PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

January 14, 2021

Wildfire Safety Division Action Statement on
Bear Valley Electric Service, Inc.'s 2020 Wildfire Mitigation Plan Refile

This Action Statement is the conditional approval of Bear Valley Electric Service, Inc.'s (BVES) 2020 Wildfire Mitigation Plan Refile (WMP or Refile) and is presented to the California Public Utilities Commission (CPUC) for ratification, via the associated Resolution and previously approved Guidance Resolution, WSD-002.

Introduction

Wildfires have caused significant social, economic, and environmental damage on a global scale. Already this year, there have been over 8,000 wildfires ignited and four million acres of land scorched, making 2020 the largest wildfire season recorded in modern California history.[1] In recent years, electric utilities have been responsible for some of the most devastating wildfires in the state. 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-ignited 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 primary regulatory vehicle for the WSD to regulate electrical corporations to reduce their 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). Electrical corporations are required to submit WMPs, designed to assesses their level of wildfire risk and detail their plans for wildfire risk reduction.

[1] https://www.fire.ca.gov/stats-events/

The first WMPs, under the SB 901 framework, were submitted by the electrical corporations and evaluated by the CPUC in 2019.

AB 1054 and AB 111 transferred responsibility for evaluation and approval of WMPs to the WSD,[2] which, as of July 2021, will transfer and become the Office of Energy Infrastructure Safety (OEIS) within the California Natural Resources Agency (CNRA). In this role, the WSD oversees electrical corporations' wildfire mitigation efforts to address increasing utility wildfire risk. To support its efforts, the WSD has developed a long-term strategy and roadmap. This strategy and roadmap 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. Bear Valley Electric Service, Inc. (BVES) originally submitted its 2020 WMP on February 7, 2020. After errors were discovered in the initial filing, BVES submitted an amended WMP on March 6, 2020. Then, following the issuance of Draft Resolution WSD-006, BVES again submitted an amended WMP on May 22, 2020 providing what it characterized as errata. The changes included in BVES's May 22, 2020 Errata submission were substantive and rendered much of the WSD's analysis in Draft Resolution WSD-006 moot. Accordingly, the WSD issued its Final Action Statement on August 26, 2020, denying BVES's WMP filing pursuant to Public Utilities Code sections 8386 et seq. and 701, and ordering BVES to submit a new WMP no later than 60 days from the date of issuance of the August 26, 2020 Final Action Statement addressing the matters in BVES's May 22, 2020 Errata.[3] BVES timely submitted its 2020 WMP Refile on September 18, 2020.

Upon completion of its evaluation, the WSD recognizes that BVES has made significant progress. Compared to its first submissions in 2019, BVES utilizes much more data and objective content in its 2020 WMP filing and shares more critical information with key partners. However, while electrical corporations are already undertaking wildfire mitigation activities and building capabilities subject to regulation, all electrical corporations must continue to make meaningful progress. Electrical corporations' activities need to incorporate longer-term thinking by focusing more systematically on increasing their maturity over time. All electrical corporations 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

[2] With CPUC ratification of the WSD's actions.

[3] The Action Statement denying BVES's WMP and directing BVES to refile did not require Commission ratification. The Action Statement represents the final determination on BVES's originally submitted WMP.

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's 2020 WMP Refile. Together, this statement, the associated Resolution and the Guidance Resolution represent the totality of the WSD's conditional approval of BVES's 2020 WMP Refile.

Background

To ensure that electrical corporation 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 electrical corporation WMP submissions. Specifically, the WMP Guidelines require reporting of consistent metrics, ignitions, risk data and specific electrical corporation initiatives to reduce wildfire risk. Electrical corporations have provided historical metrics and data as a baseline, which can be used to evaluate an electrical corporation's wildfire risk level and to assess whether the electrical corporation's initiatives sufficiently address this risk. These metrics and data will be used to track electrical corporation 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 electrical corporations for poor performance, but rather it is an effort by the WSD to work collectively with the electrical corporations it regulates[2] to facilitate improvement by identifying best practices, current strengths and current weaknesses across the electrical corporation landscape. The WSD believes it is in the best interest of the electrical corporations, ratepayers and other key stakeholders to take this collaborative, growth-oriented approach. While certain electrical corporations 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 electrical corporations, 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. An electrical corporation, for example, could meet four of five criteria required for level 2, but it would remain at level 1 until it met 100% of the criteria required to cross the threshold to level 2. In this example, the way the model works is the electrical corporation would receive a result of 1, not 1.8. The purpose of the model is not to penalize the electrical corporation for achieving a result of 1 but to identify the specific actions it can take to reach level 2 and build progress towards maturing electrical corporation wildfire mitigation efforts.

Summary of the WSD's Assessment

An effective WMP should have three, overarching components in which electrical corporations should be striving to be "world class." First, the WMP should demonstrate an understanding of an electrical corporation's unique risk. Each electrical corporation 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 electrical corporation should deploy a suite of initiatives designed to reduce that risk incrementally and aggressively. 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 electrical corporation 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:

- Completeness: The WMP is complete and comprehensively responds to the WMP requirements
- Technical feasibility and effectiveness: Initiatives proposed in the WMP are technically feasible and are effective in addressing the risks that exist in the electrical corporation's territory
- Resource use efficiency: Initiatives are an efficient use of electrical corporation resources

- Forward looking growth: The electrical corporation is targeting maturity growth

The WSD used BVES's 2020 WMP Refile submissions, including its Remedial Compliance Plan, public comments, responses to the WSD's data requests, electrical corporation reported data and electrical corporation responses to the Utility Survey in its assessment of BVES's 2020 WMP Refile.

Upon completion of this review, the WSD then determined whether BVES's 2020 WMP Refile 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 Resolution is the outcome of the WSD's review of BVES's WMP Refile and input from the public and other governmental agencies. As stated previously, this Action Statement is the conditional approval of BVES's WMP Refile and is presented to the CPUC for ratification, via the associated Resolution.

The conditions for approval of BVES's WMP Refile are designed to address the gaps identified in the WMP Refile. Some of the key findings and deficiencies for BVES's WMP Refile are summarized below. The associated Resolution captures the WSD's comprehensive review of BVES's 2020 WMP Refile submission.

Discussion of WMP Assessment

Summary

BVES has one of the smallest territories of the electrical corporations the WSD reviewed, at approximately 32 square miles. Given its small size and finite resources, in order for BVES's plan to be effective, it is crucial to strategically prioritize the initiatives within its territory by ignition risk driver to target the highest risk elements of BVES's grid.

BVES's WMP Refile outlines improvements being made to its risk assessment tools and clarifies 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 a majority of its spend (approximately 79% of total planned spend) to grid design and system hardening.

BVES, like peer small and multijurisdictional utilities (SMJUs), has not yet been subject to Safety Model Assessment Proceeding (S-MAP) or Risk Assessment Management Phase (RAMP) requirements and is thus at the nascent stages of incorporating risk-informed decision making when it comes to selection of wildfire mitigation activities. However, BVES does report RSE estimates for many initiatives and provides some analysis of alternatives and justification for mitigations chosen, particularly in section 7.5.6 of its 2020 WMP Refile.

Risk Assessment

BVES's 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 indicate that ignitions have not occurred in its service territory since 2015, yet near miss data shows that vegetation contact remains a significant risk. BVES uses a risk-based decision-making framework that includes the following six steps: risk identification, risk analysis, risk evaluation and scoring, risk mitigation, investment decisions and risk monitoring. BVES discusses its "Fire Safety Circuit Matrix" and "Risk Register Model," both used to evaluate risk and identify priorities within its grid.

Initiatives

BVES's initiatives, which are the actions and programs BVES will take to reduce wildfire risk, can address the major risk factors that BVES faces. BVES outlines its priority programs using RSE calculations and section 7.5.6 describes the alternatives considered and its rationale for selecting effective mitigations.

The WSD is concerned that BVES's WMP Refile does not thoroughly discuss PSPS. BVES provided some detail about its communication strategy before, during, and after a PSPS event; however, it is not clear that BVES has an understanding of the criteria necessary to create a clear strategy and protocols to achieve this stated goal. Although BVES has not initiated a PSPS to date, BVES should articulate its plans to enhance this capability based on its risk exposure. BVES's interconnection with Southern California Edison (SCE) means that a PSPS conducted by SCE could cause the loss of power to BVES's customers.

Local, regional, and statewide collaborative efforts are essential to successful wildfire mitigation. In its Refile, BVES often mentions that there are existing collaborations but gives little to no details, particularly with land management, fire mitigation, and suppression agencies (e.g., US Forest Service and CAL FIRE). In addition, BVES does not detail how its uses best practices, nor how stakeholder and community feedback is incorporated into scoping its WMP initiatives. BVES should continue to leverage cooperative efforts and define expected outcomes.

BVES's targeted maturity growth reflects a desire to improve the maturity of a majority of its 52 wildfire mitigation capabilities over the next 3 years, and BVES must work diligently to achieve this targeted growth. BVES's 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 Refile.

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 electrical corporation'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. BVES reports RSE estimates for many of its initiatives and compares RSE using Figure 5-6, "Risk Reduction and Efficiencies of Mitigation Initiatives" and Figure 5-7, "Risk Spend Ratio / Risk Reduction for PSPS Mitigations."[4] In addition, BVES detailed alternatives considered and justifies chosen mitigations in sections 7.5.5 and 7.5.6. However, notably, RSEs and discussion of alternatives are incomplete or missing from sections 7.5.1 and 7.5.5. This incomplete reporting does not sufficiently demonstrate that BVES is allocating finite resources to initiatives that most effectively reduce wildfire risk and PSPS incidents in the near term.

BVES plans to spend a majority, 79%, of its planned spend on grid design and system hardening initiatives, which is greater than but consistent with the other SMJU's spending on grid hardening: Liberty Utilities is at 53% and PacifiCorp is at 71%.

[4] BVES 2020 WMP Refile, at 218-219.

Conclusion

Catastrophic wildfires remain a serious threat to the health and safety of Californians. Electrical corporations, including BVES, must continue to make progress toward reducing utility-related wildfire risk. Through the conditional approval granted for its 2020 WMP Refile 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.

A detailed discussion of the concerns set forth herein as well as further analysis of BVES's WMP is articulated in the associated Resolution, including a complete list of deficiencies and conditions in Appendix A of the associated Resolution.

The WSD expects BVES to meet the commitments in its 2020 WMP Refile and fully comply with the conditions listed in Appendix A of the 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

Date of Issuance
January 15, 2021

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Wildfire Safety Division

January 14, 2021
Resolution WSD-13

R E S O L U T I O N

Resolution Ratifying Action of the Wildfire Safety Division on Bear Valley Electric Service, Inc.'s 2020 Wildfire Mitigation Plan Refile 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. Ensuring the safety of Californians is the most important responsibility of the California Public Utilities Commission (Commission) and the WSD. 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 acts on the WMP Refile of Bear Valley Electric Service, Inc. (BVES, filer, or electrical corporation) submitted on September 18, 2020, pursuant to Public Utilities Code section 8386.3(a). BVES's WMP Refile was submitted pursuant to the August 26, 2020 WSD Final Action Statement on BVES's initial 2020 WMP. The WMP Refile addresses the 22 requirements set forth in Public Utilities Code 8386(c), and focuses on the measures that BVES will take over the next 3 years to reduce the risk of, and impact from, a catastrophic wildfire caused by its electrical infrastructure and equipment. In addition, BVES submitted a Remedial Compliance Plan pursuant to Resolution WSD-002.

BVES originally submitted its 2020 WMP on February 7, 2020 and amended it on March 6, 2020, then again on May 22, 2020. The WSD issued a Final Action Statement on August 26, 2020 denying BVES's 2020 WMP filing pursuant to

Public Utilities Code sections 8386 et seq. and 701. The August 26, 2020 Final Action Statement ordered:

1. BVES to submit a new WMP no later than 60 days from the August 26, 2020 Final Action Statement addressing the matters in BVES's May 22, 2020 Errata,
2. BVES was strongly urged to satisfy the Class A and B conditions set forth the August 26, 2020 Final Action Statement Appendices B and C, as explained in Appendix D,
3. BVES to provide a full and detailed explanation of how and why the errors leading to the incorrect submission on February 7, 2020 and March 6, 2020 were made. The explanation had to include, but was not limited to, what caused the errors, how BVES reviewed the consultant's work products before submission to the WSD, how much BVES, Inc. paid for the consultant's work product(s), and a description of what changes BVES is making to avoid such significant failures in the future. BVES was also required to check every aspect of the WMP Refile to ensure completeness and accuracy and include a sworn verification by the most senior official responsible for BVES's WMP. [5]

Electrical infrastructure and equipment pose ongoing risks of starting wildfires due to the presence of electric current and proximity to people and property. 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 heat source required to ignite a wildfire which can then 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, as detailed in its Action Statement, to conditionally approve BVES's 2020 WMP Refile. In doing so, this Resolution analyzes the extent to which BVES's 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.

[5] See August 26, 2020 Action Statement, at. 1 & 4-5.

PROPOSED OUTCOME:

- Ratifies the attached action of the WSD to approve the 2020 WMP Refile of BVES, with conditions designed to ensure the WMP decreases risk of catastrophic wildfire in California.
- A list of conditions of the approval is provided in Appendix A.
- Evaluates the maturity of BVES's 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.
- Does not approve costs attributable to WMPs, as statute requires electrical corporations to seek cost recovery and prove all expenditures are just and reasonable at a future time in their General Rate Cases (GRC) or compliant application. Nothing in this Resolution or 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 electrical corporation infrastructure and equipment. By implementing measures such as vegetation management, system hardening (such as insulating overhead conductors 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, utility-caused catastrophic wildfire risk should be reduced over time.

- The WSD's and Commission's substantive and procedural changes for evaluations of electrical corporations' 2020 WMPs 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 1: 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 1: Proposed WMP costs

Proposed WMP costs	
Total costs 2020-2022	$50.9 million
Subtotal: 2020	$15.1 million
Subtotal: 2021	$21.2 million
Subtotal: 2022	$14.6 million

TABLE OF CONTENTS

Page

Summary 1

1. Background 2
2. Notice 3
3. Wildfire Safety Division Analysis of WMP 3
4. Analysis of Deficiencies from the WSD's August 26, 2020 Final Action Statement on BVES's Initial 2020 WMP 5
5. Wildfire Safety Advisory Board Input 6
6. Public and Stakeholder Comment 6
7. Discussion 7
   - 7.1 Persons Responsible for Executing the Plan 8
   - 7.2 Metrics and Underlying Data 9
   - 7.3 Baseline Ignition Probability and Wildfire Risk Exposure 11
   - 7.4 Inputs to the Plan, Including Current and Directional Vision for Wildfire Risk Exposure 13
   - 7.5 Wildfire Mitigation Activity for Each Year of the 3-Year WMP Term, Including Expected Outcomes of the 3-Year Plan 19
     - 7.5.1 Risk Assessment and Mapping 22
     - 7.5.2. Situational Awareness and Forecasting 23
     - 7.5.3. Grid Design and System Hardening 26
     - 7.5.4. Asset Management and Inspections 32
     - 7.5.5. Vegetation Management and Inspections 35
     - 7.5.6. Grid Operations and Operating Protocols, Including PSPS 38
     - 7.5.7. Data Governance 45
     - 7.5.8. Resource Allocation Methodology 47
     - 7.5.9. Emergency Planning and Preparedness 49
     - 7.5.10 Stakeholder Cooperation and Community Engagement 50
   - 7.6. BVES Supplemental Filing 52
8. Maturity Evaluation 54

9. Impact of COVID-19 Pandemic 56
10. Conclusion 58
11. Comments 58
12. Findings 59

Appendix A – Deficiencies and Conditions

Appendix B – Detailed Figures & Charts

Appendix C – Maturity Model Summary

Appendix D – Definition of Mitigation Initiatives

Appendix E – Public Utilities Code Section 8386

Appendix F – August 26, 2020 Final Action Statement Class A & B Deficiencies Disposition Summary

Summary

This Resolution acts on the attached Wildfire Safety Division's (WSD) conditional approval of the Wildfire Mitigation Plan (WMP) Refile submitted by Bear Valley Electric Service, Inc., a subsidiary of American States Water Company (BVES) on September 18, 2020. BVES filed its initial 2020 WMP on February 7, 2020. After errors were discovered in the initial filing, BVES submitted an amended WMP on March 6, 2020. Then, following the issuance of Draft Resolution WSD-006, BVES again submitted an amended WMP on May 22, 2020 providing what it characterized as errata. The changes included in BVES's May 22, 2020 Errata submission were substantive and rendered much of the WSD's analysis in Draft Resolution WSD-006 moot. Accordingly, the WSD issued a Final Action Statement on August 26, 2020 denying BVES's WMP filing pursuant to Public Utilities Code sections 8386 et seq. and 701. The August 26, 2020 Final Action Statement ordered BVES to submit a new WMP no later than 60 days from the date of issuance of the Final Action Statement addressing the matters in BVES's May 22, 2020 Errata. BVES timely submitted its 2020 WMP Refile on September 18, 2020 as well as a Remedial Compliance Plan addressing deficiencies set forth in Resolution WSD-002.

The August 26, 2020 Final Action Statement required BVES to refile its WMP in accordance with the guidance and instructions provided therein. This Resolution finds that the BVES's 2020 WMP Refile 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), the WMP Guidelines issued by the Commission to electrical corporations, and the instructions in the August 26, 2020 Final Action Statement. 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 BVES WMP Refile resolved here, the Commission ratifies the WSD's action to approve BVES's 2020 WMP Refile 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 detailed in Appendix A. Additionally, provided in Appendix F is a summary of the WSD's disposition of BVES's

responses to the conditions identified in Appendices B and C of the WSD's August 26, 2020 Final Action Statement on BVES's initial 2020 WMP.

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 acting on the 2019 WMPs also added additional requirements for the 2020 WMPs.

After the Commission issued its WMP decisions on May 30, 2019,[6] the Legislature enacted AB 1054. AB 1054 contains similar WMP requirements to SB 901 but allows WMPs a 3-year rather than a 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 by 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.[7]

Building on lessons learned from the WMP review process in 2019, the WSD developed and required all electrical corporations to conform their WMPs to a set of new WMP Guidelines starting in 2020.[8] 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

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

[7] Pub. Util. Code § 8386.3 (Wildfire Safety Division), § 326.1 (Wildfire Safety Advisory Board).

[8] 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.

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 the WSD and Commission to review the 2020 WMPs. The resolution called for electrical corporations to submit their 2020 WMPs on February 7, 2020. BVES submitted its initial 2020 WMP on that date, then amended its filing on March 6, 2020 and again on May 22, 2020. Due to the substantive changes contained in BVES's May 22, 2020 amendment, the WSD issued a Final Action Statement on August 26, 2020, denying BVES's initial 2020 WMP filing and the associated amendments pursuant to Public Utilities Code sections 8386 et seq. and 701. The August 26, 2020 Final Action Statement ordered BVES to refile a new 2020 WMP meeting the requirements therein within 60 days. BVES timely submitted its 2020 WMP Refile on September 18, 2020.

Stakeholders submitted comments on BVES's WMP Refile, to which BVES replied (see Section 0).

2. Notice

In accordance with Pub. Util. Code § 8386(d), notice of BVES's 2020 WMP Refile was given by posting of the WMP Refile on the WSD's webpage, at www.cpuc.ca.gov/wildfiremitigationplans, on September 21, 2020. Further, BVES served its 2020 WMP Refile on the Commission's existing WMP formal proceeding (R.18-10-007) service list, as Resolution WSD-001 requires. 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, responses to the maturity model survey questions, and, in the case of BVES's WMP Refile, its Remedial Compliance Plan submitted in accordance with Resolution WSD-002. Upon completion of this review, the WSD determined whether BVES's 2020 WMP Refile should either be 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 BVES WMP Refile for compliance with every aspect of the WMP Guidelines and AB 1054, requirements of the 2019 WMP Decisions, requirements in Resolution WSD-002and instructions in the WSD's August 26, 2020 Final Action Statement on BVES's initial 2020 WMP. 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 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.

With the issuance of a conditional approval, the WSD 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:

Class A – aspects of the WMP are lacking or flawed

Class B – insufficient detail or justification provided in WMP

Class C – gaps in baseline or historical data, as required in 2020 WMP Guidelines.

Class A deficiencies are of the highest concern, while Class B deficiencies are of medium concern and Class C deficiencies of less concern. In the review of initial 2020 WMP filings, different classes of deficiencies required varying levels of response (i.e., Class A deficiencies required filing of Remedial Compliance Plans, Class B deficiencies required quarterly report filings, etc.); however, considering the timing of BVES's WMP Refile, the disposition of this Resolution, and the fact that BVES has made a good faith effort to address deficiencies identified in Appendices B and C of the WSD's August 26, 2020 Final Action Statement on BVES's initial 2020 WMP, any outstanding deficiencies and corresponding conditions identified in the instant resolution shall be addressed in BVES's 2021 WMP update filing.

4. Analysis of Deficiencies from the WSD's August 26, 2020 Final Action Statement on BVES's Initial 2020 WMP

In the August 26, 2020 Final Action Statement, which denied BVES's initial 2020 WMP submission, BVES was "strongly urged to also address Class A and Class B deficiencies the WSD found in Draft Action Statement and Draft Resolutions WSD-006 and [final Resolution] WSD-002… as set forth in Appendices B and C."[9] BVES submitted responses to Class A and B deficiencies as an attachment to the WMP Refile and also elaborated on certain conditions within the document itself. In accordance with the WSD's instructions in the August 26, 2020 Final Action Statement, BVES's WMP Refile addresses the Class A and Class B conditions identified in Appendices B and C.

The WSD assesses the sufficiency of BVES's responses to these deficiencies within the relevant discussion sections of the instant Resolution. In accordance with the July 17, 2020 guidance letter on its approach to disposition of remedial compliance plans and quarterly reports,[10] the WSD issues one of the following determinations:

- Sufficient - The response is sufficient, and no further action is required.
- Insufficient - The response is insufficient.

If the WSD finds that a response is "Insufficient," the WSD created a new, related Deficiency to which BVES shall respond in its 2021 WMP filing. Appendix F of this Resolution constitutes a summary of the WSD's finding of Sufficiency/Insufficiency for each Deficiency and serves as a directory for finding specific Deficiency analysis within this Resolution.

The WSD also identified numerous Class C Deficiencies in BVES's initial 2020 WMP submission. In this Resolution, Class C Deficiencies and associated Conditions have either been (1) revised and renumbered, (2) deleted, or (3) newly created in response to BVES's Refile. These Class C Deficiencies shall be addressed in BVES's 2021 WMP update. BVES was not required to respond to

[9] The WSD's August 26, 2020 Final Action Statement on BVES's initial 2020 WMP, at 1.

[10] This guidance letter is available at: https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/About_Us/Organization/Divisions/WSD/WSD%20Guidance%20Statement%20on%20RCP%20QP%2020200717.pdf

Class C Deficiencies from the August 26, 2020 Final Action Statement, in its 2020 WMP Refile.

5. 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's WMP or WMP Refile, 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.

6. Public and Stakeholder Comment

The California Public Advocates Office (Cal Advocates) submitted comments on October 19, 2020, on BVES's WMP Refile and made the points listed below. This Resolution addresses relevant input.

Cal Advocates

- The WSD should require BVES to provide a plan to inspect the Radford Line prior to re-energization in the fall.
- The WSD should require BVES to perform a study of the potential ignition risk from its proposed battery energy storage system (BESS).

In response to the comments, BVES states the following:

- BVES personnel currently inspect the length of the Radford Line prior to its re-energization in November.
- BVES agrees to include its Radford Line re-energization inspection plan in its 2021 WMP update.

- BVES has not made a final determination regarding a BESS. Nor has an application for approval of a BESS been filed with the Commission. It is premature, and possibly a waste of customers' money, to require an analysis in BVES's 2021 WMP Update of potential safety issues when BVES has not reached any final determination on, or filed an application seeking approval of, any type of battery energy storage project.
- In the event BVES ultimately decides to pursue a BESS, an analysis of any safety issues, including any potential ignition risk posed by the construction of the BESS, will be included in an application seeking approval of the Commission.

7. 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 BVES's 2020 WMP Refile raised concerns to the WSD:

Lack of Public Safety Power Shutoff (PSPS) planning - Although BVES has never initiated a PSPS event, its PSPS activity is governed, at least in part, by Southern California Edison (SCE), as BVES's system is fed by SCE transmission lines, which may be subject to PSPS events. BVES states that its 10-year vision is to eliminate the need for PSPS by focusing on de-energization mitigations;[11] however, in addition to mitigations, BVES must have better plans in place to prepare for a potential PSPS event that may occur in its service territory.

Collaboration – BVES's discussion of collaborative efforts focuses on local PSPS and public outreach collaborations. Table 30 of BVES's WMP Refile states that there are existing collaborations but gives little to no details, particularly with land management, fire mitigation, and suppression agencies (i.e., United States Forest Service (USFS) and CAL FIRE). In addition, BVES does not detail how it uses best practices, nor how stakeholder and community feedback is incorporated into scoping its WMP initiatives. BVES says that it "will collaboratively leverage information with partners,"[12] but does not provide

[11] BVES 2020 WMP Refile, at 73.

[12] BVES 2020 WMP Refile, at 226.

details as to what those efforts are or what its expected outcomes of this collaboration will be.

Detail of its risk spend efficiency (RSE) and future modelling – BVES states that its grid hardening measures are critical to mitigate wildfire risks.[13] While BVES provides RSE cost estimates for a number of initiatives and provides a high-level comparative analysis, BVES's WMP Refile seems to rely heavily on input from subject matter experts but does not explain the assumptions made and how this subject matter expertise was incorporated into wildfire RSE and PSPS RSE calculations. BVES also states it will develop a model to quantify ignition risk drivers and associated probabilities[14] but does not provide details of its intended plans or timelines for implementation.

Data governance - BVES vaguely describes its plans to address GIS data sharing capabilities and develop a centralized data repository. BVES's WMP Refile indicates an intent to develop an action plan to address data issues and "conduct a GIS capability assessment to assure it can manage data on an enterprise-wide basis"[15] before the 2021 WMP Update but no supporting details are provided.

Because of the above concerns and other deficiencies discussed throughout this Resolution, the WSD's approval of BVES's WMP is conditioned upon BVES's compliance with each of the "conditions" set forth in Appendix A.

The following sections discuss in detail the WMP, its contents, required changes, and conditions imposed on approval. They follow the template provided in the 2020 WMP Guidelines attached to the R.18-10-007 Administrative Law Judge's (ALJ) December 16, 2019 ruling as Attachment 1.

7.1 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.

[13] BVES 2020 WMP Refile, at 122.

[14] BVES 2020 WMP Refile, at 216.

[15] BVES 2020 WMP Refile, at 183.

7.2 Metrics and Underlying Data

The metrics and underlying data section of the WMP represents:

- *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 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.

BVES presents an honest and transparent reflection on past lessons learned, programming gaps, and goals moving forward. Its major lessons learned "include resource/personnel planning for new and enhanced initiatives such as recordkeeping practices, external constraints related to materials procurement, siting constraints, weather impacts shortening work order windows, and ensuring sufficient collaboration is made with community members and public safety partners ahead of each fire season."[16]

BVES also identifies permitting challenges that caused delays in implementing 2019 plans 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. However, BVES provides no details on how it plans to address permitting concerns and delays.

BVES provides detailed tables of metrics.[17] BVES notes that it began formally tracking WMP metrics in June 2019. As a result, in BVES's initial 2020 WMP submission, filed February 7, 2020, Progress Metrics were only available for June 2019 to December 2019. However, in its WMP Refile, BVES defines the year for the 2019 Progress Metrics as June 2019 through May 2020 to provide a full calendar year of data.

BVES reports a 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's 2020 WMP Refile provides aggregate red flag warning day and wind speed data in Table 10 but it does not provide wind data in GIS formats, indicating it does not have such data in GIS format. 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.

[16] BVES 2020 WMP Refile at 13.

[17] BVES 2020 WMP Refile, Attachment 1, Tables 1-6.

Deficiencies and Conditions – Metrics and Underlying Data

Deficiency (BVES-Refile (R)1, Class C): Defining the year.

For its Progress Metrics, BVES defines 2019 as June 2019-May 2020. While the WSD understands BVES's desire to present a full calendar year of data and progress, redefining the year makes it difficult to compare BVES's Progress Metrics with those of the other filers.

Condition (BVES-R1, Class C): In its 2021 WMP update, BVES shall:

i) recalculate 2019 Progress Metrics to only include progress that occurred within calendar year 2019;

ii) explain in a footnote why data is available for only a portion of the specified calendar year for any applicable Progress Metric; and

iii) maintain the definition of "year" as a calendar year (i.e., January to December) throughout the 2021 WMP Update, subsequent WMPs, and all related filings, unless otherwise directed.

7.3 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 electrical corporation 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-related 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 electrical corporation Fire Potential Indices (FPIs) or other fire danger rating systems) to better gauge relationships and thresholds between weather and fire potential indicators and electrical corporation ignitions. As such, the discussion in this section focuses on recent weather patterns, key drivers of electrical corporation ignitions and frequencies of such ignitions, recent use of PSPS, the current baseline conditions of the electrical corporation's service territory and equipment, and locations of planned electrical corporation upgrades.

BVES provided historical weather pattern data that shows an increase in the number of RFW circuit mile days per year over the period from 2015 through 2019.[18] Even though the number of RFW circuit mile days per year indicate reduced values in 2019, the overall upward trend is likely to correlate with increased BVES risk exposure in coming years. In addition, as shown in Table 10 of BVES's WMP Refile, in 2019, 95th percentile wind conditions were twice as prevalent as compared to the previous four-year average (i.e., 2015–2018). Over the five-year reporting period, the number of 99th percentile wind conditions circuit-mile-days[19] in BVES's service territory more than tripled.

Over the last few years, BVES notably reports zero ignitions and decreasing near miss[20] incidents, such as vegetation contact and equipment/facility failures. Based on the WSD's analysis of BVES's near miss incidents from 2015-2019,[21] BVES reports that fuse failure accounts for 44% of all near miss drivers. BVES attributes 36% of near misses to vegetation contact and 8% to transformer failure. BVES's WMP Refile provides more in-depth ignition risk analysis than required by the WMP Guidelines, including an evaluation of wildfire risk circuit by circuit.[22]

---

[18] See Appendix B, Figure 1.5B.

[19] When calculating circuit-mile days, BVES multiplied the corresponding metric (Red Flag Warning days, 95th/99th percentile wind conditions days) by the total number of overhead circuit miles in BVES's service territory, assuming that underground circuit miles are unaffected by wind conditions.

[20] Near miss is defined by BVES as "an event with significant probability of ignition, including wires down, contacts with objects, line slap, events with evidence of significant heat generation, and other events ~~Awes~~ [which] cause sparking or have the potential to cause ignition." BVES Refile at 3.

[21] BVES 2020 WMP Refile, Attachment 1, Table 11.

[22] BVES 2020 WMP Refile, Supporting Table 4-5, at 63.

BVES's near miss incident analysis and risk evaluation by circuit indicate real progress and strides in risk reduction, based on zero ignitions in the last five years and mostly decreasing trends in near miss incidents over the last few years. The WSD finds the information provided in this section of BVES's 2020 WMP Refile to be sufficient.

7.4 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 electrical corporation 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), if applicable. The filer must describe how the electrical corporation 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, millions of Californians experienced loss of service from proactive power shutoffs for multiple days on end, 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 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.

In its WMP Refile, BVES WMP explains that it has not yet been required to conduct a Risk Assessment and Mitigation Phase (RAMP) and evaluates enterprise risk using a risk-based decision-making framework. BVES also

indicates that it has adopted a Fire Circuit Safety Matrix[23] to prioritize wildfire risk and evaluate wildfire risk mitigation. BVES utilizes a Risk Register model to evaluate enterprise risk reduction relative to the cost of the mitigation measure. The Risk Register model evaluates three primary wildfire-related risk events: wildfire public safety, wildfire-significant loss of property, and loss of energy supplies. BVES relies on subject matter experts to evaluate the risk reduction for each scoring and define an equivalent annual cost for each mitigation activity. BVES's risk assessment approach is further described below in Section 7.5.1 of this Resolution. BVES's WMP Refile mentions that it plans to develop a model to quantify ignition risk drivers and associated probabilities within the next 3 years.

BVES's WMP Refile explains that before its 2021 WMP Update, it plans to develop a plan to improve GIS data governance and align GIS maps with WSD standards, use established metrics, monitor the effectiveness of its WMP initiatives, and gather lessons learned from its risk modeling, implementation of its programs, and pilot projects. Over the next 3 years, it plans to develop an action plan addressing GIS data sharing and collection, replace conventional fuses, remove all tree attachments, complete the Pole Loading Assessment and Remediation Program on high risk circuits; complete the Radford Line Covered Conductor Replacement Project, complete the Grid Automation Project, install BVES-specific weather stations in strategic locations to evaluate forecasted weather and monitor extreme fire conditions, and reduce distribution circuits designated by the Fire Safety Circuit Matrix as high wildfire threat from eleven to five. Further details of BVES's data strategy is discussed in section 7.5.7 of this Resolution.

Over the next 10 years, BVES aspires to complete the Evacuation Route Hardening pilot project to harden overhead facilities along evacuation routes, make significant progress replacing bare conductor with covered conductor on high and moderate risk circuits, and implement initiatives that lead to a wildfire-hardened distribution grid, improved situational awareness and emergency response, and better operational capabilities. BVES's grid hardening plans are further discussed in section 7.5.3 of this Resolution, below.

---

[23] The Fire Safety Circuit Matrix characterizes all BVES distribution circuits as high, moderate, or low wildfire risk, and further prioritizes within each wildfire risk group. The matrix contains data regarding the number of customers, the number of wood poles, bare conductor overhead circuit miles, tree attachments, the number of expulsion fuses, and other related factors. These factors are compiled and weighted to arrive at the wildfire risk mitigation score. BVES currently has 11 circuits that are rated high, eight circuits that are rated moderate, and seven circuits that are rated low. BVES 2020 WMP Refile, at 219.

To date, BVES has had no PSPS events; however, BVES acknowledges that because its grid is fed by Southern California Edison (SCE) transmission lines, it could be impacted by PSPS events triggered by SCE. Although BVES has conducted public outreach and published its vision on its website, it presents limited information on planning for a PSPS event within the WMP Refile. BVES has identified seven areas "at-risk" of PSPS, 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. BVES has a minimal PSPS program and budget.[24] BVES's PSPS program is discussed in section 7.5.6 of this Resolution, below.

In its WMP Refile, BVES lists its wildfire initiatives, discusses its alternatives analysis, provides status updates, and itemizes investments in each of the initiatives. BVES's WMP Refile is largely focused on grid hardening and provides an alternatives evaluation to demonstrate its selection of the most cost-effective approach. Appendix B, Figure 3.9A shows that BVES's total planned spend for the WMP cycle is $50.9 million. BVES's planned spend on grid design and system hardening is $40.12 million, which is its largest category of spend for the WMP cycle.

BVES's WMP Refile mentions that it is following other utilities' pilot programs and research and development efforts, including Rapid Earth Fault Current Limiting (REFCL) technology, down-wire detection, and on-line diagnostics. BVES does not plan to pursue these alternative technologies until they become reliable and ready for commercial deployment. BVES Grid Automation project, which was approved in its General Rate Case (D.19-08-027) on August 15, 2019, includes the installation of a service area network and communication links over the next two years. BVES did not provide further detail of how new technologies and innovations will impact its strategy over the next 3 years.

The WSD previously identified Deficiency BVES-1, Class B, specific to the Inputs to the Plan, Including Current and Directional Vision for Wildfire Risk Exposure section of BVES's initial 2020 WMP submission. BVES-1 requires BVES to explain why it focused almost entirely on system hardening, articulate a vision for the next three to ten years, provide an explanation for its RSE estimate, and detail how BVES's RSE estimates were used to determine which initiatives it is pursuing. BVES's WMP Refile corrected previous errors that reflected a suite of

[24] From 2019-2022, BVES plans to spend approximately $42,000 per year on PSPS events and mitigation of PSPS impacts. BVES 2020 WMP Refile, Table 26, at 180.

wildfire mitigation initiatives almost exclusively focused on system hardening and provided significantly more analysis to support its decision making. Additionally, while BVES's initial 2020 WMP allocated approximately 90% of its planned spend on system hardening and reflected normalized spend rates that were several orders of magnitude higher than its peer utilities, the corrected information in the BVES WMP Refile more closely reflected planned spend allocation and normalized spend of its peer utilities. While BVES's WMP Refile reflects allocation of proposed spend for system hardening in line with its peer utilities, BVES still plans to allocate the largest percentage of its proposed spend on system hardening, as compared to its peers.[25]

In response to BVES-1, BVES explains that its heavy focus on system hardening programs are capital intensive, which generally yield low RSE values[26]; however, posits that these hardening investments are aligned with current best practices and will reduce the risk of potential ignition sources. BVES compares alternative mitigation measures in terms of cost and efficacy. BVES also articulates its vision for the next three to ten years. However, BVES's response to BVES-1 is incomplete. Although BVES provides RSE estimates for a significant number of initiatives and a high-level comparative analysis in Figures 5-6 and 5-7 of its WMP Refile, BVES appears to heavily rely on its subject matter experts' input but does not explain the assumptions made and how wildfire RSE and PSPS RSE were calculated. Accordingly, the WSD has determined that BVES's response to BVES-1, in its 2020 WMP Refile is insufficient and issues a new corresponding Deficiency detailed in the section below.

The WSD previously identified Deficiency Guidance-1, Class B, requiring all electrical corporations to provide their calculated reduction in ignition risks for each initiative, their calculated reduction in wildfire consequence risk for each initiative, and the risk models used. In response to Guidance-1, as stated above, BVES sufficiently provides RSE estimates for a significant number of initiatives and a high-level comparative analysis in Figures 5-6 and 5-7 of its WMP Refile, provides a description for how the plan accounts for risk, and explains that the WMP aligns with its risk-based decision-making framework. However, as noted above, BVES did not sufficiently explain the assumptions made in its RSE calculations and how wildfire RSE and PSPS RSE were calculated. Accordingly, the WSD has determined that BVES's response to Guidance-1 in its 2020 WMP

[25] See Appendix B, Figure 3.2B.

[26] Figure 5-6 and Figure 5-7 show BVES's risk benefit and RSE for its mitigation initiatives. BVES WMP Refile, at 218 - 219.

Refile is insufficient, and issues a new corresponding Deficiency detailed in the section below.

The WSD previously identified Deficiency Guidance-2, Class B, requiring all electrical corporations to provide all alternatives considered for each grid hardening or vegetation management initiative, all tools, models and other resources used to compare alternative initiatives, how they quantified and determined risk reduction benefits, and why they chose to implement each initiative over alternative options. In response to Guidance-2, BVES sufficiently provides the requested alternatives, a schedule, explains how it used RSE estimates to determine which initiatives to pursue, and details the costs of its proposed system hardening programs. BVES is of the opinion that these initiatives are justified, and no reasonable alternatives exist. Figure 5-7 of BVES's WMP Refile displays the RSE for PSPS mitigation; however, as noted above, BVES's response is incomplete and does not explain the assumptions made and how wildfire RSE and PSPS RSE were calculated. Accordingly, the WSD has determined that BVES's response to Guidance-2 in its 2020 WMP Refile is insufficient, and issues a new corresponding Deficiency detailed in the section below.

The WSD previously identified Deficiency Guidance-12, Class B, requiring all electrical corporations to detail their expected state of wildfire mitigation in ten years, including descriptions of their wildfire mitigation capabilities, grid architecture, lines, and equipment; a year-by-year timeline to achieve these goals, a list of activities to reach these goals, and a description of how the electrical corporation's 3-year WMP is a step on the way to its 10-year goal. In response to Guidance-12, BVES sufficiently describes its expected state of wildfire mitigation in ten years, provides a brief overview of its mitigation capabilities in ten years and describes its grid architecture, lines, and equipment. BVES also sufficiently provides a list of activities to achieve its goals and describes the how the activities in its 3-year WMP will help to achieve its ten-year goals. However, although Supporting Table 5-1 in the BVES WMP Refile lists each mitigation measure and a time period it will be completed, BVES's response is incomplete as it did not provide a year-by-year timeline for reaching its 10-year goals. Accordingly, the WSD has determined that BVES's response to Guidance-12, in its 2020 WMP Refile is insufficient, and issues a new corresponding Deficiency detailed in the section below.

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

Deficiency (BVES-R2, Class B): Details on risk spend efficiency and future modelling plans.

BVES states that its grid hardening projects are capital intensive and yield low RSE values but are prudent and critical to hardening its system, and that it is taking proactive measures to mitigate wildfire risks that have been widely adopted across California.[27] While BVES provides RSE estimates for a significant number of initiatives and a high-level comparative analysis in Figures 5-6 and 5-7 of its WMP Refile, BVES appears to heavily rely on its subject matter experts' input to evaluate risk but does not explain the assumptions made and how wildfire RSE and PSPS RSE were calculated. Further, BVES states that it plans to develop a model to quantify ignition risk drivers and associated probabilities within the next 3 years but does not explain the steps it will take to develop this plan or how it intends to achieve this plan.

Condition (BVES-R2, Class B): In its 2021 WMP Update, BVES shall:

i) provide an explanation for the RSE estimates in Figures 5-6 and 5-7 of the BVES WMP, including the assumptions made and how wildfire RSE and PSPS RSE were calculated;

ii) provide a detailed explanation of how the Fire Safety Circuit Matrix works, how the subject matter experts evaluate risk reduction and define an equivalent annual cost for each mitigation activity, and what process the subject matter experts go through, including assumptions made in their evaluations; and

iii) provide a detailed explanation of BVES's plans and progress in developing a model to quantify ignition risk drivers and associated probabilities, within the next 3 years.

Deficiency (BVES-R3, Class B): Long-term planning.

BVES's WMP Refile lists each mitigation measure and a time period in which it will be completed in Supporting Table 5-1, but it did not provide a year-by-year timeline for reaching its 10-year goals.

[27] BVES 2020 WMP Refile, at 217.

Condition (BVES-R3, Class B): In its 2021 WMP Update, BVES shall:

i) provide a year-by-year timeline for reaching 10-year goals.

Deficiency (BVES-R4, Class B): Pilot program impacts on strategy.

BVES states that its grid hardening projects are capital intensive and yield low RSE values. BVES mentions that it is following other utilities' pilot programs and research and development efforts but does not plan to pursue new technologies until they are ready for commercial deployment. However, BVES does not provide further detail of how new technologies and innovations will impact its strategy over the next 3 years.

Condition (BVES-R4, Class B): In its 2021 WMP Update, BVES shall:

i) provide details, timelines, and updates on how it expects new technologies, innovations, and pilot programs to impact its wildfire mitigation strategy over the next 3-years.

7.5 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 electrical corporation'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 of the WMP Guidelines 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 BVES's projected costs across its highest cost initiatives (Figure 3.9A) as well as projected costs across the highest planned spend by category (Figure 3.3B).

The WSD previously identified Deficiency Guidance-5, Class B, requiring all electrical corporations to disaggregate individual initiatives from larger programs, describe the effectiveness of each initiative at reducing ignition probability and wildfire consequence, list all data and metrics used to evaluate initiative effectiveness, and include threshold values used to differentiate between effective and ineffective initiatives. In response to Guidance-5, in Sections 5.3 and 5.4 of its WMP Refile BVES sufficiently breaks out its various initiatives and does not lump multiple initiatives into larger programs. Additionally, BVES explains its intent to leverage the Fire Safety Circuit Matrix as a tool to track and update the effectiveness of its initiatives through the determination of wildfire risk mitigation scores. However, BVES concedes that its wildfire risk mitigation scores currently rely heavily on what it considers

industry recognized system hardening best practices. BVES plans to develop a model to quantify ignition probabilities over the next 3 years. Considering its small size and limited resources, it seems prudent for BVES to leverage system hardening practices of other utilities, but the WSD strongly encourages and supports BVES developing its own risk model to quantify and support its wildfire risk mitigation decision-making. Accordingly, the WSD has determined that BVES's response to Guidance-5, in its 2020 WMP Refile is sufficient and the WSD imposes no additional conditions related to this previously identified Deficiency.

The WSD previously identified Deficiency Guidance-6, Class B, requiring all electrical corporations to differentiate WMP initiatives from standard operations. In its response to Guidance-6, BVES sufficiently lists and classifies its initiatives between "Standard Operations" and "Augmented Wildfire Operations," as required. BVES states that its approach to resolving this deficiency was to align with its recent GRC and assign all GRC-approved mitigations as standard operations. BVES also includes a detailed accounting of costs associated with each initiative from 2018 through 2022, including whether initiatives are new or existing, and the cost recovery mechanism for the initiative. Accordingly, the WSD has determined that BVES's response to Guidance-6, in its 2020 WMP Refile is sufficient, and the WSD imposes no additional conditions related to this previously identified Deficiency.

The WSD previously identified Deficiency Guidance-11, Class B, requiring all electrical corporations to provide detailed plans to address possible personnel shortages. Specifically, all electrical corporations were required to list and describe their programs for recruitment and training of personnel, including vegetation management, describe their strategy for direct and indirect recruiting, and describe metrics used to track effectiveness of recruiting programs. In response to Guidance-11, BVES sufficiently describes efforts it has made to update the duties and responsibilities for existing positions, identify additional positions needed, and institute staff programs such as its lineman apprenticeship program and relocation assistance for new hires. Regarding vegetation management personnel, BVES states that it exclusively uses contractor resources to accomplish this work and has assurances from its contractor that it has no projected shortfalls in staffing. BVES also describes its efforts and practices for tracking personnel and indicates plans to develop metrics to track the progress of its apprenticeship and recruiting programs mature. Accordingly, the WSD has determined that BVES's response to Guidance-11 in its 2020 WMP Refile is

sufficient, and the WSD imposes no additional conditions related to this previously identified Deficiency.

7.5.1 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 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) which closely mirrors the framework used by other electrical corporations. As part of this framework, BVES employs its "Risk Register Model," which evaluates the risk reduction relative to the cost of the mitigation using a Risk Spend Efficiency (RSE) analysis. Figure 5-6 (Risk Reduction and Efficiencies of Mitigation Initiatives) and Figure 5-7 (Risk Spend Ratio / Risk Reduction for PSPS Mitigations) demonstrate the outputs from BVES's Risk Register Model and its usefulness for selecting preferred mitigation alternatives presented in its WMP Refile. BVES also details its "Fire Safety Circuit Matrix," used to categorize its overhead distribution circuits into wildfire risk groups of High, Moderate, and Low. Several factors, such as number of customers, bare conductor overhead circuit miles, vegetation density, and tree attachments, are compiled and weighted to arrive at a wildfire risk mitigation score that is used to prioritize circuits for mitigation measures.

While currently BVES does not have any specific mapping and modeling initiatives, BVES commits itself to developing risk maps and models and providing a cost estimate within the next 3 years.[28]

Even though BVES has implemented some risk assessments, as described above, BVES has yet to fully develop risk assessment methodology and modeling

[28] See BVES 2020 WMP Refile, Attachment 1, Table 21.

capabilities that are consistent with what the larger electrical corporations have developed for the RAMP of their GRCs due to an agreement reached among the smaller utilities and the Commission's Safety and Enforcement Division (approved in D. 19-04-020). 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 smaller 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 should 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 must occur outside the context of WMPs, this requirement is not a condition of approval of BVES's WMP Refile.

In WSD-002, the WSD identified Deficiency Guidance-3, Class A; this Deficiency asked all electrical corporations to address the general lack of risk modeling used to inform decision-making. BVES has sufficiently addressed Guidance-3 by providing details of its "Risk Register Model," "Fire Safety Circuit Matrix," and timeline for the expansion of its mapping and risk assessment initiatives. Accordingly, the WSD has determined that BVES's response to Guidance-3 in its 2020 WMP Refile is sufficient and the WSD imposes no additional conditions related to this previously identified Deficiency. The WSD expects details about BVES's plans for modeling and mapping initiatives to be shared as they are developed.

The WSD finds the information provided in this section of BVES's 2020 WMP Refile to be sufficient.

7.5.2. 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 electrical corporation 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 has installed 18 weather stations as of its WMP Refile, September 18, 2020, and plans to install two addition stations by the end of 2020. After reviewing BVES's data submission, it appears the electrical corporation has good density and distribution of weather stations throughout its service territory.[29]

For fire risk 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 meteorologist who integrates the NFDRS with the detailed local forecast specific to BVES's service area and develops a risk rating. The risk rating is then used to direct pre-planned grid operation changes such as disabling automatic reclosers. This approach seems reasonable given BVES's small service territory.

BVES has seven existing cameras on the ridgeline southwest of BVES's service territory and two in the southeast corner of its service territory on "Deadman's Ridge" near Lake Williams. BVES is also coordinating the installation of cameras in two additional locations: Bertha Peak and the KBHR antenna.[30] However, BVES also states that the camera deployment had an estimated completion date

[29] The data for this analysis were sourced from BVES 2020 WMP Refile, Attachment 1, Table 14 & Appendix 6.2 (GIS).

[30] The KBHR antenna is within the town of Baldwin Lake, CA

of April 2020;[31] it is unclear whether that target was met and how many more cameras BVES installed or intends to install. In viewing its cameras on alertwildfire.org and considering the pending installations, BVES's cameras appear to provide good coverage of its service territory from different angles. In remote, rugged terrain with limited cell coverage, such as BVES, cameras provide high situational awareness value.

The WSD previously identified Deficiency BVES-2, Class B, specific to the Situational Awareness and Forecasting section of BVES's initial 2020 WMP submission. BVES-2 concerned the lack of wildfire camera coverage within BVES's service territory. BVES has installed additional cameras and provided a timeline for the installation of two more cameras. Accordingly, the WSD has determined that BVES's response to BVES-2 in its 2020 WMP Refile is sufficient and the WSD imposes no additional conditions related to this previously identified Deficiency.

BVES plans to install a complete Distribution Management Control Center that will have communications, web access to weather stations and cameras, and a Supervisory Control and Data Acquisition (SCADA) system. However, BVES provides no details on other continuous monitoring like Distribution Fault Analysis (DFA) or Early Fault Detection beyond an indication that it will monitor the development of these types of novel technology pilots being implemented by other utilities.

BVES indicates that one of its proposed mitigation measures is to implement the Down Wire Detection Relay Installment Program but does not provide any timeline or describe what it will do to assess the measure's effectiveness.

Deficiencies and Conditions – Situational Awareness and Forecasting

Deficiency (BVES-R5, Class C): Emerging innovation installment programs.

BVES states that it "will consider the feasibility of implementing alternative technologies" and it is "closely following" several emerging innovations and technologies.[32] BVES then lists several technologies that it is "closely following," including Down Wire Detection Relay; however, BVES refers to Down Wire

[31] BVES 2020 WMP Refile, Supporting Table 5-1, at 91.

[32] BVES 2020 WMP Refile, at 94.

Detection Relay as an "installment program."[33] BVES also states in Table 22 that "BVES is monitoring Down Wire Detection Technology and once the technology is ready for field use, BVES will develop a Down Wire Detection Installment Program in future WMPs." BVES's discussion regarding this technology is unclear and difficult to follow.

Condition (BVES-R5, Class C): In its 2021 WMP Update, BVES shall describe:

i) whether it currently has a Down Wire Detection Installment Program;
   a. if it does, provide a timeline for development and implementation of this program.
   b. if it does not, clarify whether BVES intends to develop a Down Wire Detection Installment Program and, if so, provide a timeline for the development of this program.

ii) how it intends to measure the effectiveness of Down Wire Detection technology.

7.5.3. 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 conductors, 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,

[33] BVES 2020 WMP Refile, at 94 & 221.

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. BVES plans to harden 3.5 circuit miles in HFTD Tier 2 in 2020, 12.9 circuit miles in 2021, 12.9 circuit miles in 2022, and 2.8 circuit miles in HFTD Tier 3. BVES also plans to harden one substation located in HFTD Tier 2 in 2020.

BVES explains that it expects to complete all planned system hardening investments within the next 10 years. The following summarizes BVES's planned system upgrades:

- *Undergrounding the Ute Line* – BVES determined that undergrounding of 1.5 miles of overhead Ute 34.5 kilovolt (kV) lines connected to SCE's system is no longer considered cost-effective. BVES is no longer proposing to acquire ownership from SCE and

underground the line. BVES will pursue other options to resolve the inherent wildfire risk exposure and system safety and reliability risk of the Ute Lines. BVES is not planning any undergrounding of overhead distribution assets based on SCE's Mitigation Effectiveness-to-Cost Ratios for Undergrounding Alternatives provided in Supporting Table 5-5 of BVES's WMP Refile.

- *Covered conductor* – BVES conducted pilot programs to evaluate the wildfire risk of its structure design and decided to replace all sub-transmission lines (34.5 kV) and all bare 4 kV distribution conductor in "high-risk areas" with covered conductor. BVES has prioritized the higher-risk conductors for replacement. BVES conducted the following pilots to determine the optimal covered conductor equipment:
    - Covered Conductor Replacement Pilot Program (complete) – BVES conducted two pilots, which replaced 2.16 circuit miles of bare conductor with covered conductor. The first pilot was conducted in the North Sea area, and the second pilot was conducted in the Mooridge area. As of July 31, 2020, BVES had completed both pilots, determined that they were successful, and intends to deploy this program more broadly. BVES WMP Refile does not provide further detail of its criteria for determining these pilots were successful or explain what it means to deploy this program more broadly.
    - Covered Conductor Wrap Pilot Program (complete) - BVES piloted a program to determine the effectiveness of using a "wire wrap" to cover existing bare conductor in other high threat areas but decided the product is not ready to be deployed in the field;
    - Radford Line Covered Conductor Replacement Project – BVES's 2019 WMP mentioned plans to replace bare conductor 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's overhead facilities, as determined by the Fire Safety Circuit Matrix, Figure 5-8. The line is located in a densely vegetated area that is difficult to patrol, and BVES believes that replacing the bare conductor with covered conductor

will provide high level of effectiveness for preventing a potential ignition from object contact that could lead to a wildfire. Due to complications and costs with combining the design and construction phases of this project into a single bid, BVES bifurcated this project into distinct design and construction phases. The design has been completed; BVES indicates that the construction bid was awarded in June 2020, and the project is estimated to be complete in 2021.

- *Safety and Technical Upgrades of Pineknot and Palomino Substations* – On January 24, 2020, BVES completed the conversion of its existing Pineknot Substation from an overhead-type to a dead front pad-mounted design. BVES also plans to replace all the substation's equipment with enclosed pad mounted transformers, voltage regulators, re-closers, and bus work. Similarly, BVES plans to convert the existing Palomino Substation from an overhead-type to an underground and pad-mounted design with dead front SCADA enabled. It will also replace all the substation's equipment with enclosed pad mounted transformers, voltage regulators, re-closers, and bus work. This project is expected to be completed by December 2020.

- *Conventional fuse replacement* – BVES has historically used conventional expulsion type fuses to protect lines, but these types of fuses expel hot particles and gases when they operate, which can potentially ignite fires. BVES plans to replace conventional expulsion type fuses with current limiting fuses to mitigate this ignition risk. BVES 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, further reducing ignition risk. BVES plans on replacing approximately 628 conventional fuses with electronic fuses and approximately 2,576 conventional expulsion fuses with non-expulsion fuses. As identified in its 2019 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 July 31, 2020, BVES had replaced a total of 1,400 conventional fuses with 170 electronic fuses and 1,230 current limiting fuses. This project is expected to be completed by the end of 2021.

- *Tree attachment removal.* Tree attachments reference an outdated construction practice where electrical infrastructure is fastened to trees. Due to its original system design, BVES had approximately 1,207 existing tree attachments on 16 distribution circuits. Given that tree attachments introduce significant risk of vegetation contact, BVES has been removing them. BVES plans to continue removals at a rate of approximately 220 attachments each year. As of July 31, 2020, BVES has removed 431 tree attachments and installed 295 new poles. BVES estimates that all tree attachments will be removed by the end of 2022.
- *Evacuation Route Hardening Pilot Project* – BVES's service area has three predetermined routes, developed by the local sheriff department and other local government officials, 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 potentially block evacuation routes during an emergency. BVES 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. BVES estimates this project will be complete by the end of 2026.
- *Pole Loading Assessment and Remediation Program* – BVES already assesses and remediates noncompliant distribution poles that pose a fire risk in compliance with General Order (GO) 95. BVES plans a 5-year program to increase its annual pole evaluation to 1,600 poles per year. Since the entire BVES service territory is in the HFTD (Tier 2 or Tier 3), any pole failure is considered a high fire risk. As of July 31, 2020, BVES had evaluated 2,525 poles; 1,050 failed the inspection criteria; 547 poles were replaced and 113 remediated. A corrective action for the remaining poles that failed inspection is being undertaken. This is an ongoing project that is expected to be completed by 2022.

BVES's system hardening plans are ambitious. BVES's 2020 WMP Refile does not provide comparative information, so it is not possible to assess whether it met its own internal goals. BVES also does not specify how it will ensure its internal goals and targets are met. For example, BVES gives the number of poles it replaced, but does not compare the number to a specific target. BVES's plans seem to frequently shift; in its initial 2020 WMP filing, BVES erroneously indicated plans to underground its entire system, then in its May 22, 2020 Errata

filing clarified that the undergrounding target was reduced to 1.5 miles, and in its WMP Refile eliminated undergrounding as a chosen mitigation. This frequent altering of mitigation targets makes it difficult for the WSD and stakeholders to track BVES's mitigation plans, and the WSD expects BVES to present more steady program targets in future WMP submissions.

The WSD previously identified Deficiency BVES-3, Class B, specific to the Grid Design and Hardening section of BVES'S initial 2020 WMP submission. BVES-3 requires BVES to provide a quantitative justification and explanation for its proposal to spend three times per circuit mile than large electrical corporations. In its 2020 WMP Refile, BVES sufficiently explains that in its initial 2020 WMP filing, it erroneously used circuit miles instead of line miles[34] in its tables, causing the estimated costs per mile to appear triple the actual predicted costs. BVES also mistakenly included mitigation projects that were considered but not selected during the preparation of the initial 2020 WMP filing because other projects were found to be more risk-spend efficient. Accordingly, the WSD has determined that BVES's response to BVES-3 in its 2020 WMP Refile is sufficient, and the WSD imposes no additional conditions related to this previously identified Deficiency.

The WSD previously identified Deficiency BVES-12, Class B, specific to the Grid Design and Hardening section of BVES'S initial 2020 WMP submission. BVES-12 requires BVES to describe its plans to underground most of its assets. In its 2020 WMP Refile, BVES provides a sufficient explanation stating that it mistakenly included the undergrounding of its entire electric sub-transmission and distribution systems, which was never its plan. These errors were removed from BVES's 2020 WMP Refile. Accordingly, the WSD has determined that BVES's response to BVES-12 in its 2020 WMP Refile is sufficient, and the WSD imposes no additional conditions related to this previously identified Deficiency.

Further, the WSD previously identified Deficiency Guidance-9, Class B, in reference to all electrical corporations' 2020 WMP submissions. Guidance-9 requires BVES to detail its pilot programs, the status of its pilots, the results of its pilots, remedies for faults revealed during the pilots, and proposals for expansion. In its 2020 WMP Refile, BVES provides sufficient details of its pilot programs, their results, how it plans to remedy faults detected during the pilots, and proposals for expanding or discontinuing the pilots. Accordingly, BVES's

[34] Circuit miles are the total length in miles of separate circuits regardless of the number of conductors used per circuit. A line mile is the distance between points connected by line.

response to Guidance-9 is sufficient, and the WSD imposes no further conditions in this area.

Deficiencies and Conditions – Grid Design and System Hardening

Deficiency (BVES-R6, Class B): Controls to ensure targets and goals are met.

BVES's 2020 WMP Refile did not specify the amount of work it would do for some of its 2019 targets, so it is not possible to assess whether it met its own internal goals. BVES also did not specify how it would ensure its internal goals and targets are met. Further, BVES conducted pilot programs to evaluate the wildfire risk of its structure design and decided to replace all sub-transmission lines (34.5 kV) and replace all bare 4 kV distribution conductor in "high-risk areas" with covered conductor. However, BVES did not specify how these "high-risk areas" are determined.

Condition (BVES-R6, Class B): In its 2021 WMP Update, BVES shall:

i) explain the type of controls implemented to ensure that its internal goals and targets are met; and
ii) explain how "high-risk areas" were determined.

7.5.4. 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, Light Detection and Ranging (LiDAR), substation, patrol, and detailed inspections, designed to identify and subsequently mitigate 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"[35] and "detailed" [36] ground inspections, electrical preventative maintenance, LiDAR inspection, and GIS data collection and sharing. BVES states that it not only regularly conducts patrol and detailed ground inspections and LiDAR inspections in compliance with GO 95 (Rule 18) and 165, but also that its enhanced inspection practices exceed these requirements. In addition, if any defects are found, BVES prioritizes the defect based on risk and resolves the issue within GO 95 Rule 18 timeframes.[37]

BVES's System Inspection and Maintenance Plan includes the following components:

- *Patrol and other on-ground inspection* - BVES's Inspection Program requires overhead facilities to undergo a patrol inspection each year to comply with GO 95 and GO 165. In addition to the required annual patrol inspection under GO 165, BVES piloted a second independent patrol inspection of the entire overhead system in the fall of 2019. BVES believes this additional patrol is warranted due to the local climate, icing conditions, high winds, snow, and ice weight, among other factors. BVES plans to continue conducting two ground patrols in 2020. However, after conducting a second ground patrol after two consecutive years, if no substandard conditions are found, then the second ground patrol effort will be discontinued. In addition to the twice annual patrol inspections, BVES conducts a detailed inspection at least every 5 years to meet GO 165 requirements.

---

[35] BVES defines a "patrol inspection" as a 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 conductors, leaking transformers, vegetation encroachment inside of minimum clearance standards, etc. BVES 2020 WMP Refile, at 145.

[36] BVES defines 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. BVES 2020 WMP Refile, at 145.

[37] BVES WMP 2020 Refile, Appendix B, at B-15.

- *Electrical Preventative Maintenance Program* - The program 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, including poles, substation transformers, protective substation relays, circuit breakers, and conductor and line hardware.
- *LiDAR Inspection Pilot* - BVES's "enhanced inspection" uses LiDAR inspections and analysis, which use lasers and software to develop surveys of the overhead sub-transmission and distribution systems to accurately determine vegetation clearances from conductors. BVES piloted a LiDAR initiative using a helicopter and fixed wing flights, and a truck-mounted mobile system. BVES will use the truck-mounted mobile LiDAR more often because it is more cost-effective and due to the proximity of the majority of its electrical system to the road network. BVES plans to conduct two LiDAR sweeps per year to evaluate the effectiveness of clearance efforts and identify potential wildfire hazards. However, if substandard conditions are not found after performing the LiDAR after two years, then these inspections will be discontinued. Table 3 of BVES's WMP Refile indicates that 211 circuit miles were inspected in 2019 using LiDAR and 94 LiDAR trouble spots (Level 1 and Level 2 discrepancies)[38] were found. BVES explains that these inspections occurred in November 2019, and the results were compiled in February 2020.

Appendix B, Figure 2.1B represents a breakdown of inspection findings per circuit mile and delineates the findings in accordance with the priority levels defined in 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

[38] Level 1 and Level 2 discrepancies are defined in GO 95, Rule 18.

Liberty Utilities 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 electrical corporation a long time to correct a problem.

The WSD previously identified Deficiency BVES-4, Class B, specific to the Asset Management and Inspection section of BVES's initial 2020 WMP submission. BVES-4 requires BVES to explain its LiDAR inspection plan, results, and targets. BVES provides a sufficient explanation for its LiDAR inspection plan, results including the targets that it has set for this program, and how it expects to achieve this performance. Accordingly, the WSD has determined that BVES's response to BVES-4, in its 2020 WMP Refile is sufficient, and the WSD imposes no additional conditions related to this previously identified Deficiency.

The WSD previously identified Deficiency Guidance-7, Class B, specific to the Asset Management and Inspection section of all electrical corporations' 2020 WMPs. Guidance-7 requires BVES to detail the quantifiable risk identified by its enhanced programs, how it addresses its findings, and its cost-benefit analysis. BVES provides a sufficient explanation of its enhanced inspection programs. Accordingly, BVES's response to Guidance-7 is sufficient, and the WSD imposes no further conditions in this area.

7.5.5. 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 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's vegetation management and inspection programs use a third-party contractor, Mobray's Tree Service Inc., to execute vegetation clearing, which is "subject to BVES Quality Control checks."[39] BVES plans on hiring a full-time contract utility 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's vegetation management program includes three components: preventative vegetation management, corrective vegetation clearance, and emergency vegetation clearance. These three vegetation management program components are discussed below:

- Preventative vegetation management encompasses ensuring vegetation on BVES's overhead sub-transmission and distribution lines adhere to clearance requirements identified in GO 95. BVES states its specifications "comply with or exceed"[40] those outlined in GO 95 Rule 35, Appendix E, 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. Accordingly, BVES indicates that it trims to a minimum radial clearance of 72 inches between bare conductors and vegetation, does not allow vegetation overhang above BVES sub-transmission lines, conducts preemptive trimming of vegetation that may grow within 12 feet of primary and/or secondary conductors, and removes hazard trees in accordance with GO 95, Rule 35. BVES had a 2019 program target of clearing

[39] BVES 2020 WMP Refile at 158.

[40] BVES 2020 WMP Refile at 159.

15%[41] of its overhead system by tree trimming crews within one year; BVES has exceeded its goal by completing 48%.[42]

The WSD previously identified Deficiency BVES-8, Class B, specific to the Vegetation Management and Inspection section of BVES's initial 2020 WMP submission. BVES-8 requires BVES to justify why patrols for asset and vegetation inspections are combined. BVES provides an explanation as to why patrols were combined and how the electrical corporation and an independent inspector are meeting the requirements of GO 95, Public Resources Code 4291 et seq., and associated regulations. Accordingly, the WSD has determined that BVES's response to BVES-12 in its 2020 WMP Refile is sufficient, and the WSD imposes no additional conditions related to this previously identified Deficiency.

Deficiencies and Conditions – Vegetation Management and Inspections

Deficiency (BVES-R7, Class C): Vegetation management community outreach.

BVES provides no discussion of community outreach or public education in its vegetation management section. BVES says that efforts are incorporated into "other programs such as those in Table 29 and Table 30,"[43] but those Tables are incomplete and indicate that several community engagement initiatives are included in section 5.3.9 of the WMP Refile (Emergency Planning and Preparedness), with which the WSD has found a deficiency (BVES-R11).

Condition (BVES-R7, Class C): In its 2021 WMP Update, BVES shall:

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

ii) detail how community related vegetation management outreach and response is performed outside of emergency situations.

Deficiency (BVES-R8, Class C): Fuels management.

[41] BVES 2002 WMP Refile, Attachment 1, Table 4.

[42] 48% of BVES's overhead system was cleared by vegetation inspectors between June 2019 and May 2020.

[43] BVES 2020 WMP Refile, Attachment 1, Table 25.

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

Condition (BVES-R8, Class C): In its 2021 WMP Update, BVES shall:

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

ii) disclose whether it intends on developing a fuels management program and/or joint roadmap in cooperation with the Forest Service and other land management agencies.

Deficiency (BVES-R9, 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-R9, Class C): In its 2021 WMP Update, 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.

7.5.6. 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 reclosers[44] during periods of high fire danger (e.g., during RFW conditions) can reduce electrical corporation 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.

[44] 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's WMP Refile Supporting Table 4-11 provides a list of its phases for PSPS procedures, which include the Preparatory, Warning, Implementation, Restoration, and Reporting and Lessons Learned phases. Supporting Table 4-11 also includes the timeframe, internal staff actions, and external communications and notifications, which provides a high-level overview of its preparation for a PSPS event.

BVES's WMP Refile states that during its annual PSPS Preparatory phase it intends to develop communication and notification plans jointly with Cal OES, county and local governments, independent living centers, and representatives of people/communities with Access and Functional Needs (AFN). BVES also intends to work with the CPUC, CAL FIRE, and other public safety partners to plan de-energization simulation exercises. BVES's PSPS strategy appears largely informational and educational. BVES's communication strategy to minimize public safety risk during high wildfire risk conditions does not include a list and description of community resource centers and services provided during a de-energization event that are sufficient to address the needs of the population in those areas, including Limited English Proficiency (*see* D.20-03-004) and AFN populations. BVES's WMP Refile also does not include a detailed explanation of its collaboration with state agencies and public safety partners beyond allusions to future plans. Further, BVES fails to address its Stakeholder and Community Outreach Strategy, which is further described in Section 7.5.10 of this Resolution.

During the warning phase of a PSPS procedure, BVES details its intent to communicate with local governments, agencies, and partner organizations' primary and secondary points of contact, and alert the emergency management community. It intends to post notices to its website and social media, issue press releases, send notices via Interactive Voice Response (IVR), and send emails to local governments, agencies, and partner organizations primary and secondary points of contact. BVES states it will continue these notifications 2-3 days, 1-2 days, and 1-4 hours prior to an imminent de-energization notice during the warning phase. BVES indicates that notifications continue in subsequent phases, including during the de-energization event to provide event updates, and also during the restoration phase for intent to restore notices and restoration complete notices.

BVES expresses concern about the health and safety of BVES employees, contracted and mutual assistance personnel, first responders, and the public, but it does not provide a detailed explanation of how it will mitigate the public safety impact of PSPS on critical personnel and infrastructure. Further, BVES

mentions its coordination with Big Bear Valley Mountain Mutual Aid Association (MMAA) but does not provide details of MMAA's role in BVES's strategy to minimize public safety risk during high wildfire conditions. It is also not clear what resources MMAA has available to provide direct support of BVES's restoration activities during emergency responses or what agreements BVES has in place with MMAA (or any other organization) to support and provide relief to customers experiencing extended and/or sustained power outages.

During the restoration phase of a PSPS event, BVES provides an overview of how it will notify customers and its partners. BVES's post-incident restoration protocols include: field crews validating that the extreme fire weather conditions have subsided to safe levels, conducting field inspections and patrols of facilities that were de-energized, and re-energization of inspected (and if necessary, repaired) circuits. BVES states that it will coordinate with SCE but does not provide a detailed description of what this coordination would entail. BVES does not provide any discussion of notification of the State Warning Center in the initial PSPS or Restoration Phase of the plan.

BVES states that it has never experienced the criteria to invoke a PSPS event and thus does not address the recent use of PSPS in its plan. BVES acknowledges that it may potentially be impacted by PSPS events triggered by SCE. An SCE PSPS event could lead to a partial or complete loss of the three SCE supply lines into the BVES service area. 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. BVES's 10-year vision is to eliminate the need for PSPS events and its WMP Refile is largely focused on de-energization mitigation rather than explaining how it will mitigate public safety risk during a PSPS event. BVES also states that its service territory has sufficient local generation to supply critical services and infrastructure but does not provide further detail. BVES's WMP Refile has not sufficiently addressed the requirements related to PSPS.

Aside from PSPS, BVES's Grid Operations and Operating Protocols section consists of standard company procedures related to wildfires, special work procedures, and a wildfire infrastructure protection team. Table 26 in the BVES WMP Refile notes that it does not deploy crew-accompanying ignition

prevention and suppression resources and services[45] as part of its operational practices; however, when emergencies occur, BVES communicates and collaborates with local emergency response teams, which include crew accompanying ignition prevention and suppression resources and services. BVES's Wildfire Infrastructure Protection Team includes a service crew and potentially additional linepersons and engineering staff to address wildfire related incidents and emergencies. The WMP Refile does not mention what suppression resources would be utilized by the Wildfire Infrastructure Protection team 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) will be available. BVES's grid operation and operating protocol plans include the replacement of one automatic recloser in 2019 and the installation of two additional reclosers in May 2020 to mitigate ignition risk during times of high fire danger. BVES will install SCADA during the 2020-2022 time period to enable remote control over these devices and allow for rapid grid operational changes.

The WSD previously identified Deficiency BVES-10, Class B, specific to the Grid and Operational Protocols, including PSPS section of BVES's initial 2020 WMP submission. BVES-10 requires BVES to detail its strategy to minimize public safety risk during high wildfire risk conditions, its plan for customer communication and mitigating public safety impacts of PSPS, and how it will restore power after a PSPS event. In response to BVES-10, BVES sufficiently explains its communication strategy. BVES explains that it is in the process of educating its customers and other impacted stakeholders on PSPS, including how to manage through a PSPS event, and its impacts. To achieve this, BVES intends to develop and use a common nomenclature that aligns with existing state and local emergency response communication messaging and outreach, and is aligned with the California Alert and Warning Guidelines; develop notification and communication protocols and systems; coordinate a Community Resource Center with local organizations; communicate with customers in different languages; and identify Access and Functional Needs (AFN) customers. Further, in accordance with D.20-03-004, BVES submitted Advice Letter No. 389-E to address its outreach efforts. BVES used the American Survey database and

[45] BVES defines crew-accompanying ignition prevention and suppression resources and services as those firefighting staff and equipment (such as fire suppression engines and trailers, firefighting hose, valves, and water) that are deployed with construction crews and other electric workers to provide site-specific fire prevention and ignition mitigation during on-site work. BVES 2020 WMP Refile, p. 213.

determined the top 3 languages, other than English or Spanish, spoken in its service territory are: Chinese, Vietnamese, and Tagalog. BVES's WMP Refile describes intentions to develop a mailer to be sent out by September 2020, that will highlight BVES's PSPS procedures and its WMP in English, Spanish, Chinese, Vietnamese, Tagalog, Mixteco, and Zapoteco.[46] BVES's WMP Refile also provides a list of its communication efforts for 2019/2020. However, BVES's response is incomplete. The response does not describe details of how it will mitigate the public safety impact of PSPS on first responders, health care facilities, operations of telecommunications infrastructure and water utilities/agencies, and other critical infrastructure, the role that MMAA will play during a PSPS, how it will coordinate with SCE, its 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 its coordination with SCE to restore power. Accordingly, the WSD has determined that BVES's response to BVES-10 in its 2020 WMP Refile is insufficient and issues a new corresponding Deficiency detailed in the section below.

The WSD previously identified Deficiency BVES-11, Class B, specific to the Grid and Operational Protocols, including PSPS section of BVES's initial 2020 WMP submission. BVES-11 requires BVES to detail how it will both identify and support AFN customers during PSPS, emergencies, or other disasters. In response to BVES-11, BVES's WMP Refile states that it is in the process of flagging AFN customers in the Customer Care and Billing (CCB) system so that customized notifications and outreach can be directed toward these customers, including during emergencies. BVES is also identifying AFN customers through a variety of outreach efforts including mailer surveys, working with advocacy groups, and leveraging local government and agencies knowledgeable in this area. AFN customers are provided information about BVES's WMP on its website, public broadcasts, bill inserts, and other media. In its 2020 WMP Refile, BVES provides a sufficient explanation as to how it will identify and communicate with AFN customers. However, BVES's response is incomplete as it does not describe how BVES will support its AFN customers during PSPS, emergencies, or other disasters. Accordingly, the WSD has determined that BVES's response to BVES-11 in its 2020 WMP Refile is Insufficient, and issues a new corresponding Deficiency detailed in the section below.

[46] BVES noted that it has not discovered any speakers of indigenous languages in its service territory and it plans to file a petition for modification of D.20-03-004 to provide additional in-language outreach flexibility for utilities that have no indigenous language speakers.

The WSD previously identified Deficiency Guidance-4, Class B, specific to the Grid and Operational Protocols, including PSPS section of BVES's initial 2020 WMP submission. Guidance-4 requires each electrical corporation to detail how its initiatives affect its threshold values for initiating PSPS event, reduce PSPS events, reduce the scope of PSPS, reduce the duration of PSPS events, and supports its directional vision. In its 2020 WMP Refile, BVES provides a sufficient explanation that it has never initiated a PSPS even and cannot quantify the reduction of frequency or scope of PSPS events through its initiatives. Accordingly, BVES's response to Guidance-4 is sufficient, and the WSD imposes no further conditions in this area.

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

Deficiency (BVES-R10, Class B): PSPS

Although BVES has never experienced a PSPS event, its PSPS activity is governed, at least in part, by what SCE does, so BVES must have better plans in place to prepare for a potential PSPS event in its service territory. While BVES indicates efforts to plan for PSPS events, BVES's WMP Refile lacks detail on its overall preparedness for a potential PSPS event. BVES's WMP Refile lists organizations, partners, and Community Based Organization's that it will collaborate with but does not provide a detailed explanation of what roles those organizations will play, what contracts or agreements are currently in place, actions it has taken, or resources available to those organizations to support BVES's strategy to minimize public safety risk from PSPS events. While BVES provides a limited communication strategy for providing in-language material pursuant to the requirements of D.20-03-004 and material for AFN populations, it does not provide details of how it will mitigate the public safety impact of PSPS on first responders, health care facilities, operations of telecommunications infrastructure and water utilities/agencies, and other critical infrastructure.

BVES also states that its service territory has sufficient local generation to supply critical services and infrastructure but does not provide further detail. Further, BVES's WMP Refile notes that it does not deploy crew-accompanying ignition prevention and suppression resources and services as part of its operational practices; however, when emergencies occur, BVES communicates and collaborates with local emergency response teams, which include crew accompanying ignition prevention and suppression resources and services.

However, BVES does not mention what suppression resources would be utilized by the Wildfire Infrastructure Protection team 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.

During its Restoration Phase, BVES states that it will coordinate with SCE but does not provide a detailed description of what this coordination would entail. BVES also does not provide any discussion of notification of the State Warning Center in the initial PSPS or Restoration Phase of the plan.

Condition (BVES-R10, Class B): In its 2021 WMP Update, BVES shall detail:

i) its strategy to minimize public safety risk during high wildfire risk conditions (including the list and description of community resource centers and services provided during a de- energization event and a communication strategy) sufficient to address the needs of the population in those areas, including Limited English Proficiency and AFN populations. If BVES has already submitted compliance documents with regard to the in-language requirements of D.20-03-004 or other CPUC decision, it shall explain those materials,

ii) details of Big Bear Valley Mountain Mutual Aid Association's (MMAA) role in BVES's strategy to minimize public safety risk during high wildfire conditions,

iii) 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,

iv) its collaboration with Community Based Organizations, including what role each organization will play to minimize public safety risk during high wildfire conditions,

v) an update on its development of a Community Resource Center for PSPS events,

vi) a detailed explanation of its coordination with the CPUC, CalFire, Cal OES, communications providers, representatives of

people/communities with access and functional needs, and other public safety partners to plan de-energization simulation exercises,

vii) a detailed explanation of how its local energy generation will supply critical services and infrastructure,

viii) what suppression resources would be utilized by the Wildfire Infrastructure Protection team to mitigate wildfire impacts,

ix) what stand-by resources would be available to BVES during a PSPS event,

x) its coordination with SCE during the Restoration Phase of a PSPS event, and

xi) its notification of the State Warning Center in the initial PSPS and Restoration Phase of the plan.

7.5.7. 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's WMP Refile describes its current data collection, management, and reporting efforts and capabilities. BVES states that it recognizes the importance of such capabilities and describes actions being taken, including the exploration of better data tools, use of a consultant to conduct a gap analysis, offering additional training to existing staff, and plans to share data with stakeholder agencies. However, BVES acknowledges that its current data repository is limited and underdeveloped. BVES plans on supplementing its internal GIS organization with consulting services and organizing its data from various platforms including GIS, work orders, inspection reports, and monthly and quarterly reporting. Additionally, BVES indicates plans to collaborate with community partners and stakeholder agencies to assure that requested GIS information will be available and accessible.

BVES's WMP Refile lacks detail. For example, BVES indicates plans to engage a consultant to conduct a gap analysis regarding its ability to meet WSD data reporting requirements but does not provide any indication of whether this effort has begun, how the analysis will be conducted, or when it is expected to be

completed. Additionally, BVES notes that it is currently experiencing a backlog of data management activity and has hired a consultant to expedite its GIS initiatives; however, there are no details on the nature and extent of this backlog or a timeline of when it expects the consultant to clear such backlog. In discussing its efforts to offer additional training to existing staff to enhance internal GIS capabilities, BVES refers to the execution of a capability assessment to determine its ability to manage data on an enterprise-wide basis. Again, as with its other stated data governance plans and efforts, BVES does not provide any detail regarding the scope of this assessment, how or when it will be completed, and what it will do to address the findings of this assessment. Furthermore, while BVES states plans to train existing staff on GIS capabilities, there are no details on which position classifications, the number of staff, or any other details regarding the stated training efforts.

Following a litany of issues (i.e., missing metadata, inconsistent formats, etc.) with the GIS data submissions received during the initial 2020 WMP submissions, on August 21, 2020, the WSD published its Draft GIS Data Reporting Requirements and Schema detailing a structured set of requirements for all future GIS data submissions.[47] The structured data requirements are intended to comprehensively organize data required to evaluate and monitor WMPs and their implementation in order to optimize the review process, maximize the ability to comprehensively analyze electrical corporation data, and provide transparency and comparability across utilities. These GIS data reporting requirements were issued in accordance with Guidance-10 in WSD-002. BVES timely submitted its GIS data in early September and was the only SMJU that provided such data to the WSD. The WSD appreciates BVES's efforts and attempt at gathering and structuring its GIS data in accordance with the Draft GIS Data Reporting Requirements. The WSD will be separately issuing a report detailing the findings of its review and assessment of BVES's GIS data submission. As such, the WSD defers its determination of the sufficiency of BVES's response to Guidance-10 to said report.

Deficiencies and Conditions – Data Governance

Deficiency (BVES-R11, Class B): Data capabilities and planning for data governance,

[47] The WSD's GIS Data Reporting Requirements and Schema are available at: ftp://ftp.cpuc.ca.gov/WSD/GISguidance/WSD%20GIS%20Data%20Reporting%20Requirements_DRAFT_20200821.pdf

sharing, and repository.

BVES vaguely describes its plans to address GIS capabilities, data sharing, development a centralized data repository, and performance of a "gap analysis."[48] BVES states that it is "assessing its data collection, data management and data sharing policies," and "will conduct a GIS capability assessment to assure it can manage data on an enterprise-wide basis."[49] However, BVES lacks a clear plan for implementing new data policies.

Condition (BVES-R11, Class B): In its 2021 WMP Update, BVES shall:

i) provide a schema for its centralized data repository.

ii) detail the quality assurance, quality control, and governance policies for its data enterprise systems.

iii) provide updates on the status, findings, and resultant actions for:

   a) the "gap analysis,"

   b) the GIS capability assessment,[50]

   c) clearing the backlog of data management activities, and

   d) staff training in GIS.

iv) provide a timeline and a detailed explanation of BVES's plans to develop and implement an action plan addressing data sharing, collection, and storage, including its plan to align data with WSD's data standards. This timeline and explanation shall include all types of data, including GIS.

7.5.8. 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.

[48] BVES 2020 WMP Refile, at 92.

[49] BVES 2020 WMP Refile, at 182-183

[50] BVES 2020 WMP Refile, at 183.

As shown in Appendix B, Figure 3.1B, when assessing planned spending per circuit mile in HFTD, SMJUs are planning to spend varying amounts. Appendix B, Figure 3.1B shows the total planned spending for each electrical corporation 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, electrical corporation-provided information was used to populate Appendix B, Figure 3.1B, and there are errors in electrical corporation 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 show the same information – planned spending by category for the plan period – in different formats. As previously indicated, the planned spending is normalized by HFTD circuit miles to provide for better comparisons. Electrical corporation-provided information was used to populate the information in Appendix B, Figures 3.1B and 3.2B, and there are errors in electrical corporation 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 (79%) of its budget on grid design and system hardening initiatives.

Appendix B, Figure 3.9A lists BVES's top five initiatives by planned spending. These are individual initiatives and do not comprise the full suite of activities within each category. As shown in Appendix B, Figure 3.9A, BVES plans to allocate over a third of its total planned spend for the WMP cycle on covered conductor installation.

The WSD previously identified Deficiency BVES-3, Class B, specific to the Resource and Allocation Methodology section of BVES's initial 2020 WMP submission. BVES-3 requires BVES to provide a quantitative justification and explanation or its proposal to spend three times per circuit mile more than the large utilities. As described in Section 7.5.3 of this Resolution, in response to BVES-3, BVES explained that in its initial 2020 WMP filing, BVES erroneously used circuit miles instead of line miles in its tables, causing the estimated costs per mile to appear triple the actual predicted costs and 50% more than the average of its peers. These errors were removed from BVES's WMP Refile, which brings its total planned spend for the WMP cycle in line with its peers. Accordingly, the WSD has determined that BVES's response to BVES-3, in its 2020 WMP Refile is sufficient, and the WSD imposes no additional conditions related to this previously identified Deficiency.

7.5.9. 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. D.20-03-004 contains additional in-language requirements applicable to large electrical corporations and SMJUs.

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, noting it faces significant challenges due to its environmental conditions and terrain. At the same time, BVES's 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 MMAA, to inform, prepare, and coordinate outreach and engagement.

Deficiencies and Conditions – Emergency Planning and Preparedness

Deficiency (BVES-R12, Class C): Lack of wildfire issues addressed in emergency preparedness plan.

BVES must have an emergency plan in place in accordance to GO 166 and also 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 electrical corporation will not have wildfire events in the future, and the WSD is concerned that BVES is generally unprepared to meet this challenge. In A.13 of its 2020 WMP Refile, BVES noted that it will address all Class C deficiencies in its 2021 WMP Update.

Condition (BVES-R12, Class C): In its 2021 WMP Update, 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 in D.20-03-004, 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.

7.5.10. Stakeholder Cooperation and Community Engagement

The final topic covered in Section 5 of the WMP 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's stakeholder cooperation and community engagement currently exists on an "as needed" basis and is incorporated into its overall emergency preparedness

plan. BVES is in initial stages of developing outreach programs specific to wildfire mitigation and PSPS as part of its emergency preparedness plan. BVES included its response to this year's in-language decision in the WMP proceeding, R.18-10-007 (D.20-03-004). Nevertheless, much of the requested information is missing.

The WSD previously identified Deficiency BVES-15, Class B, specific to the Stakeholder Cooperation and Community Engagement section of BVES's initial 2020 WMP submission. BVES-15 requires BVES to describe how it collaborates with outside agencies. BVES' discussion of collaborative efforts focuses on local PSPS and public outreach collaborations. In Table 30, BVES states there are existing collaborations but gives little to no details, particularly with land management, fire mitigation, and suppression agencies (USFS and CAL FIRE). In addition, the electrical corporation does not detail how its uses best practices, nor how stakeholder and community feedback is incorporated into is initiatives. Accordingly, the WSD has determined that BVES's response to BVES-15, in its 2020 WMP Refile is insufficient, and issues a new corresponding Deficiency detailed in the section below.

Deficiencies and Conditions – Stakeholder Cooperation and Community Engagement

Deficiency (BVES-R13, Class B): Collaboration.

BVES says that it "will collaboratively leverage information with partners,"[51] but does not provide details as to what those efforts or outcomes will be.

Condition (BVES-R13, Class B): In its 2021 WMP Update, BVES shall:

i) detail the nature and outcomes of its existing collaboration with each stakeholder and community partner,

ii) describe plans and desired outcomes for collaborations not yet in place, and

iii) how it incorporates feedback from collaborations into its wildfire mitigation efforts and initiatives.

Deficiency (BVES-R14, Class C). "As needed" community engagement insufficient.

[51] BVES 2020 WMP Refile Appendix A, at 14.

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.

Condition (BVES-R14, Class C): In its 2021 WMP Update, 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.

7.6. BVES Supplemental Filing

Ordering Paragraph (OP) 5 of the August 26, 2020 Final Action Statement required BVES to include with its 2020 WMP Refile a supplemental filing explaining how and why errors leading to incorrect submissions in its February 7, 2020 and March 6, 2020 WMPs were made. In response to this order, BVES submitted its supplemental filing on October 13, 2020. Detailed below is a summary of BVES's response to the required elements of the supplemental filing.

What caused the errors?

BVES's supplemental filing acknowledges that its February 7, 2020WMP filing incorrectly used the 2019 WMP Guidelines. BVES management mistakenly viewed its 2020 WMP filing as an update to its 2019 filing. BVES management also indicates that it viewed its 2020 WMP as an engineering and system operations project rather than a policy/regulatory project, and therefore the filing was predominantly developed by engineering staff, rather than attorneys and regulatory personnel. Neither BVES nor its consultants were aware that the 2020 WMP guidelines had significantly changed the WMP requirements. Further, BVES states that management failed to provide adequate oversight of its engineering staff's and consultant's work, which resulted in the February 7, 2020 and March 6, 2020 filings containing errors in the WMP tables.

Although BVES states it takes full responsibility for the outcome, BVES states that the errors occurred because the consultant included alternatives that BVES had considered but rejected, and the consultant did not include BVES's long-term mitigation plan adopted by management. BVES management did not fully appreciate the importance of the tables and missed the errors due to several challenging events occurring while its 2020 WMP was being prepared and reviewed, including that the safety and technical upgrades to the Pineknot

Substation were late, Bear Mountain Resorts had a significant load imbalance, BVES staff was involved in planning and executing several large projects that were approved in its General Rate Case and its 2019 WMP, and BVES staff was preparing for and participating in Commission hearings for its solar energy project in January 2020.

How BVES reviewed the consultant's work products before submission to the WSD

BVES's supplemental filing states that although management had created a review and approval plan for its 2020 WMP filing, its team failed to properly implement the plan because the team was having difficulty with preparing the GIS files required for the 2020 WMP submission, which diverted the consultants, BVES staff's, and management's attention.

How much BVES paid for the consultant's work product(s)

BVES indicates that it paid its consultant, Navigant Consulting, $86,392.23 for work undertaken to support the initial 2020 WMP filing between September 2019 and June 2020. However, BVES also indicates that it has advised the consultant that it does not intend to pay the consultant because the initial 2020 WMP filing was rejected and will credit future invoices to reflect this notice.

A description of what changes BVES is making to avoid such significant failures in the future

BVES's supplemental filing states that it has taken a number of immediate steps to improve its internal process to ensure quality and accuracy of its wildfire mitigation work. BVES has implemented the following:

- A more formal, multi-level review and approval process for its WMP filings,
- BVES will include its counsel and regulatory staff to a greater degree and at an earlier phase,
- BVES authorized two additional staff to assist with its WMP filings,
- BVES reclassified its Operations & Planning Manager to a Utility Manager, including updated duties and responsibilities, to ensure the Utility Manager has more bandwidth to dedicate to planning and executing the WMP,

- BVES updated the duty statements of the Utility Engineer, Wildfire Mitigation Supervisor, and GIS specialist roles to specifically support the WMP filing, and
- A multi-level review and approval process to oversee all future WMP filings.

WSD Assessment of BVES's Supplemental Filing

BVES's supplemental filing meets the intent and requirements outlined in OP 5 of the August 26, 2020 Final Action Statement. BVES takes full responsibility for the mistakes that led to its initial 2020 WMP being denied. Additionally, BVES appears to have taken the issues that led to errors in its initial 2020 WMP filing seriously and made concerted efforts to place safeguards to prevent similar mistakes in the future. If BVES repeats such conduct, however, WSD will look on such an event very unfavorably. Accordingly, the WSD has determined that BVES's response to OP 5 in its supplemental filing is sufficient, and the WSD imposes no additional conditions related to this previously identified OP.

8. 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 electrical corporation 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 electrical corporation 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.[52]

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 an electrical corporation's capabilities within the context of the underlying assessment criteria.

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

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's initial maturity model assessment reveals a wide array of results, particularly in comparison to other SMJUs.[53] 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 3 years and has a goal for reaching to top level of maturity by 2023 in 19 of the 52 capabilities.

However, BVES 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's 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,

[53] The WSD notes that BVES was not required to resubmit its Maturity Model survey and the results of its original submission from February 2020 are used in the analysis presented in this section.

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 electrical corporation'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 (J.) stakeholder cooperation and community engagement.

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 electrical corporation sees some room for some growth in continuous improvement and collaboration on wildfire mitigation planning in these categories.

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

9. Impact of COVID-19 Pandemic

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, after BVES submitted its initial 2020 WMP filing. 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).[54]
In the March 27, 2020 joint letters[55] sent to each electrical corporation regarding essential wildfire and PSPS mitigation work during COVID-19, the WSD, CAL FIRE, and the California Governor's Office of Emergency Services articulated that electrical corporations are expected to continue to prioritize essential safety work. The WSD expects electrical corporations to make every effort to keep their 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 electrical corporations to continue to make meaningful progress on their 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.

In the other resolutions addressing 2020 WMPs, the WSD required the electrical corporations to submit, within 60 days of ratification, any updates or modifications to the timing, scope or other aspects of any mitigation as a result of the COVID-19 pandemic. However, given the short time between issuance of this resolution and submission of 2021 WMP updates, the WSD does not require any further action by BVES. The WSD does expect that BVES will account for the impacts of COVID-19 when it provides updates to mitigation activities in its 2021 WMP update.

---

[54] Executive Order N-30-20. Available at: http://covid19.ca.gov/img/%20Executive-Order-N-30-20.pdf.

[55] 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. 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 2020 WMP Guidelines, with the exceptions set forth in the conditions described herein.

- BVES's WMP is approved by the WSD, subject to the conditions set forth in Appendix A.

11. Comments

A draft of this resolution was served on the service list of R.18-10-007 and posted on the Commission's website, www.cpuc.ca.gov/wildfiremitigationplans. Pursuant to Rule 14.5 of the Commission's Rules of Practice and Procedure, the following stakeholders timely served comments on the Draft Resolution WSD-013: Bear Valley Electric Service, Inc., California Public Advocates Office (Public Advocates), and Green Power Institute (GPI). In addition to minor changes throughout to fix typographical errors and/or improve clarity, the following changes are made as a result of comments or to correct errors discovered by the WSD after mailing:

1. In response to Public Advocates' comments regarding the use of the word "legitimacy," on page 3, the WSD has revised the statement to reflect the required legal standard of "just and reasonable" in place of "legitimacy."

2. In response to Public Advocates' suggestion to separate draft Condition BVES-R2 into two deficiencies, the WSD has separated what was previously Condition BVES-R2 into Condition BVES-R2 and BVES-R3. Subsequently, most Deficiencies and Conditions have been renumbered.

3. In response to Public Advocates' comments regarding draft Condition BVES-R9 (now BVES-R10), the WSD has added subparts (x) and (xi).

4. In response to GPI's comments regarding draft Condition BVES-R2 subpart (vi) (now BVES-R3 subpart (i)), the WSD has made a clarification, replacing "these" with "10-year."

5. The WSD has removed draft Condition BVES-R2 subpart (iii). The WSD discovered after distribution of Draft Resolution WSD-013 that BVES had described how it will reduce distribution circuits designated by the Fire Safety Circuit Matrix as high wildfire threat from eleven to five on page 87 of its 2020 WMP Refile.

6. The WSD has combined draft Condition BVES-R2 subpart (iv) with draft Condition BVES-R3 subpart (i) together to form Condition BVES-R4 subpart (i). These two draft subparts required the same discussion.

Findings

1. 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.
2. BVES's 2020 WMP refile was 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 as well as BVES's supplemental remedial compliance plan.
3. BVES's 2020 WMP refile was reviewed and acted upon in compliance with all relevant requirements of state law.
4. BVES's 2020 WMP Refile contains all the elements required by AB 1054, Pub. Util. Code § 8386(c).
5. BVES has satisfied the requirements of Pub. Util. Code § 8386(c) and the WMP Guidelines.
6. Appendix A contains findings regarding deficiencies in BVES's 2020 WMP Refile.

THEREFORE, IT IS ORDERED THAT:

1. Ratification of the Wildfire Safety Division's approval of Bear Valley Electric Service, Inc.'s Wildfire Mitigation Plan Refile is subject to conditions set forth in Appendix A.
2. The Wildfire Safety Division's approval of Bear Valley Electric Service, Inc.'s (BVES) 2020 Wildfire Mitigation Plan Refile, conditioned upon BVES's compliance with the conditions listed in Appendix A, is hereby ratified.

3. Bear Valley Electric Service, Inc. shall submit an update to its Wildfire Mitigation Plan in 2021 according to the guidance set forth in Resolution WSD-011.
4. Bear Valley Electric Service, Inc. 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, Inc.'s Wildfire Mitigation Plan mitigation efforts.
6. Bear Valley Electric Service, Inc. may track the costs associated with its 2020 Wildfire Mitigation Plan Refile in a memorandum account, by category of costs, and shall be prepared for Commission review and audit of the accounts at any time.
7. 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 Commission of the State of California held on January 14, 2021; the following Commissioners voting favorably thereon:

/s/ RACHEL PETERSON

Rachel Peterson
Executive Director

MARYBEL BATJER
President
MARTHA GUZMAN ACEVES
CLIFFORD RECHTSCHAFFEN
GENEVIEVE SHIROMA
Commissioners