Risk Assessment and Mapping

CalPA (at 56) claims that the utilities' WMPs are not based on robust risk-scoring models because the models are highly dependent on the inclusion of recent major wildfires as one of the few data points fed into the models. CalPA also states that a model with only a few data points dramatically changes results and recommends the WSD require more robust risk-scoring models (with more data points) in 2021. SDG&E defined its MAVF calculations and methodology in its 2019 RAMP. This document was referenced in SDG&E's 2020 WMP, and SDG&E's WMP RSE calculations were consistent with the methodologies used in RAMP. Going forward, SDG&E agrees that a consistent approach should be developed for RSE calculations during the next S-MAP, and RSE calculations on future wildfire mitigations should be consistent with S-MAP and RAMP.

SDG&E's perspective in all modeling was to attempt to capture the current situation as accurately as possible. Depending on different risks in the RAMP, SDG&E used different timelines, which it believed to be the most indicative of current situations. For wildfire in particular, SDG&E used a mix of historical data, as well as modifiers to that data, to fit circumstances that have changed during recent history. The last major fire attributed to SDG&E occurred in 2007, and since that time many aspects of SDG&E risk management programs have been developed. SDG&E did its best to estimate how those changes inform current probabilities. In cases of rare events, all models rely on a combination of historical data and projections.

CalPA (at 57) notes that the utilities rely on wildfire simulation models, weather models, and ignition probability models to understand wildfire risk, but CalPA asserts that the utilities have not demonstrated the accuracy of these models. CalPA (at 58) recommends that the WSD require utilities to perform and publish validation analyses of the models they use to assess wildfire risk. Further, to review the models, the WSD should establish a technical working group open to interested parties.

SDG&E utilized a multi-dimensional approach to modeling that has been used in several forums and has been audited by external auditors. SDG&E welcomes the opportunity to discuss the accuracy of wildfire risk assessment models in an interactive way to educate stakeholders on how SDG&E created their modeling, as well as to review the performance of the model.

G. Grid Design and System Hardening

1. Shift in System Hardening Strategy

SDG&E disagrees with CalPA's assertion (at 17) that SDG&E's hardening strategy places too much emphasis on mitigations to ensure service reliability in the event of a de-energization event, rather than focusing on mitigations that provide the most effective and efficient reduction of wildfire risk. To the contrary, SDG&E's latest analysis of segments and circuits involves the evaluation of both the wildfire risk as well as the PSPS risks and incorporates asset-risk information from its Wildfire Risk Reduction Model (WRRM) model that has been the foundation of its existing hardening programs. In addition to identifying highest wildfire risk segments and circuits, SDG&E continues to leverage asset-based risk analyses to supplement its efforts to scope hardening efforts that provide the greatest risk reduction benefit for its communities. As stated in its WMP (at Section 5.3.8.4.2), SDG&E strongly believes that a multi-layered analysis (from circuit to segment to asset) is critical to developing a

comprehensive strategy that mitigates the fire risk, which inherently mitigates the risks associated with PSPS.

2. Socioeconomic Factors in Deciding Sequence of Hardening Activities

SDG&E appreciates CEJA's concern (at 3-6) for vulnerable populations. In that regard, it is important to clarify how the location or sequence of hardening activities does not necessarily align with the location of vulnerable communities. This is not due to lack of consideration for such communities but rather results from the fact that SDG&E's hardening activities are informed by a comprehensive analysis of the science of wildfires, including how they start, and how they can propagate and spread to affect large swaths of communities that go well beyond the ignition origin.

SDG&E's identification of areas to implement mitigations is heavily driven by a focus on preventing a fire from starting. The location where a fire ignites is very different from the areas to which it could spread, causing catastrophic damages to communities. Accordingly, SDG&E may underground areas that are not heavily populated, or may not include vulnerable populations, in order to protect those larger and more vulnerable populations that are downstream of a potential fire spread. Thus, the location of hardening does not necessarily align with the economic characteristics of specific populations.

3. Wood-to-Steel Conversion; Cost/Safety and Cost/Benefit

POC (at 28-29) claims that SDG&E presents no evidence that replacing wood poles with steel poles reduces the potential for the poles to serve as ignition sources. Specifically, POC believes SDG&E did not demonstrate how a wood-to-steel pole conversion would have any impact on reducing fire ignitions. In addition, POC claims that wood poles can withstand 91 mph making them more resistant to high winds than steel poles, which have a maximum wind

speed resistance of 85 mph. Like other arguments in its comments, POC has unsuccessfully pressed these claims on multiple prior occasions.

By focusing on a pole material choice – steel vs. wood vs. composite – POC once again completely misses the mark on the fire risk mitigation benefits of SDG&E’s system hardening program. The driving force behind changing existing wood pole structures is *not* simply to change the structure to steel. Rather, the purpose is to install a structure that can withstand the known local wind conditions these areas could potentially experience during an extreme Santa Anna wind event. Regardless of whether the utility structure is wood or steel, if the structure was designed to GO 95 lite standards of 56 miles per hour (mph) wind, and the actual wind the line experiences is 85 mph, that is a change from 8 pounds per square foot (psf) to 18 psf over a 100% difference in load. To reliably withstand that type of load, existing wood pole structures must be changed out to larger (steel or wood) structures to be able to withstand the substantial increase in load requirements. In addition to designing to the known local conditions, SDG&E has been increasing the phase spacing of its conductors. This combined with using high tensile strength conductors, mitigates the chance of wire down failures that could lead to an ignition.

In addition, POC claims (at 29) that wood poles, under current design conditions, can withstand 91 mph, making them more resistant to high winds than steel poles, which have a maximum wind speed resistance of 85 mph. This interpretation represents a fundamental and dangerous misuse of safety factors. One of the reasons SDG&E chooses steel poles is that they are a more reliable material given that they are manufactured versus natural (*i.e.*, less variability in design strength) than wood poles. There is evidence to support this conclusion in GO 95: the strength variability of materials is built into the material safety factors. Grade A wood pole construction requires a safety factor of 4 while steel structures only require a safety factor of 1.5.

To say that a wood pole designed to meet a 56 mph wind can withstand 91 mph wind essentially uses the entire safety factor of four in that analysis. Wood poles require such a high safety factor due to variable strength in materials. For example, a class 1 wood pole can be as strong as an H1 or as weak as class 3. That is why the safety factor required for wood poles is so high. Good engineering practice is to design to the required load and let safety factors be used for appropriate and required safety margins.

In addition to the superior reliability of steel, SDG&E submits that steel poles are more resilient than wood poles. After the wildfires the San Diego region experienced in 2003 and 2007, SDG&E observed that wood pole structures burnt and the steel poles and towers that were exposed to the fires maintained structural integrity. SDG&E does not claim that all steel poles will withstand all fires, just that they are more resilient to fires than wood. The cost difference between wood poles and steel poles for the same height and class are approximately 4% of the overall average pole replacement cost, as most of the cost is in the construction, not pole materials. In reality, this cost difference is even less because of the impact of safety factors. Because wood has a much higher safety factor requirement than steel, 4 vs. 1.5, a larger class (and therefore more expensive) wood pole is always required where a smaller class steel pole will be adequate for the same location.

4. Expand Covered Conductor

MGRA (at 37) recommends that SDG&E expand its covered conductor program, especially in the light of the fact that the risk spend efficiency (RSE) presented in SDG&E's WMP is favorable. In the alternative, MGRA requests a detailed explanation of why such a strategy would be unfeasible or inappropriate. MGRA further suggests that SDG&E concentrate

deployment of covered conductor in areas with large concentrations of native trees (such as oaks) and areas where a 25-foot trim will not be sufficient to mitigate branch-equipment contact.

SDG&E agrees there are benefits with covered conductor and is committed to further understanding the tool and application of the equipment to ensure employees constructing the equipment are trained properly and become comfortable with the equipment. SDG&E's PSPS Mitigation Engineering team¹⁰ is evaluating covered conductor as a solution, and SDG&E has built this into its risk assessment models to evaluate against other alternatives. As with any new equipment, evaluation and piloting is required prior to mass deployment. As stated in its WMP (at 73), SDG&E plans to increase the use of covered conductor in 2021 and 2022. The scope of work of SDG&E's PSPS Mitigation Engineering team is still being developed and could impact the future years of the overhead system hardening forecast. To the extent that there are changes to SDG&E's Distribution Overhead Hardening program, those updates will be presented in an annual update to SDG&E's 2020 WMP.

5. Undergrounding Approval

Referencing the significantly higher cost and potential drawbacks of undergrounding, CalPA (at 51) recommends the electric utilities provide justification for the specific locations where they propose undergrounding projects and explain why covered conductor, or an equivalent technology is not an acceptable alternative. Specifically, CalPA requests that the WSD require each utility to submit a Tier 2 advice letter to justify its undergrounding projects *before* beginning construction, as a condition of 2020 WMP approval. CalPA also suggests this requirement be included in each future WMP submissions. As explained below, SDG&E submits such a requirement is unnecessary and inappropriate.

¹⁰ SDG&E 2020 WMP at Section 5.3.8.4.2.

SDG&E's WMP provides ample justification for why undergrounding is an acceptable system hardening solution for specific areas within its service territory, particularly in Tiers 2 and 3 of the HFTD, as well as in the wildland urban interface.¹¹ SDG&E established an internal dedicated team of experts with decades of experience to minimize wildfire risk and reduce or minimize customer impact to PSPS. As explained in its WMP (at 71), "SDG&E has formed a PSPS Mitigation Engineering team that will consider wildfire risk reduction and PSPS mitigation impacts to customers and select the most cost-effective mitigation solution that maximize the benefit of both goals." This team will be evaluating several risk factors including the WRRM model, tree strike potential, customer density, ingress/egress issues, equipment concerns and critical infrastructure among other factors to identify the appropriate mitigation. SDG&E submits that this team's analysis and justification is sufficient to move forward with the project, if they deem undergrounding as the proper mitigation. Thus, a Tier 2 advice letter is not needed to justify SDG&E's undergrounding projects before beginning construction.

As noted above, wildfire risk and PSPS events are synergistic risks. It is important to highlight that SDG&E does not apply PSPS to the entire HFTD. In fact, SDG&E's largest single PSPS event shut off only 10% of customers located within the HFTD. Areas that have experienced repeated PSPS events are the areas that have actually seen high winds during extreme events. Since these areas have the highest risk of igniting a catastrophic wildfire, SDG&E utilizes PSPS as a measure of last resort to protect public safety in these locations. The areas where SDG&E is proposing undergrounding as a solution are the areas that experience the highest wildfire risk in the entire service territory. For these relatively small number circuit line

¹¹ See SDG&E 2020 WMP at 65, 84, 95.

miles that have the highest risk, SDG&E believes it is prudent to use the mitigation that is 100% effective, and that solution is undergrounding.

6. Cost-Effectiveness of Undergrounding

POC (at 30) claims that SDG&E's 2020 WMP reveals that SDG&E did not consider undergrounding only in its highest wildfire risk areas so as to most effectively reduce risk, and further that SDG&E failed to consider properly the cost-effectiveness of undergrounding and the viability of alternatives. They further argue (at 31) that a far more reasonable alternative would be to eliminate SDG&E's lines and provide solar plus battery systems. SDG&E disagrees on both points.

As stated in its WMP (at 85), SDG&E's "Strategic Undergrounding efforts will focus on locations within Tier 3 and Tier 2 of the HFTD and the WUI" which are the highest wildfire risk areas and catered to critical customers impacted by PSPS events. Further (at 71), SDG&E explains how its PSPS Mitigation Engineering team considers wildfire risk reduction and PSPS mitigation impacts to customers and will select the most cost-effective mitigation solution that maximizes the benefit of both goals. SDG&E emphasizes that is not proposing to underground 1,658 miles of distribution line. Rather, SDG&E is considering only a few hundred miles of the highest risk circuits on its system, where undergrounding would be proven mitigation that nearly eliminates the risk of wildfire.

As discussed more fully below, POC (at 31) argues it is reasonable to remove SDG&E's lines and provide whole home solar and batteries to customers. This argument is misguided. While off-grid solutions may largely eliminate the risk of utility-caused wildfires, they may present their own wildfire risks. Further, there are major hurdles to overcome in getting customers to agree to transition from traditional utility service to this type of homeowner-owned

and operated service. SDG&E has tried to work with small groups of customers to propose these types of solutions in the past on a much smaller scale than what POC is proposing, and it has had very little success getting customers to opt in, even where SDG&E would cover all the costs of the solar and battery system. In the end, customers may like having a solar and battery system, but they are generally unwilling to give up having an electric service to their homes to ensure the type of electric reliability they have come to expect. POC's specious claim (at 32) that "the cost of whole house solar and battery storage system option should and would be borne by the Tier 3 HFTD customers themselves, and not passed on to SDG&E's ratepayers" shows a lack of understanding of customer reactions to their proposals. The mitigations proposed in SDG&E's WMP focus on choosing the right mitigation for the right situation, and they also account for feasibility.

7. Microgrids

POC (at 39) recommends elimination of SDG&E's proposed microgrid projects and proposes to instead equip all 31,181 customer meters in Tier 3 of the HFTD with a solar plus battery storage system, effectively turning every Tier 3 HFTD structure into a stand-alone microgrid. POC's proposal should be rejected. The microgrid projects proposed in SDG&E's 2020 WMP represent a continuation of the Backup Power for Resilience mitigation activities included in SDG&E's 2019 WMP which was approved as described in Section II.A above. SDG&E continues to evaluate the optimal combination of mitigation activities, including microgrids, to reduce PSPS impacts to customers. As stated in its WMP (at 80), microgrids will continue to be a part of SDG&E's portfolio of mitigation options.

8. Generator Grant Program

POC suggests (at 35-36) that SDG&E did not comply with the Commission's Decision on SDG&E's 2019 WMP (D.19-05-039), which required SDG&E to consider renewables coupled with storage for backup generation as well, and show that its Generator Grant Program will not create additional significant risk for fire threat. Contrary to POC's comments, SDG&E addressed both these considerations in its 2020 WMP (at 77 and 81). SDG&E explains that it is determining the technology such as "solar with storage, generator with storage, storage alone" and with regard to the Generator Grant Program, is testing "renewable, portable, generator options." To further demonstrate its compliance, SDG&E clarifies that the type of generator provided as part of the Generator Grant Program, is a Lithium-ion powered battery. Contrary to POC's assertions, the generators provided by this program do not create additional fire threats.

POC (at 36-37) also expresses concern regarding the cost effectiveness of the generators for SDG&E's Generator Grant Program on the grounds that they do not provide sufficient backup power for customers subject to a PSPS. As explained in SDG&E's 2019 WMP (at 58) and SDG&E's 2020 WMP (at 81) SDG&E's pilot Generator Grant Program offers residential customers (*e.g.*, medical baseline in Tier 3 of the HFTD) funding to acquire a portable generator for use during outages, in particular PSPS events. This program was not intended to be a backup power system for a whole home; rather it provides a means to power critical life support equipment or other small home appliances in the event of a PSPS.

As discussed in Section 5.3.3.11.1 of SDG&E's 2020 WMP, the PSPS Mitigation Engineering team is developing the most cost effective mitigations to address wildfire risk and PSPS impacts. SDG&E has expanded its generator programs since its 2019 WMP and expects to continue to refine the generator programs even beyond the PSPS Mitigation Engineering team analysis. These further refinements may include the technology, risk, and cost of the generators.

As SDG&E progresses further in designing and implementing a generator program to provide the best solution for customers, SDG&E will refine the menu of options and the costs.

9. Whole Home Generator Program

CalPA (at 20-22) takes issue with SDG&E's whole home generator program as being a "primarily a reliability program" and also expresses serious concerns regarding safety, environmental impact, and equity. CalPA argues (at 22) that "unless SDG&E can explain how the program furthers wildfire mitigation, the program should be removed from SDG&E's WMP."

SDG&E's PSPS Mitigation Engineering team is developing mitigations covering a wide range of infrastructure enhancements and technologies including generators that would reduce both catastrophic wildfire risk and PSPS impact to customers. The whole home generator program is a mitigation tool that can evolve to best fit customer needs on circuit segments where other wildfire and PSPS mitigation strategies will take an extended timeline for completion, based on land and environmental constraints, or where such mitigations are cost prohibitive. Although named whole home generator program, this solution is also going to be applied to commercial customers, focusing on those considered to be critical facilities or that provide essential services to communities impacted by PSPS events. Ultimately, SDG&E will identify those locations where local generation is most appropriate based on a comparison of alternatives, risk spend efficiency, and projected project timelines.

CalPA is concerned that the whole home generator program is primarily intended to produce relatively minor reliability gains for a small number of customers, rather than to produce an overall reduction in the risk of catastrophic wildfire. As explained above and throughout SDG&E's WMP, PSPS is a last-resort mitigation measure to reduce wildfire risk when

warranted by real-time conditions and both concepts (wildfire mitigation and PSPS mitigation) are fundamentally linked. In the event of extreme weather conditions, certain electric facilities are de-energized to reduce wildfire risk, causing impacts to certain customers. To mitigate this, one of SDG&E's generator programs would help to eliminate or reduce interruption in service to participating customers.

The costs of local generation vary based on size and technology – whether fossil fuel or renewable. CalPA (at 21) highlights the availability of portable 3.5 kW generators on the market for less than \$3,000 per generator, and argues that SDG&E's whole home generator estimate is more expensive. SDG&E submits that a 3.5 kW generator is not a "whole home" generator. A generator that size would only support a partial load only powering a few appliances. Depending on the size of home, the generators required to support a whole home load will vary in kW rating.

CalPA is correct (at 20-21) that customers accepting a whole home generator would need to "own and maintain the generators." Customers will opt-in to the appropriate residential generation program with the understanding that they would be responsible for owning, maintaining, and operating these assets safely. Surveying for a best fit solution, whether through this program or others (the Generator Grant Program, for example), ensures suitability to the individual customer.

CalPA (at 21) also raises potential environmental impacts of SDG&E's whole home program. SDG&E's PSPS Mitigation Engineering team is currently evaluating whether the generator programs will have any environmental issues. For the whole home solution, the fossil fuel generators are intended to provide backup power in the event of PSPS outages and would be installed to work with transfer switches on each customer's meter panel allowing for the

generators to operate only for the loss of grid power. These units will be designed to adhere to emissions standards and regulations and cleaner-burning fuels such as propane are being considered. Additionally, some residents in the HFTD may already have local propane sources, which would allow for easier implementation of propane-based solutions rather than a renewable solution.

CalPA (at 22) claims that the whole home generator program is not authorized by P.U. Code Section 8386(c)(6)(C) and thus, should neither be included in the WMP nor recorded to a WMP-related memorandum account. CalPA goes on to acknowledge (at 22) that “Section 8386 does not prevent SDG&E from implementing the whole-home generator program under other authority.” SDG&E agrees this point and submits that P.U. Code Section 8386(a) directs each electrical corporation to construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfires posed by those electrical lines and equipment. SDG&E is developing the whole home generator program to serve its customers impacted by PSPS, which is implemented to prevent the risk of wildfire.

H. Asset Management and Inspections

1. Drone Inspection Program

POC (at 2) argues that SDG&E’s inspection, vegetation management, pole replacement, undergrounding, and de-energization practices continue to be deficient and do little to reduce the risk of catastrophic wildfire. They specifically note that SDG&E’s budget for proposed equipment inspection initiatives dedicates spending almost exclusively to drone assessment. POC further claims (at 20) that SDG&E presents no compelling justification for converting to a drone inspection program.

SDG&E embarked on a drone inspection program in 2019 to *supplement* its current GO 165 mandated inspections as well as the enhanced annual other HFTD-focused inspections. This

program did not replace or convert any of SDG&E's existing inspection programs. Drone inspections provide a vantage point from the top of structures allowing SDG&E's qualified electrical workers to assess equipment more effectively. The photos acquired via drone inspections also allow for a closer view via the ability to zoom in on details and a better vantage of poles that were hard to reach on foot. The program began by assessing the Tier 3 areas of the HFTD flying close to 11,000 poles in 2019 and continues in 2020 in order to complete the rest of the Tier 3 poles. To date, of the 20,000 poles assessed within Tier 3, the program has identified issues on approximately 4,500 poles. These findings on 22% of the poles assessed support the effectiveness of drones in identifying potential fire hazards or other issues that are hard to see from the ground via traditional inspection methods. The type of issues that have been identified include: damage to poles and crossarms, loose and damaged hardware, and broken conductor strands. If these issues were left unmitigated, it could result in a wildfire; therefore, correction of these issues mitigates wildfire risk. Once the assessment of Tier 3 is complete, SDG&E will inspect Tier 2 and transmission poles in the HFTD over the WMP filing period 2020-2022.

Although SDG&E leverages drones in specific instances, this was the first mass use of drones to inspect the SDG&E electric system in the HFTD. SDG&E determined that the best course of action was to complete the entire HFTD drone-based inspections in a relatively short period of time, as compared to inspections conducted as part of its regular Corrective Maintenance Program, in order to develop a baseline of inspection information. The higher cost of the drone inspections relative to the regular inspections is largely due to this expedited approach, as well as the additional costs to develop the Program, establish new tools, processes and workflows to perform the flights, review the photographs, and make the necessary repairs. For example, since the program is new and the use of drones is still relatively novel, SDG&E

took care to plan flights to avoid adversely affecting residents and to ensure the safety of the drone crews, in addition to providing enhanced customer notifications in the HFTD to alert customers of drone inspections in their vicinity. It was also important to develop new systems to transfer photos from the drone crews to the image review team for assessment, and to provide tools for the assessors to annotate the photos to identify the potential fire hazards. SDG&E will continue to review the data from this program to determine whether these efforts will reduce the number of infractions identified during normal CMP inspections and reduce regular O&M costs.

2. Evaluating Efficiency of Inspection Programs

CEJA states (at 6-7) that there does not appear to be a systematic method for utilities to examine the effectiveness of all types of inspections. This statement is misguided; SDG&E's internal audit process on electric distribution overhead/underground detailed and wood pole intrusive inspections is quite effective. SDG&E's process requires a field visit to verify the inspector's findings and identify if there are any discrepancies. If discrepancies are found, they are added to SDG&E's inspection and maintenance database for future resolution. This process is focused on the accuracy of the documented results and the quality of our inspectors.

I. Vegetation Management

1. Enhanced Vegetation Management

CalPA (at 24), MGRA (at 30-31), and POC (at 23) each assert that SDG&E has not effectively demonstrated nor provided sufficient evidence to justify expanding time-of-trim clearances to 25 feet. Further, they contend such clearances will not necessarily reduce the risk of wildfire. SDG&E submits that expanded clearances, where properly applied, can be an effective mitigation tool to reduce the likelihood of line strike and prevent wildfire. SDG&E asserts that greater clearance can equate to lessened risk. Evidence of this is observed in the reduction in tree-related outages and damages to SDG&E electrical facilities. Vegetation line

strikes have caused several catastrophic wildfires in California in 2017-2018, and SDG&E strives to avoid such ignitions.

With respect to clearances, General Order 95, Rule 35 Appendix E states:

The radial clearances shown below are recommended minimum clearances that should be established, at time of trimming, between the vegetation and the energized conductors and associated live parts where practicable. Reasonable vegetation management practices may make it advantageous for the purposes of public safety or service reliability to obtain greater clearances than those listed below to ensure compliance until the next scheduled maintenance. Each utility may determine and apply additional appropriate clearances beyond clearances listed below, which take into consideration various factors, including: line operating voltage, length of span, line sag, planned maintenance cycles, location of vegetation within the span, species type, experience with particular species, vegetation growth rate and characteristics, vegetation management standards and best practices, local climate, elevation, fire risk, and vegetation trimming requirements that are applicable to State Responsibility Area lands pursuant to Public Resource Code Sections 4102 and 4293.

This recommendation is clearly intended to be a starting point in determining the actual post-trim clearances that are obtained, and it takes into account a multitude of factors. Proper and safe clearance must be assessed on a tree-by-tree basis, considering not just the anticipated growth of a tree but the potential likelihood and mechanics of a canopy branch break or trunk failure. SDG&E's implementation of a 25 foot clearance establishes a safer clearance zone where applied.

SDG&E's practice of obtaining greater clearances on its transmission voltage lines demonstrates the effectiveness of its tree/line clearances for its distribution lines. Traditionally, SDG&E achieves at least 20-25 feet and greater at time-of-trim on its transmission lines. An outage on a transmission line can have substantial consequences for customers and the electrical grid system. SDG&E's historical data indicates that tree-related outages on its transmission lines

are near non-existent.¹² This is strong quantitative evidence of the effectiveness of increased post-trim clearances to 25 feet. SDG&E thus strives to achieve the same clearances on its distribution lines through its enhanced vegetation management program.

SDG&E follows ANSI A300 pruning standards following industry standards for proper tree care operations. SDG&E also employs International Society of Arboriculture Best Management Procedures. Utility arboriculture is a unique niche within urban and rural forestry that must balance proper pruning and clearances in a dynamic electrical environment. Utilities must be prudent and diligent in maintaining safe clearances at all times between trees and powerlines. Not doing so, or compromising with clearances, can set the stage for an ignition and catastrophic wildfire.

SDG&E has an inventory of approximately 243,000 trees located within the HFTD. Of these, approximately 81,000 consist of targeted species with tree heights above overhead electrical high voltage lines. SDG&E pursues its expanded clearance only on targeted trees that met criteria that warrant expanded clearance. Such criteria would include trees and palms that could shed a branch onto the lines, wind sway, for proper pruning, to abate a defect, or trees with lean. It is not SDG&E's intention to establish a cylindrical clearance zone of 25 feet linearly along all of its lines. Indeed, in some instances it may be appropriate to obtain much less than 25 feet clearance if there were little chance the tree could become non-compliant or contact the lines within the annual cycle. Similarly, SDG&E will pursue removal of trees where it is deemed necessary to prevent outage, line strike or where continued pruning cannot ensure the health of the tree, and or where customer preference is removal. An example where a tree removal is the prudent and safe alternative to pruning is a green, live tree with structural defects. To completely

¹² See SDG&E 2020 WMP at Appendix A, WMP Table 11b, Row 30.

mitigate the potential hazard such trees must be topped below the defect. Subsequent regrowth can make these trees even more susceptible to future failure as these branches would be weakly attached.

SDG&E will also continue to proactively remove fast-growing, young trees to prevent future encroachment into the lines, prevent unnecessary pruning, and reduce future rate payer expenditure. SDG&E will continue to champion the goal of replacing inappropriate trees growing near powerlines with the, “right tree in the right place.” SDG&E is also proud to have been recognized by the Arbor Day Foundation with its Tree Line USA Award for 18 consecutive years. To be recognized a utility must demonstrate it has followed the five core standards of: 1) quality tree care; 2) annual worker training; 3) tree planting and education; 4) tree-based energy conservation; 5) Arbor Day celebration.

POC recommends (at 24) that SDG&E “should emphasize detailed and frequent inspections” and further suggests a six-foot separation standard and regular walking inspections as an effective alternative to excessive vegetation clearance practices. As explained in detail in its WMP, SDG&E performs detailed tree inspections twice annually every year within the HFTD. These inspections include a 360-degree assessment of every tree within the utility strike zone from ground level to top of canopy. These inspections are performed on foot by ISA Certified Arborists. SDG&E asserts that a six-foot separation is inadequate to maintain a safe distance from power lines. Such a clearance does not fully mitigate for fast-growing trees, wind movement, and branch breakout. The clearance would also require the need to prune trees multiple times per year resulting in increased costs for ratepayers, impact on customers, and detrimental to the health of trees.

GPI asserts (at 15-16) that although SDG&E Vegetation Management has a clear mandate to perform line clearance the utility does not apply alternative, sustainable methods in the disposition of debris associated with its operations. As SDG&E detailed during WMP workshops in February 2020, it partners with a local environmentally sustainable composting vendor to turn green waste into recyclable and landscaping material. In 2018 and again in 2019 SDG&E diverted over 3,500 tons of green waste material to this facility. SDG&E contractors continue to partner with local firewood companies to utilize the larger wood. SDG&E is working with its tree contractors on a partnership with local vendors to refurbish select wood from tree trunks into furniture and artisan pieces. Through an RFP process SDG&E is also investigating the feasibility and viability of repurposing biomass into alternative, sustainable options

2. Collaboration on Best Practices

CEJA suggests (at 19-20) that IOUs should collaborate and share vegetation management data on best practices to narrow the scope of trees that are removed. While sharing information can be helpful, regional, topographical, and climatological differences across the state create a rich and diverse species matrix that present unique challenges to utilities. Nevertheless, the IOUs do share a number of common tree species with similar growth patterns and failure characteristics that require similar mitigation response. For example, Eucalypti are non-native species and are planted throughout the state of California. Their propensity for fast growth, shallow-rooting, and branch failure make it a common species to target for removal or greater clearances. SDG&E makes the determination to remove a tree using a risk calculation based on multiple factors including species, lean, tree health, and site-specific conditions. A decision may be made to continue to prune a tree if doing so can remove the threat to the lines and not be

detrimental to the tree's health. The IOUs engage one another through industry conferences and via joint meetings to discuss strategy and best practices of their respective vegetation management programs.

SDG&E's internal Vegetation Management staff of foresters and managers are ISA Certified Arborists and ISA Utility Specialists. The pre-inspection and quality assurance contractors also employ a majority staff who are ISA Certified. All routine tree inspections and off-cycle patrols within the HFTD are performed by ISA Certified individuals trained to accurately perform tree risk assessments. Additionally, all Vegetation Management contractors receive annual hazard tree training from their company.

III. CONCLUSION

SDG&E appreciates the opportunity to provide this reply to the public comments on the 2020 WMPs and looks forward to continuing working with the Commission and interested stakeholders on these important wildfire mitigation issues.