APPENDIX D

Draft Resolution WSD-006

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE SAN FRANCISCO, CA 94102-3298



May 7, 2020

Agenda ID #18404

TO: STAKEHOLDERS TO BEAR VALLEY ELECTRIC SERVICE'S 2020 WILDFIRE MITIGATION PLAN Service List(s): R.18-10-007

Enclosed is the Action Statement of the Wildfire Safety Division (WSD) and Draft Resolution WSD-006. The Action Statement and Draft Resolution WSD-006, together, with the Draft Guidance Resolution (WSD-002), present the WSD's evaluation of Bear Valley Electric Service's (BVES) 2020 Wildfire Mitigation Plan (WMP). Pursuant to Public Utilities Code Section 8386.3(a), the attached Action Statement, the discussion found in Draft Resolution WSD-006, and the overarching discussion in Draft Guidance Resolution WSD-002 is the outcome of WSD's review of BVES's WMP, including input from the public, the Wildfire Safety Advisory Board, and other governmental agencies. The Action Statement is the conditional approval of BVES's WMP and is presented to the Commission for ratification via the associated resolution.

Draft Resolution WSD-006 is one of seven Draft Resolutions, sequentially ordered as Draft Resolutions WSD-003 – WSD-009, that address the individual 2020 WMPs of Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas and Electric Company, Liberty Utilities, PacifiCorp, Bear Valley Electric Service, and, together, Trans Bay Cable, LLC, and Horizon West Transmission, LLC. These seven resolutions, along with the associated Action Statements and the Guidance Resolution WSD-002, represent the totality of WSD's evaluation of the 2020 WMPs.

Pursuant to Rule 14.5 of the Commission's Rules of Practice and Procedure, stakeholders may submit comments on the Draft Resolutions and the Draft Guidance Resolution (WSD-002 - WSD-009). <u>The WSD will accept one set of comments per stakeholder that collectively addresses the Draft Guidance Resolution and the individual electrical corporation Draft Resolutions WSD-002 - WSD-009.</u>

Comments shall be limited to twenty (20) pages in length and should list the recommended changes to the Draft Resolutions. Comments shall focus on factual, legal or technical errors in the proposed Draft Resolutions.

Comments must be received by the Wildfire Safety Division by May 27, 2020. Comments should be submitted to the following email address: wildfiresafetydivision@cpuc.ca.gov. The WSD will consider comments on the Draft Resolutions when finalizing its Action Statement on BVES's 2020 WMP.

Stakeholders submitting comments on the Draft Resolution must also serve their comments on the service list of R.18-10-007. Comments that are not served on the service list of R.18-10-007 may not be considered. The WSD will post all comments received on the following website: www.cpuc.ca.gov/wildfiremitigationplans.

Replies to comments will not be accepted nor considered if submitted.

Draft Resolution WSD-006 will appear on the agenda at the next Commission meeting, which is at least 30 days after the date of this letter. The Commission may vote to ratify WSD's Draft Resolution at that time or it may postpone a vote until a later meeting.

Sincerely,

/S/ CAROLINE THOMAS JACOBS

Caroline Thomas Jacobs Director, Wildfire Safety Division California Public Utilities Commission

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE SAN FRANCISCO, CA 94102-3298



May 7, 2020

Wildfire Safety Division Draft Action Statement on Bear Valley Electric Service's 2020 Wildfire Mitigation Plan

This Action Statement is the conditional approval of Bear Valley Electric Services' (BVES) 2020 Wildfire Mitigation Plan (WMP) and is presented to the California Public Utilities Commission (CPUC) for ratification, via the associated Resolution and Guidance Resolution.

Introduction

Wildfires have caused significant social, economic, and environmental damage on a global scale. In California, electric utilities are responsible for some of the most devastating wildfires in recent years. The Wildfire Safety Division (WSD) recognizes that the wildfire threat is only increasing, with utility-related ignitions responsible for a disproportionate share of wildfire-related consequences. To that end, the WSD has a vision of moving towards a sustainable California, with no catastrophic utility-related wildfires, that has access to safe, affordable, and reliable electricity. The WSD recognizes it is critical for utilities to act quickly to reduce utility-related wildfire risk effectively and prudently.

As utility wildfire mitigation has become an increasingly urgent priority, the California Legislature has passed several bills related to utility wildfire prevention and oversight. The main regulatory vehicle for the WSD to regulate utilities in reducing utility wildfire risk is the Wildfire Mitigation Plan (WMP), which was introduced in Senate Bill (SB) 1028 (Hill, 2016) and further defined in SB 901 (Dodd, 2018), Assembly Bill (AB) 1054 (Holden, 2019), and AB 111 (Committee on Budget, 2019). Investor-owned electric utilities are required to submit WMPs assessing their level of wildfire risk and providing plans for wildfire risk reduction. The first WMPs under the SB 901 framework were submitted by the utilities and evaluated by the CPUC in 2019.

AB 1054 and AB 111 transferred responsibility for evaluation and approval of WMPs to the WSD,¹ which, as of July 2021, will transfer and become the Office of

¹ With CPUC ratification of the WSD's actions.

Energy Infrastructure Safety within the California Natural Resources Agency. In this role, the WSD must ensure utility wildfire mitigation efforts sufficiently address increasing utility wildfire risk. To support its efforts, the WSD is developing a draft long-term strategy and roadmap. This strategy and roadmap will inform the WSD's work in updating the WMP process and guidelines, and the WSD's evaluation of the WMPs.

AB 1054 mandates that the WSD complete its evaluation of WMPs within 90 days of submission. The utilities submitted 2020 WMPs on February 7, 2020. Upon completion of the past 90 days of evaluation, the WSD recognizes that the utilities have made significant progress. Compared to their first submissions in 2019, the utilities utilize much more data and objective content in their 2020 WMP filings and share more critical information with key partners. However, while utilities are already undertaking wildfire mitigation activities and building capabilities subject to regulation, all utilities must continue to make meaningful progress. Utilities' activities need to incorporate longer-term thinking by focusing more systematically on increasing their maturity over time. All utilities should take a more robust strategic approach that leverages additional Risk Spend Efficiency (RSE) data to focus on the most impactful actions – all with a local lens. This statement outlines more specifically what the WSD sees as critical priorities for the upcoming year for BVES and approves, with conditions, BVES' 2020 WMP. Together, this statement, the associated Resolution and the Guidance Resolution represent the totality of the WSD's conditional approval of BVES' 2020 WMP.

Background

To ensure that utility wildfire mitigation efforts sufficiently address increasing utility wildfire risk, new WMP Guidelines, a Utility Survey and a Maturity Model were launched for 2020. Together, these tools represent a milestone in the evolution of utilities' wildfire mitigation efforts and ensure consistency with the WSD's enabling legislation.

2020 Guidelines

The 2020 WMP Guidelines implement several changes to further enhance the depth, comparability and quality of utility WMP submissions. Specifically, the WMP Guidelines require reporting of consistent metrics, ignitions, risk data and specific utility initiatives to reduce wildfire risk. Utilities have provided historical

metrics and data as a baseline, which can be used to evaluate a utility's wildfire risk level and to assess whether the utility's initiatives sufficiently address this risk. These metrics and data will be used to track utility progress in mitigating the risk of catastrophic wildfire over time.

Maturity Model and Utility Survey

In order to enhance the focus on safety, ensure consistent goals and evaluate performance, the WSD has developed a model for evaluating current and projected wildfire risk reduction performance. It is important to note that this model is not designed to immediately penalize utilities for poor performance, but rather it is an effort by the WSD to work collectively with the utilities it regulates² to facilitate improvement by identifying best practices, current strengths and current weaknesses across the utility landscape. The WSD believes it is in the best interest of the utilities, ratepayers and other key stakeholders to take this collaborative, growth-oriented approach. While certain utilities are currently on the low end of the range for various categories of performance, the WSD is hopeful that providing clear review and evaluation of performance, including identifying such weaknesses, will help drive change in the utilities, allowing all regulated electric utilities in California to improve wildfire risk reduction performance.

As a consequence, the model results are best interpreted as levels – the results are not absolute scores. A utility, for example, could be on the borderline for level 2 in the model, but it would remain at level 1 until it completed 100% of the steps required to cross the threshold to level 2. In this example, the way the model works is the utility would get a result of 1, not 1.8. The purpose of the model is not to penalize the utility for achieving a result of 1 but to identify the specific actions it can take to reach level 2.

Summary of the WSD's Assessment

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² The WSD (ultimately the Office of Energy Infrastructure Safety) and the CPUC have complementary regulatory roles to fill in ensuring a strong oversight in reducing the risk of ignition of wildfires from utility infrastructure. The WSD, CPUC, and other relevant agencies will work together to ensure roles are defined and regulatory outcomes are met.

An effective WMP should have three, overarching components in which utilities should be striving to be "world class." First, the WMP should demonstrate an understanding of a utility's unique risk. Each utility should measure outcome and progress metrics and use a sophisticated model to lay the foundation for safe operation within its service territory. Second, with a deep understanding of its risk, the utility should deploy a suite of initiatives designed to incrementally and aggressively reduce that risk. Finally, this deployment should be done with a key, strategic eye toward maximizing every scarce resource, whether it be direct costs, personnel, or time, to maximize its impact. The result should be that with each passing year California is safer from wildfire threats, with a significant reduction and eventual elimination of the need to use Public Safety Power Shutoffs (PSPS) as a mitigation action.

The WSD evaluated 2020 WMPs considering the following factors:

- <u>Completeness</u>: The WMP is complete and comprehensively responds to the WMP requirements
- <u>Technical feasibility and effectiveness</u>: Initiatives proposed in the WMP are technically feasible and are effective in addressing the risks that exist in the utility's territory
- Resource use efficiency: Initiatives are an efficient use of utility resources
- <u>Forward looking growth</u>: The utility is targeting maturity growth

The WSD used the utilities' 2020 WMP submissions and subsequent updates, public comments, responses to the WSD's data requests, utility reported data and utility responses to the Utility Survey in its assessment of 2020 WMPs.

Upon completion of this review, the WSD then determined whether each utility's 2020 WMP should either be:

- Approved without conditions (Full Approval)
- Approved with conditions (Conditional Approval)
- Denied (Denial)

Pursuant to Public Utilities Code Section 8386.3(a), this Action Statement and the discussion found in the associated Resolutions is the outcome of the WSD's review of BVES' WMP and input from the public and other governmental agencies. As stated previously, this Action Statement is the conditional approval

of BVES' WMP and is presented to the CPUC for ratification, via the associated Resolution and Guidance Resolution.

The conditions for approval of BVES' WMP are designed to address the gaps identified in WMP. Some of the key deficiencies for BVES' WMP are summarized below. The associated Resolution and Guidance Resolution capture the WSD's comprehensive review of BVES' WMP submission.

Discussion of WMP Assessment Summary

BVES has one of the smallest territories of the utilities the WSD reviewed, at approximately 260 miles. For BVES' plan to be effective with its finite resources, strategic prioritization of initiatives within its territory by ignition driver to target the highest risk elements of BVES' grid is crucial.

BVES outlines improvements being made to its risk assessment tools, but the information provided in BVES' WMP does not clarify how these tools are used to drive prioritization of specific wildfire mitigation initiatives in order to minimize wildfire risk and PSPS. BVES outlines various wildfire mitigation programs to address the risk drivers in its territory, including allocating significant spend (approximately 90% of total planned spend) to grid design and system hardening, which includes a large undergrounding program.

BVES, like peer small and multijurisdictional utilities (SMJUs), has not been subject to Safety Model Assessment Proceeding (S-MAP) or Risk Assessment Management Phase (RAMP) requirements and is thus just beginning the process of risk-informed decision making when it comes to wildfire mitigation activities. BVES does report RSE estimates for many initiatives, however, BVES does not provide analysis to demonstrate that the initiatives chosen, including its large undergrounding program, are more effective than alternative initiatives that address the same risk drivers.

Risk Assessment

BVES' risk assessment program includes key components vital to reducing the risk of wildfire ignition. Metrics are tracked for meaningful measures such as red flag warning days per circuit mile, wind conditions, ignitions, and near misses, as required to be reported by the 2020 WMP Guidelines.

Outcome metrics provided by BVES note that ignitions have not occurred in its service territory since 2016 (when BVES began tracking metrics), yet near miss data shows that vegetation contact remains a significant risk. The utility uses a risk-based decision-making framework that includes six steps (risk identification, risk analysis, risk evaluation and scoring, risk mitigation, investment decisions and risk monitoring). BVES, however, does not mention using this model to inform wildfire mitigation activities.

Initiatives

BVES' initiatives, which are the actions and programs BVES will take to reduce wildfire risk, can address the major risk factors that BVES faces. However, BVES' WMP does not outline how its priority programs and improvements will achieve the greatest risk reduction at the highest RSE compared to alternatives. BVES plans to underground a significant portion of its system; this investment exceeds other initiatives in its plan when reviewed by total spend, accounting for more than one third of the total spend proposed in BVES' WMP.

This raises significant concerns for the WSD since the funding dedicated to this effort might be more efficiently spent focusing on a portfolio approach to its initiatives which could yield similar results in a shorter time period. For example, BVES could continue its current practice for asset management, which exceeds minimum requirements with an additional patrol per year for asset management, or these resources could be diverted to enhance its vegetation management practices beyond regulatory minimums. Within the vegetation management program, BVES should better leverage its LiDAR initiative to help target programs throughout its portfolio. Without a greater level of detail justifying its choices, it is not possible to assess the effectiveness of BVES' current approach.

The WSD is concerned that BVES' WMP does not discuss PSPS. Even though BVES has not initiated a PSPS to date, BVES should articulate its plans to enhance this capability based on its risk exposure. BVES' interconnection with Southern California Edison (SCE) means that a PSPS conducted by SCE could cause the loss of power to BVES' customers within its territory. BVES must coordinate with SCE regarding PSPS and develop its own protocols to ensure its customers are appropriately notified and supported should either utility initiate a PSPS.

BVES' targeted maturity growth reflects a desire to improve the maturity of a majority of its 52 wildfire mitigation capabilities in three years, and BVES must work diligently to achieve this targeted growth. BVES' targeted maturity growth across some capabilities raises concerns about the feasibility of BVES achieving these targets, as the path that BVES plans to take to implement these improvements is not fully described in their WMP.

Resource Allocation Methodology

While the WSD's assessment of the 2020 WMP does not approve cost recovery for its initiatives, which will be addressed in each utility's General Rate Case or application under Public Utilities Code Section 8386.4(b)(2), the assessment does consider the effective use of resources to reduce wildfire ignition risk.

Overall, while BVES does report RSE estimates for many initiatives, it does not demonstrate sufficiently that it is allocating finite resources to initiatives that most effectively reduce wildfire risk and PSPS incidents in the near term.

The case for a system-wide undergrounding effort is not fully justified in its WMP at the scale it is being proposed or in comparison to an alternative suite of initiatives (e.g., by increasing patrol inspections of distribution electric lines and equipment, for which BVES' WMP calculates a higher RSE than undergrounding). BVES plans to spend a large majority (90%) of its planned spend on grid design and system hardening initiatives, which is approximately 50% more as a percent of total planned spend than the average of its peer utilities. Considering that BVES' planned spending per High Fire Threat District circuit mile of \$1,168,000 is nearly 3 times greater than even the highest planned spending for large IOUs (SCE at \$318,000), further justification and validation of BVES' planned spending is required. Considering its relatively small rate base, the likely impact on customer rates from such broad deployment of a high-cost initiative would be significant. Moreover, BVES does not provide discussion of any substantive analysis of lower cost alternatives. This will need to be addressed to convince the WSD of the value of these initiatives relative to viable alternatives that address the same risk drivers.

A detailed discussion of the above concerns, as well as, further analysis of BVES' WMP is articulated in the associated Resolutions, including a complete list of

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deficiencies and conditions in Appendix A of the associated Resolution for BVES.

Conclusion

Catastrophic wildfires remain a serious threat to the health and safety of Californians. Electric utilities, including BVES, must continue to make progress toward reducing utility-related wildfire risk. Through the conditional approval granted for its 2020 WMP submission, the WSD will ensure BVES is held accountable to successfully executing the wildfire risk reduction initiatives articulated in its 2020 WMP and required updates.

The WSD expects BVES to meet the commitments in its 2020 WMP and fully comply with the conditions listed in Appendix A of its associated Resolution to ensure it is driving meaningful reduction of utility-related wildfire risk within its service territory.

Sincerely,

__/S/ CAROLINE THOMAS JACOBS

Caroline Thomas Jacobs
Director, Wildfire Safety Division
California Public Utilities Commission

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Resolution WSD-006 Wildfire Safety Division [Date]

RESOLUTION

Resolution Ratifying Action of the Wildfire Safety Division on Bear Valley Electric Service's 2020 Wildfire Mitigation Plan Pursuant to Public Utilities Code Section 8386.

This Resolution ratifies the attached action of the Wildfire Safety Division (WSD) pursuant to Public Utilities Code Section 8386. The California Public Utilities Commission's (Commission) and the WSD's most important responsibility is ensuring the safety of Californians. Since several catastrophic wildfires in the San Diego area in 2007, the equipment of large electric utilities the Commission regulates has been implicated in the most devastating wildfires in our state's history. California's Legislature enacted several legislative measures requiring electrical corporations to submit, and the Commission and the WSD to review, approve or otherwise act on Wildfire Mitigation Plans (WMPs) designed to reduce the risk of utility-caused catastrophic wildfire. Key among the legislative measures are Senate Bill 901 (2018), Assembly Bill 1054 (2019), and Assembly Bill 111, discussed in detail below.

This Resolution (along with several others concurrently being issued with regard to all Commission-regulated electric utilities and independent transmission owners), acts on the WMP submitted on February 7, 2020, of Bear Valley Electric Service (BVES, filer, or electrical corporation), pursuant to Public Utilities Code section 8386.3(a). BVES's WMP responds to a list of 22 requirements set forth in Public Utilities Code 8386 and focuses on measures the electrical corporation will take over the next three years to reduce the risk of, and impact from, a catastrophic wildfire caused by its electrical infrastructure and equipment.

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Unfortunately, BVES' first WMP filing submitted on February 7, 2020 did not follow the required format despite clear instructions issued by ruling on December 16, 2019. It used a format from its 2019 WMP that was completely different from the prescribed method for 2020. BVES did not submit a 2020 WMP using the proper format for almost a month, on March 6, 2020. This failure of attention to detail gives us concern, since we count on electrical corporations to comply with our requirements both for submitting plans and mitigating catastrophic wildfire.

Electrical infrastructure and equipment pose ongoing risks of starting wildfires due to the presence of electric current. There are three elements required to start a fire: fuel (such as dry vegetation), oxygen, and an ignition source (heat). A spark from electrical infrastructure and equipment can provide the ignition point from which a wildfire can spread and cause catastrophic harm to life, property, and the environment.

WMPs contain an electrical corporation's detailed plans to reduce the risk of its equipment, operations or facilities igniting a wildfire. This Resolution ratifies the attached action of the WSD, which has conditionally approved BVES' 2020 WMP in its Action Statement. In doing so, this Resolution analyzes the extent to which BVES' wildfire mitigation efforts objectively reduce wildfire risk, drive improvement, and act as cost effectively as possible. In conducting this evaluation, the Commission considers and incorporates input from the Wildfire Safety Advisory Board, the public and other stakeholders.

PROPOSED OUTCOME:

- Ratifies the attached action of the WSD to approve the 2020 WMP of BVES, with conditions designed to ensure the WMP decreases risk of catastrophic wildfire in California.
- A list of conditions of approval is in Appendix A.
- Evaluates the maturity of BVES' WMP using the WSD's new Utility Wildfire Mitigation Assessment, as represented in the Utility Wildfire Mitigation Maturity Model. Final maturity model outputs should be viewed as levels or thresholds they are not absolute scores.

- Requires BVES to file an update to its WMP in 2021 according to a forthcoming schedule to be released by the WSD.
- Does not approve costs attributable to WMPs, as statute requires electrical corporations to seek and prove the legitimacy of all expenditures at a future time in their General Rate Cases (GRC) or compliant application. Nothing in this Resolution nor the WSD's Action Statement should be construed as approval of any WMP-related costs.
- Does not establish a defense to any enforcement action for a violation of a Commission decision, order, or rule.

SAFETY CONSIDERATIONS:

Mitigation of catastrophic wildfires in California is among the most important safety challenges the Commission-regulated electrical corporations face. Comprehensive WMPs are essential to safety because:

- WMPs list all of an electrical corporation's proposed actions to reduce utility-related wildfire risk and prevent catastrophic wildfires caused by utility infrastructure and equipment. By implementing measures such as vegetation management, system hardening (such as insulating overhead lines and removing or upgrading equipment most likely to cause fire ignition), improving inspection and maintenance, situational awareness (cameras, weather stations, and use of data to predict areas of highest fire threat), improving community engagement and awareness, and other measures, utilitycaused catastrophic wildfire risk should be reduced over time.
- The WSD's and Commission's substantive and procedural changes for evaluations of electrical corporations' 2020 WMP will enhance California's ability to mitigate catastrophic wildfire risk related to utilities. Below is a summary of the key, new requirements in the 2020 process, required of all WMP filers:
 - A WMP template and format so WMPs are standardized and include similar information in the same format.
 - Standard data submissions, in spatial, non-spatial and tabular format, which grounds the WMP in specific data. Data submissions will continue throughout the WMP 3-year

- horizon and be used to measure compliance and performance to program, progress and outcome metrics.
- A new Utility Survey that objectively assesses the electrical corporation's maturity across 52 capabilities in 10 categories. The resulting Maturity Matrix quantitatively presents the progressive impact of the electrical corporation's wildfire mitigation plan activities over the WMP 3-year horizon.

ESTIMATED COST:

- Nothing in this Resolution should be construed as approval of the costs associated with the WMP mitigation efforts.
- For illustrative purposes, Table 1Table 11: Proposed WMP costs below contains filer's estimates of its projected costs for the wildfire mitigation efforts in its 2020 WMP.
- BVES may not record the same costs more than once or in more than one place, seek duplicative recovery of costs, or record or seek to recover costs in the memorandum account already recovered separately. All electrical corporations should ensure they carefully document their expenditures in these memorandum accounts, by category, and be prepared for Commission review and audit of the accounts at any time.

Table 11: Proposed WMP costs

Proposed WMP costs		
Total costs 2020-2022	\$247 million	
Subtotal: 2020	\$84 million	
Subtotal: 2021	\$79 million	
Subtotal: 2022	\$79 million	

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Summary

This Resolution acts on the attached Wildfire Safety Division's (WSD) approval of the Wildfire Mitigation Plan (WMP) submitted by Bear Valley Electric Service, an affiliate of Golden State Water Company (BVES) on February 7, 2020, with a revised version submitted on March 6, 2020. BVES failed to use the required format for 2020 WMPs and instead used a completely different template from its 2019 filing. The Resolution finds that BVES is in compliance, subject to conditions, with the requirements for WMPs set forth in Assembly Bill (AB) 1054, codified at Public Utilities Code (Pub. Util. Code) Section 8386(c) and the WMP Guidelines issued by the Commission to electrical corporations. Section 8386 requires that electrical corporations' WMPs contain 22 elements; the full list of elements appears in Appendix E to this Resolution.

There are three possible actions for the WSD and Commission in response to any electrical corporation's WMP: approval, denial, or approval with conditions. In the case of the WMP resolved here, we ratify the WSD's action to approve the WMP with conditions. To the extent the WSD does not impose conditions on elements of the WMP, that element is approved.

The list of conditions of approval is in Appendix A.

1. Background

Catastrophic wildfires in 2017-19 led the California Legislature to pass Senate Bill (SB) 901 in 2018 and its successor AB 1054 in 2019, as well as AB 111. SB 901 and AB 1054 contain detailed requirements for electrical corporations' WMPs and provide a 90-day review cycle of WMPs by the WSD. AB 111 establishes a new division, the WSD, within the Commission. The duties of the WSD are contained in Pub. Util. Code Section 326(a), including to evaluate, oversee and enforce electrical corporations' compliance with wildfire safety requirements, and develop and recommend to the Commission performance metrics to achieve maximum feasible wildfire risk reduction. SB 901 required a formal Commission proceeding for WMP review in 2019, and to that end the Commission reviewed the 2019 WMPs in Rulemaking (R.) 18-10-007. The decisions dispensing of the 2019 WMPs also added additional requirements for the 2020 WMPs.

After the Commission issued its WMP decisions on May 30, 2019,³ the Legislature enacted AB 1054. AB 1054 contains similar WMP requirements to

³ Decisions 19-05-036, 037, 038, 039, 040 and 041 (May 30, 2019).

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SB 901 but allows WMPs a three-year, rather than one-year duration. AB 1054 also requires WSD to review and approve, deny or approve with conditions the electrical corporations' WMPs, with Commission ratification to follow thereafter. AB 1054 also requires establishment of a Wildfire Safety Advisory Board (WSAB), with appointees from the California Governor and Legislature, to provide comment on the 2020 WMPs and develop and make recommendations related to the metrics used to evaluate WMPs in 2021 and beyond.⁴

Building on lessons learned from the WMP review process in 2019, WSD developed and required all electrical corporations to conform their WMPs to a set of new WMP Guidelines starting in 2020.⁵ For 2020, the WMP Guidelines add requirements on detail, data, and other supporting information. The WMP Guidelines are designed 1) to increase standardization of information collected on electrical corporations' wildfire risk exposure, 2) enable systematic and uniform review of information each electrical corporation submits, and 3) move electrical corporations toward an effective long-term wildfire mitigation strategy, with systematic tracking of improvements over time.

The Commission adopted Resolution WSD-001 setting forth the process for WSD and Commission review of the 2020 WMPs. The resolution called for electrical corporations to submit their 2020 WMPs on February 7, 2020. BVES submitted its WMP on that date, but it used a format BVES followed in 2019, rather than the format required in the December 16, 2019 ruling noted above. BVES used the proper format in its March 6, 2020 WMP submission.

Shortly after electrical corporations filed their WMPs, the WSD held two sets of all-day workshops over four days, on February 18, 19, 24 and 25. The February 18-19, 2020 informational workshops called for the electrical corporations to present to stakeholders and the public details on their WMPs, and for stakeholders to ask questions, raise concerns, and otherwise comment on the WMPs' contents. The February 24-25 technical workshops focused more in depth on key provisions of the WMPs: vegetation management, system hardening, risk-spend efficiency emerging technology and reduction of the scale and scope of

 $^{^4}$ Pub. Util. Code \S 8386.3 (Wildfire Safety Division), \S 326.1 (Wildfire Safety Advisory Board).

⁵ A ruling issued on December 19, 2019 in proceeding R.18-10-007 described and attached all of the material electrical corporations were required to use in submitting their 2020 WMPs.

Public Safety Power Shutoff (PSPS) events. Again, stakeholder and public input was offered.⁶

Stakeholders were also allowed to submit comments on the WMP, to which the electrical corporation replied. Stakeholders and members of the public commented on the WMPs by April 7, 2020, and the electrical corporations responded to those comments by April 16, 2020.

2. Notice

In accordance with Pub. Util. Code § 8386(d), notice of BVES's WMP was given by posting of the WMP on the WSD's webpage, at www.cpuc.ca.gov/wildfiremitigationplans, on February 7, 2020, in accordance with the requirements of Pub. Util. Code Section 8386(d). Further, the electrical corporation served its 2020 WMP on the Commission's existing WMP formal proceeding (R.18-10-007) service list, as Resolution WSD-001 provided. Resolution WSD-001 also required the filer to post all data request responses, as well as any document referenced in its WMP, on its own website and update the website with notice to the R.18-10-007 on a weekly basis.

3. Wildfire Safety Division Analysis of WMP

To reach a conclusion about each WMP, the WSD reviewed each electrical corporation's 2020 WMP (including updates and Geographic Information System (GIS) data), public and WSAB input, responses to the WSD data requests, and responses to the maturity model survey questions. For BVES, the WSD issued three sets of data requests for missing information, clarification, and supplementation where necessary. Upon completion of this review, the WSD determined whether each utility's 2020 WMP should either approved without conditions, approved with conditions, or denied.

There are three possible actions for the WSD in response to any electrical corporation's WMP: approval, denial, or approval with conditions. To reach its conclusion, the WSD reviewed the WMPs for compliance with every aspect of the WMP Guidelines and AB 1054 and requirements of the 2019 WMP Decisions. The WSD designed the WMP Guidelines to require that each filer have a comprehensive WMP that contains all elements required by AB 1054. Thus, for example, every WMP must contain plans for vegetation management, system

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⁶ Presentations, agendas and other details of the workshops appear on the Commission's WMP homepage, located at www.cpuc.ca.gov/wildfiremitigationplans/.

hardening, inspections of assets and vegetation, situational awareness, a plan to reduce and manage PSPS events, customer and first responder outreach and coordination, risk analysis, GIS data, a short- and long-term vision, analysis of causes of ignition, and many other elements. To evaluate WMPs, the WSD assessed each plan for its completeness, the technical feasibility and effectiveness of its initiatives, whether proposed initiatives were an efficient use of resources, and for demonstration of a sufficiently growth-oriented approach to reducing utility-related wildfire risk over time.

A conditional approval explains each missing or inadequate component in the WMP. The 2020 WMP Resolutions for each electrical corporation contain a set of "Deficiencies "and associated "Conditions" to remedy those deficiencies. Each deficiency is categorized into one of the following categories, with Class A being the most serious:

- 1. Class A aspects of the WMP are lacking or flawed
- 2. Class B insufficient detail or justification provided in WMP
- 3. Class C gaps in baseline or historical data, as required in 2020 WMP Guidelines.

Class A deficiencies are of the highest concern and require an electrical corporation to develop and submit to the WSD, within 45 days of Commission ratification of this Resolution, a Remedial Compliance Plan (RCP) to resolve the identified deficiency. Class B deficiencies are of medium concern and require reporting by the electrical corporation to provide missing data or update its progress in its quarterly report. Such reporting will be either on a one-time basis or ongoing as set forth in each condition. Class C deficiencies require the electrical corporation to submit additional detail and information or otherwise come into compliance in its 2021 annual WMP update. Detailed descriptions of the RCP and quarterly reports are contained in Resolution WSD-002, the Guidance Resolution on 2020 Wildfire Mitigation Plans.

The WSD identified a number of deficiencies in BVES' WMP, which can be found in Appendix A.

4. Wildfire Safety Advisory Board Input

The WSAB provided recommendations on the WMPs of Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) on April 15, 2020. Although not focusing

specifically on BVES' WMP, the WSD has considered the WSAB's recommendations, and this Resolution incorporates WSAB's input throughout.

The WSAB focused its recommendations on high-level input and identification of shortcomings in the 2020 WMPs to inform upcoming wildfire mitigation efforts. WSAB recommendations focused on the following areas: vegetation management and inspection; grid design and system hardening; resource allocation methodology; and communication with the community, planning, preparedness and recovery after PSPS events.

5. Public and Stakeholder Comment

Green Power Institute (GPI) and the California Public Advocates Office (Public Advocates Office) submitted comments on April 7, 2020 on BVES' WMP and made the points listed below. This Resolution addresses relevant input.

GPI

- Small, multi-jurisdictional utilities (SMJUs) such as BVES generally lag behind the large investor-owned utilities (IOUs) in their use of risk analysis and implementing wildfire mitigation based on the outcomes, although BVES provides a summary of its final risk-spend efficiency (RSE) values and how these values compare across WMP mitigation activities.
- BVES does not provide information regarding whether its asset replacement schedule is a run-to-condition or run-to-failure approach. GPI recommends that all WMPs disclose the thresholds for asset replacement.
- There should be a policy for directing residual wood waste created by tree trimming and felling to biomass plants, an issue that was not a subject of the 2020 WMPs.

Public Advocates Office

- BVES should be required to provide an analysis of how the Ute Lines undergrounding project will mitigate wildfire risk and why undergrounding is the best option.
- BVES should be required to describe its emergency notification protocols for medical baseline customers or critical care customers.

- The utilities are not sufficiently transparent about how resource and operational constraints affect their decision-making.
- Electrical corporations should provide a detailed justification of why undergrounding is an acceptable hardening strategy in locations where it is proposed.

In response to the comments, BVES states the following:

- BVES previously committed to an analysis of how the Ute line undergrounding project will mitigate wildfire risk and why undergrounding is the best option in its future asset transfer application. Therefore, the Commission need not conduct the analysis as part of its WMP review process.
- Unforeseen higher costs for a single covered conductor project on BVES' Radford line does not justify a comprehensive analysis. There is no realistic alternative to covering the Radford line; re-routing or undergrounding is costly and impractical.
- BVES is improving WMP outreach to all customers, including medical baseline and critical care customers. BVES will describe its outreach efforts in an Advice Letter if necessary.
- BVES followed the risk framework outlined in Decision (D.)19-04-020 and its WMP is therefore compliant with Commission rules.
- The method of vegetation management waste disposal is the contractor's decision, so rules on how to dispose of biomass are inappropriate.
- Microgrid activities should be addressed in Rulemaking (R.) 19-09-009, not here.

6. Discussion

The Commission has reviewed the actions taken by the Wildfire Safety Division (WSD) pursuant to Pub. Util. Code Section 8386.3, the recommendations of the Wildfire Safety Advisory Board (WSAB), stakeholder comments served on the Rulemaking (R.)18-10-007 service list, the underlying documents, and other public input. The following aspects of the Wildfire Mitigation Plan (WMP) raised concerns to the WSD:

- 1) Disproportionate spending when compared to other electrical corporations. On a normalized basis, Bear Valley Electric Service (BVES) is spending three times the amount per circuit mile as the large electrical corporations on wildfire mitigation and many times more than its peer small and multijurisdictional electrical corporations without justification of why such expense is justified. Combined with BVES' failure to complete 2019 mitigation, we are concerned that BVES' approach to wildfire mitigation may not be adequate.
- 2) Delays in completing prior mitigation promised. BVES reports limited progress on certain mitigation promised in its 2019 WMP. For example, BVES is off target on LiDAR surveys (vegetation management), removal of conductor strung on live trees and replacement of expulsion fuses that spark and cause ignition (system hardening).
- 3) Lack of PSPS planning and readiness. BVES has not called a PSPS event but appears to have some risk of such an action due to its interconnectedness with Southern California Edison's (SCE) power lines. It must have a plan for keeping the public informed and safe in the event a PSPS occurs.
- 4) Deficiencies. BVES' WMP lacked a great deal of required information, listed as "deficiencies" in this Resolution. BVES must supply the missing information as described below.

Therefore, the WSD's approval of BVES' WMP is conditioned on BVES' compliance with each of the "conditions" set forth in Appendix A. A detailed analysis and comparison across utilities is provided in Appendix B.

The following sections discuss in detail the WMP, its contents, required changes, and conditions imposed on approval in detail. They follow the template provided in WMP Guidelines attached to the R.18-10-007 Administrative Law Judge's (ALJ) December 16, 2019 ruling as Attachment 1.

6.1. Persons Responsible for Executing the Plan

This section of the WMP requires that the filer designate a company executive with overall responsibility for the plan, and program owners specific to each component of the plan. The section also requires a senior officer to verify the contents of the plan, and the filer to designate key personnel responsible for major areas of the WMP.

BVES provides the required information.

6.2. Metrics and Underlying Data

The metrics and underlying data section of the WMP represents an innovation over the 2019 WMP requirements in that all filers are required to report standardized and normalized data on many aspects, including their performance metrics, conditions in their service territories, grid topology, and wildfire mitigation efforts. To remedy a concern with the 2019 plans, the 2020 WMP Guidelines disallow the practice of filers characterizing only "program targets" (e.g., number of miles of covered conductor installed or trees trimmed) as the "metrics" required by the statute. For 2020, the WMP Guidelines require filers to group metrics and program targets as follows.

- Progress metrics track how much electrical corporation wildfire
 mitigation activity has managed to change the conditions of electrical
 corporation wildfire risk exposure in terms of drivers of ignition
 probability.
- Outcome metrics measure the performance of an electrical corporation and its service territory in terms of both leading and lagging indicators of wildfire risk, PSPS risk, and other direct and indirect consequences of wildfire and PSPS, including the potential unintended consequences of wildfire mitigation work.
- *Program targets* measure tracking of proposed wildfire mitigation activities against the scope and pace of those activities as laid out in the WMPs but do not track the efficacy of those activities. The primary use of these program targets in 2020 will be to gauge electrical corporation follow-through on WMPs.

This section first requires filers to discuss how the their plans have evolved since 2019, outline major themes and lessons learned from implementation of their 2019 plan and discuss how the filers performance against metrics used in their 2019 plans have informed their 2020 WMP. A series of tables then requires reporting of recent performance on predefined outcome and progress metrics, including numbers of ignitions, near misses, PSPS events, worker and public deaths and injuries, acreage affected, and assets destroyed by fire, and critical infrastructure impacts, as well as additional metrics the filer proposes to use to ensure the effectiveness of its efforts in quantitatively mitigating the risk of utility-caused catastrophic wildfire. This section also requires filers to detail their methodology for calculating or modeling potential impact of ignitions, including

all data inputs used, data selection and treatment methodologies, assumptions, equations or algorithms used and types of outputs produced. Finally, this section requires filers to provide a number of GIS files detailing spatial information about their service territory and performance, including recent weather patterns, location of recent ignitions, area and duration of PSPS events, location of lines and assets, geographic and population characteristics and location of planned initiatives.

Generally, BVES has a proactive approach, with open and honest reflection on past lessons learned, programming gaps, and goals moving forward. Therefore, BVES adequately summarizes lessons learned from its 2019 WMP. Its major lessons learned relate to need for better planning for resource and personnel needs; planning for new and enhanced initiatives; record keeping; external constraints related to materials procurement and siting constraints; weather impacts which shortened windows for completing work; and the continued need to engage public safety partners and community stakeholders to improve community response efforts during PSPS events.

BVES also identifies permitting challenges that caused delays in 2019 as a lesson learned for 2020 and beyond. BVES states that it plans to address design and permitting needs of projects that typically incur seasonal constraints for 2021 and beyond.

BVES provides a detailed table of proposed metrics. While many of the proposed metrics are "program targets" as described above, several proposed metrics are useful because they conform to the "progress metrics" and "outcome metrics" described above.

BVES reports steady decrease in near miss incidents per circuit mile since 2016, with decreases reported across every cause category. BVES reports no ignitions resulting from its facilities since 2015.

BVES' 2020 WMP provides aggregate red flag warning day and wind speed data in Table 10 but it does not provide wind data in GIS formats, stating it does not have the data in GIS formats. It also does not provide PSPS data since it has not initiated any PSPS events.

A detailed analysis and comparison across peer utilities is provided in Appendix B.

Deficiencies and Conditions - Metrics and Underlying Data

BVES does not provide a notable amount of required data but also provides reasons for why some of it is missing. BVES stands out for providing many asset GIS data layers, including extensive relevant attributes. However, BVES does not provide metadata, so it is often not clear what some layers are or what various attributes mean. Regarding the possibility of delivering data in the Federal Geographic Data Committee (FGDC) metadata format, BVES states that it uses third parties to collect its data and therefore that it may not all be in the correct format.

Deficiencies such as these are not unique to BVES. As such, deficiencies related to submittal of data and associated conditions are addressed in the Guidance Resolution, WSD-002.

6.3. Baseline Ignition Probability and Wildfire Risk Exposure

The baseline ignition probability and wildfire risk exposure section of the WMP requires electrical corporations to report baseline conditions and recent information related to weather patterns, drivers of ignition probability, use of PSPS, current state of utility equipment, and summary data on weather stations and fault indicators. The section then requires the filer to provide information on its planned additions, removals, and upgrades of equipment and assets by the end of the 3-year plan term, in urban, rural and highly rural areas. The information must describe the scope of hardening efforts (i.e., circuit miles treated), distinguish between efforts for distribution and transmission assets, and identify certain locational characteristics (i.e., urban, rural and highly rural) of targeted areas. Filers must also report the sources of ignition over the past 5 years due to ignition drivers outlined in the annual fire incident data collection report template adopted in Decision (D.) 14-02-015.

Considering that managing the potential sources of ignition from its infrastructure, operations, and equipment is the single most controllable aspect of utility wildfire risk, understanding the sources and drivers of near misses and ignitions is one of the most critical capabilities in reducing utility-caused wildfire risk. Moreover, it is important to consider these performance metrics relative to annual fluctuations in weather conditions (i.e., incidence of Red Flag Warning (RFW) days, days with high wind conditions – 95th and 99th percentile winds, and high fire potential days measured relative to utility Fire Potential Indices (FPIs) or other fire danger rating systems) to better gauge relationships and

thresholds between weather and fire potential indicators and utility ignitions. As such, the discussion in this section focuses on recent weather patterns, key drivers of utility ignitions and frequencies of such ignitions, recent use of PSPS, the current baseline conditions of the utility's service territory and equipment, and locations of planned utility upgrades.

The provided historical weather pattern data submitted by BVES demonstrates an upswing over the period 2016–2018 in the amount of red flag warning circuit mile days per year, Even though 2019 had reduced values comparatively, it is still indicative that trends are increasing over time, which is likely to impact the utility's risk exposure.

BVES' reported 95th percentile wind conditions for 2019 were nearly twice as prevalent as compared to years 2016–2018. Over a 5-year average, BVES' 99th percentile wind conditions by circuit mile day more than tripled.

Over the last few years, BVES notably has zero ignitions and decreasing fault trends due to equipment/facility failures, except for conductor failures. BVES's WMP provides more in-depth ignition risk analysis than required by the WMP Guidelines, including analysis of 2009-2018 wildfire risk events and evaluation of High Fire Threat District (HFTD) areas circuit by circuit. The two main events that BVES focuses on in its analysis are vegetation contacting bare wire and wire down events, since these events may result in wildfires on BVES' system.

Based on 2009-2018 wildfire risk event analysis, BVES states that vegetation bare line contact is the largest event driver with 86% of all drivers. BVES attributes 48% of the total to weather or third parties and 38% to vegetation. BVES attributes 14% of event drivers to wire down events with 10% of the total caused by weather and 4% of the total caused by third parties.

BVES' ignition wildfire risk analysis appears to be providing real risk reduction based on zero ignitions in the last five years and mostly positive trends in fault incidents over the last few years. The WSD does not impose any conditions on BVES' WMP in this area.

6.4. Inputs to the Plan, Including Current and Directional Vision for Wildfire Risk Exposure

This section of the WMP requires the filer to rank and discuss trends anticipated to exhibit the greatest change and have the greatest impact on ignition probability and wildfire consequence, within the filer's service territory, over the

next 10 years. First, filers must set forth objectives over the following timeframes: Before the upcoming wildfire season, before the next annual update, within the next 3 years, and within the next 10 years.

Filers must describe how the utility assesses wildfire risk in terms of ignition probability and estimated wildfire consequence, using Commission adopted risk assessment requirements (for large electrical corporations) from the GRC Safety Model and Assessment Proceeding (S-MAP) and Risk Assessment Mitigation Phase (RAMP). The filer must describe how the utility monitors and accounts for the contribution of weather and fuel to ignition probability and wildfire consequence; identify any areas where the Commission's HFTD should be modified; and rank trends anticipated to have the greatest impact on ignition probability and wildfire consequence.

A key area which filers are required to address is PSPS events. In 2019 electrical corporations proactively shutoff power to millions of customers for multiple days, resulting in numerous cascading consequences, including associated public safety concerns. The Commission has been clear in its judgement that those events were unacceptable and cannot be repeated. The new 2020 WMP Guidelines direct the electrical corporations to describe lessons learned from past PSPS events and quantify the projected decrease of circuits and customers affected by PSPS as a result of implementing wildfire mitigation programs and strategies contained in the WMP.

BVES provides little information that could be characterized as evidence of a directional vision. It has had no PSPS events, and it presents no information on planning for such an event. BVES has identified seven "at-risk" areas based on type of distribution facilities (e.g., overhead bare conductors, high voltage lines), tree and vegetation density, available dry fuel, and other factors that make certain locations vulnerable to wildfire risk. It has a minimal PSPS program and budget. BVES' PSPS program is discussed in Grid Operations and Operating Protocols, including PSPS, below.

BVES lists its wildfire initiatives, provides status updates, and itemizes investments in each of the initiatives. BVES' undergrounding initiatives are the largest initiatives by planned spend in its WMP, and grid design/system hardening is its biggest spend area, though it also plans to spend about \$1.8 million per year installing covered conductors.

BVES does not refer to new technologies and innovations to impact its strategy and approach over the next 3 years. It mentions using Rapid Earth Fault Current Limiting (REFCL) technology, down-wire detection, and on-line diagnostics, but provides little specific information.

Deficiencies and Conditions – Inputs to the Plan, Including Current and Directional Vision for Wildfire Risk Exposure

Deficiency (BVES-1, Class B): Focus on grid hardening.

BVES is focused almost entirely on grid hardening without much analysis of whether this is the most cost effective and efficacious approach. Without a stated long-term vision, it is not possible to assess why BVES has this singular focus.

BVES does provide RSE estimates for a significant number of initiatives and provides a high-level comparative analysis in Figures 3-4 and 3-5 of its WMP. However, BVES reports that "Underground of the Ute line" has a wildfire RSE of 0.13 in Figure 3-4 and that the same initiative has a PSPS RSE of 0.3. It is not clear how BVES calculated these or what assumptions it made. Therefore, it is unclear specifically how BVES applies these estimates to inform its allocation of resources across initiatives and whether the spend allocated to undergrounding is the most effective use of BVES' limited resources.

Condition (BVES-1, Class B): In its first quarterly report, BVES shall:

- i. explain why it is focused heavily on system hardening, including giving information on how other mitigations compare in terms of cost and efficacy;
- ii. articulate a vision for where it plans to go over the next 3 and 10 years;
- iii. provide an explanation for the RSE estimates in Figures 3-4 and 3-5 of the BVES WMP, including the assumptions made and how wildfire RSE and PSPS RSE were calculated; and
- iv. outline in detail how BVES' RSE estimates were used to determine which initiatives it is pursuing, including the level of spend allocated to its undergrounding program.

6.5. Wildfire Mitigation Activity for Each Year of the 3-Year WMP Term, Including Expected Outcomes of the 3-Year Plan

This section of the WMPs is the heart of the plans and requires the filer to describe each mitigation measure it will undertake to reduce the risk of catastrophic wildfire caused by the utility's infrastructure, operations, and

equipment. A description of each type of measure appears below, with elaboration in Appendix D to this Resolution.

First, the WMP Guidelines require a description of the overall wildfire mitigation strategy over the following timeframes: before the upcoming wildfire season, before the next annual update, within the next 3 years and within the next 10 years. The filer is required to describe its approach to determining how to manage wildfire risk (in terms of ignition probability and estimated wildfire consequence) as distinct from other safety risks. The filer is required to summarize its major investments over the past year, lessons learned, and changes planned for 2020-2022; describe challenges associated with limited resources; and outline how the filer expects new technologies to help achieve reduction in wildfire risk.

Next, Section 5 requires the filer to explain how it will monitor and audit the implementation of the plan and lay out the data the filer relies on in operating the grid and keeping it safe. It then requires detailed descriptions of specific mitigations or programs, in the following order:

- 1) Risk assessment and mapping
- 2) Situational awareness and forecasting
- 3) Grid design and system hardening
- 4) Asset management and inspections
- 5) Vegetation management and inspections
- 6) Grid operations and operating protocols
- 7) Data governance
- 8) Resource allocation methodology
- 9) Emergency planning and preparedness
- 10) Stakeholder cooperation and community engagement.

Below, this Resolution evaluates the mitigations (or initiatives) BVES proposed for each of the 10 foregoing categories. After identifying each proposed mitigation or group of mitigations, the Resolution discusses concerns with the proposal, and identifies any conditions imposed. Provided in Appendix B, for illustrative purposes, are summaries of the filer's projected costs across highest total cost initiatives as well as projected costs across the highest category initiatives.

6.5.1. Risk Assessment and Mapping

This section of the WMP requires the filer to discuss the risk assessment and mapping initiatives implemented to minimize the risk of its equipment causing wildfires. Filers must describe initiatives related to maps and modelling of: overall wildfire risk, ignition probability, wildfire consequence, risk-reduction impact, match-drop simulations, and climate/weather driven risks. This section also requires the electrical corporation to provide data on spending, miles of infrastructure treated, spend per treated line mile, ignition probability drivers targeted, projected risk reduction achieved from implementing the initiative, risk spend efficiency, and other (i.e., non-ignition) risk drivers addressed by the initiative.

BVES does not conduct a Risk Assessment Mitigation Phase (RAMP). Nonetheless, BVES does an adequate job of outlining and prioritizing its risks using reliability data. The utility uses a risk-based decision-making framework that includes six steps (risk identification, risk analysis, risk evaluation and scoring, risk mitigation, investment decisions and risk monitoring). BVES has performed this analysis in five areas that do not correspond to the categories in the WMP Guidelines for wildfire mitigation: design and construction, inspection and maintenance, operational practices, situational awareness and construction, and response and recovery.

As a result of an agreement reached among the smaller utilities and the Commission's Safety and Enforcement Division (approved in D. 19-04-020), BVES has not yet developed risk assessment methodology and modeling capabilities that are consistent with what the larger electrical corporations have developed for the RAMP of their GRCs.

The agreement in D.19-04-020 was reached well before SB 901 went into effect, and while its intent was to reduce the regulatory burden on resource constrained utilities in their GRCs, the continuing threat of wildfires makes it incumbent on BVES, in coordination with the Commission and other utilities, to expedite its development of these risk management tools.

BVES (and other SMJUs) shall participate in a Commission led process to further develop its risk assessment and resource allocation methodologies related to wildfire risks, for the purposes of improving its next WMP filings and evaluations. Because the process will occur outside the context of WMPs, this requirement is not a condition of approval of BVES' plan.

Deficiencies and Conditions - Risk Assessment and Mapping

BVES provides RSE estimates for most initiatives in its WMP, but it does not fully explain how these estimates were calculated, what assumptions were used, or how its limited resources are allocated based on these RSE estimates. While BVES' efforts are a positive development, additional description and justification is needed to ensure that BVES is focusing resources on the most effective initiatives. Therefore, its 2020 WMP lacks inputs needed by the WSD to fully assess its resource allocation proposals.

Deficiencies related to RSE are not unique to BVES. As such, RSE deficiencies generally and associated conditions are addressed in the Guidance Resolution, WSD-002.

BVES' WMP does not mention the use of models to drive wildfire mitigation activities. While the scope of this initiative is limited, BVES at least expands upon HFTD mapping by implementing some data analysis for areas that prove to have higher risk than others in Table 21. BVES also discusses analysis of ignitions in order to score risk. Although its small size limits its use of modeling and mapping, more details on its future goals should be provided, including how it intends to reach such goals moving forward.

Deficiencies such as these are not unique to BVES. As such, this deficiency and associated condition are addressed in the Guidance Resolution, WSD-002.

6.5.2. Situational Awareness and Forecasting

The situational awareness and forecasting section of the WMP requires the filer to discuss its use of cameras, weather stations, weather forecasting and modeling tools, grid monitoring sensors, fault indicators, and equipment monitoring. Situational awareness requires the electrical corporation to be aware of actual ignitions in real time, and to understand the likelihood of utility ignitions based on grid and asset conditions, wind, fuel conditions, temperature and other factors.

The WMP Guidelines refer to key situational awareness measures, including:

- 1) Installation of advanced weather monitoring and weather stations that collect data on weather conditions so as to develop weather forecasts and predict where ignition and wildfire spread is likely,
- 2) Installation of high definition cameras throughout an electrical corporation's service territory, with the ability to control the camera's direction and magnification remotely,
- 3) Use of continuous monitoring sensors that can provide near real-time information on grid conditions,
- 4) Use of a fire risk or fire potential index that takes numerous data points in given weather conditions and predicts the likelihood of wildfire, and
- 5) Use of personnel to physically monitor areas of electric lines and equipment in elevated fire risk conditions.

BVES installed 11 weather stations in 2019 and plans to install 9 more by June 2020. No further installations are discussed so it is unknown whether more are needed. After reviewing BVES' data from Table 14 and GIS data from Appendix 6.2, it appears the utility has good density and distribution of weather stations throughout its service territory.

In terms of forecasting, BVES uses National Fire Danger Rating System (NFDRS) data for Southern California. In order to focus on forecasting fire weather in its area BVES contracts with a part time meteorologist. This approach seems reasonable given BVES' small size.

BVES has four existing cameras on the mountain top ridge southwest of BVES' service territory. In viewing its cameras on alertwildfire.org, they are clustered near each other and do not appear to provide good coverage from different angles. The WMP says BVES plans to work with partners to install more but no number or details are given. In remote, rugged terrain with limited cell coverage, such as BVES, cameras provide high situational awareness value.

BVES plans to install a complete Distribution Management Control Center that will have communications, web access to weather stations and cameras, and SCADA controls. However, it provides no details on other continuous monitoring like Distribution Fault Analysis (DFA) or Early Fault Detection. BVES describes how it plans on implementing smart relays that will detect downed lines in its 2021 update but also does not describe what it will do to assess the measure's effectiveness.

Deficiencies and Conditions - Situational Awareness and Forecasting

Deficiency (BVES-2, Class B): Wildfire cameras do not provide good coverage of service territory.

BVES has four existing cameras on the mountain top ridge southwest of BVES' service territory. In viewing them on alertwildfire.org they are clustered near each other and do not appear to provide good coverage from different angles. The WMP says BVES plans to work with partners to install more but no number or details are given. In remote rugged terrain with limited cell coverage such as BVES, cameras provide high situational awareness value.

Condition (BVES-2, Class B): In its first quarterly report, BVES shall detail:

- i) whether it has sufficient cameras, including the observations from alertwildfire.org, and
- ii) plans, including a timeline to improve its camera coverage moving forward.

6.5.3. Grid Design and System Hardening

The grid design and system hardening section of the WMPs examine how the filer is designing its system and what it is doing to strengthen its distribution and transmission system and substations to prevent catastrophic wildfire. The grid design and system hardening WMP section also requires discussion of routine and non-routine maintenance programs, including whether the filer replaces or upgrades infrastructure proactively rather than running facilities to failure. Programs in this category, which often cover the most expensive aspects of a WMP, include initiatives such as the installation of covered conductors to replace bare overhead wires, undergrounding of distribution or transmission lines, and pole replacement programs. The filer is required, at a minimum, to discuss grid design and system hardening in each of the following areas:

- 1) Capacitor maintenance and replacement,
- 2) Circuit breaker maintenance and installation to de-energize lines upon detecting a fault,
- 3) Covered conductor installation,
- 4) Covered conductor maintenance,
- 5) Crossarm maintenance, repair, and replacement,

- 6) Distribution pole replacement and reinforcement, including with composite poles,
- 7) Expulsion fuse replacement,
- 8) Grid topology improvements to mitigate or reduce PSPS events,
- 9) Installation of system automation equipment,
- 10) Maintenance, repair, and replacement of connectors, including hotline clamps,
- 11) Mitigation of impact on customers and other residents affected during PSPS event,
- 12)Other corrective action,
- 13) Pole loading infrastructure hardening and replacement program based on pole loading assessment program,
- 14) Transformers maintenance and replacement,
- 15) Transmission tower maintenance and replacement,
- 16) Undergrounding of electric lines and/or equipment,
- 17) Updates to grid topology to minimize risk of ignition in HFTDs, and
- 18)Other/not listed items if an initiative cannot feasibly be classified within those listed above

BVES's grid design and system hardening plans consist of upgrades listed below, with some items carried over from 2019 because BVES did not meet its targets. In summary, BVES plans to add 13 substations by 2022. This appears to be a large number of additions in relation to the size of BVES' service territory. BVES also plans to upgrade 6-8 miles of overhead distribution lines in HFTD Tier 2 and two miles of overhead lines in HFTD Tier 3. It is difficult to assess this proposal without context – for example, the proportion of lines being upgraded, and explanation of how BVES decided on the amount of system hardening it proposes.

The following are more details of BVES' planned system upgrades:

- Substation upgrades conversion of existing Pineknot Substation from an overhead-type to an underground and pad-mounted design, complete; and similar conversion of Palomino Substation, to be completed in 2020.
- Undergrounding proposed undergrounding of 1.5 miles of overhead Ute 34.5 kilovolt (kV) lines connected to SCE's system. BVES will convert the assets from an overhead system located in the forestry area to underground facilities alongside a county road. These lines provide approximately 72% of supply capacity and under normal conditions 100%

of BVES' supply loads. D.19-05-040 required an application for approval, which BVES has not filed. It anticipates 2 years to complete the project from time of approval. In addition, BVES has a program to underground overhead bare wires in both its 34.5 kV and 4 kV systems.

• Fuse conversion – BVES has historically used conventional fuses to protect lines but conventional fuses expel hot particles and gases when operated, which can start fires. BVES plans to replace conventional fuses with current limiting fuses. It also proposes to install electronic programmable fused trip savers (vacuum style) system-wide, which expel no materials, limit the available fault current, and may reduce the duration of faults. BVES plans on replacing approximately 628 conventional fuses with electronic fuses and approximately 2,576 conventional fuses with non-expulsion fuses.

As identified in its previous WMP, BVES planned this rollout beginning in June 2019 and continuing for 24 months until all conventional fuses are replaced. BVES is performing the fuse replacements in the higher risk areas first. As of January 31, 2020, BVES had replaced a total of 612 conventional fuses with 29 electronic fuses and 583 current limiting fuses.

- Tree attachment removal. Tree attachments are pieces of electrical infrastructure fastened to trees. Due to its original system design, BVES had over 1,200 existing tree attachments on 16 distribution circuits. Given that tree attachments introduce significant risk of heat and fuel source contact, BVES has been removing them. BVES has begun removing its tree attachments and plans to continue removals at a rate of approximately 240 attachments each year. As of January 31, 2020, BVES has removed 273 tree attachments and installed 149 new poles. The utility estimates that all attachments will be removed by 2022.
- Evacuation route hardening BVES' service area has predetermined routes to evacuate the public in the event of a wildfire due to any cause. BVES plans maintenance and fortification of its facilities along these routes to ensure they do not fail and limit mobility along the evacuation routes. It proposes a pilot program to test various solutions such as fire-resistant overhead facilities and protecting existing wood poles with fire resistant and strengthening materials.

- *Pole loading* BVES already assesses and remediates noncompliant distribution poles that pose a fire risk in compliance with Commission General Order 95. The utility plans a five-year program to increase its annual pole evaluation to 2,000 poles (of 8,000 wood poles in the BVES service area) per year. Since the entire BVES service area is in the HFTD (Tier 2 and 3), any pole failure is considered a high fire risk. As of January 2020, BVES had evaluated 2512 poles; 1039 failed the inspection criteria; 425 poles were replaced and 101 remediated. Maintenance action for the remaining failed poles is being planned.
- Covered conductor BVES plans to replace bare conductors with covered conductors first on high-risk wires. In its previous WMP, BVES conducted pilot projects to determine the optimal covered conductor systems. It also has completed, or plans to complete, the following work:
 - Replaced 3 circuit miles of bare wire utilizing covered tree wire, which performed well;
 - Trialed a "wire wrap" to cover existing wire in other high threat areas but decided the product is not ready to be deployed in the field;
 - Will replace bare wire with a high-performance covered conductor on its Radford 34.5 kV line, located in the HFTD Tier 3 area, since it has the highest risk of wildfires out of all of BVES' overhead facilities. The line is located in a densely vegetated area that is difficult to patrol, so BVES believes that replacing the line completely will provide the greatest protection.
 - Will cover all sub-transmission lines (34.5 kV) in the HFTD Tiers 2 and 3.
 - Will replace all bare 4 kV distribution wire in "high-risk areas" within the HFTD with covered wire. This action will result in approximately 86 miles of the 4 kV distribution lines in the system in the HFTD being covered. The high-risk areas selected have high vegetation density.

BVES' system hardening plans are ambitious, and more costly per circuit mile than its sister electrical corporations. BVES' strengths lie in the extensiveness of its plan. However, it appears that BVES did not meet its targets for 2019, calling into question whether it will be able to execute on its 2020 plans. It appears BVES failed to meet program targets for several system hardening activities. For example, for tree attachments (power lines connected to live trees), BVES only removed 43 of 75 attachments (57% complete). Its number of conventional fuses replaced with current-limiting fuses is 285 of 500 (57% complete). Its number of conventional fuses replaced by fused trip savers is 8 of 100 (8% complete). Additionally, for some 2019 targets BVES did not specify the amount of work it would do, so it is not possible to assess whether it met its own internal goals. For example, BVES gives the number of poles it replaced, but does not compare the number to a goal.

Deficiencies and Conditions - Grid Design and System Hardening

Deficiency (BVES-3, Class B): High spend per circuit mile.

BVES plans to spend more than three times as much per circuit mile as the large electrical corporations. While BVES has lower economies of scale given its small size, the expense of its program may cause significant impact to ratepayers.

Condition (BVES-3, Class B): In its first quarterly report, BVES shall provide:

 further quantitative justification and explanation that from a total cost of ownership perspective, the amount of ignition risk that its initiatives will reduce warrants the extra expense, including whether alternatives could enable BVES to achieve the same level of risk reduction using fewer resources.

6.5.4. Asset Management and Inspections

The asset management and inspections portion of the WMP Guidelines requires the filer to discuss power line/infrastructure inspections for distribution and transmission assets within the HFTD, including infrared, LiDAR, substation, patrol, and detailed inspections, designed to minimize the risk of its facilities or equipment causing wildfires. The filer must describe its protocols relating to maintenance of any electric lines or equipment that could, directly or indirectly, relate to wildfire ignition. The filer must also describe how it ensures inspections are done properly through a program of quality control.

BVES 's asset management and inspection plans consist of "patrol" and "detailed" ground inspections, electrical preventative maintenance, LiDAR inspection, and GIS data collection and sharing. BVES meets each of the foregoing requirements, except that it appears not to have completed LiDAR

inspections promised for 2019. Approval of its 2020 WMP is therefore conditioned upon BVES explaining its approach to LiDAR inspections.

BVES inspection plan includes several components:

- Patrol⁷ and other on-ground inspection: In addition to a required annual patrol inspection under General Order 95, BVES conducts a second onground patrol inspection each year. BVES believes this additional patrol is warranted due to the local climate, icing conditions, high winds, snow, and ice weight, among other factors. BVES conducts a detailed⁸ on-ground inspection at least every five years. The list below defines the difference between these two types of inspections.
- Substations Assesses major equipment assets located in BVES substations and in the field at various locations in the BVES sub-transmission (34.5 kV) and distribution (up to 4.160 kV) system.
- LIDAR Inspection Light Detection and Ranging (LiDAR) inspections and analysis, using lasers and software to develop surveys of the overhead sub-transmission and distribution systems, to accurately determine vegetation clearances to conductors. BVES does not appear to have begun this work; it states "While most often acquired via helicopter or fixed wing flights, LIDAR can also be captured via a truck-mounted mobile system.

⁷ Under BVES' definition, a "patrol inspection" is a simple visual inspection designed to identify obvious structural problems and hazards. These patrols are designed to identify gross defects. Gross defects may include, but are not limited to: damaged poles, broken cross-arms, damaged insulators, sagging wires, leaking transformers, vegetation encroachment inside of minimum clearance standards, and the like.

⁸ BVES described a "detailed inspection" as a careful visual and routine diagnostic exam of individual pieces of equipment. The inspector will record the results of the diagnostic and visual examinations and rate the condition of each piece of equipment. These inspections are designed to identify any existing defects, including minor ones. These may include, but are not limited to: open wire secondary clearance, corona effect on cross-arms, warning signage issues, visibility strips and pole-tag issues, rotten poles, vegetation encroachment inside of minimum clearance standards or encroachment that will lead to violation of minimum clearance standards before the next scheduled vegetation clearance crew visit, and the like.

Given the proximity of the majority of BVES's electrical system to the road network, truck-mounted mobile LIDAR will most likely be utilized." BVES plans two LiDAR sweeps per year.

• GIS – BVES' GIS data includes ample system asset location data. BVES currently does not share data, but states it understands the importance of collaborating with key stakeholder agencies, such as this Commission and CAL FIRE, and plans to provide its data in accordance with Commission Investigation (I.) 17-06-027, which relates to sharing pole databases. Additionally, the utility states it will provide information to stakeholder agencies on a case-by-case basis at its discretion.

Appendix B, Figure 2.1b represents a breakdown of utility inspection findings per circuit mile and delineates the findings in accordance to the priority levels defined in General Order (GO) 95, Rule 18. In accordance with Rule 18, priority Level 1 findings are those that pose "an immediate risk of high potential impact to safety or reliability." Priority Level 2 findings are any non-immediate "risk[s] of at least moderate potential impact to safety or reliability..." GO 95, Rule 18 considers priority Level 3 findings as, "any risk of low potential impact to safety or reliability." Pursuant to Rule 18, each priority level corresponds to a maximum timeframe for corrective action (i.e., to fix the identified GO 95 violation or safety hazard).

Data reporting inconsistencies limit comparative analysis among the SMJUs, including BVES. For example, PacifiCorp only reports Level 3 findings while Liberty only provides findings for distribution lines in HFTD areas. In general, the majority of findings are classified as priority Level 3, which calls into question how the utilities are making this determination. Priority Level 3 findings are afforded the longest timeframe (60 months or longer) for making corrective action, in accordance with the correction timeframes identified in GO 95, Rule 18, so using Level 3 gives the utility a long time to correct a problem.

Deficiencies and Conditions - Asset Management and Inspections

Deficiency (BVES-4, Class B): LiDAR patrol targets not met.

⁹ BVES March 6, 2020 WMP at 152 (emphasis added).

BVES reports that it did not meet 2019 targets for LiDAR inspections. BVES' target for 2019 was 211 circuit miles of LiDAR patrols, but BVES shows zero circuit miles actually surveyed.

Condition (BVES-4, Class B): In a first quarterly report, BVES shall:

i) explain its LiDAR inspection plan and results including the targets that it has set for this program and how it expects to actually achieve this performance.

6.5.5. Vegetation Management and Inspections

This section of the WMP Guidelines requires filers to discuss vegetation inspections, including inspections that go beyond existing regulation, as well as infrared, LiDAR, and patrol inspections of vegetation around distribution and transmission lines/equipment, quality control of those inspections, and limitations on the availability of workers. The filer must also discuss collaborative efforts with local land managers to leverage opportunities for fuel treatment activities and fire break creation, methodology for identifying at-risk vegetation, how trim clearances beyond minimum regulations are determined, and how the filer considers and addresses environmental and community impacts related to tree trimming and removal (erosion, flooding, and the like).

BVES' vegetation management and inspection programs use a third-party contractor to executes the vegetation clearing, with "frequent BVES Quality Control checks." ¹⁰ BVES plans on hiring a contract forester for inspections, auditing, customer contact and issue resolution, work plan development, specialized projects, contractor safety observations, and vegetation management program documentation and data analysis.

BVES' vegetation management program includes three components: preventative vegetation management, corrective vegetation clearance, and emergency vegetation clearance.

 Preventative vegetation management encompasses ensuring vegetation on BVES overhead sub-transmission and distribution lines adheres to clearance specifications identified. BVES states its specifications "comply with and exceed"¹¹ those outlined in GO 95, Rules for

¹⁰ BVES WMP March 6, 2020 at 166.

¹¹ BVES WMP March 6, 2020 at 165.

Overhead Electric Line Construction, Rule 35 Vegetation management, and Appendix E Guidelines to Rule 35 and Commission decisions, such as D.17-12-024.

- Corrective vegetation clearance consists of completing corrective and emergent vegetation orders to fix clearance discrepancies that the contractor or BVES discovers. If an order is designated as High Priority, the contractor must prioritize that work and make the correction immediately.
- Emergency vegetation clearance requires maintenance on an as-needed basis for any major disaster or emergency events. For example, if a storm results in fallen trees and branches, the contractor must mobilize as soon as possible to clear the vegetation.

BVES acknowledges it has unique local conditions that require it to go beyond the regulated vegetation clearance standards, including a minimum radial clearance of 72 inches between bare conductors and vegetation; no vertical coverage above BVES sub-transmission lines; primary-secondary line vegetation growth limits; and hazard tree requirements. BVES had a program target of 15% of overhead system cleared by tree trimming crews but has exceeded its goal by completing 31%.

Deficiencies and Conditions - Vegetation Management and Inspections

Deficiency (BVES-5, Class C): Compliance focus rather than proactive wildfire risk mitigation.

BVES' vegetation management practice is based around following minimum regulations and requirements, and any additional analysis and initiatives are not discussed. Further, the plan is very general in its description of the vegetation management program and not clear on how often inspections occur. It simply states a contractor completes work under company direction to meet minimum required regulatory requirements.

BVES needs to focus on relying less on contractor opinion, and work to set up internal procedures to ensure consistency across work and allow for evaluation of effectiveness for future improvement. Additionally, to allow for maximum effectiveness and minimize oversight, BVES should perform or adopt "at-risk" species analysis similar to other utilities, based on tree growth rate and failure likelihood.

Condition (BVES-5, Class C): In its 2021 WMP, BVES shall:

- i) explain whether focusing simply on compliance with GO 95 achieves adequate wildfire mitigation in light of the requirements of SB 901 and AB 1054, and
- ii) whether it needs to go beyond rules that predate the WMP statute in order to achieve wildfire mitigation that addresses current risks in its service territory.

Deficiency (BVES-6 Class C): Community Outreach.

BVES provides no discussion of community outreach or public education in its vegetation management section. It acknowledges the importance of such measures but provides no solution moving forward to set up a program.

Condition (BVES-6, Class C): In its 2021 WMP, BVES shall:

i) supply the missing information on its community outreach and public education related to vegetation management.

Deficiency (BVES-7, Class C): Fuels management.

BVES provides discussion on slash treatment or fuels reduction around facilities, and just states that practices are incorporated into vegetation management practices with no details on how.

Condition (BVES-7, Class C): In its 2021 WMP, BVES shall:

i) provide detailed information on its fuels management and slash reduction practices.

Deficiency (BVES-8, Class B) Patrols for asset and vegetation inspections combined.

BVES conducts two patrols a year but these are not specific to vegetation management; asset and vegetation patrols are conducted together.

Condition (BVES-8, Class B): In its first quarterly report, BVES shall detail:

- i) why it combines its asset and vegetation inspections,
- ii) how it verifies and ensures effectiveness of these inspections,

- iii) whether it plans to establish two distinct inspection processes for assets and vegetation, in order to more thoroughly inspect vegetation, and
- iv) how it complies with Public Resources Code 4291 *et seq.* and associated regulations to conduct inspections on annual basis.

Deficiency (BVES-9, Class C): Tracking of tree status.

BVES does not discuss whether it has a tracking system for trees, other than one to ensure its contractor is completing required work.

Condition (BVES-9, Class C): in its 2021 WMP BVES shall detail:

- i) how it tracks its trees or groups of trees to ensure they are treated according to an appropriate schedule and appropriate specifications that ensure they do not pose a risk of wildfire, and
- ii) whether this tracking documents the condition of trees to ensure they are maintained in proper condition over time.

6.5.6. Grid Operations and Operating Protocols, Including PSPS

The grid operations and operating protocols section of the WMP requires discussion of ways the filer operates its system to reduce wildfire risk. For example, disabling the reclosing function of automatic reclosers¹² during periods of high fire danger (e.g., during RFW conditions) can reduce utility ignition potential by minimizing the duration and amount of energy released when there is a fault. This section also requires discussion of work procedures in elevated fire risk conditions, PSPS events and protocols, and whether the filer has stationed and on-call ignition prevention and suppression resources and services.

As noted above, BVES does not address the recent use of PSPS in its plan. BVES states that it has never experienced the criteria to invoke but it must be prepared for such an event. Because BVES is interconnected with SCE, an SCE PSPS event could lead to a partial or complete loss of the three SCE supply lines into the

¹² A recloser is a switching device that is designed to detect and interrupt momentary fault conditions. The device can reclose automatically and reopen if a fault condition is still detected.

BVES service area. In such an event, BVES states it would endeavor to supply its customers with power from backup sources. This is not adequate preparation.

BVES does not provide its strategy to minimize public safety risk during high wildfire risk conditions (including the list and description of community assistance locations and services provided during a de-energization event) sufficient to address the needs of the population in those areas, including Limited English Proficiency and Access and Functional Needs populations. BVES' statement that "Customer Service staff and/or additional staff may be called out to assist with notification procedures as needed" shows a lack of understanding of the information and notification demands required during and in advance of a PSPS. Short of the effort to work closely with stakeholders, no information is provided on the strategy to minimize public safety risk.

BVES' plan only includes notification of the State Warning Center and sending notification via Interactive Voice Response (IVR) (phone notice to the customer base) during the Validated Extreme Fire Weather Conditions phase of the plan. However, the Imminent Extreme Fire Weather Conditions phase also includes de-energization and notification of the State Warning and Interactive Voice Response (IVR) is not covered in that section. Nor is there any discussion of notification of the State Warning Center in the initial PSPS or restoration phase of the plan. BVES also does not describe how it might coordinate with SCE which may call a PSPS event that impacts BVES' customers.

In terms of customer communications and mitigating the public safety impact of PSPS on first responders, health care facilities, operations of telecommunications infrastructure and water utilities/agencies, BVES' only statement is that it has worked and will continue to work with the named entities.

Although BVES has never initiated a PSPS and the likelihood is low (most likely as a supply shortage from another electrical corporation's PSPS), it must have a well-thought-out plan in case a PSPS is required. Its plan does not address the basic requirements of a PSPS. BVES' criteria for PSPS de-energizing and reenergizing are limited to wind speed and duration, and it monitors the National Fire Danger Rating System. These factors seem to be very black and white without taking into consideration other factors such as RFW, fuels and the like. There is no treatment of how to address changing frequency, scope and duration in the PSPS protocol.

On non-PSPS topics, in response to a question on crew-accompanying ignition prevention and suppression resources and services, BVES has a Wildfire Infrastructure Protection Team that includes a service crew and potentially additional linepersons and engineering staff to address wildfire related incidents and emergencies. The plan does not mention what suppression resources would be utilized to mitigate wildfire impacts. BVES does not outline personnel work procedures and training requirements. BVES states that additional linepersons and engineers could supplement the ignition mitigation and suppression effort, but does not mention if standby resources (i.e., water trucks) would be available.

BVES' operating protocols consist of plans to replace reclosers with automatic ones to mitigate the creation of sparks by 2020. BVES describes a Wildfire Infrastructure Protection Team that includes a service crew and potentially additional linemen and engineering staff to address wildfire related incidents and emergencies. BVES will install SCADA during 2020-2022 to enable supervisory control over these devices.

Deficiencies and Conditions - Grid Operations and Operating Protocols, Including PSPS

Deficiency (BVES-10, Class B): PSPS

Because BVES' PSPS activity is governed at least in part by what SCE does, BVES should have better plans in place in the event a PSPS event occurs in its service territory. It is not adequate simply to state that BVES has not had a PSPS event. In combination with BVES' failure to have information on its access and functional needs population, BVES lacks overall preparedness.

BVES' statement that "Customer Service staff and/or additional staff may be called out to assist with notification procedures as needed" shows a lack of understanding of the information and notification demands required during and in advance of a PSPS. Short of the effort to work closely with stakeholders, no information is provided on the strategy to minimize public safety risk. In terms of customer communications and mitigating the public safety impact of PSPS on first responders, health care facilities, operations of telecommunications infrastructure and water utilities/agencies, BVES' only statement is that it has worked and will continue to work with the named entities. Finally, Bear Valley lacks a communication strategy for providing in-language material, and material for customers with AFN. Several Commission decisions already impose these

requirements, but it is unclear whether BVES is currently in compliance with any of them.

Condition (BVES-10, Class B): In its first quarterly report, BVES shall detail:

- i) its strategy to minimize public safety risk during high wildfire risk conditions (including the list and description of community assistance locations and services provided during a deenergization event and a communication strategy) sufficient to address the needs of the population in those areas, including Limited English Proficiency and Access and Functional Needs (AFN) populations
- ii) a plan for customer communications and mitigating the public safety impact of PSPS on first responders, health care facilities, operations of telecommunications infrastructure and water utilities/agencies, and
- iii) how it would restore power after a PSPS event.

6.5.7. Data Governance

The data governance section of the WMP Guidelines seeks information on the filer's initiatives to create a centralized wildfire-related data repository, conduct collaborative research on utility ignition and wildfire, document and share wildfire-related data and algorithms, and track and analyze near miss data.

BVES describes its data repository initiative as a tool for asset management and planning, consisting only of GIS data. BVES would benefit from expanding its plans for a centralized data repository to include non-GIS data that it collects. The initiative it proposes is limited and underdeveloped and should be expanded to include risk data that can be analyzed for future use.

BVES has no data governance initiatives aside from building a centralized data platform. Risk does not inform the prioritization of these initiatives, and BVES has yet to determine how integration of these data governance initiatives can improve its mitigation strategy. Approval of its 2020 WMP is therefore conditioned upon BVES meeting the requirements specified below.

BVES fails to provide a notable amount of required data but also provided reasons for why some of it is missing. The data BVES provides for HFTD,

population density is sufficient to identify high-risk areas. Also, before the start of the next wildfire season, BVES will address the Wildland Urban Interface (WUI) designations. However, while BVES provides data layers for its equipment, without metadata it is unclear what some layers are or what various attributes mean. BVES states it uses third-parties to collect its data and therefore the data may not all be in the designated format. Metadata will be needed in the future to better understand the data.

BVES provides no access and functional needs customer data, stating it does not have such data at this time. BVES provided weather station data that spans its service territory. No equipment addition or removal data were provided; BVES stated it does not have this information in GIS at this time. Similarly, BVES did not map its various WMP initiatives in GIS as points, lines, or polygons at this time, stating it lacks such data.

Deficiencies and Conditions - Data Governance

As noted above, BVES does not keep and therefore did not report on much of the requested data, including metadata. It also does not describe collaborative research on utility ignition and wildfire, document and share wildfire-related data and algorithms, and track and analyze near miss data.

Deficiencies related to data are not unique to BVES. Deficiencies related to submission of data and associated conditions are addressed in the Guidance Resolution, WSD-002.

Deficiency (BVES-11, Class B): BVES did not report an ability to identify and support customers with access and functional needs (AFN).

BVES is required both in the context of PSPS and for disaster preparedness purposes generally to know which of its customers have access and functional needs so that they can receive assistance in preparation for and during an emergency.

Condition (BVES-11, Class B): In a first quarterly report, BVES shall describe:

i) how it will identify and support customers with access and functional needs during PSPS, emergencies or other disasters.

6.5.8. Resource Allocation Methodology

The resource allocation section of the WMPs requires the filer to describe its methodology for prioritizing programs to minimize the risk of its equipment or

facilities causing wildfires in the most cost-efficient manner. This section requires filers to discuss risk reduction scenario analysis and provide a risk spend efficiency analysis for each aspect of the plan.

BVES' spending is out of proportion with the other SMJUs and even the large electrical corporations. BVES does not adequately justify why it is spending so much more than its peers. Approval of its 2020 WMP is therefore conditioned upon BVES providing further detail on why it has chosen such costly mitigation, as set forth below.

As shown in Appendix B, Figure 3.1b, when assessing planned spending per circuit mile in HFTD, SMJUs are planning to spend significantly varying amounts. Appendix B, Figure 3.1b shows the total planned spending for each utility during the plan period (2020-2022). The planned spending is also presented as normalized values – normalized over circuit miles and HFTD circuit miles. Considering that much of the planned spending will occur in HFTD areas, the HFTD circuit mile normalization is focused on in this analysis. However, utility-provided information was used to populate Appendix B, Figure 3.1b and there are errors in utility calculations for spending totals, as well as inconsistent interpretations on what data to report (i.e., overhead vs. total miles, transmission vs. distribution, and the like) for circuit mileage.

Further, Appendix B, Figures 3.1b and 3.2b shows the same information – planned spending by category for the plan period – in different formats. The planned spending is normalized by HFTD circuit miles. Utility-provided information was used to populate the information in Appendix B, Figures 3.1b and 3.2b, and there are errors in utility calculations for spending totals, as well as inconsistent interpretations on what data to report for circuit mileage. With these limitations in mind, the information provided in Figures 3.1b and 3.2b of Appendix B serves as a tool to compare BVES and its peers.

As shown in Appendix B, Figures 3.2b and 3.3b, at least 95% of all SMJUs' planned spending is allocated to the following four categories: (1) Grid design and system hardening, (2) Vegetation management and inspections, (3) Asset management and inspections, and (4) Grid operations and protocols. On average, the SMJUs plan to allocate approximately 97% of their planned spending on initiatives across these four WMP categories. All SMJUs plan to spend more than half their total budget on grid design and system hardening initiatives and less than 5% of their budget on other enabling initiatives (e.g., situational awareness, risk assessment and mapping).

BVES plans to spend the large majority (90%) of its budget on grid design and system hardening initiatives, which is approximately 50% more than the average of its peer utilities.

Appendix B, Figure 3.9 lists the Top 5 initiatives by planned spending for BVES. These are individual initiatives and do not comprise the full suite of activities within each category. As shown in Appendix B, Figure 3.9, BVES plans to allocate over a third of its total planned spend on undergrounding initiatives. BVES aspires to underground all its sub-transmission lines over the next 10 years.

BVES plans to underground significant portions of its grid to mitigate wildfire risk; however, BVES reports no ignitions in its service territory since 2015. Considering its relatively small rate base, the likely impact on customer rates from such broad deployment of a high-cost initiative would be significant. Moreover, BVES does not provide discussion of any substantive analysis of lower cost alternatives. These disproportionate initiative costs are reflected in BVES's normalized spending figures. BVES' planned spending per HFTD circuit mile at \$1,168,000 is significantly greater than the other SMJUs. This may be due, in part, to the fact that BVES has fewer circuit line miles (BVES – 265, Liberty – 2,055, and PacifiCorp – 3,868) than its peers. Considering that BVES's planned spending per HFTD circuit mile of \$1,168,000 is nearly 270% greater than even the highest planned spending for large electrical corporations (SCE, at \$318,000), further justification and validation of BVES's planned spending is required, especially to determine the cause for such discrepancy.

Deficiency and Condition - Resource Allocation Methodology

Deficiency (BVES-12, Class B): Undergrounding (Related to BVES-1).

BVES plans to underground most of its assets even though it has had no ignitions, fires or PSPS events and has seen a decreasing trend in near miss incidents in recent years.

Condition (BVES-12, Class B): In its first quarterly report, BVES shall describe:

i) all reasonable alternatives it has considered in addition to undergrounding,

- ii) whether an option other than undergrounding will achieve comparable reduction in outage and ignition frequency and probability,
- iii) how the capital and maintenance cost for undergrounding and alternatives compare, and
- iv) the expected life of undergrounded vs. overhead assets.

6.5.9. Emergency Planning and Preparedness

The WMP Guidelines require a general description of the filer's overall emergency preparedness and response plan, including discussion of how the plan is consistent with legal requirements for customer support before, during and after a wildfire, including support for low income customers, billing adjustments, deposit waivers, extended payment plan, suspension of disconnection and nonpayment fees, and repairs. Filers are also required to describe emergency communications before, during, and after a wildfire in English, Spanish, and other languages required by the Commission.

The WMP Guidelines also require discussion of the filer's plans for coordination with first responders and other public safety organizations, plans to prepare for and restore service, including workforce mobilization and prepositioning of equipment and employees, and a showing that the filer has an adequate and trained workforce to promptly restore service after a major event.

BVES describes very limited emergency planning and preparedness. It would appear the utility faces significant challenges due to its environmental conditions and terrain. At the same time, BVES' plan suggests it is aware of risk factors. It has been actively pursuing means to minimize the risks including building relationships and communications with key stakeholder groups, including the Mountain Mutual Aid Association (MMAA) to inform, prepare, and coordinate outreach and engagement.

Deficiencies and Conditions - Emergency Planning and Preparedness

Deficiency (BVES-13, Class C): Overall lack of an emergency preparedness plan. BVES must have an emergency plan in place, both for wildfire and PSPS events, as discussed in the section on Grid Operations and Protocols. Lack of ignition in the past does not mean the utility will not have events in the future, and we are concerned it is generally unprepared to meet this challenge.

Condition (BVES-13, Class C): In its 2021 WMP, BVES shall:

- i) set forth its emergency planning and preparedness for wildfire, including customer support before, during and after a wildfire, support for low income customers, billing adjustments, deposit waivers, extended payment plan, suspension of disconnection and nonpayment fees, and repairs,
- ii) describe emergency communications before, during, and after a wildfire in English, Spanish, and other languages required by the Commission, and
- iii) address plans for coordination with first responders and other public safety organizations, plans to prepare for and restore service, including workforce mobilization and prepositioning of equipment and employees, and a showing that it has an adequate and trained workforce to promptly restore service after a major event.

6.5.10. Stakeholder Cooperation and Community Engagement

The final topic covered in Section 5 relates to the extent to which the filer will engage the communities it serves and cooperate and share best practices with community members, agencies outside California, fire suppression agencies, forest service entities and others engaged in vegetation management or fuel reduction.

BVES' stakeholder cooperation and community engagement is incorporated into its overall emergency preparedness plan. Much of the requested information is missing. Further, BVES has obligations stemming from last year's WMP and this year's in-language decision in the WMP proceeding, R.18-10-007. Approval of its 2020 WMP is therefore conditioned upon BVES providing the missing information described below. Nothing in this Resolution relieves BVES of complying with existing decisions on wildfire preparedness and mitigation.

Deficiencies and Conditions – Stakeholder Cooperation and Community Engagement

Deficiency (BVES-14, Class C). "As needed" community engagement insufficient. It is not sufficient for BVES simply to state that it will engage with its community "as needed." It must plan now in the event of wildfire or PSPS emergencies later.

BVES needs to take the initiative to better work with the community, with areas of focus such as PSPS, vegetation management, and inspections.

Condition (BVES-14, Class C): In its 2021 WMP, BVES shall:

i) establish and describe its program regarding customer outreach and engagement, including community meetings with proper input from the community, such as surveys, with a process to change procedures and the WMP based off such input.

Deficiency (BVES-15, Class B): Collaboration. In terms of collaboration with outside agencies and entities in order to make use of best practices and lessons learned, in Table 30, BVES states there is existing cooperation but gives no details.

Condition (BVES-15, Class B): In its first quarterly report, BVES shall describe how:

- i) it collaborates with outside agencies,
- ii) it uses best practices, and
- iii) it acts on lessons learned from this collaboration.

7. Maturity Evaluation

In 2020, the WSD introduced a new Utility Wildfire Mitigation Maturity Model, to establish a baseline understanding of utilities' current and projected capabilities and assess whether each utility is progressing sufficiently to improve its ability to mitigate wildfire risk effectively. The maturity model also serves as an objective means of comparing across utilities and provides a framework for driving utility progress in wildfire risk mitigation over time. WMP filers were required to complete a survey in which they answered specific questions which assessed their existing and future wildfire mitigation practices across 52 capabilities at the time of filing and at the end of the 3-year plan horizon. The 52 capabilities are mapped to the same 10 categories identified in Section 5 above.¹³

¹³ A detailed description of the purpose and use of the maturity model is provided the Guidance Resolution being issued concurrently with the instant Resolution.

The maturity model will continue to evolve each year to reflect best practices and lessons learned. With the inaugural use of the maturity model in 2020, it is important to note that the resulting maturity score is to be informative of a utility's capabilities within the context of the underlying assessment criteria. Accordingly, it is essential that the maturity assessment scores are understood within the context of the qualitative detail supporting each score. The model results require context and should not be interpreted as the final word on an electrical corporation's wildfire mitigation capabilities without an understanding of the scoring process described in the Guidance Resolution. As such, the final maturity model outputs should be viewed as levels or thresholds – they are not absolute scores.

BVES' initial maturity model assessment reveals a wide array of results, particularly in comparison to other SMJUs. As shown in Appendix C, BVES projects substantive growth across all 10 categories between 2020 and 2023.

While BVES is at or near the starting point for more than half of the identified capabilities (28 out of 52), it already sees itself at more advanced maturity levels for 14 capabilities, and claims the highest level of maturity for seven (7) of these capabilities. It also projects better than incremental growth for 15 capabilities over three years and has a goal for reaching to top level of maturity by 2023 in 19 of the 52 capabilities.

However, BVES also projects no growth at all for 14 capabilities, although in no instance does BVES expect to be at zero capability by 2023. BVES foresees the strongest growth in capabilities for (F.) grid operations, and (H.) data governance in the 3-year time frame.

BVES' development in these foundational, enabling capabilities provides an opportunity for the WSD and the Commission to guide this development and drive towards increased transparency and standardization in decision-making. Compared to the other categories, BVES projects little growth for capabilities in (A.) risk assessment and mapping, except for some improvement to estimating wildfire consequences for communities and developing risk maps and algorithms.

It largely projects incremental or two-step improvements for (B.) situational awareness, (C.) grid design and system hardening, (E.) vegetation management, and (H.) resource allocation. Areas of emphasis appear to be improving wildfire detection capabilities and improving grid design for minimizing ignition risks by 2023.

In its WMP, BVES presented some risk-spend efficiency scoring and mitigation prioritization but did not explain its methodology. Like other SMJUs, it should engage in a process to better develop these capabilities prior to the next WMP, and not wait until 2023.

BVES appears to be prioritizing its relatively limited resources for improving (F.) grid operations and protocols, with projections to be at or near the top level in all six capabilities by 2023. It also foresees better-than-incremental growth for each of the four capabilities in the (G.) data governance category.

The utility's self-assessment is at the top level of maturity for seven of 10 capabilities in the categories of (I.) emergency planning and preparedness and

Although difficult to reconcile against the reality of its very small territory and limited history of wildfires, such high assessments indicate BVES should be engaged in sharing its processes and methodologies with other SMJUs. Indeed, the utility sees some room for some growth in continuous improvement and collaboration on wildfire mitigation planning in these categories.

(J.) stakeholder cooperation and community engagement.

A detailed summary of BVES' maturity model responses and results is provided in Appendix C.

8. Impact of COVID-19 Pandemic

After BVES submitted its WMP, on March 19, 2020, California Governor Gavin Newsom signed Executive Order N-33-20 requiring Californians to stay at home to combat the spread of the COVID-19 virus. Specifically, Governor Newsom required Californians to heed the order of the California State Public Health Officer and the Director of the California Department of Public Health that all individuals living in California stay home or at their place of residence, except as needed to maintain continuity of operation of the federal critical infrastructure

sectors, in order to address the public health emergency presented by the COVID-19 disease (stay-at-home order).¹⁴

As articulated in the March 27, 2020 joint letters¹⁵ of the WSD, CAL FIRE and the California Governor's Office of Emergency Services regarding essential wildfire and PSPS mitigation work during COVID-19 sent to each electrical corporation, electrical corporations are expected to continue to prioritize essential safety work. The WSD expects the electrical corporations to make every effort to keep WMP implementation progress on track, including necessary coordination with local jurisdictions. Such effort is essential to ensuring that electrical corporations are prepared for the upcoming and subsequent wildfire seasons, while complying with COVID-19 restrictions requiring residents to shelter-in-place, practice social distancing, and comply with other measures that California's public health officials may recommend or that Governor Newsom or other officials may require in response to the COVID-19 pandemic.

Furthermore, the WSD expects the electrical corporations to continue to make meaningful progress on PSPS mitigation goals, including continuing with sectionalization projects, local outreach and coordination, establishing customer resource centers, and microgrid projects. Electrical corporations are expected to limit planned outage work during this time to wildfire mitigation, PSPS reduction, projects that immediately impact reliability if delayed, and emergency/public safety outages. In addition, electrical corporations are expected to undertake any other critical work related to operating a safe and reliable grid and to mitigate wildfire and/or PSPS risk.

9. Conclusion

- BVES's Wildfire Mitigation Plan contains all of the elements required by AB 1054, Pub. Util. Code Section 8386(c) and all elements required by the WMP Guidelines.
- BVES's WMP is approved by the WSD, subject to the conditions set forth in Appendix A.

¹⁴ Executive Order N-30-20. Available at http://covid19.ca.gov/img/ Executive-Order-N-30-20.pdf.

¹⁵ https://www.cpuc.ca.gov/covid/. Letters to each electrical corporation are found under the heading "Other CPUC Actions", March 27, 2020: Joint Letters to IOUs re: Essential Wildfire and PSPS Mitigation Work.

10. Comments

Pub. Util. Code § 311(g)(1) provides that resolutions must be served on all parties and subject to at least 30 days public review. However, given that this resolution is issued outside of a formal proceeding, interested stakeholders need not have party status in R.18-10-007 in order to submit comments on the resolution. Please note that comments are due 20 days from the mailing date of this resolution. Replies will not be accepted.

This draft resolution was served on the service list of R.18-10-007 and posted on the Commission's website, www.cpuc.ca.gov/wildfiremitigationplans, and it will be placed on the Commission's agenda no earlier than 30 days from today.

Findings

- 1. BVES submitted its WMP on February 7, 2020, but it used a format BVES followed in 2019, rather than the format required in the December 16, 2019 ruling in R.18-10-007. BVES used the proper format in its March 6, 2020 WMP submission.
- 2. AB 1054 and Commission Resolution WSD-001 require BVES to file a WMP for 2020 that conforms with Pub. Util. Code § 8386(c) and guidance provided by the WSD and served on the R.18-10-007 service list on December 16, 2019 by ALJ ruling.
- 3. The WMPs were reviewed and acted upon with due consideration given to comments received from governmental agencies, the WSAB, members of the public, and all other relevant stakeholders.
- 4. The WMPs were reviewed and acted upon in compliance with all relevant requirements of state law.
- 5. BVES's WMP contains all the elements required by AB 1054, Pub. Util. Code § 8386(c).
- 6. BVES has satisfied the requirements of Pub. Util. Code § 8386(c) and the WMP Guidelines.
- 7. Appendix A contains findings regarding deficiencies in BVES's WMP.

THEREFORE, IT IS ORDERED THAT:

1. Ratification of the Wildfire Safety Division's approval of Bear Valley Electric Service's Wildfire Mitigation Plan is subject to conditions set forth in Appendix A.

- 2. The Wildfire Safety Division's approval of Bear Valley Electric Service's (BVES) 2020 Wildfire Mitigation Plan, conditioned upon BVES's compliance with the conditions listed in Appendix A, is hereby ratified.
- 3. Bear Valley Electric Service shall submit an update to its Wildfire Mitigation Plan in 2021 according to the forthcoming guidance and schedule issued by the Wildfire Safety Division.
- 4. Bear Valley Electric Service shall submit a new comprehensive 3-year Wildfire Mitigation Plan in 2023.
- 5. Nothing in this Resolution should be construed as approval of the costs associated with Bear Valley Electric Service's Wildfire Mitigation Plan mitigation efforts.
- 6. Bear Valley Electric Service may track the costs associated with its Wildfire Mitigation Plan in a memorandum account, by category of costs, and shall be prepared for Commission review and audit of the accounts at any time.
- 7. Bear Valley Electric Service shall submit a letter to the Wildfire Safety Division containing any updates to scope, timing or other aspects of any mitigation set forth in its Wildfire Mitigation Plan as result of the COVID-19 pandemic, including Public Safety Power Shutoff. The letter shall list items using the same names and sections used in the Wildfire Mitigation Plan and give a thorough description of why the COVID-19 pandemic requires the specified action. The letter shall be submitted within 60 days of issuance of this Resolution and shall be addressed to the Director of the Wildfire Safety Division. The letter shall be emailed to wildfiresafetydivision@cpuc.ca.gov with service on the service list of Rulemaking 18-10-007. If there are no changes to report, no such submission is required.
- 8. Nothing in this Resolution should be construed as a defense to any enforcement action for a violation of a Commission decision, order, or rule.

This Resolution is effective today.

I certify that the foregoing resolution was	duly introduced, passed and adopted
at a conference of the Public Utilities Com	mission of the State of California held
on; the following Commis	sioners voting favorably thereon:
	Alice Stebbins
	Executive Director

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

RESOLUTION WSD-006 Resolution Ratifying Action of the Wildfire Safety Division on Bear Valley Electric Service's 2020 Wildfire Mitigation Plan Pursuant to Public Utilities Code Section 8386.

INFORMATION REGARDING SERVICE

I have electronically served all persons on the attached official service list who have provided an e-mail address for R.18-10-007.

Upon confirmation of this document's acceptance for filing, I will cause a Notice of Availability of the document to be served by U.S. mail on all parties listed in the "Party" category of the official service list for whom no e-mail address is provided.

The official service list I use is current as of today's date.

Dated May 7, 2020, at San Francisco, California.

/s/ MARILOU HIPOLITO

Marilou Hipolito

NOTICE

Persons should notify the Process Office, Public Utilities Commission, 505 Van Ness Avenue, Room 2000, San Francisco, CA 94102, of any change of address to ensure that they continue to receive documents. You must indicate the proceeding number on the service list on which your name appears.

The Commission's policy is to schedule hearings (meetings, workshops, etc.) in locations that are accessible to people with disabilities. To verify that a particular location is accessible, call: Calendar Clerk (415) 703-1203.

If specialized accommodations for the disabled are needed, e.g., sign language interpreters, those making the arrangements must call the Public Advisor at (415) 703-2074 or TDD# (415) 703-2032 five working days in advance of the event.

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